Sabina
GOLD & SILVER CORP.

The BACK RIVER PROJECT

Main Volume

Volume 1

Prepared by:

Rescan™
an ERM company

December 2013

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Back River Project Fact Sheet

December 2013

Location

- Located in the western Kitikmeot Region of Nunavut at approximately 65° north latitude, and 106° west longitude. About 400 km south of Cambridge Bay and 525 km northeast Yellowknife.
- Primary communities: Kugluktuk, Cambridge Bay, Gjoa Haven, Kugaaruk and Taloyoak
- The closest community areas to the Project are Kingaok, located approximately 160 km north of the Goose Property, and Omingmaktok, located approximately 250 km northeast of the Goose Property

Reserves

- Six mining areas within the Goose and George Properties. Three locations at the Goose Property (Goose, Umwelt, and Llama) and three locations at the George Property (Locale 1, Locale 2, and LCP North).

Site Preparation and Construction Phase

- Site preparation may begin in 2014 (winter roads, fuel depots, laydown areas)
- Full construction of the project could commence as early as 2016 – two years to complete construction
- Approximately $605 M initial capital investment

Operational Phase

- Goose Property: open pit at Llama, Umwelt and Goose deposits; underground at Umwelt deposit
- George Property: Open pits at Locale 1, Locale 2, LCP North

Production

- Production Rate (Ore): 15.0 million tonnes of mill feed for life of mine
- Projected annual 300,000 ounces of gold for about up to 10 years

Processing

- 5,000 tonnes per day
- Standard gravity separation and cyanide leaching circuit
- Tailings facility at Goose Property

Transport

- Gold doré bars shipped out by aircraft

Access Roads

- All-weather roads within George and Goose properties
- Winter road between George and Goose properties
- Winter road to link properties to the Marine Laydown Area at Bathurst Inlet
- Short term winter road link to Tibbett-Contwoyto Winter Road

Re-supply

- Marine supply via open water seasonal shipping (max of 10 ships, average of 3 to 5 per year)
- Year-round by aircraft
- Winter road to the Marine Laydown Area
- Winter road connection to Yellowknife (short term)

Environment

- Extensive baseline studies including terrestrial environment, wildlife (particularly caribou), marine environment, freshwater environment, air quality and resource utilization
- Traditional knowledge information collected and analyzed through an Inuit owned major study - Naonaiyaotit Traditional Knowledge Project
- Will form the foundation of Environmental Impact Statement , and provide information for development of mitigation and management plans

Employment

- Fly-in/fly-out operation
- Direct construction employment up to 1200 person years over a two year period
- Direct operations employment up to 4442 person years for 10 years

Social and Economic Benefits

- Inuit Impact Benefits Agreement with the Kitikmeot Inuit Association
- Opportunities for local businesses
- Royalties and taxes to governments

Closure and Post-closure Phase

- Closure will ensure that the former operational footprint is both physically and chemically stable in the long term for protection of people and the natural environment
- Post closure environmental monitoring will continue sufficient to verify that reclamation has successfully met closure and reclamation objectives

BACK RIVER PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Main Volume

December 2013
Project #0194096-0040

Citation:

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Prepared for:

Sabina Gold & Silver Corp.

Prepared by:

Rescan Environmental Services Ltd., an ERM company
Vancouver, British Columbia

Plain Language Summary

Rescan™
an ERM company

Plain Language Summary

Sabina Gold & Silver Corp. (Sabina) has prepared a Draft Environmental Impact Statement (Draft EIS) for the proposed development of the Back River Project (the Project). The Draft EIS is being submitted to the Nunavut Impact Review Board, Nunavut Water Board, government review agencies and community stakeholders for review and comment.

This popular summary presents the findings of the Draft EIS, focusing on the topics that were identified during consultation and engagement as being most important to the potentially affected communities and government review agencies. The Draft EIS provides a detailed assessment of the Project's baselines environment, anticipated environmental and socio-economic effects, residual effects, transboundary considerations and associated mitigation and monitoring plans.

The Proponent

Sabina is a Canadian junior resource company focused on the advancement of the Back River Project. Sabina is headquartered in North Vancouver, British Columbia with satellite offices in Cambridge Bay, Nunavut and Thunder Bay, Ontario. Sabina's management team has a wealth of project development experience and is focused on advancing the Back River Project in a sustainable, financially responsible manner.

Project Components and Activities

Sabina's 100% owned Back River Project is a proposed gold mine located in the western Kitikmeot Region of Western Nunavut.

The proposed Project includes mining operations at two separate areas referred to as the Goose Property and the George Property, supported by winter roads connecting the Properties and a Marine Laydown Area in southern Bathurst Inlet (Figures 1 and 2). The closest seasonal communities to the Project are Kingaok (Bathurst Inlet) and Omingmaktok (Bay Chimo), located on the southwestern and northeastern shores of Bathurst Inlet, respectively. Cambridge Bay and Kugluktuk are the closest permanent communities to the Project, located approximately 300km northeast and 375km northwest from the Marine Laydown Area, respectively.

Goose Property – Three open pits will be developed at the Goose Property, named Goose Main, Umwelt and Llama. An underground mining operation will extract ore from below the bottom of the Umwelt open pit. All ore generated at both Properties will be processed at the Goose Property. Gold bars will be poured as a final product of processing. The remainder of the ore, called tailings, will be stored in a tailings impoundment area next to the process plant. Rock that does not contain gold (or enough gold) will be stockpiled next to the open pits. All water that contacts mining areas and wastes will be managed to protect nearby water quality and fish. Other facilities at the Goose Property will include a camp for workers, an airstrip, maintenance, warehouse, shops and a fuel storage tank farm (Figure 3).

George Property – The George Property is located approximately 50 kilometres from the Goose Property. Three open pits will be developed at the George Property, named Lone Cow Pond North, Locale 1 and Locale 2. All ore mined from the George Property open pits will be stockpiled during the summer and will be transported over a winter road to the Goose Property for processing. The George Property will also consist of camp facilities, an airstrip, maintenance, warehouse, shops and a fuel storage tank farm (Figure 4).

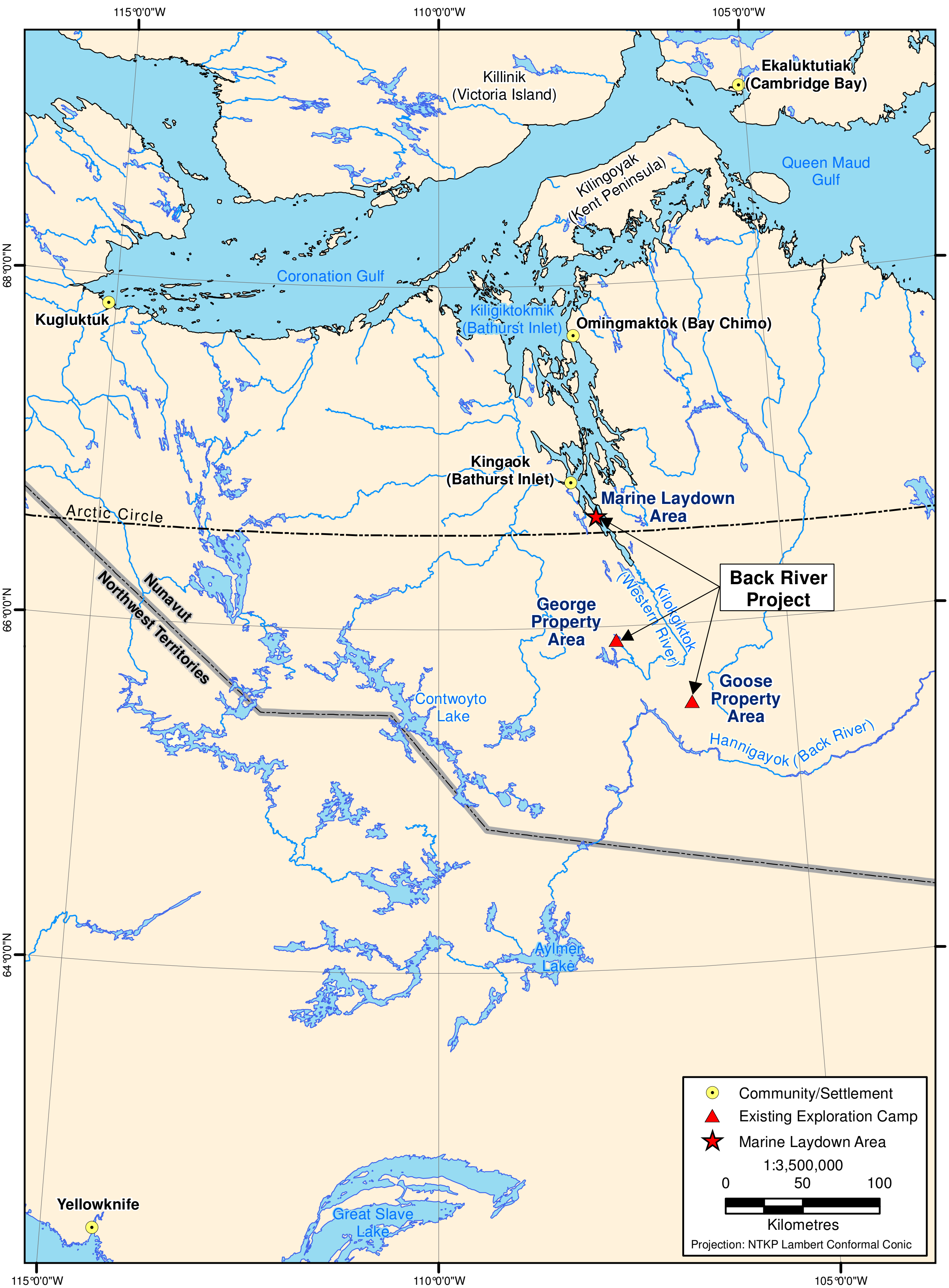

Figure 1

Project Location

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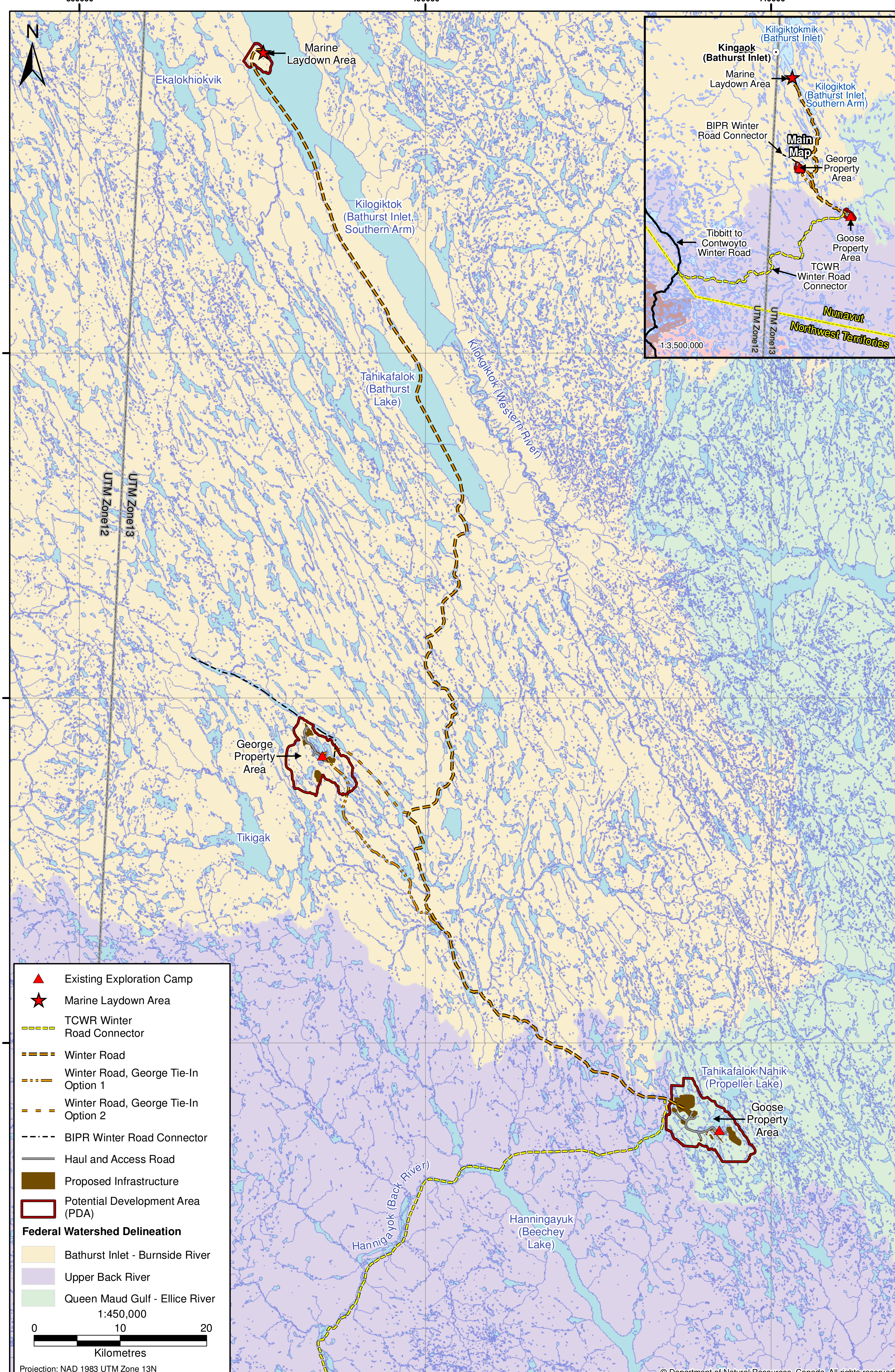

Figure 2

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Project Site Layout for 2013 DEIS

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PROJECT # 0194096-0015 GIS # BAC-15-118 December 6, 2013

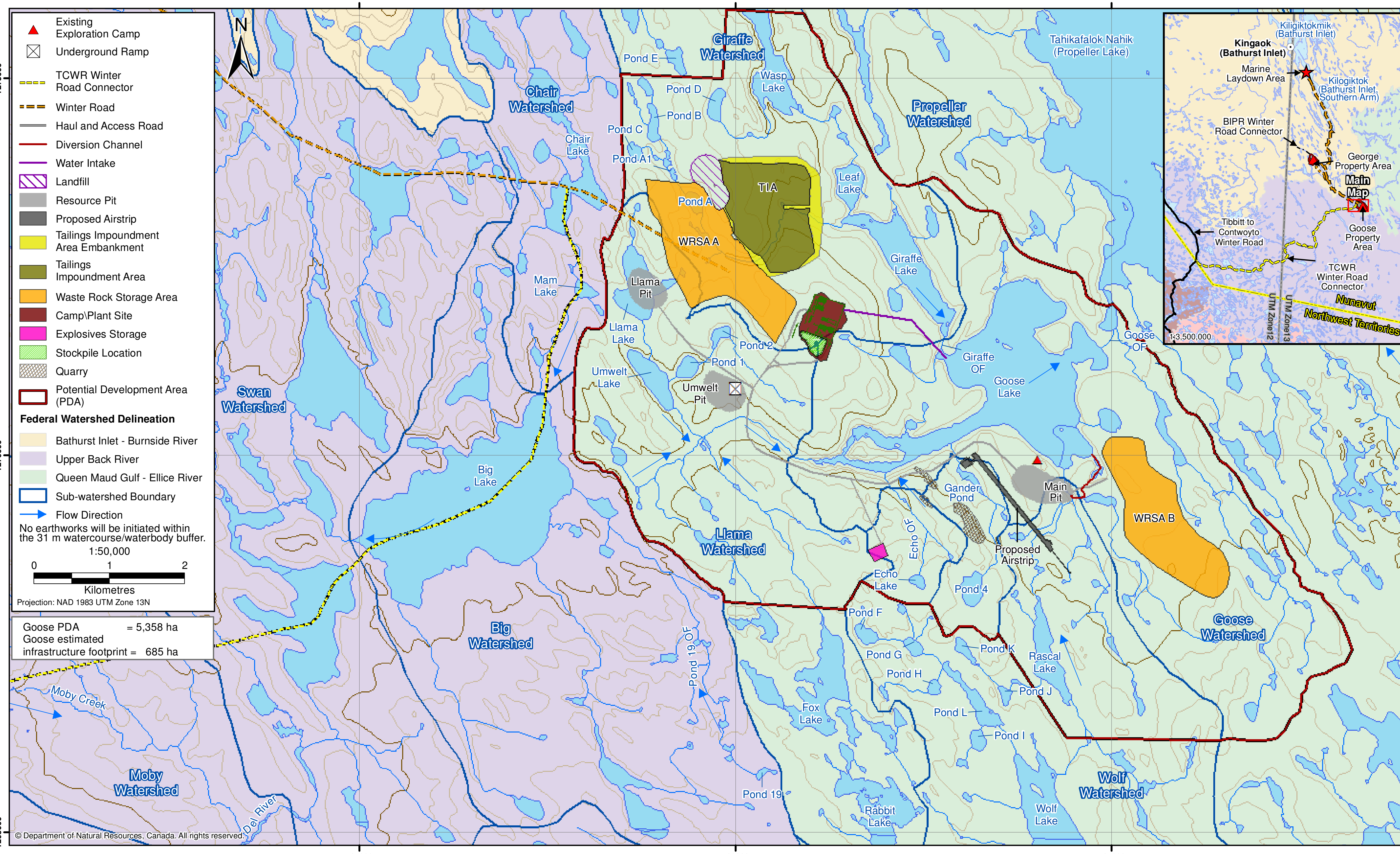

Figure 3

Project Development Area and Infrastructure Areas - Goose Property Area

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PROJECT # 0194098-0015 GIS # BAC-15-117

December 06, 2013

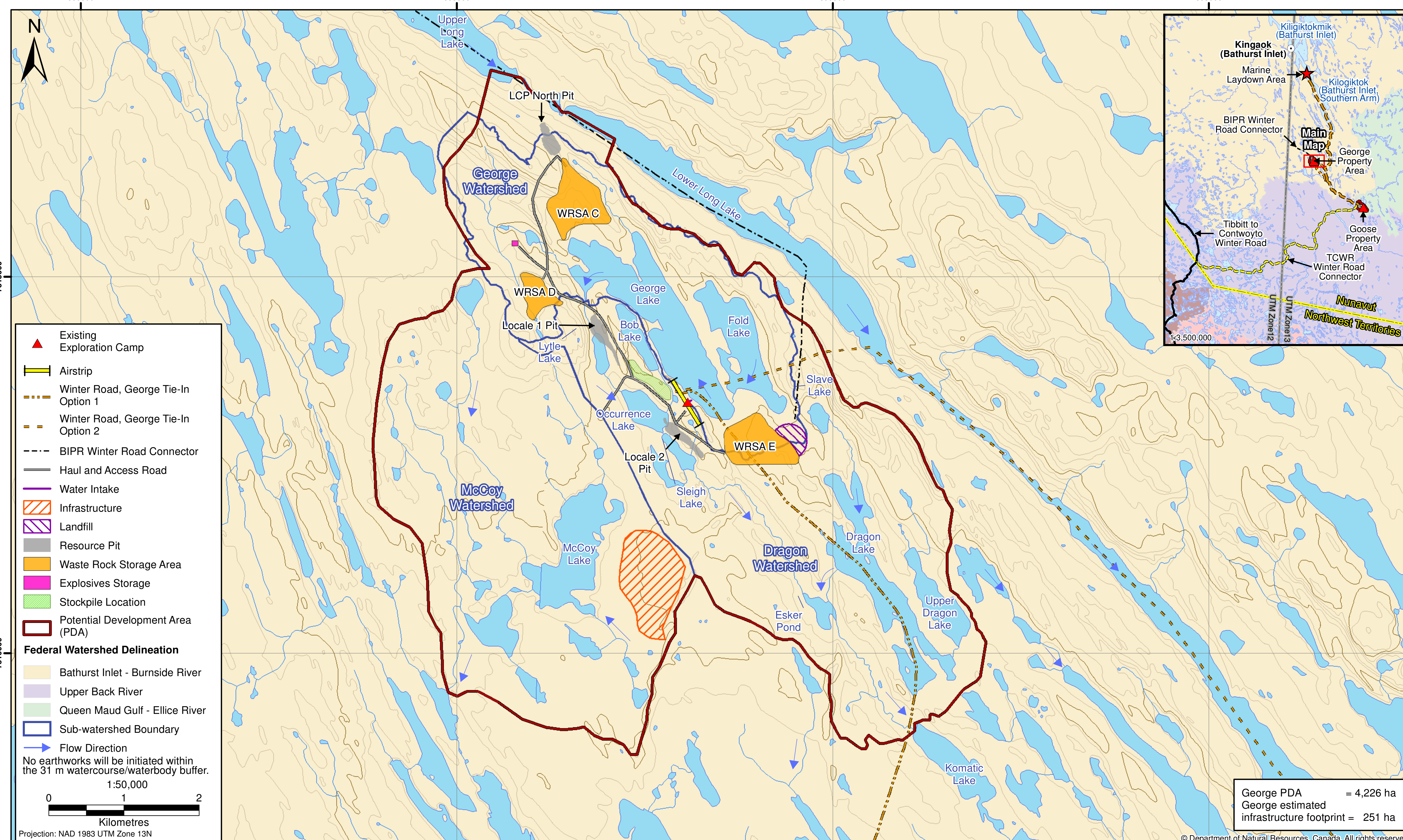

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Figure 4

Project Development Area and Infrastructure Areas - George Property Area

Marine Laydown Area – The Marine Laydown Area will be used for annual sealifts during the open water season only. Temporary docks or barge ramps will be constructed to help off-load sealift vessels. Laydown areas will be established to store containers and equipment that are off-loaded before these items can be delivered to the Goose and George properties over the winter road. A fuel storage tank farm will receive tanker shipments of fuel that will also be delivered to the mining properties over the winter road. A camp will also be established (Figure 5).

Winter Road Connectors – Seasonal winter roads will be utilized to supply the operations. These roads will operate between the Goose Property and the George Property as well as a connection to the Marine Laydown Area. A connection from the Properties to the Tibbitt to Contwoyto Winter Road may be utilized during the first few years (Figure 2).

Throughout all phases of the Project, Sabina will plan and conduct operations in a manner designed to return the Project sites to a safe and environmentally stable condition. Sabina will undertake progressive reclamation activities throughout the mine life. Facilities will be decommissioned and removed at the end of their useful life. Open pits, waste rock storage areas, tailings impoundment areas, quarries, roads and other disturbed sites will be physically and chemically stabilized, and rehabilitated once they are no longer required. Environmental monitoring will continue during a post closure period.

The life of the Project is up to 29 years. This includes the time to construct the Project, mine the current mineral resources, decommission and close out the properties, and conduct follow up environmental monitoring:

- Site Preparation: 2 years
- Construction: 2 years
- Operation: 10 years
- Reclamation and Closure: 10 years
- Post Closure Monitoring: 5 years

Alternatives Assessment

Alternatives within the Project have been evaluated according to the following criteria: technical feasibility; costs; potential impacts to the environment; and amenability to reclamation. Engagement, consultation and traditional knowledge have been considered as part of the alternatives assessment.

Consultation and Engagement

To date there has been extensive consultation and engagement sessions with relevant communities and organizations that may have an interest in the Project. These include public meetings, meetings with key stakeholders and stakeholder groups (Hamlets, elders, HTOs, youth), meetings with community advisory groups in Cambridge Bay and Kugluktuk, the Kitikmeot Inuit Association, Governments of Nunavut and Northwest Territories as well as all relevant Federal agencies. There has been a particular focus on the communities of Cambridge Bay, Kugluktuk, Kingaok, Omingmaktok, Gjoa Haven, Taloyoak, and Kugaaruk.

Information obtained through these consultation and engagement sessions has helped Sabina identify issues and concerns so that they may be addressed in the Draft EIS. Sabina intends to continue its public consultation and engagement activities throughout the environmental review process and the life of the Project.

Traditional Knowledge

Sabina recognizes the inherent value of Traditional Knowledge and the importance local communities place on its use. Traditional Knowledge is important as it complements existing scientific and socio-economic information; provides new or otherwise unrecorded information; and provides alternative views or interpretations which should be considered.

In order to ensure relevant Traditional Knowledge was properly considered the Project utilized a partnership with the Kitikmeot Inuit Association to collect and analyse available data. In addition publically available information was used for groups within the Northwest Territories. Traditional Knowledge played a major role in Project design and decisions.

Summary of Effects Assessment

Valued Ecosystem Components (VECs) and Valued Socio-Economic Components (VSECs) are the highest priority aspects for a particular region, community or to society as a whole. The assessment of potential Project effects looked at the potential effects over time and considered potential effects near to the Project (local study area), in a larger area around the Project (regional study area) and even larger area within the region including potentially all of Nunavut.

Through the review process the interactions of the Project with the various VECs and VSECs were identified and key indicator species were identified and analysed. Scientific studies combined with traditional knowledge were used to predict any potential effect. Where negative Project interactions could not be avoided, plans were developed to minimize or offset these effects.

Valued Ecosystem Components

Atmospheric Environment

Air Quality – Project activities have the potential to generate emissions and also lead to dust and acid deposition. Mitigation and management activities planned to reduce or eliminate potential effects on air quality include: energy efficiency measures, measures to reduce fuel use, the use of water or dust suppression fluids to reduce dust from unpaved roads, transported material and equipment in the crushing facility, and the use of emission control systems such as wet scrubbers, baghouses, and filters. With the above measures, the residual effects on air quality are not significant. There are no anticipated cumulative effects or transboundary effects on air quality.

Noise and Vibration – Construction and operation of the Project will introduce noise and vibration from construction equipment, haul vehicles, blasting and vehicle and aircraft traffic. Mitigation and management measures planned to reduce or eliminate potential effects on noise and vibration include: ensuring equipment is fitted with appropriate mufflers and silencers, limiting activities such as blasting and take-off and landing of aircraft to certain times of the day, and housing stationary sources in building or using enclosures, berms, acoustic screening and shrouding. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects for noise and vibration.

Terrestrial Environment

Vegetation and Special Landscape Features – Construction of the Project could result in the loss of vegetation and special landscape features. The mitigation and management measures designed to eliminate or minimize potential Project effects include: minimizing the Project footprint, using winter roads, and reducing fugitive dust where possible. For the effects assessment, it was assumed that the entire PDA would be lost. In reality, the area of vegetation/special landscape feature loss will be much less as it will be confined to the final footprint of the Project. The residual cumulative effect (vegetation loss) will not be significant. There is not a transboundary component to the non-significant residual effects.

PROJECT # 0194096-0015 GIS # BAC-15-114 December 10 2013

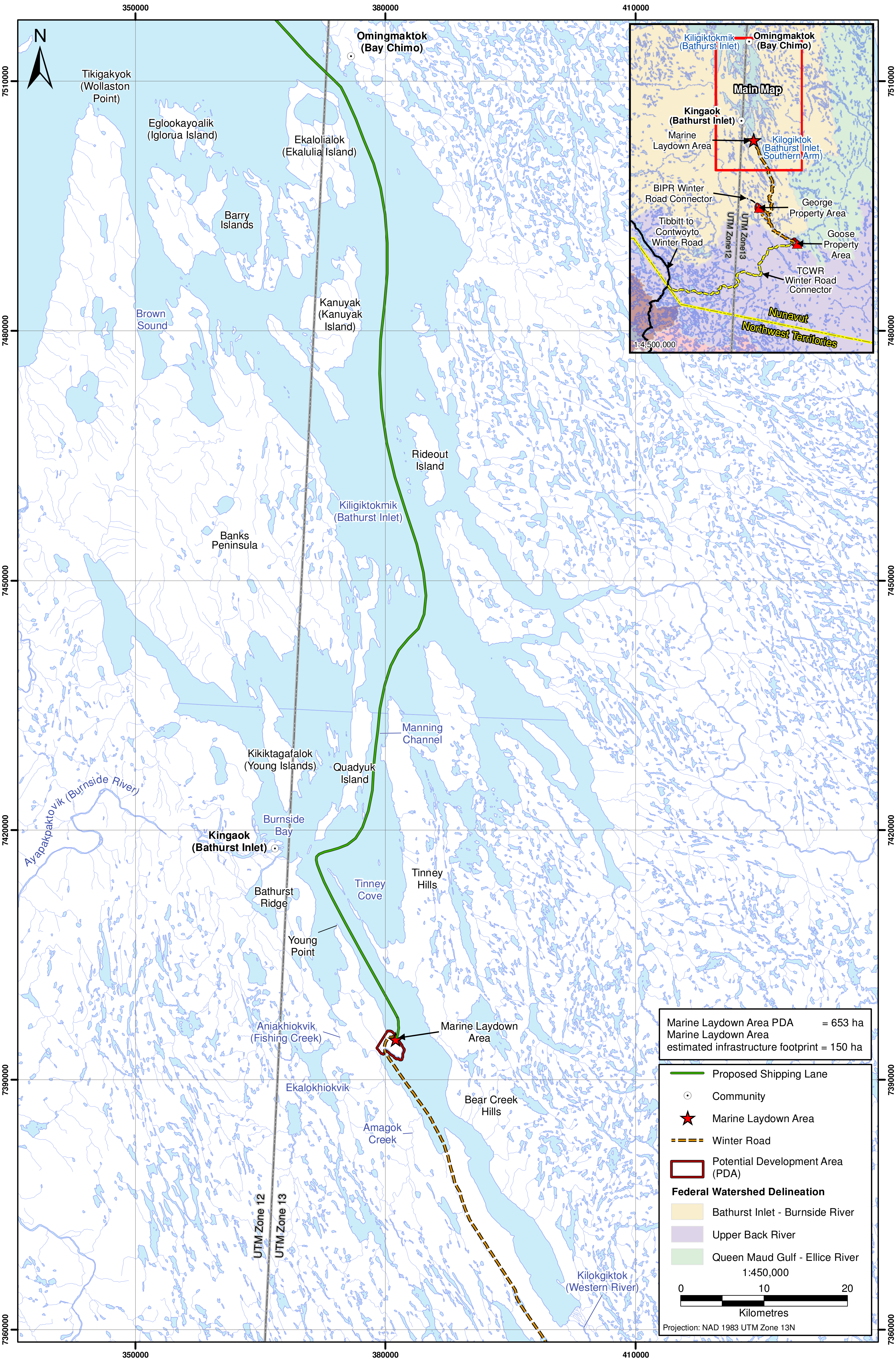

Figure 5

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Marine Laydown Area and Shipping Lane

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Caribou – There are three barren-ground caribou herds in the regions: the Bathurst herd, found primarily during post-calving period, and the Beverly herd (formerly the Ahiak herd), found primarily during the late-summer and early-fall; and the Dolphin and Union herd (listed as a species of special concern). Potential Project-related effects include: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures to eliminate or minimize the potential effects include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter roads, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects are not significant. The potential transboundary effects are accounted for in the cumulative effects assessment and are indicated to be not significant.

Grizzly Bears – Grizzly bears are federally listed as species of “special concern” and are listed as sensitive in Nunavut. Potential Project-related effects include: habitat loss, disturbance due to noise (e.g. displacement from areas of habitat), disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures to eliminate or minimize the potential effects include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects are not significant. Potential transboundary effects are accounted for in the cumulative effects assessment and are not significant.

Muskox –Potential Project-related effects on muskox include: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects are not significant. Potential transboundary effects are accounted for in the cumulative effects assessment and are not significant.

Wolverine and Furbearers – Wolverines (species of concern) and grey wolves were selected as the representative furbearer species for the EIS. Effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures to eliminate or minimize the potential effects include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects are not significant. Potential transboundary effects are accounted for in the cumulative effects assessment and are not significant.

Migratory Birds – Potential Project-related effects on migratory birds include: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste and chemical handling measures to avoid attracting wildlife to wastes and contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on migratory birds.

Raptors – The raptors found in the regional study area are the cliff-nesting peregrine falcon (species of concern); the ground-nesting short-eared owl (species of concern); the golden eagle (sensitive); the gyrfalcon (sensitive); and the rough-legged hawk (sensitive). Potential Project-related effects include: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife, and the implementation of the Wildlife Mitigation and Monitoring Plan. With the above measures, the residual effects on air quality are not significant. Potential transboundary effects are accounted for in the cumulative effects assessment and are not significant.

Freshwater Environment

Surface Hydrology – Potential Project effects include water use, site water management activities, and winter roads. Mitigation and management measures that to eliminate or minimize the potential effects include: the design of maximum water use volumes for key waterbodies in order to protect critical fish habitat, following DFO protocols for winter water withdrawal, confinement of infrastructure to local watersheds, and following winter road construction and maintenance DFO operational statements. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on hydrology.

Freshwater Water Quality – Potential Project-related effects include: Project activities that could alter the following indicators for water quality via runoff, water withdrawals, treated discharge, and aerial deposition: pH, TSS, nutrients, metals, hydrocarbons, BOD, chorine, and cyanide. Mitigation and management measures to eliminate or minimize the potential effects include: Project design features such as using geochemically suitable material for roads and pads, and the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on freshwater water quality.

Freshwater Sediment Quality – Potential Project-related effects include: Project activities that could alter the following indicators via runoff, water withdrawals, treated discharge, and aerial deposition: particle size, nutrients and organic carbon, metals, and hydrocarbons. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: mitigation measures to avoid erosion, and the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on freshwater water quality.

Freshwater Fish/Aquatic Habitat – Project activities that have the potential to directly affect freshwater fish/aquatic habitat include: the loss of lake habitat due to dewatering, development of open pits, water withdrawal for domestic and process use, and winter road construction. The primary mitigation measure to avoid potential effects on freshwater fish/aquatic habitat is building infrastructure in a way that avoids freshwater fish habitat. For example, placing the tailings impound and waste rock areas away fish-bearing waters. Another key mitigation measure is the establishment of maximum water volume usage. With these measures, no residual, cumulative or transboundry effects are anticipated on the freshwater fish/aquatic habitat.

Freshwater Fish Communities – In this assessment we focused on the two abundant freshwater or anadromous fish species, Lake Trout and Arctic Grayling. The main potential Project-related effect to freshwater fish communities is mortality/ population decreases due to lake dewatering, building of winter roads, construction of the Project footprint, water withdrawal for domestic and process use or winter road construction, and blasting with explosives. The primary mitigation measure to avoid potential effects on freshwater fish/aquatic habitat is building infrastructure in a way that avoids freshwater fish habitat. Another key mitigation measure is the establishment of maximum water volume usage. With these measures, no residual, cumulative or transboundry effects are anticipated.

Marine Environment

Marine Water Quality – Potential Project effects include shipping activities; sediment introduction to water as a result of site preparation, construction, and reclamation; site contact water; winter roads; explosives; fuels, oils, and polycyclic aromatic hydrocarbons (PAHs); treated discharges; and dust deposition. Mitigation and management measures to eliminate or minimize the potential effects include: minimizing vessel speeds and restricting vessels to deeper waters, intercepting runoff in ditches and diverting the water to a collection pond at the MLA, using geochemically suitable material for roads and pads, adhering to regulatory guidelines for treated discharges, and using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials as well as for dust suppression and incineration. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on freshwater water quality.

Marine Sediment Quality – Potential Project effects include shipping activities; sediment introduction to water as a result of site preparation, construction, and reclamation; site contact water; fuels, oils, and polycyclic aromatic hydrocarbons (PAHs); treated discharges; and dust deposition. Mitigation and management measures to eliminate or minimize the potential effects include: intercepting runoff in ditches and diverting the water to a collection pond at the MLA, adhering to regulatory guidelines for treated discharges, and using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials as well as for dust suppression and incineration. With the above measures, the residual effects are not significant. There are no anticipated cumulative effects or transboundary effects on freshwater water quality.

Marine Fish/Aquatic Habitat – Project activities that have the potential to directly affect marine fish/aquatic habitat include the in-water construction of MLA infrastructure (in-water construction of a seasonal dock and beach ramp). By constructing artificial marine shoals, we can eliminate or greatly reduce this potential effect. No residual, cumulative or transboundary effects are anticipated.

Marine Fish Community – Potential Project effects focused on Arctic Char and include: potential direct mortality from in-water construction and blasting, population effects from introduced species carried by ballast water, and underwater noise from shipping activities. Mitigation measures to eliminate or reduce potential effects include limiting the amount of in-water construction, eliminating ballast water exchange, and enforcing speed limits for ships navigating through the regional study area. With the above measures, the residual and cumulative effects are not significant. There is not a transboundary component to the non-significant residual effect.

Seabirds/Seaducks – Seabirds and seaducks include migratory bird species that may use marine areas during any time of year and encompass a diverse group of avian species including eiders, scoters, geese and swans, dabbling ducks, diving ducks, loons, and gulls. Common eider, glaucous gull, and long-tailed duck are considered sensitive species. Potential Project effects include disturbance (e.g., noise) and reduced reproductive productivity. Mitigation measures to eliminate or reduce potential effects include: identification and avoidance of seabird and seaduck staging areas, avoidance of disturbing sensitive areas by developing pre-determined flight paths when possible to provide horizontal and vertical buffer distances from staging birds, establishing a flight altitude of 650 m above known staging areas, and avoidance of staging areas. With the above measures, the residual and cumulative effects are not significant. There is not a transboundary component to the non-significant residual effect.

Ringed Seals – Potential Project effects include: alteration of habitat, disturbance (e.g., noise), direct mortality and injury, indirect mortality, exposure to contaminants, and reduced reproductive productivity. Mitigation measures to eliminate or reduce potential effects include: identification and avoidance of seal lairs. We do not anticipate any residual, cumulative or transboundary effects on ringed seals.

Valued Socio-economic Components (VSECs)

Human Environment

Archaeological Sites – The construction of the Project has the potential to impact archaeological sites. The main mitigation measure will be site avoidance by Project design. Any archaeological sites discovered during construction, operations, and closure will be inspected by the Project archaeologist, documented, and reported to the Government of Nunavut, Department of Culture and. With avoidance and/or mitigation implemented, we do not anticipate any residual, cumulative or transboundary effects on known archaeological sites.

Socio-economics

Economic Development – Increases to economic diversity are anticipated as a result of the Project and are characterized by: increased local employment, increased incomes, and spending; Project-related expenditures (locally, regionally) with existing businesses located in the Kitikmeot and across Nunavut, increasing the financial resources available to existing businesses; the addition of new businesses or expansion of existing businesses within the Kitikmeot Region that provide goods or services previously unavailable; and/or the development of, or additional investment in, Inuit-owned businesses. Increased economic growth, diversity, and performance are expected to have a positive residual effect on economic development.

Business Opportunities – Project activities that are anticipated to promote growth and diversity among Inuit and northern businesses include: provision of contract and sub-contract opportunities, specifically the procurement of goods and services from local suppliers; and contribution to personal incomes, increasing the purchasing power of local residents. The expected increase in local business activity itself is expected to bring about an increase in capital investment (investment in the expansion of businesses or the creation of new businesses) in anticipation of the Project. Local businesses will be presented with opportunities to bid on Project work, facilitated by the Project through mitigation and management measures established to maximize the benefits of contracting opportunities and the local sourcing of goods and services. Changes to the growth and diversity of Inuit and northern business are anticipated to have a positive residual effect.

Employment – The Project is expected to affect employment through: 1) changes to employment and income levels; 2) changes to the capacity of the labour force; and 3) changes to competition for local labour. Mitigation and management measures that focus on training, recruitment, and retention were developed to enhance the participation of local Inuit in Project employment and are detailed in the

Human Resources Plan. Direct Project employment and procurement may cause negative changes to local competition for labour. The Project creates the potential for individuals currently employed in the Kitikmeot Region to leave their current employment for mine-related positions. Though this it is a possible effect, it's highly unlikely and we don't anticipate any residual, cumulative or transboundary effects.

Education and Training – The potential effects of the Project on education and training include changes to the demand for education and training, and changes to youth attitudes and behaviours toward education and training. Sabina expects to partner with local governments, educational institutions, Inuit organizations, and other mine proponents to contribute to the creation of a regional training facility or additional mine employment training programs. Changes to the demand for education and training, as well as changes in youth attitudes toward education and training, are predicted to have positive residual effects.

Health and Community Well-being – Both positive and negative residual effects are predicted on Health and community well-being due to changes to individual and family spending. Should local residents that obtain employment with the Project choose to spend their increased incomes unproductively (e.g., on gambling, drugs, and alcohol) and engage in negative social behaviours, this will have a negative effect on the community. However, income used to improve standards of living (e.g., improvements to housing, food security) coupled with the other numerous positive effects associated with Project employment have the potential to result in substantial increases. Overall, the residual, cumulative and transboundary effects of negative changes to individual and family spending, and negative changes to family and household structure, are determined to be Not Significant.

Land Use

Non-traditional Land and Resource Use – Commercial land use consists primarily of sport hunting, tourism, mineral exploration, and transportation and shipping. The project could impact ecotourism activities by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. There are several best practice management and mitigation measures in place which serve to reduce potential adverse effects, while maximizing beneficial outcomes. The residual and cumulative effects are not identified as significant. Non-traditional land use does not extend beyond the boundaries of the Nunavut Settlement Area and cannot result in transboundary effects.

Subsistence Economy and Land Use – The Inuit people of the Kitikmeot have always depended on their knowledge of the land and environment (Inuit Qaujimajatuqangit). Subsistence economy and land use (hunting, fishing, trapping, gathering) is potentially affected by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. There are several management and mitigation measures including: mitigation by Project design, best practice management measures, and monitoring.

Overall, the negative residual and cumulative effects on the subsistence economy and land use are not significant. In addition, the benefits of the Project may serve to maintain traditional subsistence land use to a greater extent than would be possible without the economic growth and employment income associated with the Project. The Project is not expected to result in transboundary effects on subsistence land users.

Country Foods

There are a number of contaminants that may be present in the country foods during the life of the Project. Because the proposed Project is a metal mine, metal concentrations in the environment are most likely to change as a result of Project development. Extensive mitigation and management measures will be in place to minimize or eliminate potential effects on environmental media (air, water, sediment, soil, and vegetation) and country foods themselves (fish and wildlife). Based on the qualitative and quantitative results of the effects assessment, the quality of country foods is not expected to change substantially from baseline conditions. As there are no anticipated Project residual effects, there are no potential cumulative or transboundary effects.

Summary of Conclusions

Overall, the Project is expected to result in no significant negative effects (residual, cumulative or transboundry) to the atmospheric, terrestrial, freshwater, marine, and human environments. The Project will result in positive effects on various socio-economic aspects including local employment and skills development.

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ᓴᐱᓇᒃᑯᑦ ᒎᓗᓄᑦ ᓴᕕᕋᔭᒃᓴᓄᑦᑐ ᑎᒥᖁᑎᖓᑦ (ᓴᐱᓇᒃᑯᑦ) ᐸᕐᓇᐃᓯᒪᓕᕐᒪᑕ ᓯᕗᓪᓕᖅᐹᒥᒃ ᑎᑎᕋᖅᑕᐅᖓᐅᑎᖓᓂᒃ ᐊᕙᑎᒧᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑳᖅᑐᓂᒃ ᐅᓂᒃᑳᖓᓂᒃ (Draft EIS) ᐅᔾᕋᖕᓂᐊᕐᕕᒋᔪᒪᔭᖓᓂ ᓴᓐᓂᖓᔪᓕᐅᑉ ᑰᖓᓂ ᓴᓇᕕᒃᓴᖓᓂ (ᓴᓇᕕᒃ). Draft EIS ᐊᕙᑎᒧᑦ ᐅᓂᒃᑳᖓ ᑐᓂᔭᐅᓂᐊᕐᒪᑦ ᓄᓇᕗᒥᐅᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑳᖅᑐᑦ ᖃᐅᔨᓴᖅᑎᖏᑕ ᑲᑎᒪᔨᖏᓐᓄᑦ ᕿᒥᕈᔭᐅᓂᐊᕐᒪᑦ, ᓄᓇᕗᒥ ᐃᒪᓕᕆᔨᒃᑯᓐᓄᑦ, ᒐᕙᒪᑎᒃᑯᖏᑕᓗ ᑎᒥᖁᑎᖏᓐᓄᑦ ᐊᒻᒪᓗ ᓄᓇᓕᖕᒥᐅᓄᑦ ᑖᒥᓂ ᓴᓇᕕᐅᔪᒪᔪᒥ ᖃᓂᒃᓴᖅᑐᓄᑦ ᕿᒥᕈᔭᐅᓂᐊᕐᒪᑦ ᐅᖃᐅᓯᐅᓗᓂᓗ.

ᑖᓐᓇ ᖃᐅᔨᓴᕈᑕᐅᔪᔪᓂᒃ ᐅᓂᒃᑳᖅ ᓇᐃᓪᓕᒋᐊᕐᓗᒍ ᐅᓂᒃᑲᓕᐊᕆᔭᐅᖓᓪ Draft EIS, ᑕᐅᑦᑐᒐᖃᖅᓯᓂ ᓇᓗᓇᐃᔭᖅᑕᐅᓚᐅᖅᑐᓂᒃ ᓄᓇᓕᖕᓄᑦ ᐅᖃᓪᓚᑲᑕᒋᐊᖅᑐᖅᓯᒪᑎᓪᓗᒋᑦ ᐱᓪᓚᕆᐅᓂᕋᖅᑕᐅᓚᐅᖅᑐᓂᒃ ᓄᓇᓕᖕᒥᐅᓄᑦ ᐊᒃᑐᐊᓂᖃᕋᔭᖅᑐᓂᒃ ᐃᒃᐱᖕᓇᕐᓂᖅᑐᓂᓗ ᒐᕙᒪᑎᒃᑯᓪᓗ ᑎᒥᖁᑎᖏᓐᓄᑦ ᕿᒥᕈᔭᐅᓂᐊᕐᒥᖓᑦ. Draft EIS ᑕᒪᐃᓐᓄᓕᒫᖅ ᐅᓂᒃᑳᖅᑐᑦ ᓴᓇᕕᐅᓂᐅᖅᑐᒥ ᑐᓐᖓᕕᒋᓂᐊᖅᑕᖓᓄᑦ ᒪᓂᕋᒧᑦ, ᐊᕙᑎᖓᓄᓗ ᐃᒃᐱᖕᓇᕐᓂᖃᕐᓂᐊᕋᓯᒋᔭᐅᔪᑦ ᑖᓂᕐᒥᐅᓪᓗ ᐃᓅᔪᑎᖏᓐᓄᑦ-ᕿᓄᐅᔭᒃᓴᐅᑎᖏᓐᓄᓪᓗ, ᓴᓇᕕᐅᔪᓂᓗ ᐊᒥᐊᒃᑯᒋᔭᐅᓗᑎᓗ ᐃᒃᐱᖕᓇᕐᓂᖃᕈᓐᓇᖅᑐᑦ, ᐊᒻᒪᓗ ᐊᓯᖏᓐᓄᑦ ᓄᓇᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᖃᕈᓐᓇᖅᑐᑦ ᐊᓯᖏᓪᓗ ᐊᒃᓲᓗᐊᓕᖅᑕᐃᓕᖁᓪᓗᒋᑦ ᑲᒪᔩᑦ ᐊᑐᐊᒐᐃᑦ ᐊᒻᒪᓗ ᐅᐟᓲᖅᓯᕈᑕᐅᓂᐊᖅᑐᓄᑦ ᐸᕐᓇᐃᔪᑕᐅᓯᒪᔪᑦ.

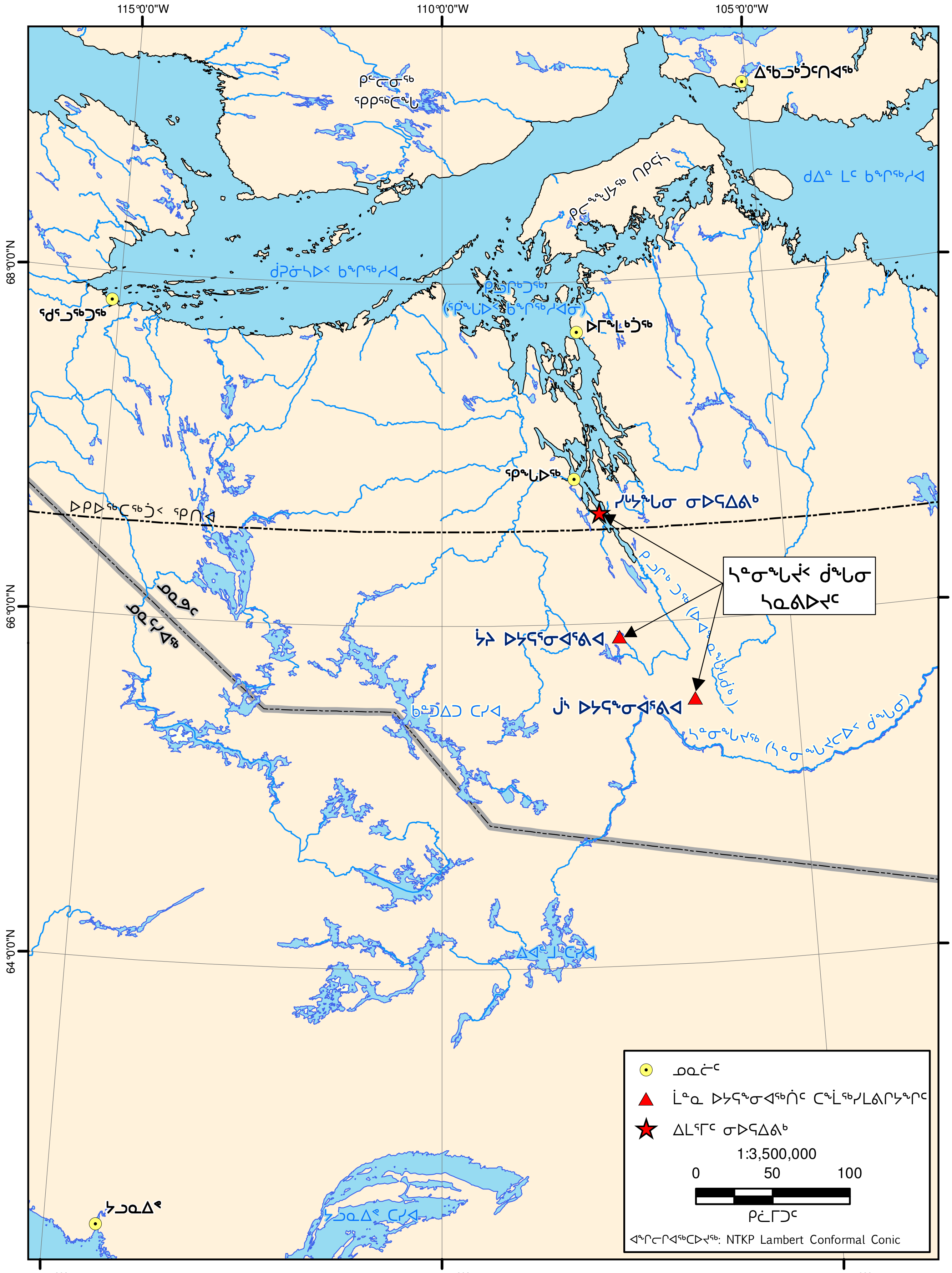
ᑐᒃᓯᕋᖅᑐᖅ

ᓴᐱᓇᒃᑯᑦ ᑲᓇᑕᒥᐅᑕᐅᓪᓗᓂ ᓄᑲᖅᖠᐅᓪᓗᓂ ᑲᒻᐸᓂᕐᑯᑎᒋᔭᐅᖓᓪ ᐅᔾᕋᖕᓂᐊᖅᑎᒃᑯᓐᓄᑦ ᐱᕙᓪᓕᐊᑎᑦᑎᔨᐅᕐᑯᔭᐅᓯᒪᔪᖅ ᓴᓐᓂᖓᔪᓕᐅᑉ ᑰᖓᓂ ᓴᓇᕕᖅᑲᓪᓚᖓᔪᑦ ᓴᐱᓇᒃᑯᑦ ᑕᖏᕐᕕᓕᐅᕐᓗᑎᒃ. ᓴᐱᓇᒃᑯᑦ ᐊᖓᔪᖅᑳᒃᑯᕕᖅᑕᖅᑐᑦ ᕚᓐᑰᕙ ᑲᓇᖕᓇᖠᖓᓂ ᐲᓯᒥ ᓄᓇᓕᖕᓂᓗ ᐊᒡᓚᕝᕕᖃᐅᖅᓯᑎᒃ ᐃᖃᓗᒃᑑᑎᐊᒥ, ᓄᓇᕗᒥ ᐊᒻᒪᓗ ᑕᓐᑐᕉᐱᒥ, ᐊᓐᑎᐅᕆᐅᒥ. ᓴᐱᓇᒃᑯᑦ ᐊᐅᓚᑦᑎᔨᖏᑦ ᐊᒥᓯᓂᒃ ᓴᓇᕕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑦᑕᖅᓯᒪᖓᒪᑕ ᐱᕙᓪᓕᐊᑎᑦᑎᔨᐅᓪᓗᑎᒃ ᑕᐃᒪᓐᓇ ᑕᕝᕙ ᐱᕙᓪᓕᐊᑎᑦᑎᔨᐅᓂᐊᖅᑐᑦ ᓴᓐᓂᖓᔪᓕᖕᒥ ᓴᓇᕕᐅᓂᐊᖅᑐᒥᒃ ᐅᔾᕋᖕᓂᐊᖅᑎᓄᑦ ᑲᔪᓯᑎᐊᕈᓐᓇᕐᑯᓪᓗᒍ, ᑮᓇᐅᔭᓕᕆᔪᑎᑎᒍᑦ ᐅᔾᔨᖅᓯᑎᐊᕐᓗᑎᒃ.

ᓴᓇᕕᐅᔪᑦ ᐃᓗᓕᖕᒋᑦ ᓴᓇᖅᑯᓯᖕᒋᓪᓗ

ᓴᐱᓇᒃᑯᑦ ᐱᕐᑯᑎᖃᕐᒪᑕ 100-ᐳᓴᖓᓂᒃ ᓴᓐᓂᖓᔪᓕᖕᒥ ᓴᓇᕕᐅᔪᒥᒃ ᒍᓗᒃᓴᔭᓂᒃ ᐅᔾᕋᖕᓂᐊᕐᕕᓕᐅᕐᒪᑕ ᐅᐊᖕᓇᖕᒫᖓᓂ ᕿᑎᕐᒥᐅᓂ ᓄᓇᕗᒥ.

ᐅᔾᕋᖕᓂᐊᕐᕕᓕᐅᕐᕕᐅᔪᒪᔪᑦ ᒪᕐᕈᐃᓕᖓᖓᒪᑕ ᑕᐃᔭᐅᔪᑦ ᒎᓯᒥ ᐱᕐᑯᑎᐊ ᐊᒻᒪᓗ ᔪᐊᕐᒥ ᐱᕐᑯᑎᐊ, ᐅᐸᒃᑕᐅᔪᓐᓇᖅᓯᑎᒃ ᐅᑭᐅᒃᑯᑦ ᓯᑯᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᖅᓯᑎᒃ ᐊᑯᓐᓂᖓᒍᑦ ᑖᒃᑯᐊ ᓄᓇᕐᑯᑎᖏᑕ ᐊᒻᒪᓗ ᐊᐅᔭᒃᑯᑦ ᓯᐅᔭᒧᑦ ᑐᓕᒃᑕᕐᕕᖓᓄᑦ ᓂᐅᕋᐃᕕᓕᐅᕐᓂᐊᖅᑐᑦ ᕿᖓᐅᑉ ᑲᖏᖅᓯᐊᑕ ᐃᓯᖅᓯᖅᐹᖓᓂ (ᓄᓇᙳᐊᖅ 1 ᐊᒻᒪᓗ 2). ᐅᑯᐊ ᖃᓂᓐᓂᖅᐹᙳᔪᑦ ᓄᓇᓖᑦ ᓴᓇᕕᐅᓂᐊᖅᑐᒧᑦ ᕿᖓᐅᖅ ᐊᒻᒪᓗ ᐅᒥᖕᒪᖅᑑᖅ, ᓴᓇᕕᐅᔪᒪᔪᑦ ᓄᓇᓕᓕᐊᒃᓴᖏᑦ ᑖᒃᑯᐊ ᓂᔾᕆᖑᕆᖓᓃᑦᑐᑦ ᐅᐊᖕᓇᖑᕆᖓᓂᓗ ᓯᙳᒥ ᕿᖓᐅᑉ ᑲᖏᖅᓯᖓᓂ, ᑕᐃᒪᓐᓇ. ᐃᖃᓗᒃᑑᑦᑎᐊᒥᐅᑦ ᖁᕐᓗᖅᑐᒥᐅᓪᓗ ᖃᓂᓐᓂᖅᐹᙳᖅᒥᔪᑦ ᓴᓇᕕᐅᔪᒪᔪᒧᑦ, ᐃᒪᖅ 300-ᑭᓛᒥᑐᒥᒃ ᑲᓇᖕᓇᖠᖓᓂ ᐊᒻᒪᓗ 375-ᑭᓛᒥᑐᒥᒃ ᐅᐊᖕᓇᖠᖓᓂ ᓯᙳᒥ ᑐᓚᒃᑕᕝᕕᓕᐊᕆᔭᐅᔪᒪᔪᒧᑦ, ᑕᐃᒪᓐᓇ.

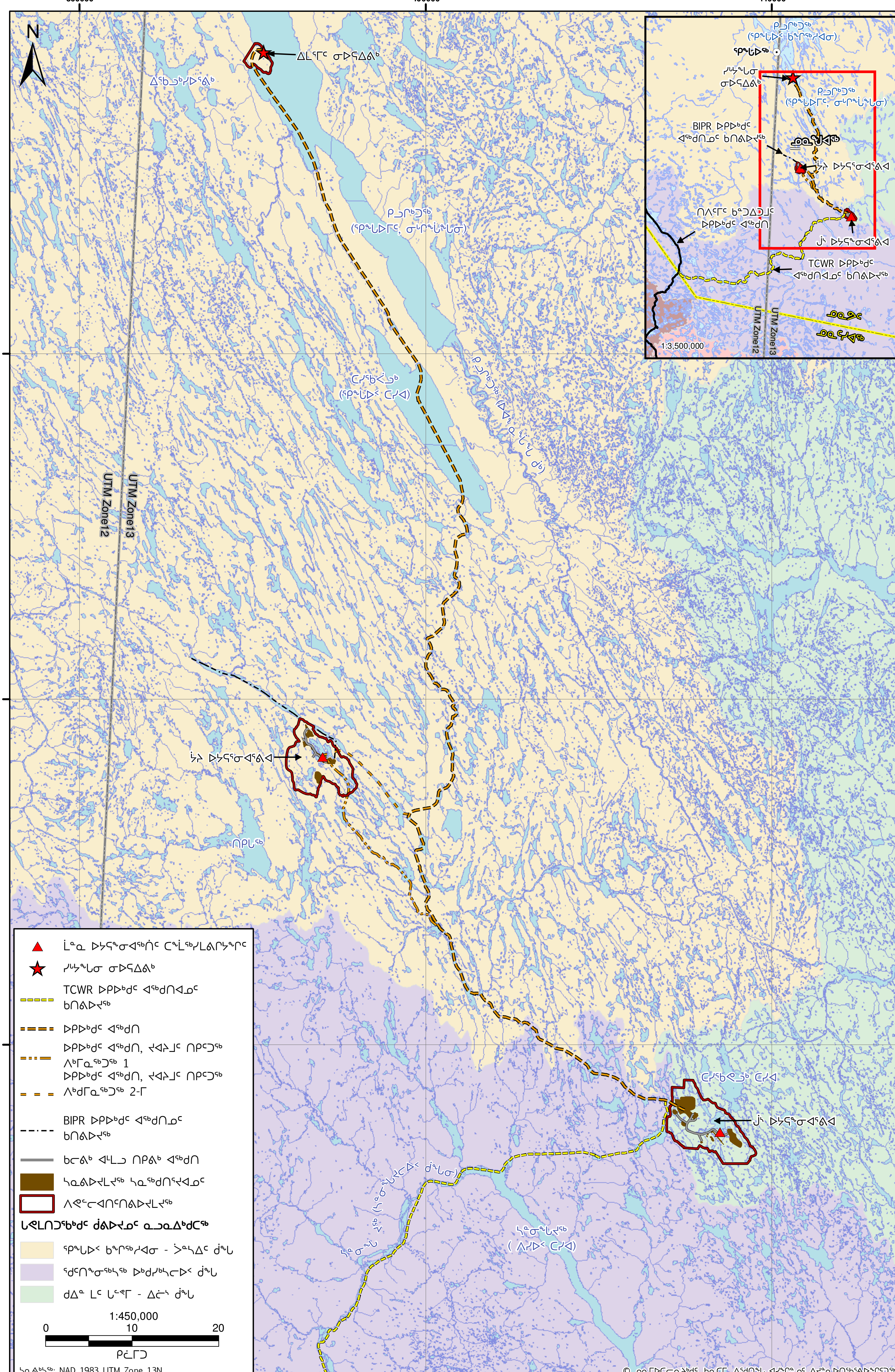


ᓄᓇᙳᐊᖅ 1

ᐊᖏᓕᒋᐊᖅᑕᐅᔪᖅ ᓇᒦᒪᖕᒫᑦ

Sabina GOLD & SILVER CORP.

Rescan an ERM company



Sabina GOLD & SILVER CORP.

ᓴᓇᕕᐅᑉ ᒪᓂᕋᖓᑕ ᐋᕿᒃᓯᖅᓯᒪᓂᖓ 2013 DEIS-ᒥ

Rescan an ERM company

ᒎᓯᒥ ᓴᓇᕕᒃ - ᐱᖓᓱᐃᓕᖓᓚᑕ ᐳᐊᓇᔭᖅᑕᐅᓂᐊᖅᑐᑦ ᓇᖅᓴᓕᐊᖑᔪᑎᒃ ᐅᔭᕋᖕᓂᐊᖅᑐᓄᑦ ᒎᓯᒥ ᐱᖁᑎᖓᓂ, ᑕᐃᔭᐅᑐᑎᒃ Goose Main, Umwelt ᐊᒻᒪᓗ Llama. ᓄᓇᐅᑉ ᐊᑖᓄᑦ ᐳᐊᓇᔭᓚᖓᔪᑦ ᐱᔭᐃᑐᑎᒃ ᐅᔭᖅᑲᓂᒃ ᓴᕕᕋᔭᒃᓴᖅᑲᖅᑐᓂᒃ ᐊᑖᓂᑦ ᐊᒻᕗᐅᓪᑦ ᐳᐊᓇᔭᖅᑕᐅᓯᒪᔫᑉ. ᑕᒪᐃᑕ ᓴᓇᕕᐅᔪᑦ ᑕᒪᐃᓐᓂ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᔪᓂ ᓴᓗᒻᒪᒃᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᒍᓯᒥ ᐱᖁᑎᖓᓂ, ᒎᓗᐃᑦ ᐊᐅᒃᑕᐅᓗᑎᒃ ᓯᒃᑭᑕᖁᖅᑎᑕᐅᓗᑎᒃ ᑯᕕᔭᐅᖅᑲᑦᑕᓚᖓᔪᑦ ᑭᖑᓪᓕᖅᐹᒥ ᓴᓇᔭᐅᓗᑎᒃ ᒎᓯᒥ. ᐅᔭᕋᐃᑦ ᐊᒥᐊᒃᑯᖏᓪᓕ, (ᐸᒥᐅᖑᓂᕋᖅᑕᐅᔪᑦ), ᑲᑎᖅᓱᖅᑕᐅᓂᐊᖅᑐᑦ ᓯᕐᓗᐊᖅᑲᕐᕕᐊᓄᑦ ᐊᒃᑕᕐᕕᖕᒧᑦ ᓴᓂᑦᑎᐊᖓᓃᑦᑐᒧᑦ ᓴᕕᕋᔭᒃᓴᓕᐅᕐᕕᐅᑉ. ᐅᔭᕋᕐᓗᑯᐃᑦ ᒍᓗᖏᑦ ᐱᔭᖅᑕᐅᓯᒪᔪᑦ (ᐱᑕᖅᑲᓗᐊᕈᓐᓃᖅᑐᑦ) ᑲᑎᖅᓱᖅᑕᐅᓂᐊᕐᒪᑕ ᓴᓂᑦᑎᐊᖓᓂ ᐳᐊᓇᔭᕐᕕᐅᔫᑉ. ᑕᒪᐃᑕ ᐃᒪᕐᓗᑯᐃᑦ ᐊᑐᖅᑕᐅᔪᑦ ᐅᔭᕋᖕᓂᐊᖅᑐᓄᑦ ᐅᐊᕈᑎᒋᔭᐅᔭᕕᓃᓪᓗ ᓴᓗᒻᒪᒃᓴᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᐊᓂᑕᐅᓚᐅᖏᓐᓂᖏᓐᓂ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᑉ ᐃᒪᖓ ᓴᓂᑦᑎᐊᖓᓂ ᒪᕋᕐᓗᑰᓕᕐᑯᓇᒍ ᓯᓕ ᐃᖅᑲᓗᖅᑲᐅᕐᒪᑕ ᑕᓯᒐᓚᖏᑦ ᑖᒪᓂ. ᐊᓯᖏᓪᓕ ᓴᓇᕕᐅᓂᐊᖅᑐᑦ ᒎᓯᒥ ᐅᑯᐊᖑᓚᖓᔪᑦ ᓄᓇᓕᕋᓛᓕᐅᕐᓗᑎᒃ ᓴᓇᔨᓄᑦ, ᒥᑦᑕᕐᕕᓕᐅᕐᓗᑎᒃ, ᐋᖅᑭᐅᒪᑎᑦᑎᔪᑎᓂᒃ ᓴᓇᕕᓕᐅᕐᓗᑎᒃ, ᓯᕐᓗᐊᒃᑯᕕᓕᐅᕐᓗᑎᒃᓗ, ᓄᓇᒃᑰᕐᓕᕆᕝᕕᓕᐅᕐᓗᑎᒃ ᓴᓇᕕᖕᒥᒃ ᐊᒻᒪᓗ ᐅᕐᓱᐊᓗᖅᑲᐅᑎᓄᑦ ᖃᑦᑕᐅᔭᖅᔭᐊᓄᑦ ᐃᓂᒃᓴᓕᐅᕐᓗᑎᒃ (ᓄᓇᖑᐊᖅ 3).

ᔪᐊᔨᒥ ᓴᓇᕝᕕᒃ - ᔪᐊᔨᒥ ᐱᖁᑎᖓᑦ ᐃᒻᒪᖄ 50-ᑭᓛᒥᑐᒥᒃ ᐅᖓᓯᖕᓂᖅᑲᖅᑐᖅ ᒍᓯᒥ ᓴᓇᕝᕕᐊᓂᑦ. ᐱᖓᓱᓂᒃᑕᐅᖅ ᓇᖅᓴᓕᐅᕐᕕᐅᓂᐊᕐᒥᔪᖅ ᐅᔭᕋᖕᓂᐊᖅᑕᐅᓗᓂ ᓄᓇᖓ ᔪᐊᔨᒥ ᓄᓇᕐᑯᑎᐊᓂ, ᑕᐃᔭᐅᔪᓂᒃ Lone Cow Pond North, ᓄᓇᖓ 1 ᐊᒻᒪᓗ ᓄᓇᖓ 2. ᑕᒪᐃᑕ ᓴᕕᕋᔭᒃᓴᐃᑦ ᑖᖓᑦ ᐱᔭᖅᑕᐅᔪᑦ ᑲᑎᖅᓱᖅᑕᐅᓂᐊᕐᒥᔪᑦ ᐊᐅᔭᒃᑯᑦ ᐊᒻᒪᓗ ᐅᑭᐅᒃᑯᑦ ᓯᑯᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕐᓗᑎᒃ ᐅᓯᑲᖅᑲᖅᑕᐅᓂᐊᕐᒪᑕ ᑖᖓ ᒍᓯᒥ ᓴᕕᕋᔭᒃᓴᓕᐅᕐᕕᐊᓄᑦ. ᔪᐊᔨᒥ ᑕᖕᒫᖅᓯᒪᔪᑦ ᓄᓇᓕᖓ ᐃᓗᓕᖅᑲᖅᑐᖅ ᐅᑯᓂᖓ ᓴᓇᔨᓄᑦ ᐃᒡᓗᐃᑦ, ᒥᑦᑕᕐᕕᐊ, ᓴᓇᕕᐊ, ᓯᕐᓗᐊᖅᑲᕐᕕᐊᓗ, ᓄᓇᒃᑰᕐᓕᕆᕕᐊ ᓴᓇᕕᒃ ᐅᕐᓱᐊᓗᖅᑲᐅᑎᓄᓪᓗ ᖃᑦᑕᐅᔭᖅᔭᐊᖅᑲᖅᕕᐊ (ᓄᓇᖑᐊᖅ 4).

ᓯᑦᔭᒥ ᓂᐅᕋᐃᕝᕕᒃ - ᓯᑦᔭᒥ ᓂᐅᕋᐃᕕᒃᓴᖅ ᐊᑐᖅᑕᐅᖃᑦᑕᓚᖓᔪᑦ ᐊᐅᔭᒃᑯᑦ ᐅᒥᐊᕐᔪᐊᓄᑦ ᓯᑯᖃᖕᓂᖏᓐᖓᑦ ᑎᑭᑕᐅᖃᑦᑕᕐᓂᐊᕐᒪᑕ ᐅᓯᔪᑦ ᓱᓇᒃᑯᑖᒃᓴᖏᓐᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖏᓐᓄᑦ. ᑐᓚᒃᑕᕐᕕᓕᐅᕐᓂᐊᖅᑐᑦ ᐃᑳᕕᓕᐅᕐᓗᑎᒃ ᐅᒥᐊᕐᔪᐊᓄᑦ ᓯᑲᐅᕈᓗᖕᓄᓪᓗ ᓂᐅᕋᐃᕕᒃᓴᓂᒃ ᐊᒻᒪᓗ ᐃᓕᐅᖅᑲᐃᕕᒃᓴᓂᒃ ᐃᖅᓯᕙᔪᐊᓂᒃ ᓴᓇᖅᑯᑎᖅᔪᐊᓂᓗ ᑕᒪᐅᖓ ᓯᑦᔭᖓᓄᑦ ᓂᐅᕋᐃᖅᑲᑦᑕᕐᓂᐊᒪᖅᑕ ᐅᓯᑲᖅᑲᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖏᓐᓄᑦ ᒎᓯᒥ ᔪᐊᔨᒥᓗ ᐅᑭᐅᖑᓕᖅᑎᓪᓗᒍ ᓯᑯᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕐᓗᑎᒃ. ᐅᓯᑲᖅᑲᖅᑕᐅᑏᓪᓕ ᖃᑦᑕᐅᔭᖅᔭᐊᑦ ᐅᓯᑲᖅᑲᖅᑕᐅᑎᓗᑦ ᐅᒥᐊᕐᔪᐊᓗᑦ ᑕᑕᑎᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᑕᒪᓂ ᓯᑦᔭᖓᓂ ᐅᑭᐅᒃᑯᑦᑕᐅᖅ ᐊᖅᑯᑎᓕᐅᕐᓗᑎᒃ ᐅᓯᑲᖅᑕᐅᖅᑕᐅᖅᑕᕐᓂᐊᕐᒥᖓᑕ ᐅᔭᕋᖕᓂᐊᕐᕕᖏᓐᓄᑦ.ᒎᓯᒥ ᔪᐊᔨᒥᓗ ᑖᒪᓂᓗ ᓴᓇᔨᓄᑦ ᐃᒡᓗᖅᔪᐊᓕᐅᕐᓗᑎᒃ ᓄᓇᓕᕋᓛᓕᐅᕐᓂᐊᕐᒥᔪᑦ (ᓄᓇᖑᐊᖅ 5).

ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓄᑦ ᐊᖅᑯᓵᖅᑕᐅᔪᑦ - ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᖅᑲᑦᑕᕐᓂᐊᖅᑐᑦ ᐅᓯᑲᖅᑲᕈᑕᐅᓂᐊᖅᑐᓂᒃ ᓴᓇᕕᐅᔪᓄᑦ. ᐊᖅᑯᑎᓕᐅᕐᓗᑎᒃ ᐊᒃᑯᓐᓂᖓᒍᑦ ᒎᓯᒥ ᔪᐊᔨᒥᓗ ᓴᓇᕕᖏᓐᓂᑦ ᐊᒻᒪᓗ ᓯᑦᔭᒧᑦ ᐅᒥᐊᕐᔪᐊᓄᑦ ᑐᓚᒃᑕᕐᕕᖕᒧᑦ ᓂᐅᕋᐃᕕᐅᖅᑲᑦᑕᕐᓂᐊᖅᑐᒧᑦ ᐅᔭᕋᖕᓂᐊᕐᕕᓂ ᓱᓇᒃᑯᑖᒃᓴᖏᓐᓂᒃ. ᑲᓯᒃᓯᓗᑎᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᖅᑕᐅᖅᑲᑦᑕᖅᑐᑦ ᔭᓗᓇᐃᕗᒥᑦ ᓴᓇᕕᐅᔪᓄᑦ ᑎᐱᖅᒥ ᑕᓯᐊᓂ ᑲᓐᑐᐃᑐᒥᓗ ᑕᒪᑐᒪᓂ ᐊᑐᖅᑲᑦᑕᕐᓂᐊᖅᑐᑦ ᐅᓯᑲᖅᑕᐅᑎᒋᓗᑎᒃ (ᓄᓇᖑᐊᖅ 2).

ᑕᐃᒪᖓᓂᓕᒫᖅ ᓴᓇᓂᖏᓐᓂ, ᓴᐱᓇᒃᑯᑦ ᐸᕐᓇᐃᓯᒪᓚᖓᔪᑦ ᖃᓄᐃᓕᐅᕐᓂᐊᖅᑕᒥᓂᒃ ᐊᐅᓚᑕᐅᓂᓇᓂᐊᖅᑕᖏᓐᓂᓗ ᐊᖅᑭᒃᓱᐃᓯᒪᓗᑎᒃ ᓴᓇᕕᐅᔪᓂ ᐊᑦᑕᓇᖅᑐᖃᖅᑕᐃᓕᕐᑯᓗᒍ ᐊᕙᑎᖓᓄᑦ ᖃᓄᐃᖏᑦᑎᐊᕐᑯᓗᒍ. ᓴᐱᓇᒥ ᑕᐃᒪᖓᓂ ᓴᓇᕕᖕᖏᓐᓇ ᐱᖅᑯᓯᑐᖅᑲᖓᓄᑦ ᐅᑎᖅᑎᑦᑎᔭᓇᓯᐊᕐᓂᐊᖅᑐᑦ ᐅᔭᕋᖕᓂᐊᕐᕕᖓ ᒪᑐᐃᖓᓂᖓᓂ. ᓴᓇᕖᑦ ᐲᔭᖅᑕᐅᓂᐊᕐᒪᑕ ᐃᓱᓕᑉᐸᑦ ᐅᔭᕋᖕᓂᐊᕐᕕᖓ ᐊᑐᖅᑕᐅᔪᓐᓃᖅᐸᑕ. ᐅᔭᕋᖕᓂᐊᕐᕕᐅᓪᓗ ᐳᐊᓇᔭᖅᑕᐅᔪᑦ ᓇᖅᓴᓕᐊᕕᓃᑦ, ᐅᔭᕋᖅᓗᑯᓄᑦ ᐊᒃᑕᕐᕖᑦ, ᓴᓇᖅᑯᑎᕕᓂᖏᑦ ᐊᒃᑕᕐᕖᑦ ᐸᒥᐅᖑᓂᖅ ᑐᐊᐸᐃᑦ, ᑐᐊᐸᒃᑕᕐᕖᖕᒧ, ᐊᖅᑯᑎᓕᐅᕐᕕᖕᒧ ᐊᓯᖏᑦ ᓄᓇᒥ ᐊᓯᐅᔾᔨᕙᒃᑕᐅᔪᑦ ᐱᖅᑯᓯᑐᖃᕐᒥᓄᑦ ᐅᑎᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᓴᖅᑯᑎᕕᓃᑦ ᓯᕙᓂᖅᑎᑕᐅᓗᑎᒃ, ᐅᑎᖅᑎᑕᐅᓗᑎᒃ ᐱᖅᑯᓯᑐᖃᕐᒥᓄᑦ ᐊᑐᖅᑕᐅᔪᓐᓃᖅᐸᑕ. ᐊᕙᑎᖓ ᐅᔾᔨᖅᓱᖅᑕᐅᓂᐊᖅᑐᖅ ᒪᑐᐃᒪᓕᖅᑎᓪᓗᒍ ᐱᕝᕕᒃᓴᖅᑐᑦ.

ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᐃᓅᓯᖅᑲᕐᓂᐊᕐᒪᑦ 29-ᓂᒃ ᐅᑭᐅᓂᒃ. ᑕᒪᑐᒪᓂ ᓴᓇᔭᐅᓗᑎᒃ ᓴᓇᖕᕕᒃᓴᐃᑦ, ᐅᔭᕋᓐᓂᐊᕕᐅᓕᕐᓗᓂ ᓴᕕᕋᔭᒃᓴᓂᒃ, ᐱᐊᓂᒃᐸᑕ ᑭᖑᓂᖓᒍᑦ ᓄᖅᑲᖅᑎᑕᐅᓕᕐᓗᑎᒃ ᐊᒻᒪᓗ ᒪᑐᔭᐅᓗᑎᒃ ᐅᔭᕋᓐᓂᕐᕕᐅᔪᑦ, ᐊᒻᒪᓗ ᑭᖑᓂᖓᒍᑦ ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐊᕙᑎᓕᓇᔪᑎᓂᒃ ᐅᑯᓇᓂ.

- ᓴᓇᕕᒃᓴᒥᒃ ᐸᕐᓇᐃᔪᑦ: 2 ᐅᑭᐅᑦ
- ᓴᓇᕕᒃᓴᖅ ᓴᓇᔭᐅᔪᖅ 2 ᐅᑭᐅᑦ
- ᐊᐅᓚᑕᐅᓗᓂ 10 ᐅᑭᐅᑦ
- ᐅᑎᖅᑎᑕᐅᓗᓂ ᒪᑐᔭᐅᓗᓂᓗ: 10 ᐅᑭᐅᑦ
- ᑭᖑᓂᖓᒍᑦ ᐅᔾᔨᖅᓱᖅᑕᐅᓗᓂ: 5 ᐅᑭᐅᑦ

ᐊᓯᖕᒫᖓᒍᑦ ᖃᐅᔨᓴᕈᑕᐅᔪᑦ

ᐊᓯᖕᒫᖓᒍᑦ ᖃᐅᔨᓴᕈᑕᐅᔪᖅᑲᓚᖓᖕᒥᔪᖅ ᓴᓇᕕᐅᔪᒪᔪᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ ᕿᒥᕈᔭᐅᒋᐊᖅᑲᕐᒪᑕ ᐅᑯᓂᖓ ᐊᑐᐊᒐᖅᑲᕐᓗᑎᒃ: ᓴᓇᔭᐅᔪᓐᓇᖅᐸᑕ, ᐊᑭᖏᑦ, ᖃᓄᑎᒋ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕐᓂᐊᓇᐊᖏᑦ ᐊᕙᑎᖓᓄᑦ; ᐊᒻᒪᓗ ᐃᓯᓕᓕᐸᑕ ᐋᕐᑭᒋᐊᖅᑕᐅᔪᓐᓇᖅᐸᑕ ᐱᖅᑯᓯᑐᖅᑲᖏᓐᓄᑦ ᐅᑎᖅᑎᑕᐅᓂᐊᕐᒪᑕ ᐃᓱᒪᒋᓪᓗᒋᑦ. ᐃᓚᐅᖅᑕᐅᔪᑏᑦ, ᐅᖃᓪᓚᑲᑕᒍᑕᐅᔪᑏᑦ ᐱᖅᑯᓯᑐᖅᑲᒃᑯᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᐃᓱᒪᒋᓗᒋᑦ ᑕᒪᒃᑯᐊ ᐃᓚᐅᑎᑕᐅᔪᓐᓇᓇᐊᖏᑦ ᖃᓄᖅᑑᕈᑕᐅᔪᓐᓇᕐᓂᐊᕐᒥᔪᑦ.

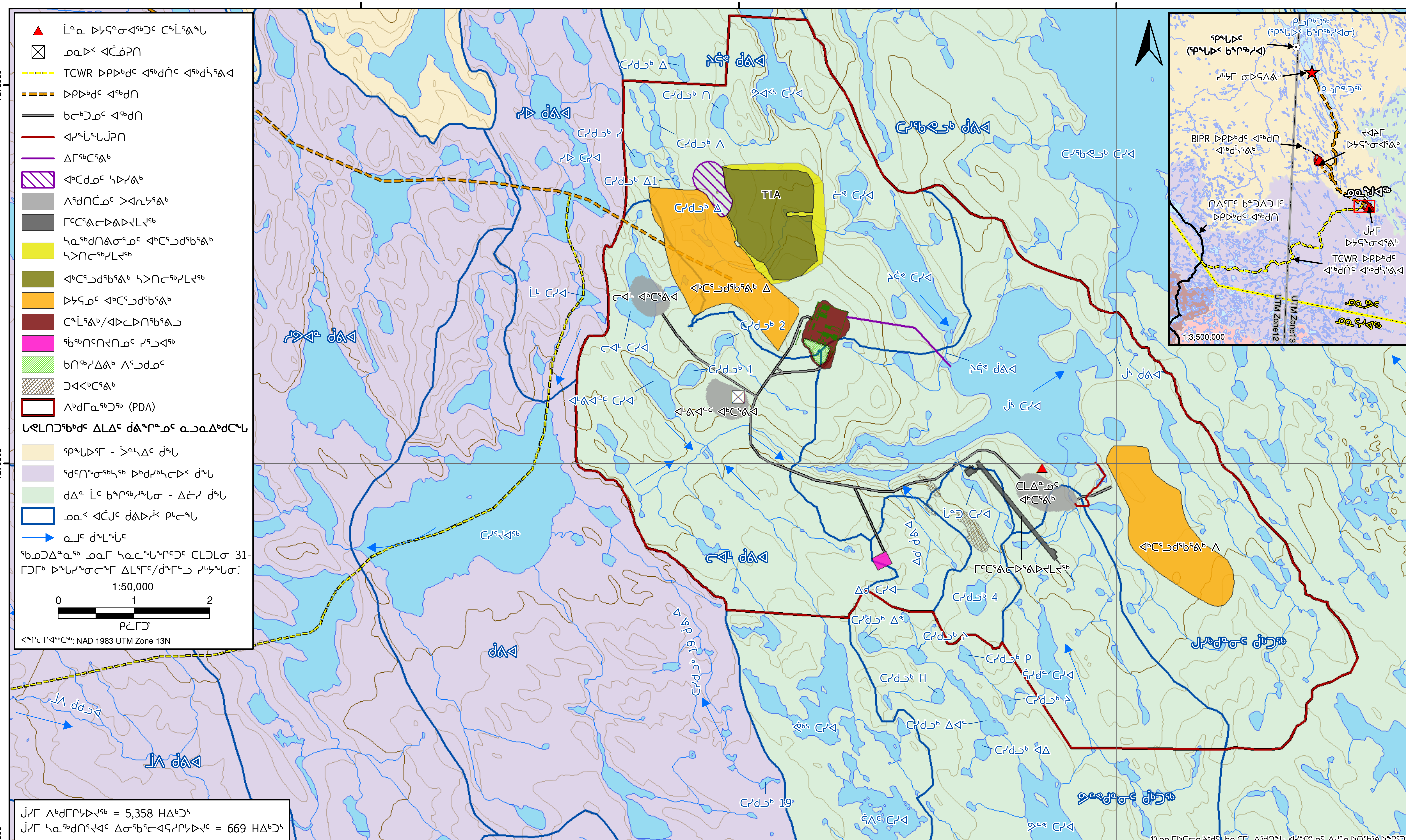
ᐅᖃᓪᓚᑲᑕᒍᑕᐅᔪᑦ ᐃᓚᐅᖅᑕᐅᔪᓪᓗ

ᒫᓐᓇᒧᑦ ᑎᑭᓯᒍ ᐊᒃᓯᐊᓗᒃ ᐅᖃᓪᓚᑲᑕᒍᑕᐅᓯᒪᓕᕐᒪᑦ ᑕᒫᓂ ᐃᓚᐅᖅᑕᐅᓂᐊᖅᑐᓄᑦ ᑲᑎᒪᔪᑕᐅᓪᓗᓂ ᓄᓇᓕᖕᓂ ᐊᒻᒪᓗ ᑎᒥᖁᑎᒋᔭᐅᔪᓂᒃ ᑲᑎᒪᖅᑲᑎᖅᑲᖅᑲᑦᑕᖅᓯᑎᒃ ᐃᓚᐅᔪᒪᔪᓂᒃ ᓴᓇᕕᐅᓂᐊᖅᑐᒥ. ᐊᖅᑯᑎᖅᑲᖅᑐᒍᑦ ᐅᑯᓂᖓ ᓄᓇᓕᖕᓂ ᑲᑎᒪᖅᑲᑎᖅᑲᖅᐸᒃᓯᑕ, ᐱᒃᑯᒥᒍᓱᒃᑐᓂᒃ ᑕᒪᒃᑯᓂᖓ ᐊᒻᒪᓗ ᐃᓚᐅᖅᑕᐅᔪᓂᒃ ᓴᓇᕕᑦᑎᓐᓂ (ᕼᐊᒪᓚᖏᑦ, ᐃᓐᓇᕐᓂᒃ, ᐊᖑᓇᓱᒃᑏᑦ ᑲᑐᔾᔨᖅᑲᑎᒌᖏᓐᓂᒃ, ᒪᒃᑯᒃᑐᓂᒃ), ᑲᑎᒪᖅᑲᑎᒋᖅᑲᑦᑕᖅᑕᕗᑦ ᓄᓇᓕᖕᒥᐅᑦ ᐅᖅᑲᐅᔪᐃᔾᔨᖏᑦ ᐃᖅᑲᓗᒃᑑᑦᑎᐊᒥ ᖁᖅᓗᖅᑐᒥᓗ, ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑲᑎᒌᖏᑦ, ᓄᓇᕗᑦ ᓄᓇᖁᐊᓪᓗ ᒐᕙᒪᖏᑦ ᐊᒻᒪᓗ ᒐᕙᒪᑎᑐᖅᑲᒃᑯᑦ ᑎᒥᖁᑎᖏᑦ ᑕᒪᒃᑯᓂᖓ ᑲᒪᔩᐅᔪᑦ. ᐊᔪᐃᓐᓇᕐᓂᖅᑳᓇᔭᕗᑦ ᓄᓇᓖᑦ ᕿᑎᕐᒥᐅᓂ ᒪᑯᐊ ᐃᖅᑲᓗᒃᑑᑦᑎᐊᒥᐅᑦ, ᖁᖅᓗᖅᑐᒥᐅᑦ, ᕿᖓᐅᕐᒥᐅᑦ, ᐅᒥᖕᒪᖅᑑᒥᐅᑦ, ᐅᕐᓱᖅᑑᒥᐅᑦ, ᑕᓗᕐᔪᐊᒥᐅᑦ, ᐊᒻᒪᓗ ᑰᒑᕐᔪᖕᒥᐅᑦ.

ᑕᒪᒃᑯᓂᖓ ᑐᓴᐅᒪᕕᒋᓕᖅᓯᒋᑦ ᐅᖃᓪᓚᑲᑕᒍᑎᑎᒍᑦ ᐃᓚᐅᖅᑕᐅᕕᒋᓕᖅᑐᒋᑦᑐ ᓄᓇᓕᖏᓐᓂ ᑲᑎᒪᕕᖕᓂ ᐃᑲᔪᖅᓯᒪᖕᒪᑕ ᓴᐱᓇᒃᑯᑦ ᐅᔭᕋᓐᓂᐊᖅᑎᖏᓐᓄᑦ ᓇᓗᓇᐃᔭᐃᓇᓱᐊᖅᑎᓪᓗᒋᑦ ᐃᓯᓛᓗᒋᔭᐅᔪᓂᒃ ᑭᐅᔭᐅᖁᔭᖏᓐᓂᒃ ᐅᓂᒃᑳᓕᐅᖅᓯᒪᖕᓂᖓᓄᑦ ᑖᓱᒥᖓ Draft EIS-ᒥᒃ. ᓴᐱᓇᒃᑯᑦ ᑕᐃᒪᖓᓂᑦ ᑲᔪᓯᑎᑦᑏᓐᓇᓚᖓᔪᑦ ᓄᓇᓕᖕᓄᑦ ᐅᖃᓪᓚᑲᑕᒍᑕᐅᔪᑎᓂᒃ ᐃᓚᐅᖅᑕᐅᔪᑎᓂᒃ ᐊᕙᑎᓕᓇᔪᑏᑦ ᖃᐅᔨᓴᖅᑕᐅᑎᓪᓗᒋᑦ ᐃᓚᐅᕕᒋᔪᓐᓇᖅᑕᖏᓐᓂᒃ ᖃᐅᔨᒪᑎᑕᐅᑎᐊᕐᓂᐊᕐᒪᑕ ᑕᒪᓐᓇ ᐊᕙᑎᖓ ᕿᒥᕈᔭᐅᓂᖓᓂ ᐊᒻᒪᓗ ᐃᓅᓯᓕᒫᖓᓂ ᓴᓇᕕᐅᓂᐊᖅᑑᑉ.

ᐱᖅᑯᓯᑐᖅᑲᖅᒥᑎᒍᑦ ᖃᐅᔨᒪᔭᑐᖅᑲᖏᑦ

ᓴᐱᓇᒃᑯᑦ ᐃᓕᑕᖅᓯᓯᒪᖕᒪᑕ ᑕᒫᓂᖅᒥᐅᑕᑐᖅᑲᐅᓂᖅᒥᓄᑦ ᐱᖅᑯᓯᑐᖅᑲᖅᒥᑎᒍᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐱᒻᒪᓇᐅᑎᑦᑎᓪᓗᑎᒃ ᓄᓇᓕᖕᒥᐅᓄᑦ ᓯᕗᕋᐅᑎᖏᓐᓂᑦ ᐊᑐᖅᑲᑦᑕᖅᑕᒥᓂᒃ ᑕᒫᓂ. ᐱᖅᑯᓯᑐᖅᑲᒃᑯᑦ ᖃᐅᔨᒪᓂᖏᑦ ᐃᓄᐃᑦ, ᐃᒻᒥᒃᑰᖅᓯᑎᑦ ᓄᑖᒥᒃ ᖃᐅᔨᓭᓪᓗᒍᑕᐅᔪᓇᖅᒪᑕ, ᓄᑖᓂᒃ ᑎᑎᕋᖅᑕᐅᓯᒪᖏᑦᑐᓂᒃ ᖃᐅᔨᒪᔭᐅᔪᑐᖅᑲᖅᓂᒃ ᑕᒫᓂᖅᒥᐅᓄᑦ, ᐃᒡᓗᐊᒍᖕᒫᖅ ᑕᐅᑦᑐᒐᖅᑲᖅᒪᑕ, ᑐᑭᖅᑲᖅᑎᑦᑎᖕᒪᑕ ᓄᓇᒥᓂ ᐊᑐᖅᓂᖅᑲᖅᑎᑕᒥᓂᒃ ᐊᓯᖏᓐᓄᑦ ᐃᓯᒪᒋᔭᐅᒋᐊᓕᖕᓂᒃ.

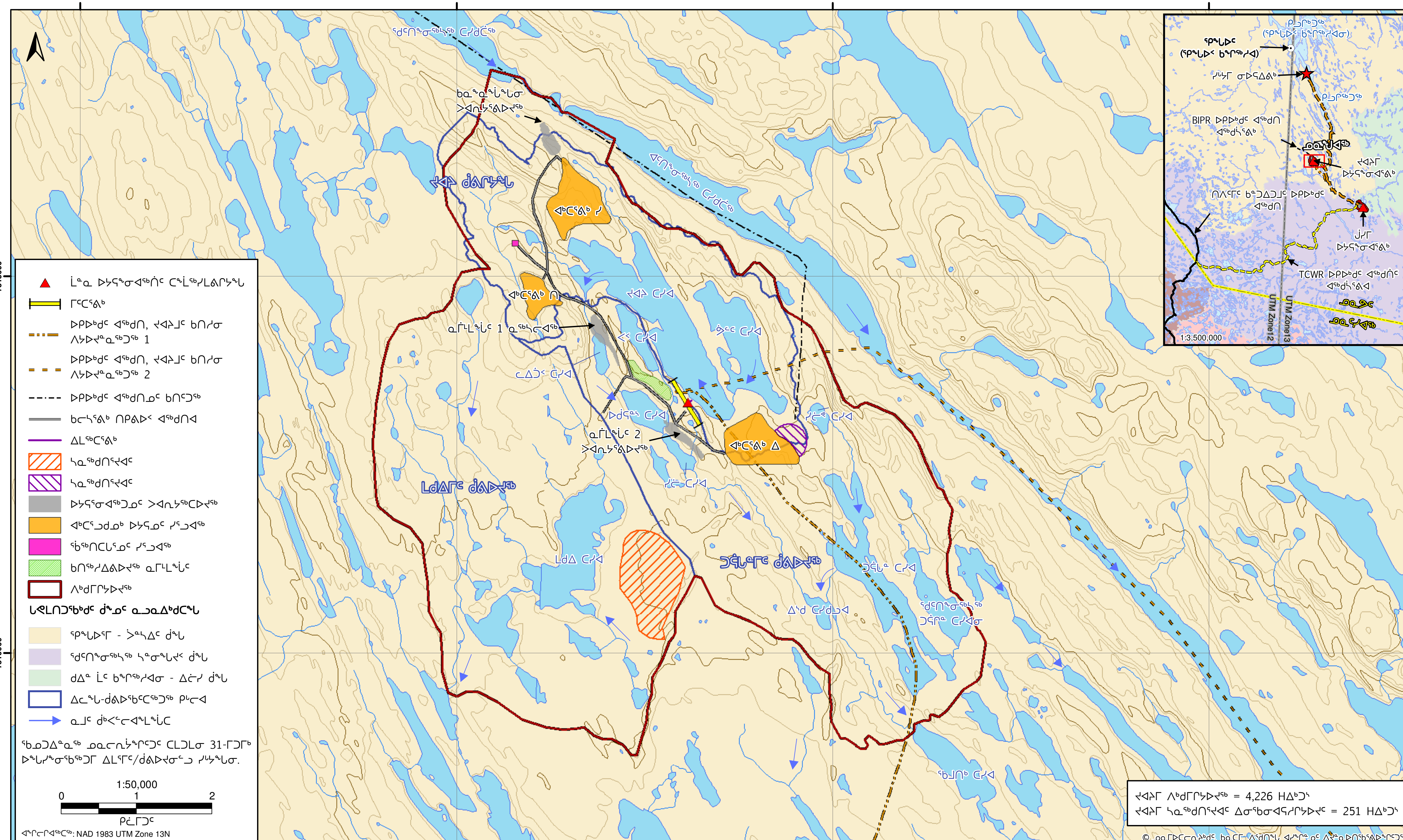


Sabina GOLD & SILVER CORP.

Rescan an ERM company

ᓴᓇᕕᐅᔪᖅ ᐊᒻᒪᓗ
ᐱᕐᑯᑎᕐᔪᐊᖅᑲᕐᕕᒃ -
ᒍᓯᒥ ᐅᔾᕋᙱᓂᐊᖅᑐᓄᑦ

ᓄᓇᙳᐊᖅ 3



ᓄᓇᙳᐊᖅ 4

ᓴᓇᕕᐊᔪᖅ ᐊᒻᒪᓗ ᐱᖁᑎᖏᐊᖃᖅᑲᖅ - ᒍᓯᒥ ᐅᔭᕋᖕᓂᐊᖅᑐᓄᑦ

Sabina GOLD & SILVER CORP.

Rescan an ERM company

ᐅᔾᔨᖅᓱᑦᑎᐊᕐᓱᐊᖅᓱᒋᑦ ᐊᑐᕐᓂᖅᑲᕐᓗᐊᕐᒪᖔᑕ ᐱᖅᑯᓱᑐᕐᑲᒃᑯᑦ ᖃᐅᔨᒪᓂᓇᔭᐅᔪᑦ ᐅᕙᑦᑎᓐᓄᑦ ᓴᓇᕙᑦᑎᓐᓄᑦ ᐊᑐᐊᒐᓇᔭᐅᔪᓐᓇᕐᑯᓪᓗᒋᑦ ᐃᑲᔪᖅᑎᖃᓚᐅᖅᑐᒍᑦ ᑕᑎᒋᓪᓗᒋᑦ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖕᒐᓂᒃ ᑲᑎᖅᓯᐃᓇᓯᐊᖅᑎᓪᓗᑕ ᖃᐅᔨᓴᕈᑕᐅᔪᓂᒃ ᐅᓂᒃᑲᓕᐊᕆᔭᐅᓂᐊᖅᑐᓂᒃ. ᐊᒻᒪᓗ ᐅᓂᒃᑲᓕᐅᖅᓯᒪᔪᑐᕐᑲᕐᓂᒃ ᐊᑐᓚᐅᖅᑐᒍᑦ ᓄᓇᓯᐊᒥᐅᓂ ᐊᐱᖅᓱᑲᑕᒃᓱᑕ. ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᕐᑲᖕᒋᑦ ᐊᑐᐊᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᐅᒃᑯᑐᐃᓐᓇᖅ ᓴᓇᕙᑦᑎᓐᓂ ᐱᖅᑯᓯᒃᑯᒥᓇᕋᖕᒐᑕ ᐋᕿᒃᓱᖅᑕᐅᕙᓪᓚᐊᓂᖕᒐᓂ ᐊᒻᒪᓗ ᓴᓇᖅᑯᑏᑦ ᐱᖅᑯᓯᓇᓂᐊᕐᓂᖕᒋᓐᓄᑦ.

<u>ᓇᐃᓪᓚᒋᐊᕐᓗᒍ ᐅᓂᒃᑳᖅ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᖅᑐᓄᑦ</u>

ᐊᑐᕐᓂᕐᑲᖅᑎᑕᐅᔪᑦ ᓄᓇᐃᑦ ᑕᒫᓂᕐᒥᐅᓂ (VECs) ᐊᒻᒪᓗ ᐊᑐᕐᓂᕐᑲᖅᑎᑕᐅᔪᑦ ᐃᓅᔪᑎᖏᑎᒍᑦ-ᑮᓇᐅᔭᒃᓴᐅᑎᖏᑎᒍᓪᓗ ᑕᒫᓂ (VSECs) ᑕᒪᔾᔭ ᐊᒃᓱᕉᑕᐅᕐᑲᑦᑕᕐᒪᑕ ᓇᒥᑐᐃᓐᓇᖅ ᓄᓇᓚᐅᕐᑲᑎᖅᑳᐅᔪᓂ, ᓄᓇᓚᖕᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐃᓅᕐᑲᑎᖅᑰᓂ ᑕᒪᐃᓐᓂ. ᐊᑐᕐᓂᕐᑲᓇᐊᖏᓐᓂᒃ ᐆᒃᑐᕋᐅᑕᐅᓚᐅᕐᒪᑕ ᐃᒃᐱᖕᓇᖕᓂᕐᑲᕐᓂᐊᓂᕋᖅᑕᐅᔪᑦ ᓴᓇᕙᐅᓚᖅᐸᑦ ᑕᒫᓂ ᕿᒥᕈᔭᐅᓚᐅᕐᒪᑕ ᐃᓱᒪᒋᓪᓗᒋᑦ ᖃᓄᑎᒋ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᕐᓂᐊᓇᐊᖏᑦ ᐆᒃᑐᕋᖅᑕᐅᓪᓗᑎᒃ ᖃᓄᑎᒋᓗ ᐊᑯᓂᐅᑎᒋᔪᒥᒃ ᑕᒫᓂᕐᒥᐅᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᕐᓂᐊᓇᐊᖏᑦ (ᓄᓇᓚᖕᓂ), ᐊᖏᓂᖅᓴᒥᓗ (ᕿᑎᕐᒥᐅᓂ) ᐊᒻᒪᓗ ᐊᖏᓂᖅᓴᒃᑲᓐᓂᕐᒥ ᓄᓇᕗᒥᐅᓚᒫᓂ ᐊᓯᖏᓐᓂᓗ ᓄᓇᓂ.

ᑕᒪᒃᑯᐊᓚᒫᖅ ᕿᒥᕈᔭᐅᑎᓪᓗᒋᑦ ᐊᒃᑐᐊᓂᕐᑲᕐᕕᒋᓂᐊᖅᑕᕗᑦ ᓴᓇᕙᐅᓚᖅᐸᑕ ᐅᔭᕋᖕᓂᐊᕐᕚᑦ ᐊᔾᔨᒌᖏᑦᑐᓂ VECs-ᓂ ᐊᒻᒪᓗ VSECs-ᓂ ᓇᓗᓇᐃᔭᐃᓚᐅᖅᑐᒍᑦ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐊᒃᑐᐊᓂᕐᑲᕐᓂᐊᖅᑐᓂᒃ ᑕᒫᓂᕐᒥᐅᓄᑦ ᐆᒪᔪᖏᓐᓄᓪᓗ ᐊᒻᒪᓗ ᕿᒥᕈᔭᐅᑦᑎᐊᖅᓱᑎᒃ ᓱᓚᑐᔪᓄᑦ ᖃᐅᔨᒪᔭᑐᕐᑲᖏᑦ ᐊᑐᐊᒐᓚᒡᓗᒋᑦ ᓇᓚᐅᑦᑖᕈᑕᐅᓚᐅᖅᑐᑦ ᑕᒫᓂᕐᒥᐅᓄᑦ ᓯᕗᓂᑦᑎᓐᓂ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓂᐊᖅᑐᓄᑦ, ᐊᔪᕐᓇᕐᒪᑦ ᑕᐃᒪᓐᓇ ᑭᓯᐊᓂᐅᒃᐸᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᓗᑎᒃ ᐊᒃᓱᓗᐊᕗᔭᐃᒃᑯᑎᒃᓴᖏᓐᓂᒃ ᐋᕿᒃᓱᐃᓚᐅᕐᒥᔪᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᕐᓂᐊᖅᑐᓄᑦ.

ᐊᑐᕐᓂᕐᑲᖅᑐᑦ ᓄᓇᐃᑦ ᑕᒫᓂᕐᒥᐅᓄᑦ

ᓯᓚᓐᓂᐊᕈᑏᑦ

ᓯᓚᐅᑉ ᐊᓂᖅᑎᓇᑦᑎᐊᕐᓇᕐᓂᖕᒐ - ᓴᓇᕙᐅᔪᓂ ᐊᐅᓚᐅᑏᑦ ᐳᔪᐊᕿᕐᑲᑦᑕᕐᒪᑕ ᑕᐃᒪᐃᓐᓂᖕᒐᓄᑦ ᑎᑦᑕᐅᕙᐅᔪᓄᑦ ᑲᑦᑕᖕᓂᕐᓗᑯᕐᑲᐅᕐᑲᑦᑕᕐᒪᑕ ᐳᔪᐊᕿᔪᓂᑦ ᐊᒻᒪᓗ ᐃᑭᑕᐅᔪᑦ ᐃᓚᖕᒋᑦ ᓱᕈᔪᐃᔪᓐᓇᖅᑐᕐᑲᐅᖅᓱᑎᒃ ᐋᓱᑦᑲᖅᐸᑕ ᑲᑦᑕᖕᓂᕐᓗᑯᖕᒋᑦ. ᐋᒃᓲᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐃᓚᐅᖅᑲᐃᓂᐊᖅᑐᑦ ᐳᔪᐊᕿᔪᓂ ᓴᓇᖅᑯᑎᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐱᖅᓱᑦᑎᐊᒪᓇᕐᑲᑦᑕᓗᑎᒃ ᐊᓂᖅᑎᓇᕙᐅᔪᓂ ᐃᓱᒪᒋᓪᓗᒋᑦ. ᐃᑯᒪᖅᑯᑎᓂᓗ ᐊᑐᓗᐊᖅᑕᐃᓚᒪᕐᑯᓪᓗᒋᑦ, ᐅᕐᓱᐊᓗᒃᑐᓗᐊᖅᑕᐃᓚᒪᕐᑯᓪᓗᒋᑦ, ᐃᒪᕐᓂᓗ ᐊᓱᖏᓐᓂᓗ ᐳᔪᐊᕿᓗᐊᔭᐃᒃᑯᑎᕐᑲᐅᖅᐸᓗᑎᒃ ᐊᖅᑯᑎᓂ ᕿᑯᕐᑲᖏᑦᑐᓂ, ᐅᓯᑲᖅᑕᖅᑕᐅᔪᓂ ᐊᒻᒪᓗ ᓴᓇᖅᑯᑎᓂ ᐅᔭᖅᑲᓂᒃ ᓯᕐᑲᓪᓕᑎᑦᑎᕝᕕᖕᓂ, ᐊᒻᒪᓗ ᐊᑐᕐᑲᑦᑕᕐᓗᑎᒃ ᐳᔪᐊᕿᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᕿᑯᕐᑲᖕᒋᑦᑐᓂ, ᐅᓯᑲᖅᑕᕝᕕᓂ ᐊᒻᒪᓗ ᓴᓇᖅᑯᑎᓂ ᐅᔭᖅᑲᓂᒃ ᓯᕐᑲᓪᓕᑎᑦᑎᕝᕕᖕᒥ, ᐊᒻᒪᓗ ᐊᑐᕐᑲᑦᑕᕐᓗᑎᒃ ᐳᔪᐊᕿᓗᐊᔭᐃᒃᑯᑎᓂᒃ, ᑕᒪᐃᑎᒍᑦ ᓯᓚᒧᑦ ᐱᖅᑯᓱᑐᕐᑲᖕᒐᓄᑦ ᐅᑎᕈᓐᓇᕈᑕᐅᓂᐊᖅᑐᑦ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᕐᑲᑦᑕᕐᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐋᒃᓲᓗᐊᔭᐃᒃᑯᑏᑦ ᐊᑐᖅᑕᐅᑎᓪᓗᒋᑦ ᓱᕈᔪᐃᕐᑲᑦᑖᖕᒋᓪᓚᑕ ᓄᓇᒥᒃ ᓯᓚᒥᓗ. ᓯᕗᓂᖓᓂᐊᖅᑕᑦᑎᓐᓇᓗ ᐱᖏᖕᓇᖕᒋᓪᒥᔪᖅ ᐊᒥᐊᒃᑯᓂᐊᓇᐊᒃᓴᖕᒋᑦ ᑲᑎᓪᓗᒋᑦ ᓴᓇᕙᐅᔪᓂᑦ ᐱᔪᓂᒃ ᐊᓯᖏᓐᓂ ᓄᓇᕐᑲᖅᑐᓄᑦ ᓯᓚᖕᒐᓄᑦ.

ᓂᐹᕿᔪᑦ ᓴᔪᐱᓪᓗᒃᑐᓪᓗ - ᓴᓇᕙᐅᔪᓂ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᑎᓪᓗᒋᑦ ᓴᓇᓪᓗᑐᓕᖅᑎᓪᓗᒋᑦ ᓂᐹᕿᔪᕐᑲᐅᓲᖑᒪᑕ ᓴᓇᖅᑯᑎᖏᑦ ᐃᓚᖏᓪᓗ ᐊᓯᖏᓐᓄᑦ ᓴᔪᐱᓪᓗᒃᑕᓲᖑᓪᓗᑎᒃ ᖄᖅᑎᑦᑎᔪᕐᑲᖅᑎᓪᓗᒍ, ᐅᓂᐊᕈᑏᑦ ᑲᓕᒪᓂᒃ, ᖄᖅᑎᑦᑎᑲᑦᑐᑦ ᐅᔭᕋᖕᓂᐊᖅᓱᑎᒃ ᓄᓇᒃᑯᔪᕐᔪᐊᖏᓪᓗ ᕐᑲᖕᒪᑕᓲᓪᓗ ᐊᐅᓪᓚᓪᓚᖅᑐᑦ ᒥᑦᑕᖅᑐᓪᓗ. ᐋᒃᓲᓗᐊᔭᐃᒃᑯᑎᓕᐅᖅᑕᐅᓪᓗᑎᒃ ᐊᒻᒪᓗ ᓴᓇᕚᑦ ᐊᐅᓚᑕᐅᔪᑎᕐᑲᖅᓱᑎᒃ ᐋᒃᓲᓗᐊᔭᐃᒃᑯᑎᓂ ᐱᑦᑕᐅᓚᖕᒐᔪᑦ ᑕᒪᐃᓐᓂ ᓴᓇᕙᖕᓂ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᖅᑐᓄᑦ ᓂᐹᕿᔪᓄᑦ ᐊᐅᓪᓚᔾᔭᑲᓪᓚᕐᑲᑦᑕᖅᑐᓄᓪᓗ ᓴᓇᖅᑯᑎᓐᓂ ᐋᕿᒃᓱᐃᑎᐊᖅᓯᒪᓗᑎᒃ ᓂᐹᕿᓗᐊᔭᐃᒃᑯᑎᕐᑲᐅᕐᓗᑎᓗ, ᐱᓕᕆᑦᑕᐃᓕᒪᑎᑕᐅᕙᓗᑎᒃ ᐅᓐᓄᐊᒃᑯᑦ ᒪᑯᓇᓂ ᖄᖅᑎᑦᑎᑲᑦᑐᓂᒃ ᕐᑲᖕᒪᑕᓱᓂᓗ ᐊᐅᓪᓚᕐᑲᑦᑕᖅᑐᓂᒃ ᐅᓪᓗᒥ ᑭᓱᐊᓂ ᐱᕝᕙᒃᓴᖅᑎᑕᐅᓗᑎᒃ, ᐊᒻᒪᓗ ᓂᐹᕿᔪᑦ ᐃᓪᓗᒦᑎᑕᐅᓗᑎᒃ ᓴᐳᑎᖅᑎᑕᐅᓗᑎᓗ ᐃᓂᓕᐅᖅᑕᐅᓗᑎᒃ, ᓂᐹᕿᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐃᓕᐅᖅᑲᐃᕙᐅᓗᑎᒃ ᒪᑐᔭᐅᔪᓐᓇᖅᑐᓂ. ᑕᐃᒪᓐᓇ ᓴᓇᕙᓂ ᐱᓗᐊᔭᐃᒃᑯᑎᖅᑲᐅᖅᐸᑕ,

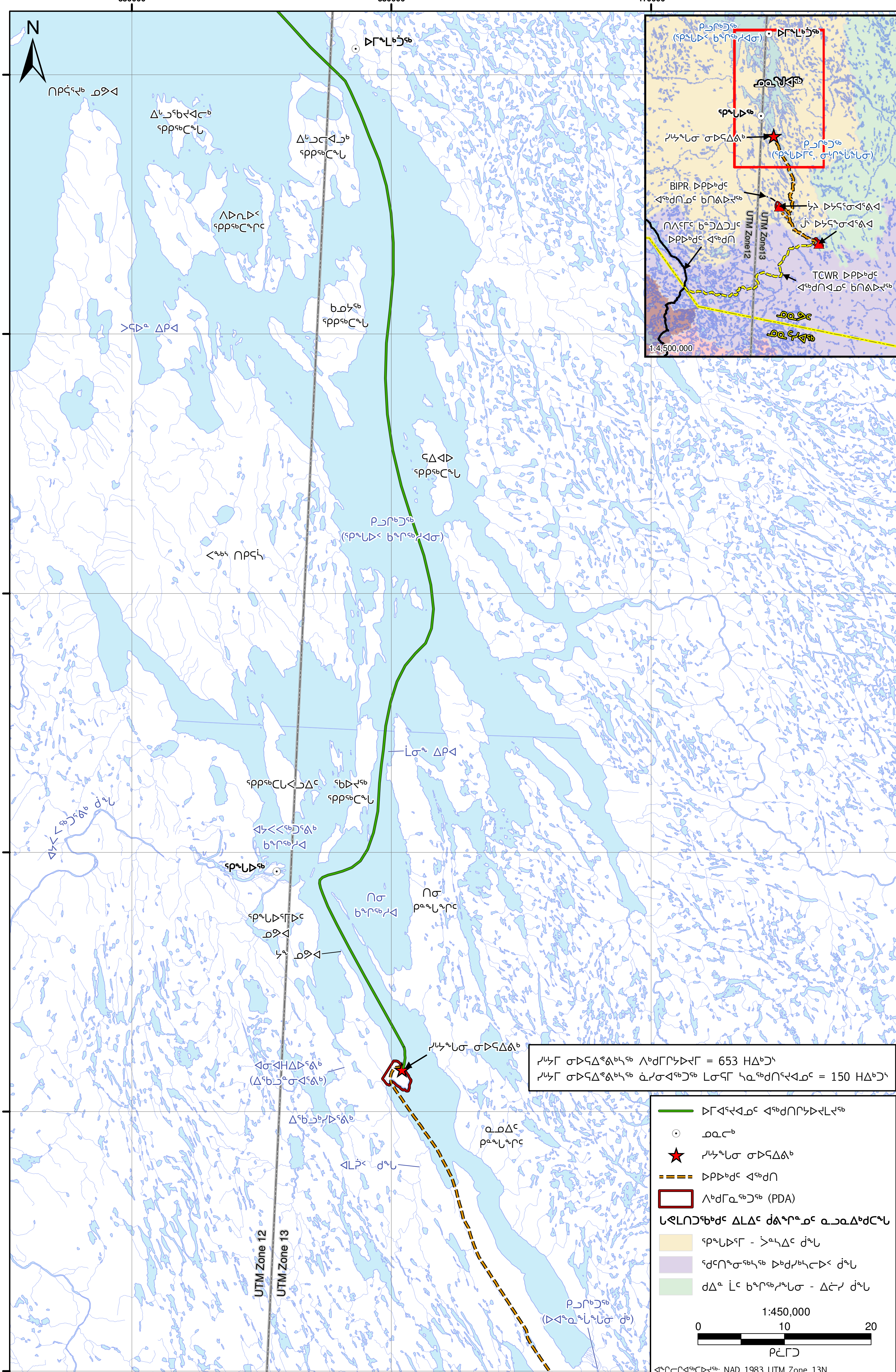
ᐃᒃᐱᖕᓇᕐᓂᕐᑲᓗᐊᔾᔫᖕᒋᑦᑐᑦ ᑕᒪᒃᑯᓇᖕᒐᑦ ᐊᒃᓰᓗᐊᖕᒍᔾᔫᖕᒋᑦᑐᖅ ᑲᑎᓪᓗᒋᓪᓗ ᐊᓯᖕᒋᓐᓄᑦ ᓄᓇᕐᑲᖅᑐᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᑳᔭᓇᑎᒃ ᓂᐹᕐᕿᔪᓂᑦ ᓴᔪᑲᓪᓚᒃᑐᓂᓪᓗ.

ᓄᓇᐅᑉ ᒪᓂᕋᖓᑕ ᐊᕙᑎᐊᓄᑦ

ᐱᕈᖅᑐᐃᑦ ᓄᓇᐃᓪᓗ ᑲᔾᔮᕐᓇᖅᑐᑦ - ᓴᓇᕕᐅᔪᒥ ᐅᔭᖓᓂᐊᕐᕕᖕᒥ ᒪᓂᖓᓂ ᐱᕈᖅᑐᑦ ᐊᓯᐅᔪᓐᓇᕐᒪᑕ ᓄᓇᖓᑕᓗ ᑲᔾᔮᕐᓇᕈᓐᓃᕐᓗᓂ. ᐊᒃᓰᓗᐊᖕᒍᔭᐃᒃᑯᑎᒃᓴᐃᑦ ᐊᐅᓚᑦᑎᔩᓪᓗ ᓴᓇᕕᖕᓂᒃ ᐋᕿᒃᓯᐃᓯᒪᓚᖕᒐᖕᒪᑕ ᑕᒪᒃᑯᓂᖕᒐ ᐃᓚᐅᑎᓪᓗᒍ ᐊᕙᑎᖓᓂ ᒪᓂᕋᐃᑦ ᓇᔪᖅᑕᖕᒋᑦ, ᐅᑭᐅᒃᑯᑦ ᓯᑯᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕐᑲᑦᑕᕐᓗᑎᒃ ᐊᒻᒪᓗ ᐊᒃᓰᓗᐊᖕᒍᔪᓐᓃᖅᑎᑕᐅᓗᑎᒃ ᐳᔭᐊᕿᕐᑲᑦᑕᖅᑐᑦ ᐊᔪᕐᓇᖕᒋᑉᐸᑦ. ᐃᒃᐱᖕᓇᕐᓂᕐᓂᐊᖅᑐᓪᓕ ᕐᑲᐅᔾᔭᕈᑕᐅᓕᕐᒥᔪᑦ, ᐃᓯᒪᓕᐅᕐᒪᑕ ᑕᒪᐃᓐᓂ ᓴᓇᕕᐅᓂᐊᖅᑐᓂ ᐱᕈᖅᑐᑦ ᐊᓯᐅᓂᐊᕐᒪᑕ. ᓯᓕᔪᒥᒃ, ᑕᒫᓂ ᐱᕈᖅᑐᕐᑲᐅᖅᑐᑦ/ᑳᔾᔮᕐᓇᕈᑎᕐᑲᖅᑐᑦ ᐊᓯᔾᔨᖅᑕᐅᔪᑦ ᐊᒃᓰᓗᐊᖕᒍᔾᔫᖕᒋᒻᒥᔪᑦ ᑕᒫᓂᑐᐊᖅ ᑭᓯᐊᓂ ᐅᔭᖓᓂᐊᖅᑕᐅᔪᒥ ᐱᓂᐊᕐᒪᑕ ᐃᓂᓪᓗᑐᐊᓂ ᓴᓇᕕᐅᔫᑉ. ᐊᒥᐊᒃᑯᓂᐊᓇᐊᖕᒋᓪᓕ ᐊᓯᖕᒋᓐᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᒐᔭᖅᑐᓂᒃ (ᐱᕈᖅᑐᓄᑦ) ᐊᒃᓯᓗᐊᖕᒍᔾᔫᖕᒋᒻᒥᔪᑦ. ᐊᓯᖕᒋᓐᓂᒍ ᓄᓇᕐᑲᖅᑐᓄᑦ ᐊᒃᑐᐊᓂᕐᑳᔭᓇᓂ ᐊᒃᓯᓗᐊᖕᒍᔾᔫᖕᒋᒻᒥᔪᖅ ᐊᒥᐊᒃᑯᕆᔭᐅᔪᓂᑦ ᓴᓇᕕᐅᔪᒥᑦ.

ᑐᒃᑐᐃᑦ - ᑐᒃᑐᐃᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᑕᒪᐅᖕᒐᕐᑲᑦᑕᖅᑐᑦ ᐱᖕᒐᓱᐃᓕᖕᒐᓪᓗᑎᒃ ᐊᒡᒍᖅᑕᐅᓯᒪᖕᒪᑕ: ᕿᖕᒐᐅᕐᒥᐅᑦ, ᑕᒪᐅᖕᒐᕐᑲᑦᑕᕐᒪᑕ ᓄᕐᓇᐊᓂᒃᓯᒪᓕᖅᓯᑎᒃ, ᐊᒻᒪᓗ ᐱᕗᓕᐅᓂᖓᖅᑕᐅᔪᑦ ᑐᒃᑐᐃᑦ (ᐊHᐃᐊᑦ), ᑕᒪᐅᖕᒐᕐᑲᑦᑕᕐᒥᔪᑦ ᐊᐅᔭᖅ ᐃᓯᓕᓕᖅᑎᓪᓗᒍ ᐅᑭᐊᒃᓴᓕᖅᑎᓪᓗᒍᓗ ᐊᒻᒪᓗ ᑕᓪᕕᓐᖑᓂᖓᖅᑕᐅᔪᑦ ᔭᓂᐊᓐᑯᓪᓗ (ᐃᓯᒫᓗᒋᔭᐅᓂᖓᖅᑕᐅᓪᓗᑎᒃ ᑖᒃᑯᐊ ᐅᕐᑲᐅᓯᐅᕐᑲᑦᑕᕐᒥᔪᑦ. ᓯᕘᕋᕐᑎᔭᐅᔪᑦ ᓇᔪᓚᓇᕐᑲᑦᑕᖅᑕᒥᓂᒃ ᐊᓯᐅᔨᑐᐃᓐᓇᓇᐊᕐᑲᕐᓂᖕᒋᑦ, ᐸᕝᕙᓴᒃᑕᐅᓗᐊᓕᕈᑎᒃ ᓂᐹᕐᕿᔪᓄᑦ, ᐊᓯᖕᒑᖕᒐᒍᑦ ᐃᖕᒋᕋᓕᑐᐃᓐᓇᓇᐊᕐᑲᕐᒪᑕ, ᑐᑭᒧᐊᖅᑐᒥᓗ ᑐᕐᑯᑕᐅᔭᕐᑲᕈᓐᓇᖅᓯᑎᒃ ᐋᓐᓂᖅᑕᐅᔭᕐᑲᕈᓐᓇᓕᓪᓗᑎᒃ, ᑐᑭᒧᐊᖕᒋᑦᑐᒧᑦ ᑐᕐᑯᑕᐅᔭᓐᓇᓕᓪᓗᑎᒃ, ᐅᐸᓯᒋᐊᔭᑕᖕᒋᓪᓗ, ᓴᓇᖅᑯᑎᕕᓂᕐᓄᑦ ᑐᕐᑯᓐᓇᖅᑐᕐᑲᖅᑎᓪᓗᒍ ᐃᓅᔪᓐᓃᕈᓐᓇᕐᒥᖕᒪᑕ ᐊᒻᒪᓗ ᓄᕐᓇᐅᖕᒋᓐᓂᖅᓴᐅᓕᕈᓐᓇᕐᒪᑕ ᓂᐹᕐᕿᓗᐊᖅᑐᓄᑦ ᐸᕝᕙᓴᖅᑕᐅᓕᕈᑎᒃ. ᐃᒃᐱᖕᓇᖅᑐᓄᑦ ᐊᒃᓰᓗᐊᖕᒍᓕᔭᐃᒃᑯᑎᓂᒃ ᐃᓕᐅᖅᑲᐃᓯᒪᓂᐊᖅᑐᑦ ᒪᑯᓂᖕᒐ: ᐃᓚᐅᑎᓪᓗᒋᑦ ᓴᓇᖅᑯᑎᓄᑦ ᐃᓂᕐᑲᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ, ᓂᐹᕐᕿᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ ᐊᒻᒪᓗ ᑐᕐᑯᓐᓇᖅᑐᓂᒃ ᓴᓇᖅᑯᑎᕐᑲᖅᑐᑦ ᐅᔾᔨᖅᓱᖅᑕᐅᑦᑎᐊᕐᓗᑎᒃ ᐊᑐᐊᒐᕐᑲᖅᑎᑕᐅᓗᑎᓗ ᐱᓗᐊᔫᖕᒋᒻᒪᑕ ᐆᒪᔪᓄᑦ, ᓱᕈᔭᐃᓇᔭᖅᑐᑦ ᐋᕿᒃᓱᖅᓯᒪᐅᕐᓗᑎᒃ ᐊᒃᓯᓗᐊᖕᒍᔭᐃᒃᑯᑎᓂᒃ ᐅᔾᔨᖅᓱᖅᑕᐅᔭᑎᕐᑲᐅᕐᓗᑎᓗ. ᐊᓯᖕᒋᓐᓂ ᓄᓇᕐᑲᖅᑐᓄᑦ ᐊᖅᑐᐊᓂᕐᑲᕐᓂᐊᓇᐊᖕᒋᑦ ᐃᓯᒫᓗᒋᔭᐅᓚᐅᕐᒥᖕᒪᑕ ᐸᕐᓇᐃᔭᑎᕐᑲᓚᖕᒐᖕᒥᔪᑦ ᐅᔾᔨᖅᓱᕈᑎᓂᒃ ᐊᒻᒪᓗ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᑐᐃᓐᓇᓇᐊᓃᑦ ᐊᓯᖕᒋᓐᓄᑦ ᓄᓇᕐᑲᖅᑐᓄᑦ ᐊᒻᒪᓗ ᐅᓄᖅᓯᒃᐸᑕ ᓴᓇᕕᐅᔪᑦ ᑲᑎᓪᓗᒋᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᓕᕈᓐᓇᖅᑐᑦ ᐊᒃᓰᓗᐊᖕᒍᔾᔫᖕᒋᓐᓂᕐᑲᖅᑕᓕᕐᒥᔪᑦ.

ᐊᒃᓴᐃᑦ - ᐊᒃᓴᐃᑦ ᒐᕙᒪᑎᑐᕐᑲᒃᑯᓐᓄᑦ ᑎᑎᕋᐅᓯᐅᓯᒪᖕᒪᑕ "ᐃᓯᒫᓗᒋᔭᐅᓕᕐᓂᖕᒋᓐᓂᒃ" ᐊᒻᒪᓗ ᓂᑲᓇᕐᓂᖓᖅᑕᐅᓕᖅᓯᑎᒃ ᓄᓇᕗᒥ ᓴᓇᕕᐅᓂᐊᖅᑐᒦᑦᑐᑦ ᐊᓯᐅᔨᓂᐊᕐᓴᓯᒋᔭᐅᖕᒪᑕ ᓄᓇᓂᒃ ᓇᔪᖅᑕᖅᑕᒥᓂᒃ, ᐸᕝᕙᓴᒃᑕᐅᕐᑲᑦᑕᕐᓗᑎᓗ ᓂᐹᕐᕿᔪᓄᑦ ᓴᓇᖅᑯᑎᓄᑦ ᑕᒫᓂ (ᐊᓯᐊᓄᖕᒑᖅ ᕿᒪᒋᐊᕐᑲᕐᑲᑦᑕᓕᕐᓂᐊᕐᒪᑕ), ᐅᐸᒍᓐᓇᖅᑕᖕᒋᓐᓂᓗ ᐊᖅᓵᖅᑕᐅᓗᑎᒃ, ᑐᑭᒧᐊᖅᑐᒥᒃ ᑐᕐᑯᑕᐅᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐋᓐᓂᖅᑕᐅᓗᑎᒃ, ᑐᑭᒧᐊᖕᒋᑦᑐᒥᓗ, ᐅᐸᓯᒋᐊᔭᒻᒪᑕ ᓇᐃᒪᓪᓗᑎᒃ, ᓱᕈᔭᓂᒃ ᑐᕐᑯᓐᓇᖅᑐᕐᑲᖅᑐᓂᒃ ᓂᓇᑐᐃᓐᓇᓇᐊᕐᑲᕐᒪᑕ, ᕿᑐᖕᒋᐅᕐᓂᖕᒋᓪᓗ ᐸᕝᕙᓴᖅᑕᐅᓗᑎᒃ. ᐊᒃᓰᓗᐊᖕᒍᔭᐃᒃᑯᑎᓂᒃ ᐋᕿᒃᓯᐃᓯᒪᓚᖕᒐᔪᑦ ᐃᓂᖕᒐ ᓴᓇᕕᐅᔫᑉ ᐊᖕᒋᓕᓗᐊᖅᑕᐃᓕᒪᓗᒍ ᓄᓇᓕᖃᓈᖕᒐ. ᓂᐹᕐᕿᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ, ᓱᒃᑲᓕᓴᕐᑲᑦᑕᖅᑕᐃᓕᒪᓗᑎᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑰᕐᑲᑦᑕᕐᓗᑎᒃ ᑭᓯᐊᓂ, ᐊᒃᑕᕐᓗᑯᐃᓪᓗ ᐊᐅᓚᑕᐅᓗᑎᒃ ᑐᕐᑯᓐᓇᖅᑐᕐᑲᖅᑐᓂᒃ ᑕᐃᒪᓐᓇᑐᐃᓐᓇᖅ ᐊᒃᑕᖅᑕᐅᑎᑦᑎᕐᑲᑦᑕᖕᒋᓪᓗᑎᒃ, ᐊᒻᒪᓗ ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐆᒪᔪᓕᕆᔪᑎᓂᒃ ᐊᒃᓯᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐅᔾᔨᖅᓱᕈᑎᓂᓗ ᐸᕐᓇᐃᔭᑕᐅᓯᒪᔪᓂᒃ. ᑕᒪᒃᑯᐊ ᐊᑐᐊᖅᑕᐅᑎᐊᖅᐸᑕ, ᐊᒥᐊᒃᑯᕆᔭᐅᔪᑦ ᐊᒃᓯᓗᐊᖕᒍᒍᓐᓃᕐᓂᐊᖅᑐᑦ. ᐃᒃᐱᖕᓇᕐᓂᕐᑲᑐᐃᓐᓇᓇᐊᓖᓪᓕ ᐊᓯᖕᒋᓐᓂ ᓄᓇᕐᑲᖅᑐᓄᑦ ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ ᐃᒃᐱᖕᓇᕐᓂᕐᑲᓗᐊᓐᓇᓇᐊᓖᑦ ᐊᒃᓰᓗᐊᖕᒍᔾᔫᖕᒋᓐᓂᕐᑲᖅᑕᐅᖕᒥᔪᑦ.



ᓯᒃᓯᒥ ᓂᐅᕋᐃᕝᕕᒃ ᐅᒥᐊᖅᔪᐊᓄᑦ ᐊᖅᑯᑎ

Sabina GOLD & SILVER CORP.

Rescan an ERM company

ᐅᒥᖕᒪᐃᑦ - ᓴᓇᕙᐅᔪᒥ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᐃᓐᓇᕆᐊᓖᑦ ᐅᒥᖕᒪᓄᑦ ᒪᑯᐊ: ᓇᔪᖅᑦᑕᖅᑕᖕᓚᓂᒃ ᐊᖅᓵᖅᑕᐅᓗᑎᒃ, ᐸᙵᓴᒃᑕᐅᓗᑎᒃ ᓂᑲᖅᑭᔪᓄᑦ, ᐃᖕᒋᕋᓂᕆᖅᑦᑕᖅᑕᖕᒋᓐᓂ, ᑐᑭᒧᐊᖅᑐᒥᒃ ᑐᖅᑯᔪᒃᖅᑲᓗᓂ ᐋᓐᓂᖅᑐᖅᑲᓗᓂᓗ, ᑐᑭᒧᐊᖕᒋᑦᑐᒥᒎᓐᓃᑦ, ᐅᐸᒃᑕᓕᑐᐃᓐᓇᕆᐊᖅᑲᖅᒪᑕ, ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᓂᒃ ᐱᓐᓂᖅᐸᑕ, ᓄᖅᕆᐅᖅᓂᕆᖅᑦᑕᖅᑕᖕᒋᑦ ᐊᓯᔾᔨᖅᑕᐅᓗᑎᒃ. ᐊᒃᓯᓗᐊᖕᒍᔭᐃᒃᑯᑏᑦ ᐊᐅᓚᑦᑎᔪᑏᓪᓗ ᐱᑕᖅᑲᓚᖕᓚᔪᑦ ᐱᔭᖅᑕᐅᓗᑎᒃ ᐊᒃᓲᓗᐊᖕᒍᓕᖅᑕᐃᓕᒪᓗᑎᒃ ᐃᓂᒋᔭᐅᔪᑦ ᓴᓇᖅᑯᑎᓄᑦ ᐊᑐᖅᑕᐅᔪᓪᓗ ᓄᓇᐃᑦ, ᓂᑲᖅᑭᓗᐊᖅᑕᐃᓕᒪᔪᑎᖅᑲᐅᖅᓗᑎᒃ, ᓱᒃᑲᓕᓴᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓂᒃ ᐊᑐᖕᓖᖅᑲᑦᑕᖅᓗᑎᒃ, ᐊᒃᑕᖅᓗᑯᐃᑦ ᐊᐅᓚᑕᐅᑦᑎᐊᖅᓗᑎᒃ ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᓪᓗ ᓴᓇᖅᑯᑏᑦ ᐆᒪᔪᓄᑦ ᐅᐸᒃᑕᐅᖅᑲᑦᑖᔭᖕᒋᓪᒪᑕ ᐊᒃᑕᖅᓗᑯᐃᑦ, ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐆᒪᔪᓐᓂᐊᕈᑎᓂᒃ ᐅᔾᔮᖅᓯᕈᑎᓂᓗ ᐸᖅᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ ᑖᒃᑯᐊ ᐅᔾᔮᖅᓯᕈᑏᑦ ᐱᑕᖅᑲᖅᐸᑕ, ᐊᒥᐊᒃᑯᕆᔭᐅᔪᑦ ᐃᑉᐱᖕ`ᓇᖅᓂᖅᑲᖅᑐᑦ ᐊᒃᓲᓗᐊᖕᒍᓂᐊᕋᓯᕆᔭᐅᖕᒋᑦᑐᑦ. ᐊᓯᖕᒋᓐᓂᓗ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑳᖕᒋᑦᑐᑦ ᑲᑎᓯᒋᑦ ᓴᓇᕚᑦ ᐊᒻᒪᓗ ᐊᒃᓯᓗᐊᖕᒎᔭᖕᒋᓯᑎᒃ.

ᖄᕝᕚᑦ ᒥᖅᑯᓖᓪᓗ - ᖄᕝᕚᑦ (ᐃᓯᒫᓗᕆᔭᐅᖕᒥᔪᑦ) ᓯᐊᖅᓇᐃᓪᓗ ᐊᒪᕈᐃᑦ ᓂᕈᐊᖅᑕᐅᓚᐅᖅᑐᑦ ᐆᒃᑐᕋᐅᑕᐅᔪᒪᓪᓗᑎᒃ ᓂᐅᕙᐊᒃᓴᓇᔭᐅᖅᑦᑕᖅᒪᑕ ᒥᖅᑯᓖᑦ ᒪᒥᖕᒋᑦ ᐊᒃᑐᐊᓂᖅᑲᖅᒪᑕ ᑕᒫᓂᖅᒥᐅᑦ ᐃᓅᔪᑎᖕᒋᓐᓄᑦ-ᑈᓇᐅᔭᒃᓴᐅᑎᖕᒋᓐᓄᓪᓗ ᐅᓂᒃᑳᐅᓯᐅᖅᑦᑕᖅᑐᓂ EIS. ᐃᑉᐱᖕᓇᖅᓂᖅᑲᖅᓂᐊᖅᓂᖕᒋᑦ ᓴᓇᕙᐅᓂᖕᓚᓄᑦ ᐊᓯᐋᔪᑕᐅᔪᓐᓇᖅᒪᑕ ᐅᑯᓄᖕᓚ:ᓂᑲᖅᑭᓗᐊᖅᑕᐃᓕᒪᔪᑎᖅᑲᐅᖅᓗᑎᒃ, ᓱᒃᑲᓕᓴᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓂᒃ ᐊᑐᖕᓖᖅᑲᑦᑕᖅᓗᑎᒃ, ᐊᒃᑕᖅᓗᑯᐃᑦ ᐊᐅᓚᑕᐅᑦᑎᐊᖅᓗᑎᒃ ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᓪᓗ ᓴᓇᖅᑯᑏᑦ ᐆᒪᔪᓄᑦ ᐅᐸᒃᑕᐅᖅᑲᑦᑖᔭᖕᒋᓪᒪᑕ ᐊᒃᑕᖅᓗᑯᐃᑦ, ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐆᒪᔪᓐᓂᐊᕈᑎᓂᒃ ᐅᔾᔮᖅᓯᕈᑎᓂᓗ ᐸᖅᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ ᑖᒃᑯᐊ ᐅᔾᔮᖅᓯᕈᑏᑦ ᐱᑕᖅᑲᖅᐸᑕ, ᐊᒥᐊᒃᑯᕆᔭᐅᔪᑦ ᐃᑉᐱᖕ`ᓇᖅᓂᖅᑲᖅᑐᑦ ᐊᒃᓲᓗᐊᖕᒍᓂᐊᕋᓯᕆᔭᐅᖕᒋᑦᑐᑦ. ᐊᓯᖕᒋᓐᓂᓗ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑳᖕᒋᑦᑐᑦ ᑲᑎᓯᒋᑦ ᓴᓇᕚᑦ ᐊᒻᒪᓗ ᐊᒃᓯᓗᐊᖕᒎᔭᖕᒋᓯᑎᒃ.

ᑎᑭᖅᑦᑕᖅᑐᑦ ᖁᐸᓄᐊᑦ ᑎᖕᒥᐊᓪᓗ - ᓴᓇᕙᐅᓂᖕᓚᓄᑦ ᑕᒫᓂ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᐃᓐᓇᕆᐊᓖᑦ ᐊᐅᔭᒃᑯᑦ ᑎᑭᖅᑦᑕᖅᑐᓄᑦ ᖁᐸᓄᐊᓄᑦ ᑎᖕᒥᐊᓄᓪᓗ ᒪᑯᐊᖕᒍᖕᒥᔪᑦ: ᐊᓯᐅᐋᑐᐃᓐᓇᕆᐊᖅᑲᖅᒪᑕ ᓇᔪᓚᕆᖅᑦᑕᖅᑕᒥᓂᒃ ᑕᒫᓂ, ᐸᙵᓴᖅᑕᐅᓗᑎᒃ ᓂᑲᖅᑭᔪᓄᑦ, ᐊᓯᖕᓛᖕᓚᓄᑦ ᓅᑎᑕᐅᓗᑎᒃ, ᑐᑭᒧᐊᖅᑐᒥᒃ ᑐᖁᑕᐅᓗᑎᒃ ᐋᓐᓂᖅᑕᐅᓗᑎᓗᐃᓐᓃᑦ, ᑐᓵᖅᑕᐅᓗᑎᒃ, ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᓂᒃ ᐱᔪᓐᓇᖅᒥᖕᒪᑕ, ᐊᒻᒪᓗ ᖁᑐᖕᒋᐅᖅᓂᖕᒋᑦ ᐊᓯᔾᔨᖅᑕᐅᓗᑎᒃ. ᐊᒃᓯᓗᐊᖕᒍᔭᐃᒃᑯᑏᑦ ᐊᐅᓚᑕᐅᔪᑏᓪᓗ ᐊᑐᐊᓚᓇᔭᐅᓗᑎᒃ ᐊᓲᓗᐊᖕᒍᔪᓐᓃᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᒻᒪᓗ ᐱᔭᐃᔪᓐᓇᓇᓪᓗᑎᒃ ᓴᓇᕙᐅᔪᓂ ᐊᑦᑕᖅᓇᖅᑐᓂᒃ ᒪᑯᓂᖕᓚ ᐊᖕᒋᓕᓗᐊᖅᑕᐃᓕᖁᔭᐅᔪᖅ ᓄᓇᓕᖕᓚ ᐅᔭᕋᖕᓂᐊᖅᕙᐅᑉ, ᓂᑲᖅᑭᔪᓂᒃ ᐊᒃᓯᓗᐊᖅᑕᐃᓕᒪᑎᑦᑎᓗᑎᒃ, ᓱᒃᑲᓕᓴᓗᐊᖅᑦᑕᖕᒋᓪᓗᑎᒃ, ᓂᑲᖅᑭᓗᐊᖅᑕᐃᓕᒪᓗᑎᒃ, ᐃᖕᒋᕋᖅᑦᑕᖅᓗᑎᒃ ᑭᓯᐊᓂ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑯᑦ, ᐊᒃᑕᖅᓗᑯᐃᓪᓗ ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᑦ ᐊᐅᓚᑕᐅᑦᑎᐊᖅᓗᑎᒃ ᐆᒪᔪᓄᑦ ᓇᐃᒪᔭᐅᔮᖕᒋᓪᒪᑕ ᓱᕈᔪᐃᑦ, ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐆᒪᔪᓕᕆᔪᑎᓂᒃ ᐅᔾᔮᖅᓯᕈᑎᓂᓗ ᐸᖅᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ. ᑖᒃᑯᐊ ᐊᐅᓚᑦᑎᔫᑦ ᐱᑕᖅᑲᖅᐸᑕ ᓴᓇᕙᓂ, ᐃᑉᐱᖕᓇᖅᓂᖅᑲᖅᑐᑦ ᐊᒃᓲᓗᐊᖕᒍᔮᖕᒋᓪᒪᑕ ᐲᔭᖅᑕᐅᖅᑦᑕᖅᓗᑎᓗ. ᐊᓯᖕᒋᓐᓂ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᑉᐱ`ᖕᓇᖅᓂᖅᑳᖕᒋᓐᓂᕋᖅᑕᐅᖕᒥᔪᖅ ᑎᑭᖅᑦᑕᖅᑐᓄᑦ ᑎᖕᒥᐊᓄᑦ.

ᓂᖅᑭᑐᓰᑦ ᑎᖕᒥᐊᑦ - ᓂᖅᑭᑐᓰᑦ ᑎᖕᒥᐊᑦ ᑕᑯᔭᐅᓚᐅᖅᑐᑦ ᑕᒫᓂ ᖃᐅᔮᓴᖅᕙᐅᔪᒥ ᐅᑯᐊᖕᒍᓚᐅᖅᑐᑦ: ᖃᔩᑦ (ᐃᓯᒫᓗᕆᔭᐅᔪᑦ), ᒪᓂᕋᒥ ᐃᕚᓰᑦ ᓯᐅᑎᑭᑦᑐᑦ ᐅᒃᐱᔪᐊᑦ (ᐃᓯᒫᓗᕆᔭᐅᔪᑦ), ᓇᒃᑐᕋᓖᑦ (ᓂᒃᑲᓇᖅᓯᔪᑦ), ᖄᓐᓄᐊᔪᐊᑦ (ᓂᒃᑲᓇᖅᓯᔪᖅ), ᐊᒻᒪᓗ ᓂᐅᕝᓗᒃᑐᐃᑦ ᑭᙵᕙᐊᖅᔪᐃᑦ (ᓂᒃᑲᓇᖅᓯᔪᑦ). ᑕᒫᓂ ᓴᓇᕙᐅᓂᖕᓚᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᐃᓐᓇᕆᐊᓖᑦ ᐅᑯᐊᖕᒍᔪᑦ: ᓇᔪᓚᖅᒥᓂᒃ ᐊᓯᐃᔩᑐᐃᓐᓇᕆᐊᓖᑦ, ᑐᑭᒧᐊᖅᑐᒥᒃ ᑐᖅᑯᔪᒃᑲᕈᓐᓇᖅᒪᑦ ᐊᓐᓂᖅᑐᒃᑲᕈᓐᓇᕆᓪᓗᓂᓗ, ᑐᑭᒧᐊᖕᒋᑦᑐᒥᓗ ᑐᖅᑯᔪᒃᑲᕈᓐᓇᕆᓪᓗᓂ, ᐱᒃᑯᒥᔮᖅᑕᐅᓗᑎᒃ, ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᓂᖅᐸᑦ ᑕᒪᓂ, ᐊᒻᒪᓗ ᖁᑐᖕᒋᐅᖕᒋᓐᓂᖅᓴᐅᓕᕈᓐᓇᖅᓯᑎᒃ. ᐊᒃᓯᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐊᐅᓚᑕᐅᔪᑎᓂᓗ ᐋᖅᑭᒃᓯᐃᓯᒪᓚᖕᓚᔪᑦ ᐱᔭᐃᕗᓗᑎᒃ ᐱᓗᐊᕈᓐᓃᖅᑎᑦᑎᕗᓗᑎᒃ ᐊᑦᑕᖅᓇᕈᑕᐅᔪᓂᒃ ᓴᓇᕙᖕᓂ ᒪᑯᓂᖕᓚ ᐊᖕᒋᓕᓗᐊᖅᑕᐅᓕᒪᑎᑕᐅᓗᑎᓂ ᓄᓇᓕᕋᓖᖕᓚᑦ, ᓂᑲᖅᑭᓗᐊᔭᐃᒃᑯᑎᖅᑲᐅᖅᓗᑎᒃ, ᓱᒃᑲᓕᓴᖅᑲᖅᑦᑕᖅᑯᔭᐅᖕᒋᓪᓗᑎᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓂᒃ ᐊᑐᖕᓖᖅᑲᑦᑕᖅᓗᑎᒃ, ᐊᒃᑕᖅᓗᑯᐃᑦ ᐊᐅᓚᑕᐅᑦᑎᐊᖅᓗᑎᒃ ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᑦ ᑲᒪᕆᔭᐅᑦᑎᐊᖅᑲᖅᑦᑕᖅᓗᑎᒃ ᐅᐸᒃᑕᐅᖅᑲᑦᑖᔭᖕᒋᓪᒪᑕ ᐆᒪᔪᓄᑦ, ᐊᒻᒪᓗ ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐆᒪᔪᓕᕆᔪᑎᓂᒃ ᐅᔾᔮᖅᓯᕈᑎᓂᒃ ᐸᖅᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ ᐊᑐᐊᓗᖅᑲᖅᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐊᐅᓚᔫᑦ ᐊᑐᐊᓚᓇᔭᐅᒃᐸᑕ ᐃᑉᐱᖕᓇᖅᓂᖅᑲᖅᑐᑦ ᐊᒃᓲᓗᐊᖕᒍᔮᖕᒋᓪᒪᑕ. ᐊᓯᖕᒋᓐᓄᓪᓗ ᓄᓇᓄᑦ ᐃᑉᐱᖕ`ᓇᖅᓂᖅᑲᓗᐊᖕᒋᓪᓗᑎᒃ ᑲᑎᓪᓗᒋᑦ ᓴᓇᕙᐅᔪᑦ ᐆᒃᑐᕋᖅᑕᐅᓚᐅᖅᑐᑦ ᐊᒃᓲᓗᐊᖕᒍᔮᖕᒋᓐᓂᕋᖅᑕᐅᓪᓗᑎᒃ.

ᐃᒪᐃᑦ ᐊᕙᑎᑦᑎᓐᓂ

ᒪᓂᕋᕐᒥ ᐃᒪᖅ - ᐃᒃᐱᖕᓇᕐᓂᖅᑐᐃᓐᓇᓄᐊᓖᑦ ᐃᒪᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᖓᓄᑦ ᓴᓇᔪᓄᑦ - ᑖᒥᓂ ᐃᒪᖅᑲᕈᑏᑦ ᐊᐅᓚᑕᐅᑦᑎᐊᕐᓂᐊᖅᑐᑦ, ᐅᑭᐅᒃᑯᓪᓗ ᐊᖅᑯᑎᓕᐅᖅᑲᑦᑕᕐᓗᑎᒃ. ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐱᑕᖅᑲᐅᕐᓗᑎᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᒃ ᐆᔭᐃᓗᑎᒃ ᐊᒃᓲᓗᐊᖑᔪᓐᓅᖅᑎᑦᑎᓗᑎᒃ ᐋᕿᒃᓯᐃᓯᒪᓗᑎᒃ ᐃᒪᖅᑲᕈᑎᓂᒃ ᑲᒪᑦᑎᐊᖅᑐᓂᒃ ᐃᒪᕐᓂᒃ ᐅᑯᐊ ᑕᕝᕙ ᐊᐅᓚᑦᑎᔪᑏᑦ ᐃᓕᐅᖅᑲᖅᑕᐅᓯᒪᔪᑦ ᓴᓇᕙᐅᔪᓂ ᐋᕿᒃᓯᐃᓯᒪᓗᑎᒃ ᓯᑭᔪᐃᔭᐃᒃᑯᑎᓂᒃ ᐃᒪᕐᒧᑦ ᒪᑯᓂᖓ: ᓴᐳᔾᔨᓯᒪᔪᑎᓂᒃ ᐊᑐᓗᐊᖅᑕᐅᓕᒪᔪᑎᓂᓗ ᑖᒥᓂ ᐃᒪᑦᑎᐊᕙᖅᑲᖅᑐᓂᒃ ᓯᑭᔪᐃᑦᑕᐃᓕᒪᓗᑎᒃ ᐃᖅᑲᓗᖅᑲᐅᖅᑐᓂᒃ, ᐊᑐᐊᖅᓯᓗᑎᒃ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ DFO ᐊᑐᐊᒐᖏᓐᓂᒃ ᐅᑭᐅᒃᑯᑦ ᐃᒪᖅᑲᕈᑎᓂᒃ, ᐊᕙᓗᔭᐅᓯᒪᖅᑲᑦᑕᕐᓗᑎᒃ ᐃᒥᖅᑕᕐᕖᑦ, ᓴᓇᕖᑦᑐ ᐊᒻᒪᓗ ᐊᑐᐊᒐᓂᒃ ᐊᑐᐊᖅᓯᑦᑎᐊᖅᑲᑦᑕᕐᓗᑎᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᖅᑲᕈᑎᓄᑦ, ᐊᓯᖏᓐᓄᑦ ᐊᒃᓯᐊᓗᒃ ᐃᒃᐱᖕᓇᕐᓂᖅᑳᖏᑦᑐᑦ ᐊᖅᑯᑎᓕᐅᕈᑎᓂᒃ ᐊᑐᐊᒐᕆᔭᐅᔪᓂᒃ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓐᓄᑦ DFO ᒪᓕᒐᖅᑲᖅᑐᑎᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᒃ. ᑖᒃᑯᐊ ᐊᑐᐊᒐᐃᑦ ᒪᓕᒃᑕᐅᑎᐊᑐᐊᖅᐸᑕ ᓯᕗᓪᓕᐅᑕᐅᓗᐊᓚᖓᖏᑦᑐᑦ. ᑲᑎᑦᑐᕐᖏᑦᑕᐅᑦ ᓴᓇᕖᑦ ᐊᒃᓯᓗᐊᖑᔪᓂᐊᖏᓪᒥᔪᑦ ᐃᒃᐱᖕᓇᕐᓂᓇᔾᖏᑦ ᐊᓯᑦᑎᓐᓂ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᒪᖅᑲᕈᑎᖏᓐᓄᑦ.

ᐊᕙᑎᑦᑎᓐᓂ ᐃᒪᑦᑎᐊᕙᖅᑲᖅᑯᓪᓗᒍ - ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕈᓐᓇᖅᑐᑦ ᓴᓇᕕᐅᓂᖓᓄᑦ ᑕᒪᓐᓇ ᐅᑯᐊ: ᓴᓇᔪᓄᑦ ᐃᒪᖓ ᓯᕿᔪᒃᑕᐅᔪᓐᓇᕐᒪᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᖅ ᐃᒪᖅ ᓯᕿᔪᒃᑕᐅᕐᑯᓇᒍ ᑰᕕᐅᔪᓂ, ᐃᒥᖅᑕᕐᕕᖕᓂ, ᑮᓈᓗᖕᓂᒃ ᑯᕕᓯᕕᓂ, ᓯᓚᒥᑦ ᐳᔪᐊᕐᑭᔪᓂ ᐆᒃᑐᕋᖅᑕᐅᖅᑲᑦᑕᕐᓗᑎᒃ pH ᐱᐊᖕᓂᖏᑦ , TSS ᔩᕐᓇᓂᖏᓪᓗ, ᓂᕿᖅᑲᐅᕐᓂᖏᑦ, ᓴᕕᕋᔭᒃᓴᖅᑲᐅᕐᓂᖏᑦ, ᐅᕐᓯᐊᓗᖅᑲᐅᕐᓂᖏᑦ, ᓴᓇᖅᑯᑎᕈᔪᖅᑲᐅᕐᓂᖏᑦ BOD, chorine, ᐊᒻᒪᓗ cyanide. ᐊᒃᓯᓗᐊᖑᓕᔭᐃᒃᑯᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᖅᑲᐅᓚᖓᔪᑦ ᐆᒃᑐᕋᐃᖅᑲᑦᑕᕐᓗᑎᒃ ᐱᔭᐃᖅᑲᑦᑕᕐᓗᑎᓗ ᐊᑦᑕᕐᓇᕋᓯᕆᔭᐅᔪᓂᒃ ᓴᓇᖅᑯᑎᓂᒃ ᒪᑯᓇᓂ: ᓴᓇᕖᑦ ᐋᕿᒃᓯᖅᓯᒪᓂᖏᓐᓂ ᐊᑐᕐᑲᑦᑕᕐᓗᑎᒃ ᐊᖅᑯᑎ ᕐᑯᐊᐃᔭᐃᒃᑯᑎᓂᒃ ᓄᓇᒧᑦ ᐊᑲᐅᓂᖅᓴᓂᒃ ᒥᑦᑕᕐᕕᓂᓗ, ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐊᒃᓯᓗᐊᖑᓕᔭᐃᒃᑯᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᒃ ᑕᐃᑲᓂ ᐃᒪᖅᑲᐅᖅᑐᓂ ᐅᔾᔨᖅᓱᕈᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᓗ ᐸᕐᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ. ᑖᒃᑯᐊ ᐆᒃᑐᕋᐅᑏᑦ ᐊᑐᐊᖅᑕᐅᑎᐊᑐᐊᖅᐸᑕ ᓱᓗᐊᔭᖏᑦᑐᖅ, ᐊᒥᐊᒃᑯᖏᓪᓗ ᐆᒃᑐᕋᖅᑕᐅᖅᑲᑦᑕᕐᓂᐊᓯᑎᒃ ᐊᒃᓲᓗᐊᖑᖅᑎᑕᐅᔾᔭᖏᑦᑐᑦ. ᑭᖑᓂᖓᒍᓪᓗ ᑲᑎᑦᑐᕐᒥᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᔮᓇᑎᒃ ᐊᓯᖏᓐᓂᓗ ᓄᓇᖅᑲᖅᑐᓂ ᐃᒃᐱᖕᓇᕐᓂᖅᔮᓇᑎᒃ ᐃᒪᑦᑎᐊᕙᓄᑦ.

ᐃᒪᑦᑎᐊᕙᐃᑦ ᑕᔫᑦ ᐃᖅᑲᖏᓐᓂ ᓯᑭᔪᐃᔭᐃᒃᑯᑏᑦ - ᐃᒃᐱᖕᓇᕐᓂᖅᑐᐃᓐᓇᓄᐊᓖᑦ ᓴᓇᕕᐅᓂᖓᓄᑦ ᑕᒪᓐᓇ ᐅᑯᓇᓂ: ᓴᓇᔪᓄᑦ ᐊᐅᓚᑕᐅᓗᑎᒃ ᓯᑭᔪᐃᔪᓐᓇᕐᒪᑦ ᑰᕕᐅᔪᓂᒃ, ᐃᒪᕐᓂᒃ ᐊᑐᕐᓗᑎᒃ ᓴᓇᖅᑯᑎᖅᑲᖅᑐᓂᒃ, ᐊᑐᖅᑕᐅᓂᑯᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᖅᑲᑦᑕᕐᓗᑎᒃ, ᓯᓚᒧᑦ ᐳᔪᐊᕐᑭᔪᓂᑦ ᑎᒃᑕᐅᕕᐅᓂᑯᐃᑦ ᐃᓚᕐᓗᑯᓂᒃ, ᓂᕿᓂᒃ ᐊᒻᒪᓗ ᐊᒃᑕᕐᓗᑯᓂᒃ ᓂᕿᕕᓂᕐᓂᒃ, ᓴᕕᕋᔭᕈᔪᖕᓂᒃ, ᐅᕐᓯᐊᓗᕈᔪᖕᓂᓗ. ᐊᒃᓲᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐃᓕᐃᖅᑲᐃᓯᒪᓚᖓᔪᑦ ᐊᐅᓚᑦᑎᔪᑎᖅᑲᐅᕐᓗᑎᒃ ᐱᔭᐃᔪᑎᓂᒃ ᐱᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕈᓐᓇᖅᑐᓄᑦ ᒪᑯᓂᖓ ᐋᕿᒃᓯᐃᓯᒪᓚᖓᔪᑦ: ᐊᒃᓯᓗᐊᖑᓕᔭᐃᒃᑯᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᓗ ᑰᒐᓚᕕᐅᔪᑦ ᓯᒡᔭᖅᑲᓂᒃ ᓯᑭᔪᐃᑐᐃᓐᓇᓄᐊᓕᖅᓂᒃ, ᑲᔪᓯᑎᑦᑎᓗᑎᒃ ᐅᔾᔨᖅᓱᕈᑎᓂᒃ ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᔪᓂᒃ ᓴᓇᕕᓂ ᐃᒪᓕᕆᔪᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᓗ ᐅᔾᔨᖅᓱᕈᑎᓂᓗ ᐸᕐᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ. ᐊᒻᒪᓗ ᑖᒃᑯᐊ ᑲᒪᔪᑏᑦ ᐊᑐᐊᕐᓗᒋᑦ, ᑭᖑᓂᖓᒍᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᔮᖏᓂᕋᖅᑕᐅᔪᑦ ᐃᒪᑦᑎᐊᕙᓄᑦ ᐊᒃᓲᓗᐊᖑᔮᖏᓂᕋᖅᑕᐅᔪᑦ. ᑲᑎᑦᑐᕐᒥᓪᓗ ᐃᒃᐱᖕᓇᓕᕋᔭᖅᑐᓂᒃ ᐊᒃᓲᓗᐊᖑᓂᐊᖏᓂᕋᐃᖕᒥᑦ ᐊᓯᖏᓐᓂ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᒪᖓᑕ ᐱᐅᓂᖏᓐᓄᑦ.

ᑕᓯᕐᒥᐅᑕᐃᑦ ᐃᖅᑲᓗᐃᑦ/ᐃᒪᕐᒥᐅᑕᓄᑦ ᓇᔪᓚᓇᔭᐅᔪᓪᓗ - ᓴᓇᔪᓄᑦ ᐃᒃᐱ``ᖕᓇᕐᓂᖅᑲᕈᓐᓇᖅᑐᑦ ᐃᒪᑦᑎᐊᕙᓄᑦ ᐃᖅᑲᓗᖅᑲᖅᑐᓄᑦ/ᓇᔪᓚᓇᔭᐅᔪᓄᓪᓗ ᐅᒪᔪᓄᑦ ᐃᒪᕐᒥᐅᑕᓄᑦ ᐅᑯᐊᖑᔪᑦ: ᐊᓯᐅᕝᕆᑐᐃᓐᓇᓄᐊᖅᑲᕐᒪᑦ ᑕᓯᕐᓂᒃ ᓇᔪᓚᓇᖅᑲᑦᑕᖅᑕᖏᓐᓂᒃ ᐃᒥᖅᑕᖅᑕᐅᑎᓪᓗᒋᑦ, ᐱᕙᓪᓕᐊᑎᑕᐅᑎᓪᓗᒋᑦ ᐳᐊᓇᔭᖅᑕᐅᔪᑦ ᓇᖅᓴᓕᐊᖑᔪᑦ ᐅᔭᕋᖕᓂᐊᖅᑐᓄᑦ, ᐃᒥᖅᑕᖅᑕᖅᑐᓄᑦ ᓇᖕᒥᓂᖅ ᐊᑐᕐᓂᐊᖅᑕᒥᓂᒃ ᓴᓇᖅᑯᑎᓄᓪᓗ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕐᕕᐅᖅᑲᑦᑕᖅᑐᓂ. ᓯᕗᓪᓕᖅᐹᒥ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕈᓐᓇᕐᒪᑕ ᐃᒪᑦᑎᐊᕙᖕᓄᑦ ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐃᓕᐅᖅᑲᐃᓯᒪᓚᖓᔪᑦ ᐊᑐᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐅᔾᔨᖅᓱᕈᑎᓂᓗ ᐃᒪᕐᓂ ᐃᖅᑲᓗᖅᑲᖅᑐᓂ/ᓇᔪᓚᓇᔭᐅᔪᓂ ᐆᒪᔪᓄᒃ. ᐃᒫᒃ, ᐅᔭᕋᓐᓂᐊᖅᑕᐅᔪᓂᒃ ᐅᔭᕋᓂᒃ ᐊᒃᑕᕐᕕᖅᑲᕐᓗᑎᒃ ᐅᖓᓯᒃᑐᒥ ᐃᒪᕐᓄᑦ ᐃᖅᑲᓗᖅᑲᖅᑐᓄᑦ ᖃᓂᒃᓴᖏᑦᑐᒥ. ᐃᓕᐅᖅᑲᐃᓯᒪᓗᑎᒃ ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐊᒻᒪᓗ ᐅᑭᐅᓕᒫᒥ ᐃᒪᕐᒥᒃ ᐊᑐᕈᓐᓇᖅᑕᖅᑲᖅᑐᓂᒃ ᑖᒥᓂ ᐆᒃᑐᕋᐃᓯᒪᓗᑎᒃ. ᑖᒃᑯᐊ ᐊᑐᐊᒐᐃᑦ ᒪᓕᒃᑕᐅᑎᐊᑐᐊᖅᐸᑕ, ᐊᒥᐊᒃᑯᖅᑲᔮᖏᑦᑐᖅ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓕᕈᓐᓇᖅᑐᓂᒃ, ᑲᑎᑦᑐᕐᒥᓪᓗ

ᐃᒃᐱᖕᓇᓕᕈᓐᓇᖅᑐᓂᒃ ᐊᓯᖏᓐᓄᑦ ᓄᓇᖃᖅᑐᓄᑦ ᐊᒃᓲᓗᐊᖏᓐᓂᐊᕐᓂᕋᐃᔪᑦ ᐃᒪᕐᒥᐅᑕᓄᑦ ᐃᖃᓗᖕᓄᑦ/ᓇᔪᒐᕆᔭᐅᔪᓄᒻᒧ.

ᐃᖃᓗᖅᑐᑦ ᑕᓱᑦ ᓇᔪᒐᕆᖃᑦᑕᖅᑕᖏᑦ - ᑕᕝᕙ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔪᑦ ᐊᒃᓱᕈᑎᖃᖅᓯᑕ ᒪᕿᖓᓂᒃ ᑖᓂᕐᒥᐅᓂᒃ ᐃᖃᓗᖕᓂᒃ ᑕᓯᕐᒥᐅᑕᓂᒃ ᑰᒃᑯᑦ ᒪᔪᕋᖃᑦᑕᖅᑐᓂᓗ ᐃᖃᓗᖕᓂᒃ, ᑲᕙᓯᓖᑦ ᐊᒻᒪᓗ ᓯᓗᒃᐸᐅᒐᐃᑦ. ᐃᒃᐱᖕᓇᕐᓂᖅᐹᖑᔪᓐᓇᖅᑐᑦ ᑖᒥᓂ ᓴᓇᕙᐅᓂᖓᓄᑦ ᑕᓯᕐᒥᐅᑕᓄᑦ ᐃᖃᓗᖕᓄᑦ ᑐᑯᓴᖅᑕᐅᔪᓐᓇᕐᒪᑕ/ᐅᓄᖏᓐᓂᖅᓴᐅᓕᕈᓐᓇᕐᒪᑕ ᑕᓱᑦ ᐃᒪᐃᖅᑕᐅᒃᐸᑕ, ᓴᓇᕙᐅᖃᑦᑕᓕᖅᐸᑕ ᐊᖅᑯᑎᓕᐅᕝᕙᐅᓗᑎᒃ ᐅᑭᐅᒃᑯᑦ, ᑖᒥᓂ ᓴᓇᕙᐅᑉ ᖃᓂᒋᔭᖓᓂ, ᐃᒥᖅᑕᕝᕙᐅᖃᑦᑕᖅᑐᓂ ᓴᓇᔾᔪᓄᑦ ᓴᓇᖅᑯᑎᓄᒻᒧ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂ ᐅᕙᓘᓐᓃᑦ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕝᕙᐅᓗᑎᒃ, ᖃᓂᒋᔭᖏᓐᓂᓗ ᖄᖅᑎᑦᑎᖃᑦᑕᓕᖅᐸᑕ. ᓯᕗᓪᓕᖅᐹᖑᓗᓂ ᐃᒃᐱᖕᓇᕐᓂᖃᕐᓂᐊᖅᑐᓄᑦ ᐊᒃᓲᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐋᕿᒃᓯᐃᓯᒪᓚᖓᔪᑦ ᑕᒪᐅᖓᖅᑕᐃᓕᒪᖃᑦᑕᕐᑯᕗᓗᑎᒃ ᓴᓇᔾᔪᓂᒃ ᐃᖃᓗᖅᑐᓄᑦ ᑕᓯᕐᓄᑦ/ᓇᔪᒐᕆᔭᐅᔪᓄᒻᒧ ᓴᓇᖃᑦᑕᕐᓗᑎᒃ ᐊᑲᐅᓂᖅᓴᓂᒃ ᐊᑐᐊᓚᖃᕐᓗᑎᒃ ᐅᐸᖃᑦᑕᖕᒋᒻᒧᑎᒃ ᑕᓯᕐᓂ ᐃᖃᓗᖕᓄᑦ ᓇᔪᒐᕆᔭᐅᔪᓄᑦ. ᐊᐃᑉᐸᖓᓂ ᐊᒃᓱᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐃᓕᐅᖅᑲᐃᓯᒪᔪᓐᓇᕐᒥᔪᑦ ᐊᑐᐊᒐᖃᕐᓗᑎᒃ ᐃᒪᕐᓂᒃ ᐊᑐᕈᓐᓇᐅᑎᓂᒃ ᐊᑐᓗᐊᖅᑕᐃᓕᒪᑎᑦᑎᖃᑦᑕᕐᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐊᒃᓱᓗᐊᖑᓕᔭᐃᒃᑰᑎᑦ ᐊᑐᐊᒐᐃᑦ ᒪᓕᒃᑕᐅᒃᐸᑕ, ᐊᒥᐊᒃᑯᖃᔾᔮᖏᑦᑐᖅ, ᑲᑎᓪᓗᒋᓪᓗ ᐅᕝᕙᓘᓐᓂᑦ ᐊᓯᖏᓐᓄᑦ ᓄᓇᖃᖅᑐᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᖃᔾᔮᖏᑦᑐᑦ.

ᐃᑭᕐᒥᐅᑕᐃᑦ ᐊᕙᑎᖓᓗ

ᐃᑭᕐᒥ ᐃᒪᓄᑦ ᐊᒃᑐᐊᓂᖃᖅᑐᑦ - ᐃᒃᐱᖕᓇᕐᓂᖃᕈᓐᓇᖅᑐᑦ ᒪᑯᐊ ᐃᒪᕐᒥᐅᑕᓄᑦ ᐅᒥᐊᕐᔪᐊᑦ ᑕᒪᐅᖓᖃᑦᑕᓕᖅᐸᑕ, ᐃᒪᐃᑦ ᐃᖅᑲᖓᓂ ᑲᑕᖕᓂᕐᓗᑯᖃᐅᓕᕈᓐᓇᕐᒪᑦ ᓄᑖᓂᒃ ᐃᒪᕐᓂᒃ ᑕᒪᐅᖓᐅᔅᔮᒍᓐᓇᕐᒪᑕ ᑐᓚᒃᑕᕝᕙᒃᓴᖓᓂᒃ ᐋᕿᒃᓯᐃᓗᑎᒃ, ᓴᓇᓂᖏᓐᓂ ᐊᒻᒪᓗ ᐃᓯᓕᓕᖅᑎᓪᓗᒍ ᐱᖅᑯᓯᑐᖃᖏᓐᓄᑦ ᐅᑎᖅᑎᑕᐅᓕᖅᑎᓪᓗᒋᑦ, ᐃᒪᐃᑦ ᐊᒃᑐᐊᔭᐅᔪᑦ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᕝᕙᐅᔪᑦ, ᖃᖅᑎᑦᑎᖃᑦᑕᖅᑐᓪᓗ, ᐅᕐᓯᐊᓗᖃᐅᑏᓪᓗ, ᐅᕐᓯᐊᓗᐃᓪᓗ, ᐊᒻᒪᓗ polycyclic aromatic hydrocarbons (PAHs); ᓴᓗᒻᒪᖅᓴᖅᓯᒪᔪᑦ ᐃᒪᕐᓗᑯᐃᑦ ᐊᑐᖅᑕᐅᔪᕙᓃᑦ, ᐊᒻᒪᓗ ᐳᔪᐊᕐᑭᔪᓄᑦ ᑎᒃᑕᐅᕙᐅᖃᑦᑕᖅᑐᓂ.

ᐊᒃᓲᓗᐊᖑᓕᔭᐃᒃᑯᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᓗ ᐱᑕᖃᓚᖓᔪᖅ ᐱᔭᐃᓇᓯᐊᕐᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐃᒃᐱᖕᓇᕐᓂᖃᕐᔭᖅᑐᓂᒃ ᐊᒃᓲᓗᐊᖑᓕᖅᑕᐃᓕᒪᑎᑦᑐᒃ ᐅᒥᐊᕐᔪᐊᓂ ᑕᒪᐅᖓᖃᑦᑕᖅᑐᓂᒃ ᓱᒃᑲᓕᓴᖃᑦᑕᕐᑯᔨᕐᖏᓪᓗᑎᒃ ᐅᐸᖃᑦᑕᕐᖏᓪᓗᑎᒃ ᐃᑎᓂᖅᓴᓂᒃ ᐊᖅᑯᑏᑎᑦᑎᖃᑦᑕᕐᓗᑎᒃ ᑭᓯᐊᓂ, ᑯᒐᓛᒃᑐᑦ ᓴᓇᕙᓂᑦ ᑕᒪᐅᖓ ᐊᓯᙱᖓᓅᖅᑎᑕᐅᕙᓗᑎᒃ ᐊᒃᑕᕐᓗᑯᖃᕙᒨᑦ ᑕᓯᕐᓗᖕᒨᑦ ᑖᒥᓂ ᓂᐅᖃᐃᕙᖕᒥ ᑐᓚᒃᑕᕐᕙᖕᒥᓗ, ᐊᑐᖃᑦᑕᕐᓗᑎᒃ ᓄᓇᒥᒃ ᓯᕈᔭᐃᖕᒋᑦᑐᓂᒃ ᐊᖅᑯᑎᓕᓇᔪᑎᓂᒃ ᐃᓂᖃᕐᕙᐅᔪᓂᓗ ᓴᓇᖅᑯᑎᓄᑦ, ᐊᑐᐊᒐᓂᒃ ᐊᑐᐊᑦᑎᐊᖃᑦᑕᕐᓗᑎᒃ ᐊᒃᑕᕐᓗᑯᓄᑦ ᑮᓇᓗᖕᓄᑦ ᐊᓯᖏᓐᓄᒻᒧ, ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᔪᑎᖃᑦᑎᐊᕐᓗᑎᒃ ᓯᕐᓗᐊᖕᒋᓐᓂ ᐅᔾᔮᖅᓯᑎᐊᕈᑎᓂᒃ, ᐊᖅᑯᑎᓂᓗ, ᐊᒻᒪᓗ ᐅᕐᔭᖅᓴᕙᓂ, ᖃᖅᑎᑎᕙᓂ, ᐊᒻᒪᓗ ᑐᕐᑯᓇᖅᑐᖃᖅᑐᓂ ᓴᓇᖅᑯᑎᓂ ᐊᒻᒪᓗ ᐳᔪᐊᕐᑭᔪᓂᒃ ᐱᑕᖃᓗᐊᕐᑯᓇᒍ ᐊᒻᒪᓗ ᐃᑭᑎᑎᕙᐅᖃᑦᑕᖅᑐᓂ. ᑖᒃᑯᐊ ᐊᑐᐊᒐᓇᔪᐅᔪᑦ ᒪᓕᒃᑕᐅᑎᐊᑐᐊᖅᐸᑕ ᐊᒃᓱᓗᐊᖑᔾᔮᖏᓐᒪᑕ ᐊᒥᐊᒃᑯᕐᔪᐅᔪᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑐᑦ. ᑲᑎᓪᓗᒋᑦ ᐊᑕᐅᑎᒃᑯᑦ ᐃᒃᐱᖕᓇᕐᓂᖃᔾᔮᖏᓐᒥᔪᑦ ᐊᓯᖏᓐᓂ ᓄᓇᖃᖅᑐᓄᑦ ᑕᓯᕐᒥᐅᑕᓄᑦ ᐃᒪᑎᐊᕙᖕᓄᒻᒧ.

ᐃᑭᐅᑉ ᐃᖅᑲᖓᓄᑦ ᓱᕉᓪᓕᐅᑕᐃᔪᑦ - ᐃᒃᐱᖕᓇᕐᓂᖃᕈᓐᓇᕐᒥᖕᒪᑕ ᓴᓇᕙᐅᓕᖅᐸᑦ ᑖᒥᓂᕐᒥᐅᓄᑦ ᐅᒥᐊᕐᔪᐊᑦ ᑎᑭᖃᑦᑕᓕᖅᐸᑕ ᐅᓯᑲᖅᑕᖅᑐᑦ ᑕᒪᐅᖓ ᑐᓚᒃᑕᕝᕙᓕᐅᖅᑕᐅᓗᑎᒃ ᑭᓴᖅᓯᒪᕝᕙᓕᐅᖅᑕᐅᓗᑎᓗ ᓂᐅᕋᐃᕝᕙᒃᓴᖕᒋᓐᓄᒻᒧ ᐃᑳᕝᕙᓕᐅᕐᓗᑎᒃ ᐅᒥᐊᕐᔪᐊᑦ ᐃᒪᖏᑦ ᑕᒪᐅᖓ ᑯᕙᔭᐅᖃᑦᑕᕐᓂᐊᕐᒪᑕ ᐃᒪᖓᓄᑦ, ᐅᕐᓯᐊᓗᐳᔪᖃᐅᖅᑐᑦ, ᐅᕐᓯᐊᓗᐃᓪᓗ, ᐊᒻᒪᓗ polycyclic aromatic hydrocarbons (PAHs); ᓴᓗᒻᒪᖅᓴᖅᓯᒪᔪᒻᒧ ᖀᓇᓗᐃᑦ, ᐳᔪᐊᕐᑭᔪᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᔪᑏᑦ. ᑎᒃᑕᐅᕙᖕᒋᑦ ᐅᔾᔮᖅᓯᖅᑕᐅᓗᑎᒃ. ᐊᒃᓯᓗᐊᓕᔭᐃᒃᑯᑎᓂᒃ ᐊᑐᐊᒐᖃᐅᓗᑎᒃ ᐊᐅᓚᑦᑎᔪᑎᖃᐅᓗᑎᒃ ᐹᔭᐃᓗᑎᒃ ᐊᒃᓯᓗᐊᖑᔪᓐᓃᖅᑎᑦᑎᓗᑎᒃᑯ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᓐᓇᖅᑐᓂᒃ ᒪᑯᓂᖓ: ᐊᓯᖕᒑᖏᓐᓇᓄᑦ ᑰᒃᑎᑕᐅᖅᑕᕐᓗᑎᒃ ᑕᓯᕐᓗᓕᐊᓇᔭᐅᓯᒪᔪᓄᑦ ᑖᒥᓂ ᑐᓚᒃᑕᕝᕙᖕᒥ, ᐊᑐᐊᓂᒃ ᒪᓕᑦᑎᐊᖅᑕᕐᑕᕐᓗᑎᒃ ᓯᕐᓗᐊᓂ, ᐅᓯᑲᖅᑕᐅᑎᓂ, ᐊᒻᒪᓗ ᐅᕐᓯᐊᓗᐃᑦ ᐊᑐᖅᑕᐅᕙᖕᒋᓐᓂ, ᖃᖅᑎᑦᑎᔩᑦᑐᒧ, ᐊᑦᑕᕐᓇᖅᑐᖅᑐᑦ ᓴᓇᖅᑯᑏᑦ ᐅᔾᔮᖅᓯᖅᑕᐅᔪᑎᖃᓚᖓᔪᑦ ᐊᒻᒪᓗ ᐳᔪᐊᕐᑭᔪᑦ ᐃᓵᕐᑭᔪᒻᒧ ᐊᒃᓲᓗᐊᖑᓕᖅᑕᐃᓕᒪᑎᑕᐅᓗᑎᒃ ᐃᑭᑕᐅᖅᑕᕐᓗᑎᓗ ᐊᑦᑕᕐᓇᕈᑕᐅᓕᓚᔪᑦ. ᑖᒃᑯᐊ ᐊᑐᐊᒐᐃᑦ ᒪᓕᒃᑕᐅᑎᐊᑐᐊᖅᐸᑕ ᐃᒃᐱᖕᓇᕐᓂᖃᔾᔮᖏᑦᑐᑦ ᐊᒥᐊᒃᑯᖕᖏᓐᓂ ᐊᒃᓱᓗᐊᖑᔾᔮᖏᓐᒥᔪᒻᒧ. ᐃᒃᐱᖕᓇᕐᓂᖃᕐᓂᐊᖕᖏᓐᓂᕋᖅᑕᐅᔪᑦ ᑲᑎᓪᓗᒋᑦ ᐊᓯᖏᓐᓄᒻᒧ ᓄᓇᓄᑦ ᐃᒪᑎᐊᕝᕙᖃᑕᐅᔪᓄᑦ ᑖᒥᓂ.

ᐃᑭᖅᒥᐅᑕᐃᑦ ᐃᖅᑲᓗᐃᑦ/ᓂᖅᔪᑏᓪᓗ ᓇᔪᒐᖏᑦ - ᓴᓇᕙᐅᔪᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑭᓐᓇᖅᒥᖕᒪᑕ ᐃᑭᖅᒥᐅᑕᓄᑦ ᐃᖅᑲᓗᖕᓄᑦ/ᓂᖅᔪᑎᓄᓪᓗ ᒪᑯᑎᒎᓇᖅ ᐃᒪᖅᒥ ᓴᓇᔪᖅᑲᓂᖅᐸᑦ ᑐᓚᒃᑕᖅᕕᓂᐅᖅᓗᑎᒃ ᓂᐅᕋᐃᕕᓂᐅᖅᓗᑎᓗ (ᐃᒪᐅᑉ ᐃᖅᑲᖓᓂ ᐋᕿᒃᓯᐃᓂᐊᖅᒪᑕ ᑐᓚᒃᑕᖅᕕᓂᐅᖅᓗᑎᒃ ᓯᕗᒥᓗ ᐅᒥᐊᖅᔪᐊᓄᑦ ᐃᑳᕕᓂᐅᖅᓗᑎᒃ). ᓴᓇᔭᐅᑎᓪᓗᒋᑦ ᑕᒪᒃᑯᐊ ᓯᕗᒥ ᓵᐳᑎᓂᐅᖅᓯᒪᓂᖕᒐᔪᑦ ᐃᖅᑲᓗᖕᓄᑦ, ᐲᖅᓯᔪᓐᓇᖅᒪᑕ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᒃᓴᓂᒃ ᐅᖁᓘᓐᓃᑦ ᐊᒃᓯᒃᑲᓪᓚᒃ ᐱᓗᐊᔭᐃᒃᑯᑎᒃᓴᓂᒃ ᐱᑕᖅᑭᓐᓇᖅᓕᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑫᔭᖅᑐᓄᑦ ᐃᒪᖅᒥ ᐆᒪᔪᓄᑦ. ᐊᒥᐊᒃᑰᔭᖕᒋᑦᑐᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑕᖅᑐᓂᒃ, ᑲᑎᓪᓗᒋᓪᓗ ᐊᓯᖕᒋᓐᓂ ᓄᓇᖅᑲᖅᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑳᔭᖕᒋᑦᑐᑦ.

ᐃᒪᖅᒥᐅᑕᐃᑦ ᖁᐸᓄᐊᑦ/ᐊᒡᒋᐊᖅᔪᐃᓪᓗ - ᐃᒪᖅᒥᐅᑕᐃᑦ ᖁᐸᓄᐊᑦ ᐊᒡᒋᐊᖅᔪᐃᓪᓗ ᒪᑯᐊᖑᔪᑦ ᑕᒪᐅᖓ ᑎᑭᖅᑲᑦᑕᖅᑐᑦ ᐊᐅᔭᒃᑯᑦ ᖁᐸᓄᐊᑦ ᓯᖅᔭᓇᐊᑦ ᐊᐅᔭᒃᑯᑦ ᑕᒪᐅᖓᖅᑲᑦᑕᖅᑐᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᐅᖕᒪᑕ ᑎᖕᒥᐊᑦ ᒪᑯᐊ ᒥᑏᑦ, ᐊᒃᐸᐃᑦ, ᐋᒡᒋᐊᖅᔪᐃᑦ, ᓂᕿᓪᓗ, ᑲᖑᐃᓪᓗ ᖁᒡᔪᐃᓪᓗ, ᖃᖅᓴᐅᓪᓗ, ᑐᓪᓚᓪᓗ, ᑑᓪᓚᔪᐊᓪᓗ ᐊᒻᒪᓗ ᓇᐅᔭᐃᑦ. ᐃᒪᖅᒥᐅᑕᐃᓪᓚ ᑎᖕᒥᐊᑦ ᐊᒻᒪᓗ ᐋᒡᒋᐊᖅᔪᐃᑦ ᓂᑲᓇᖅᓂᕋᖅᑕᐅᓚᖅᑐᑦ. ᐃᑉᐱᖕᓇᖅᓂᖅᑭᓐᓇᖅᒪᑕ ᓴᓇᕙᐅᔪᑦ ᑎᖕᒥᐅᓄᑦ ᐸᒡᕕᓴᒃᑕᐅᓗᑎᒃ (ᐃᒻᒪᒃ, ᓂᐹᖅᑭᔪᓄᑦ) ᐊᒻᒪᓗ ᕿᑐᖕᒋᐅᖕᒋᓐᓂᖅᓴᐅᓚᕈᓐᓇᖅᒪᑕ. ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐃᓚᐅᖅᑲᐃᓯᒪᔪᑦ ᒪᑯᓂᖓ: ᓇᓗᓇᐃᔭᐃᓚᐅᖅᑐᑦ ᓇᒦᖅᑲᑦᑕᖅᓂᖕᒋᑦ ᐅᐸᒃᑕᐅᖅᑲᑦᑖᔭᖕᒋᒻᒪᑕ ᓂᑲᓇᖅᑎᓪᓗᒋᑦ ᐋᕿᒃᓯᐃᓯᒪᓗᑎᒃ ᖃᖓᑕᓲᓄᑦ ᐊᖅᑯᑎᓂᒃ ᐊᔪᖅᓇᖕᒋᒃᑳᖑᑦ ᐋᕿᒃᓯᐃᓯᒪᓗᑎᒃ ᑐᑭᓚᐊᖅᑐᒥᒃ ᖁᑦᑎᖕᓂᖅᑲᓇᐊᖅᑲᖅᑐᒥᓗ ᐅᐸᒃᑕᐅᑎᐊᖅᑲᖕᒋᑦᑐᒥᒃ ᐊᒡᒋᐊᔪᓄᑦ ᐃᒪᖅᒥᐅᑕᓄᓪᓗ ᓇᔪᖅᑕᐅᖅᑲᑦᑕᖅᑐᓄᑦ ᐱᒋᐊᖑᖅᕙᖕᓂ, ᐋᕿᒃᓯᐃᓯᒪᓗᑎᒃ ᖃᖓᑕᓯᓄᖅ 650-ᒦᑐ ᐊᑖᒍᑦ ᖃᖓᑕᓲᖅᑲᑦᑕᖕᒋᓪᓗᑎᒃ ᐱᒋᐊᖑᖅᕙᐊᓂ, ᐊᒻᒪᓗ ᐅᐸᒃᑕᐅᑦᑕᐃᓕᒪᖅᑲᑦᑕᖅᓗᑎᒃ. ᑖᒃᑯᐊ ᐊᑐᐊᒐᐃᑦ ᒪᓕᒃᑕᐅᖅᑲᑦᑕᖅᓗᑎᒃ, ᐊᒥᐊᒃᑯᕿᔭᐅᓗᑎᒃ ᐃᑉᐱᖕᓇᖅᓂᖅᑲᖅᔭᖅᑐᑦ ᑲᑎᓪᓗᒋᓪᓗ ᐊᒃᓲᓗᐊᖑᔮᖕᒋᓐᓂᖅᑲᖅᑕᐅᔪᑦ. ᓄᓇᓄᑦ ᐊᓯᑎᓐᓂ ᐃᑉᐱᖕᓇᖅᓂᖅᑳᔭᖕᒋᒻᒥᔪᑦ ᐊᒃᓲᓗᐊᖑᔮᖕᒋᒻᒪᑕ ᐊᒥᐊᒃᑯᖕᒋᑦ ᐃᑉᐱ`ᖕᓇᖅᓂᖅᑐᑦ.

ᓇᑦᑏᑦ - ᐃᑉᐱᖕᓇᖅᓂᖅᑭᓐᓇᖅᑐᑦ ᑕᒫᓂ ᓴᓇᕙᐅᓂᖓᓄᑦ ᒪᑯᐊ: ᓇᔪᒐᓇᖅᑲᑦᑕᖅᑕᖕᒋᑦ ᐊᓯᔾᔨᖅᑕᐅᑐᐃᓐᓇᓇᐊᖅᑲᒪ, ᐸᕝᕙᓴᒃᑕᐅᓗᑎᓗ (ᐃᒻᒪᖅᑳ ᓂᐹᖅᑭᔪᓄᑦ) ᑐᑭᓘᐊᖅᑐᒥᒃ ᑐᖅᑯᑕᐅᓗᑎᒃ ᐋᓐᓂᖅᑕᐅᓗᑎᓗᓐᓃᑦ, ᑐᑭᓘᐊᖕᒋᑦᑐᒥᓗ ᑐᖅᑯᑕᐅᓗᑎᒃ, ᑐᖅᑯᓐᓇᖅᑐᖅᑲᖅᑐᓂᒃ ᐅᐸᒃᓯᓐᓂᖅᐸᑕ, ᓯᑭᔪᓂᒃ, ᐸᕝᕙᓴᒃᑕᐅᓗᑎᒃ ᑕᒫᓂ ᐊᓪᓗᖅᑲᖅᕕᑭᕙᒃᑕᖕᒋᓐᓂ ᕿᑐᖕᒋᐅᖕᒋᓐᓂᖅᓴᐅᓚᕈᓐᓇᖅᒪᑕ. ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐃᓚᐅᖅᑲᐃᓯᒪᓂᐊᖅᒪᑕ ᐲᔭᖅᑕᐅᓗᑎᒃ ᐸᕝᕙᓴᐅᑕᐅᔪᑦ ᐊᒃᓱᓗᐊᖑᔪᓐᓃᖅᑎᑕᐅᓗᑎᒃ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᑦ ᒪᑯᓇᓂ: ᓇᓗᓇᐃᔭᐃᓗᑎᒃ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᑦᑕᐃᓕᒪᖅᑲᖅᓗᑎᒃ ᐊᓪᓗᖅᑲᖅᕕᐅᔪᑦ. ᐃᓱᓕᓗᒋᔭᖅᑲᖕᒋᑦᑐᑦ ᑕᐃᒪᓐᓇ ᑭᖑᓂᖓᒍᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᓂᒃ ᐊᒥᐊᒃᑯᓂᐊᓗᐊᖕᒋᑦ ᐊᓯᖕᒋᓐᓄᓪᓗ ᓄᓇᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᑦ ᓇᑦᑎᖅᑲᐅᖅᑐᓂ.

ᐊᑐᖅᓂᖅᑐᑦ ᐃᓅᔪᑏᑦ ᑮᓇᐅᔭᒃᓴᐅᑏᓪᓗ ᑕᒫᓂᖅᒥᐅᓄᑦ (VSECs)

ᐃᓄᐃᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ

ᐃᑦᑕᓐᓂᑕᖅᑲᖅᕕᐅᔪᑦ - ᓴᓇᔭᐅᕙᓪᓕᐊᑎᓪᓗᒍ ᐅᔭᕋᖕᓂᐊᖅᕕᒃᓴᖅ ᐃᑉᐱᖕᓇᖅᓂᖅᑭᓐᓇᖅᒪᑕ ᐃᑦᑕᓐᓂᑕᖅᑲᖅᕕᐅᔪᓄᑦ ᑕᒫᓂ. ᐊᒃᓯᓗᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᐋᕿᒃᓯᐃᓯᒪᓚᖓᖕ`ᒥᔪᑦ ᐅᐸᒃᑕᐅᖅᑲᑦᑕᖅᑯᖕᒋᓪᓗᒋᑦ ᓴᓇᕙᐅᔪᓂ ᐋᕿᒃᓯᐃᓯᒪᓚᖓᔪᑦ. ᓇᒥᑐᐃᓐᓇᖅ ᐃᑦᑕᓐᓂᑕᖅᑲᖅᕕᐅᔪᓂᒃ ᓇᓂᓯᒫᖕᒪᑕ ᓴᓇᑎᓪᓗᒋᑦ, ᐊᐅᓚᑕᐅᓂᖅᑎᓪᓗᒍᓗ, ᐊᒻᒪᓗ ᑭᖑᓪᓕᖅᐹᒥ ᒪᑐᓂᖅᑎᓪᓗᒍ ᑕᒪᓐᓇ ᕿᒥᕈᔭᐅᖅᑕᐃᓐᓇᓚᖓᔪᖅ ᓴᓇᕙᐅᔪᖅ ᐃᑦᑕᓐᓂᑕᓐᓂᐊᖅᑎᓄᑦ, ᑎᑎᕋᖅᑕᐅᕙᓗᓂ, ᐅᓂᒃᑲᐅᓯᐅᕙᓗᑎᓗ ᓄᓇᕗᑦ ᒐᕙᒪᖓᓄᑦ, ᐃᓕᖅᑯᓯᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ: ᐅᐸᒃᑕᐅᑦᑕᐃᓕᒪᓕᖅᓗᑎᒃ ᐊᒻᒪᓗ/ᐅᖁᓘᓐᓃᑦ ᐋᕿᒋᐊᖅᓯᔪᑕᐅᓗᑎᒃ ᐊᑐᐊᒐᖏᓐᓄᑦ ᑕᒫᓂ, ᖃᓄᑐᐃᓐᓇᖅ ᐃᑉᐱᖕᓇᖅᓂᖅᑐᑦ ᐊᒥᐊᒃᑰᔭᖕᒋᑦᑐᑦ ᑲᑎᓪᓗᒋᓪᓗ ᐊᓯᖕᒋᓐᓄᓪᓗ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᑉᐱᖕᓇᖅᓂᖅᑳᔭᖕᒋᑦᑐᑦ ᐃᑦᑕᓐᓂᑕᖅᑲᖅᕕᐅᔪᓂ.

ᐃᓅᔪᑏᑦ-ᑮᓇᐅᔭᒃᓴᐅᑏᓪᓗ

ᑮᓇᐅᔭᒃᓴᐅᑎᓄᑦ ᐱᕖᓪᓕᐅᑕᐅᔪᑦ - ᐅᓄᖅᓯᕖᓪᓕᖅᓂᐊᖅᑐᑦ ᑮᓇᐅᔭᒃᓴᐅᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᓯᖕᒋᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᑕᒪᓂ ᐅᔭᕋᖕᓂᐊᖅᕕᖅᑲᓕᖅᐸᑕ ᐱᓗᐊᒍᐊᖅᑐᒥᒃ ᓄᓇᓕᖕᒥᐅᑦ ᐃᖅᑲᓇᐃᔭᒃᓴᖅᓂᖅᓴᐅᓕᖅᓂᐊᖅᒪᑕ, ᐊᑭᓕᐅᓯᐊᖅᓂᖅᓴᐅᓕᖅᓗᑎᒃᓗ, ᐊᒻᒪᓗ ᓂᐅᕕᖅᑕᖅᓂᖅᓴᐅᓕᖅᓗᑎᒃ, ᐱᑕᖅᑲᖅᓂᖅᓴᐅᓕᖅᓗᑎᓗ ᐅᔭᕋᖕᓂᐊᖅᕕᓂ ᓴᓇᔨᒋᔭᐅᓪᓗᑎᒃ ᐊᑐᖅᑐᐊᖅᑕᐅᔪᑦ ᐱᔨᑦᓯᕋᖅᑎᐅᓪᓗᑎᒃ ᓄᓇᓕᖕᒥᐅᓂ (ᓄᓇᓕᖕᓂ, ᓄᓇᓕᐅᖅᑎᑭᕕᐊᓂᓗ) ᐅᓄᖅᓯᕖᓪᓕᖅᓗᑎᒃ ᓇᖕᒥᓂᖅ ᐱᓇᓯᐊᒐᖅᑐᑦ ᓄᓇᓕᖕᓂ ᐊᑐᖅᑕᐅᓂᖅᓴᐅᓕᖅᐸᑕ ᕿᑎᖅᒥᐅᓂ ᓄᓇᕗᒥᐅᓕᒫᓂᓗ,

ᒪᓐᓇ ᐱᕙᓕᖅᑕᖅᑕᒥ ᐊᓯᒌᓐᓂᑦ ᐱᔪᓐᓇᖅᓯᓂᐊᕐᒪᑕ ᑮᓇᐅᔭᒃᓴᕐᓂᖕᓴᐅᓕᕐᓗᑎᒃ ᐊᒌᓕᕚᓪᓕᕈᓐᓇᖅᓯᓂᐊᕐᒪᑕ ᕿᑎᕐᒥᐅᓂ ᓂᐅᕕᐊᒃᓴᖅᑲᖅᑕᖅᑐᑦ ᐱᖁᑎᓂᒃ ᐱᔮᑦᓯᕋᕈᑎᓂᓗ ᐱᑕᖃᐅᕐᓂᖕᓴᐅᓕᕐᓂᐊᖅᑐᑦ ᑕᐃᓱᒪᙱᓂᓐ, ᐊᒻᒪᓗ/ᐅᕝᕙᓗ ᐱᕚᓪᓕᐊᔪᓐᓇᖅᓯᓗᑎᒃ ᑮᓇᐅᔭᖃᕐᓂᖕᓴᐅᓕᕈᑎᒃ ᐊᓯᒥᓂᒃ ᐃᑲᔪᕈᓐᓇᖅᓯᓗᑎᒃ ᐱᓇᓱᐊᕆᓕᐅᕈᒪᔪᓂᒃ ᐃᓄᐃᑦ ᓇᒥᓂᙱᓐᓂ ᐱᓇᓱᐊᕆᓂ. ᑮᓇᐅᔭᒃᓴᐅᑏᑦ ᐱᕈᖅᐸᓪᓕᕐᓗᑎᒃ, ᐅᓗᖅᓯᕗᓪᓕᕐᓗᑎᒃ, ᐊᒻᒪᓗ ᐊᔪᙱᓕᖅᐸᓪᓕᕐᓗᑎᒃ ᐊᒌᓂᖕᓴᓂᒃ ᐊᔾᔩᙱᑦᑐᓂᒃ ᐱᓕᕆᔪᓐᓇᖅᓯᓗᑎᒃ ᐱᕗᓪᓕᓂᖃᓪᓚᙱᔪᑦ ᐃᓗᐊᕐᓂᖕᓱᑦ ᑮᓇᐅᔭᒃᓴᐅᑎᑎᒍᑦ.

ᓇᙱᓂᖃᖅᑐᓄᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ - ᐅᔭᕋᓐᓂᐊᕐᕕᓂ ᐱᓕᕆᐊᕆᔭᐅᔪᓄᑦ ᐃᑲᔪᖅᓴᕈᑏᑦ ᐱᑕᖃᕐᓂᖕᓴᐅᓕᖅᐸᑕ ᓄᓇᓕᙱᐅᓄᑦ ᓇᙱᓂᕆᔭᐅᔪᓄᑦ ᐱᕈᖅᐹᓪᓕᕈᑕᐅᓂᐊᕐᒪᑕ ᐃᓄᐃᑦ ᑲᒻᐸᓂᕐᑯᑎᙱᓐᓄᑦ ᒪᑯᓇᓂ: ᑳᓐᑐᖅᑎᑕᐅᖅᑕᕐᓗᑎᒃ ᐃᑲᔪᖅᑎᒋᔭᙱᓕᓗ ᓱᓕᒃᑲᓐᓂᖅ ᑳᓐᑐᖅᑎᑕᐅᙱᒥᓗᑎᒃ, ᓴᓇᔩᑦ ᓱᓇᒃᑯᑖᒃᓴᙱᓐᓂᒃ ᓂᐅᕕᕐᕕᐅᓗᑎᒃ ᐊᒻᒪᓗ ᐱᔮᑦᓯᖅᑎᐅᓗᑎᒃ, ᑕᐃᒪᓐᓇ ᐊᑐᓂ ᐊᑭᓕᐅᓯᐊᙱᓐᓄᑦ ᐊᑐᕐᓂᖅᑲᕐᓂᐊᖅᑐᖅ, ᓄᓇᓕᙱᒥᐅᑦ ᓂᐅᕕᕋᓐᓇᕐᓂᖕᓴᐅᓕᖅᐸᑕ ᓂᐅᕕᐊᒃᓴᐃᑦ ᐅᓗᖅᓯᓂᖕᓴᐅᓗᑎᒃ. ᕿᓚᓈᖅᑐᑦ ᓇᓚᐅᑦᑖᕈᑕᐅᓯᒪᔪᓂᒃ ᓄᓇᓕᙱᓂ ᓴᓇᖅᑯᑎᒃᓴᓂᒃ ᓂᐅᕕᖅᑕᖅᑐᑦ ᐅᓗᖅᓯᕗᓪᓕᕐᓂᐊᕐᒪᑕ (ᐃᒻᒪᖄ ᐊᒌᓕᒋᐊᖅᑎᑦᑎᓗᑎᒃ ᐱᓕᕆᐊᒥᓂᒃ ᐅᕙᕗᓐᓃᑦ ᓄᑖᓂᒃ ᐱᒋᐊᖅᑎᑦᑎᓗᑎᒃ) ᕿᓚᓈᕆᓪᓗᒋᑦ ᐅᓗᖅᓯᕗᓪᓕᕐᓂᐊᕐᓂᙱᑦ ᓴᓇᔭᒃᓴᐃᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᓂ. ᓄᓇᓕᙱᓂ ᓇᙱᓂᖃᖅᑐᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᓂ ᐱᔮᑦᓯᕋᐅᑎᓂᒃ ᑳᓐᑐᖅᑎᒐᓱᐊᕈᓐᓇᕐᓂᐊᕐᒪᑕ ᐅᔭᕋᓐᓂᐊᖅᑏᓪᓗ ᓴᓇᔩᑦ, ᐊᖅᑯᑎᒋᔭᐅᓗᑎᒃ ᑖᒃᑯᐊ ᐅᔭᕋᓐᓂᐊᕐᕕᖅᑕᖅᑐᑦ ᓴᓇᕕᙱᓐᓂ ᐊᒡᒎᓗᐊᕝᔪᔭᐃᒃᑯᑎᓂᒃ ᑲᒪᔩᐅᓗᑎᒃ ᐊᐅᓚᑦᑎᔩᐅᓗᑎᓗ ᐱᒋᐊᖅᑎᑕᐅᓯᒪᔪᓂᒃ ᐅᔾᔩᖅᓯᕈᑎᓂᒃ ᓴᓇᕕᙱᓂ ᐅᓗᖅᓯᕗᓪᓕᕐᓂᐊᖅᑐᑦ ᐊᑐᕐᓂᖅᑐᑦ ᑳᓐᑐᖅᑎᖅᑕᖅᓯᑎᒃ ᐱᔮᑦᓯᕋᖅᑎᐅᖅᑕᖅᑐᓄᑦ ᐱᕗᓪᓕᐅᑕᐅᓂᐊᖅᑐᑦ ᐊᑐᕐᓂᖅᑐᓄᑦ ᑳᓐᑐᖅᑎᖅᑕᖅᑐᓄᑦ ᓄᓇᓕᙱᓂ ᓄᓇᓕᐅᖅᑎᒌᕕᓂᓗ ᑭᓯᓕᒫᑦ ᐱᕈᖅᐹᓪᓕᐊᓕᖅᐸᑕ ᐅᓗᖅᓯᕗᓪᓕᖅᐸᑕᓗ ᓴᓇᕕᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᐃᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓪᓗ ᓇᙱᓂᖅ ᐱᓇᓱᐊᒐᙱᓐᓄᑦ ᐊᑲᐅᓯᓂᖕᓴᐅᓂᐊᓂᕋᐃᔪᑦ ᐃᒃᐱᙱᓐᓂᙱᓐᓄᑦ.

ᐃᖅᑲᓇᐃᔭᖅᑎᖅᑲᕈᑏᑦ - ᐅᔭᕋᓐᓂᐊᕐᕕᙱᒥ ᓴᓇᔪᑦ ᐅᓗᖅᓯᓂᐊᕐᒪᑕ ᑕᒪᓂᕐᒥᐅᑦ ᐅᑯᓇᓂ 1) ᐊᓯᔩᓂᐊᖅᑐᑦ ᐃᖅᑲᓇᐃᔮᖅᑐᑦ ᐊᑭᓕᐅᓯᐊᙱᓕᓗ, 2) ᐊᓯᔩᓂᐊᖅᑐᑦ ᐊᔪᙱᓐᓂᙱᑦ ᑕᒫᓂᕐᒥᐅᑦ ᐃᖅᑲᓇᐃᔮᖅᑲᓕᖅᐸᑕ, ᐊᒻᒪᓗ 3) ᐊᓯᔾᔩᓂᐊᖅᑐᑦ ᐊᑭᒪᖅᑕᐅᑎᔪᓯᙱᑦ ᐃᖅᑲᓇᐃᔮᖅᑖᕋᓯᐊᕐᓗᑎᒃ ᓴᓇᔩᑦ. ᐋᕿᒋᐊᖅᑕᐅᓗᑎᒃ ᐊᐅᓚᑕᐅᓗᑎᓗ ᐅᓗᖅᓯᕝᕙᓪᓕᐊᓂᙱᑦ ᐃᓗᐊᕐᓂᖕᓱᑦ ᐃᓕᓴᐃᔪᑎᓄᑦ ᓴᓇᖅᑯᓯᕐᓂᒃ, ᐃᖅᑲᓇᐃᔭᖅᑎᑖᓇᔭᐅᓗᑎᒃ, ᐸᐸᑕᐅᙱᓐᓇᕐᓗᑎᒃ ᑕᒪᔭ ᐱᕚᓪᓕᐊᑎᑕᐅᓂᐊᖅᑐᑦ ᐃᓗᐊᕐᓂᖕᓱᑦ ᐃᒃᐱᙱᓐᓂᖅᑯᓪᓗᒋᑦ ᓄᓇᓕᙱᒥᐅᓄᑦ ᐃᓄᙱᓐᓄᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᙱᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᓄᑦ ᐊᒻᒪᓗ ᐊᑐᐊᕆᖅᑲᖅᓯᑎᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᖅᑲᕈᑎᓄᑦ ᐸᕐᓇᐃᔪᑕᐅᓯᒪᔪᓂᒃ. ᑐᑭᒧᐊᖅᑐᒥᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᒋᓗᒋᑦ ᐅᔭᕋᓐᓂᐊᖅᑏᑦ ᐃᒻᒪᖄ ᓄᓇᓕᙱᓐᓂ ᓴᓇᔨᖅᑲᙱᓐᓂᖕᓴᐅᓕᕋᔭᖅᑐᖅ ᐅᔭᕋᓐᓂᐊᕐᕕᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᐃᓐᓇᐅᓕᖅᐸᑕ. ᓴᓇᕕᖅᑲᓕᖅᐸᑕ ᐊᓯᙱᓐᓂ ᐃᒻᒪᖄ ᓄᓇᓕᙱᒥᐅᓂ ᓴᓇᔩᑦ ᐊᑐᖅᑕᐅᙲᓕᖅᐸᑕ ᐅᔭᕋᓐᓂᐊᕐᕕᓂ ᐊᑲᐅᙱᓕᐅᕈᑕᐅᓕᑐᐃᓐᓇᕆᐊᓕᒃ. ᑕᐃᒪᓐᓇ ᐱᑐᐃᓐᓇᕆᐊᖅᑲᕋᓗᐊᖅᑎᓪᓗᒋᑦ, ᑭᓯᐊᓂᓕ ᓯᕠᕋᒋᔭᐅᙱᑦᑐᑦ ᑕᒪᓐᓇ ᐊᒃᓯᕈᓕᕈᑕᐅᓂᐊᕋᓯᒋᔭᐅᙱᒻᒪᑦ ᑕᒫᓂᕐᒥᐅᓄᑦ ᐊᓯᙱᓐᓂᓗ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐊᒥᐊᒃᑯᙱᑦ ᐊᑲᐅᙱᑦᑐᒍᑦ ᐃᒃᐱᙱᓐᓂᖅᑳᓇᑎᒃ.

ᐃᓕᓴᖅᑐᓕᕆᔪᑏᑦ ᐊᔪᕈᓐᓃᖕᓴᐅᑏᓪᓗ - ᐃᒃᐱᙱᓐᓂᖅᑲᕐᓂᐊᕋᓯᒋᔭᐅᔪᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᐃᓕᓴᕈᑎᓂ ᐊᒻᒪᓗ ᐱᓕᒪᒋᐅᖕᓴᐅᑎᓂ ᐃᖅᑲᓇᐃᔮᒃᓴᓂᒃ ᐱᑕᖃᓂᐊᖅᑲᖅᑕᓂᐊᕐᒪᑕ ᑖᒥᓂ ᐃᓕᓴᖅᑕᐅᓗᑎᒃ ᐊᔪᕈᓐᓃᖕᓴᖅᑕᐅᓗᑎᓗ ᐃᖅᑲᓇᐃᔮᓂᒃ, ᒪᒃᑯᒃᑐᓄᑦ ᐃᒃᐱᙱᓐᓂᖅᑲᓪᓚᙱᔪᑦ ᐃᓯᒪᙱᓐᓄᑦ ᐱᖅᑯᓯᙱᓐᓄᓪᓗ ᐃᓕᓴᐃᔪᑏᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᐊᔪᕈᓐᓃᖕᓴᐅᑏᓪᓗ. ᓴᐱᓇᒥᐅᑦ ᐱᓕᕆᖅᑎᖅᑲᕐᓂᐊᕐᒪᑕ ᑕᑎᒋᓗᒋᑦ ᓄᓇᓕᙱᒥᐅᑦ ᓚᕙᒪᑎᙱᑦ, ᐃᓕᓴᕕᔪᐊᓪᓗ ᑎᒥᖁᑎᙱᑦ, ᐃᓄᐃᓪᓗ ᑎᒥᖁᑎᙱᑦ ᑖᒥᓂ ᐊᓯᙱᓪᓗ ᐅᔭᕋᓐᓂᐊᕐᕕᙱᒥ ᓴᓇᔨᓂᒃ ᐋᕿᐅᒪᑎᑦᑎᔩᑦ ᐃᓕᓴᐃᖅᑕᖅᑐᑎᒃ ᐊᔪᕈᓐᓃᖕᓴᐃᖅᑕᖅᑐᑎᒃ ᓱᕋᐅᓴᐃᖅᑕᖅᑐᑎ'ᓗ, ᒪᒃᑯᒃᑐᓪᓗ ᐱᖅᑯᓯᙱᓐᓄᓪᓗ ᐊᓯᔩᔪᑕᐅᔪᓂᒃ ᑲᒪᔩᐅᖅᑕᖅᑐᑎᒃ, ᕿᓚᓈᕆᔭᖅᑐᑦ ᐃᓗᐊᕐᓂᓴᖅᑯᑦ ᐃᒃᐱᙱᓐᓂᖅᑲᕐᓂᐊᕋᓯᒋᓪᓗᑎᒃ.

ᐋᓐᓂᐊᖅᑐᓕᕆᔪᑏᑦ ᐃᓗᐊᖕᓴᐃᔪᑏᓪᓗ ᓄᓇᓕᙱᓂ - ᑕᒪᐃᑕ ᐱᐅᓯᕚᓪᓕᐅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᐊᑲᐅᙱᓕᖅᐹᓪᓕᐅᑕᐅᓂᐊᖅᑐᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᐃᓗᐊᖕᓴᐃᔪᑎᓄᑦ ᓄᓇᓕᙱᓂ ᐋᓐᓂᐊᖅᑐᓕᕆᔪᑎᓂ ᖃᓄᐃᙱᔭᐃᒃᑯᑎᓂᓗ ᓴᓇᕕᙱᓂ ᑕᒪᐃᓐᓄᑦ ᓴᓇᔨᓄᑦ ᖃᑕᙳᑎᙱᓐᓄᓪᓗ ᐊᔪᖕᓴᙱᓐᓂᖕᓴᐅᓕᖅᐸᑕ. ᖃᓄᐃᓐᓇᖅ

ᓄᓇᓕᖕᒥᐅᑦ ᐊᔪᖅᓴᖕᒋᓂᖅᓴᐅᓕᕈᑎᒃ ᑮᓇᐅᔭᑎᒃ ᑭᓱᑐᐃᓐᓇᒧᑦ ᐊᑐᕈᓐᓇᕐᒪᔪᒃ ᐱᐅᖕᒋᓐᓂᖅᓴᒧᑦ (ᐃᒻᒪᖄ ᓅᒃᑯᒃᑕᕈᑎᒋᑯᒋᑦ, ᐋᖕᒑᔾᓇᖅᑐᓂᒃ ᓂᐅᕚᕈᑎᒋᑯᒋᑦ, ᐃᒥᐊᑯᖕᓂᑯ) ᑕᐃᒪᓐᓇ ᐱᐅᖕᒋᑦᑐᓂᒃ ᐱᖅᑯᓯᖅᑲᓕᕐᑯᑎᒃ, ᑕᐃᒪᐃᓐᓂᐊᖅᐸᑕ ᐊᑲᐅᖕᒋᑦᑐᒥᒃ ᓄᐃᑦᑐᖅᑲᕈᓐᓇᖅᑐᖅ ᓄᓇᓕᖕᓂ. ᑭᓱᐊᓂᓕ, ᐃᒡᑯᐊᓄᖕᖠᖅᑕᐅᖅ ᑕᑯᓪᓗᒋᑦ ᐊᑭᓕᐅᓯᐊᒥᓂᒃ ᐊᑐᑦᑎᐊᖅᑲᑦᑕᕐᓂᐊᖅᐸᑕ ᐃᓅᓯᕐᒥᓂᒃ ᐃᓗᐊᖅᓯᕗᓪᓕᖅᑎᑦᑎᓇᓱᐊᕐᑯᑎᒃ (ᐃᒻᒪᖄ, ᐱᐅᓂᖅᓴᓂᒃ ᐃᒡᑯᖅᑲᓕᕐᑯᑎᒃ, ᓂᕿᖅᑲᑦᑎᐊᓕᕐᑯᑎᒃ) ᑲᑎᓪᓗᒋᑦ ᐃᓗᐊᖅᓯᕗᓪᓕᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᓱᓕᒃᑲᓐᓂᖅ ᐱᕗᓪᓕᐅᑕᐅᔪᓐᓇᕐᒪᑕ ᐅᓄᖅᑐᓄᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᓄᑦ. ᑕᒪᐃᑎᒎᓪᓕ, ᐊᒥᐊᒃᑯᒋᔭᐅᑯᓂ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᖅᓂᐊᖅᑐᖅ ᓄᓇᓕᖕᒥᐅᓄᑦ, ᑲᑎᓪᓗᒋᓪᓗ ᓴᓇᕖᑦ, ᐊᓯᑦᑎᓐᓄᓪᓗ ᓄᓇᓂ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕐᓂᐊᕈᓯᖕᒋᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᓄᑦ ᑮᓇᐅᔭᖅᓴᕐᓂᖅᓴᐅᓕᖅᐸᑕ ᑖᒪᓂᕐᒥᐅᑦ ᖃᑦᖑᑎᖕᒋᓐᓄᓪᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᑦ ᓄᐃᑦᑐᓐᓇᕐᒪᑕ ᖃᑦᖑᑎᑭᓪᓗ ᓴᓇᒪᓂᖕᒋᓐᓄᑦ, ᓯᓕᔪᒥᒃ ᓇᓚᐅᑦᑖᕈᑕᐅᓯᒪᔪᑦ ᐊᒃᓲᑯᐊᖑᔾᔫᖕᒋᓐᓂᖅᑲᖅᑕᐅᓪᓗᑎᒃ.

ᓄᓇᐃᑦ ᐊᑐᖅᑕᐅᓂᖕᒋᑦ

ᐱᖅᑯᓯᑐᖅᑲᐅᖕᒋᑦᑐᓂᒃ ᓄᓇᒥᒃ ᓄᓇᒥᑕᔭᓂᑯ ᐊᑐᕈᑕᐅᔪᑦ - ᑮᓇᐅᔭᒃᓴᐅᑎᖅᑲᖅᓯᑎᒃ ᓄᓇᒥᓂᒃ ᐊᑐᖅᑲᑦᑕᕐᒪᑕ ᑕᒪᓂᕐᒥᐅᑦ ᐊᓯᙵᐊᖅᓯᒪᑎᑦᑎᖅᑲᑦᑕᖅᑐᑦ ᐊᖑᓇᓱᒃᑎᓂᒃ ᐳᓚᓇᐊᖅᓯᒪᔪᓂᒃ, ᓴᕙᕋᔭᒃᓴᔭᓂᑯ ᕿᓂᖅᑐᑦ, ᐃᖕᒋᕋᕚᕆᖅᑲᑦᑕᖅᑯᓂᔪᑯ ᐊᖅᑯᑎᒃᑯᑦ ᐅᒥᐊᖅᔪᐊᒃᑯᓪᓗ. ᓴᓇᕕᐅᔪᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕐᓂᐊᖅᑐᑦ ᓄᓇᒥᒃ ᐊᑐᖅᑲᑦᑕᖅᑐᓄᑦ ᐊᓯᖕᒋᓐᓄᑦ ᐅᐸᒃᑕᐅᔪᓐᓇᐃᓕᑎᑦᑎᑯᑎᒃ ᐊᖑᓇᓱᒃᑎᓄᑦ ᐊᑐᖅᑲᑦᑕᖅᑕᖕᒋᓐᓄᓪᓗ ᓄᓇᒥᑦᑐᓄᑦ, ᐊᓯᔾᔨᕈᑕᐅᓂᐊᕐᒪᑕ ᑖᒃᑯᓂᑐᐊᖅ ᓴᓇᕕᐅᔪᒥ ᓄᓇᖕᒐᓂᒃ ᐅᐸᖅᑲᑦᑕᑦᑕᖕᒋᓐᓂᒃ ᑲᔾᔭᖅᓇᖅᑐᓂᒃ, ᐊᓯᔾᔨᕈᑕᐅᑯᑎᑯ ᐱᑕᖅᑲᐅᕐᓂᖕᒋᓐᓄᑦ ᐱᕈᖅᑐᐃᑦ.. ᐊᒥᓱᓂᒃ ᐱᐅᓂᖅᐹᒧᑦ ᓵᖕᒐᖕᖠᖅᑎᑦᑎᓇᓱᐊᕐᑯᑎᒃ ᐋᕿᒃᓯᐃᓯᒪᔪᓐᓇᕐᒪᑕ ᓴᓇᖅᑯᑏᑦ ᐱᖅᑯᓯᖕᒋᑎᒧᑦ ᐃᑲᔫᕈᓐᓇᖅᑐᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᒃ ᐊᒃᓱᐊᔭᐃᒃᑯᑎᓂᒃ ᐊᑐᐊᒐᖅᑲᖅᑯᑎᒃ ᓴᓇᕕᖕᓂ ᐊᒃᓯᕈᓕᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᒃᓱᐊᖑᖅᑯᓇᒋᑦ, ᑕᒪᑐᒪᓂᓴᐃᓐᓇᖅ ᐃᑲᔪᖅᓴᕋᑯᐊᖅᑯᑎᒃ ᐱᕗᓪᓕᐅᑕᐅᔪᓐᓇᖅᑐᓂᒃ. ᐊᒥᐊᒃᑯᒋᔭᐅᓇᔭᖅᑐᑦ ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ ᐃᒃᐱᖕᓇᕈᑕᐅᓇᔭᖅᑐᑦ ᐊᒃᓯᕈᐊᖑᓂᐊᖕᒋᓂᖅᑲᖅᑕᐅᓚᐅᖅᒥᔪᑦ. ᐱᖅᑯᓯᑐᖅᑲᐅᖕᒋᑦᑐᑎᑐᑦ ᓄᓇᓂᒃ ᐊᑐᕈᑕᐅᔪᑦ ᐅᖕᖁᑖᓄᑦ ᐱᖕᒋᒻᒪᑕ ᓇᔪᒐᓇᔭᒥ ᑭᓪᓕᖕᒋᓐᓄᑦ ᓄᓇᕗᒥ ᓄᓇᑖᕈᑕᐅᓯᒪᔪᓄᑦ ᑭᓱᐊᓂ ᐊᒃᑐᐊᓂᖅᑲᖅᒪᑕ ᑕᐃᒪᓐᓇ ᐃᒃᐱᖕᓇᕐᓂᖅᑳᖕᒋᑦᑐᑦ ᐊᓯᖕᒋᓐᓂ ᓄᓇᖅᑲᖅᑐᓄᑦ.

ᐃᓅᔪᑎᒋᓪᓗᒋᑦ ᑮᓇᐅᔭᒃᓴᐅᑎᖅᑲᖅᑐᑦ ᓄᓇᒥᒃ ᐊᑐᕈᑎᖕᒋᑦ - ᐃᓄᐃᑦ ᕿᑎᖅᒥᐅᓂ ᑕᐃᒪᖕᓕᓂᑦ ᐱᖅᑯᓯᑐᖅᑲᖅᒥᑎᒎᑦ ᖃᐅᔨᒪᔭᒥᓂᒃ ᐃᓅᔪᑎᖅᑲᐃᓐᓇᐅᔭᕐᒪᑕ ᑖᒪᓂ ᓄᓇᒥᓂ ᐊᐅᑎᒥᓂᑯ (ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖅᑲᖕᒋᑦ). ᐃᓅᔪᑎᒋᓪᓗᒋᑦ ᑮᓇᐅᔭᒃᓴᐅᑎᒋᔭᖕᒋᑦ ᓄᓇᒥᑯ ᐊᑐᕈᑎᒋᖅᑲᑦᑕᖅᑕᖕᒋᑦ ᑖᒪᓂᕐᒥᐅᑦ (ᐊᖑᓇᓱᒃᑏᑦ, ᐃᖃᓗᓐᓂᐊᖅᑏᑦ, ᒥᑭᒋᐊᓐᓂᐊᖅᑏᓪᓗ, ᓄᓂᕙᒃᑲᖅᑏᓪᓗ) ᐃᒻᒪᖄ ᐊᒃᑐᐊᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᖕᒐᓂ ᐱᕙᓪᓕᐊᑎᑕᐅᔪᓄᑦ ᐅᐸᒍᓐᓇᐃᓪᓕᓗᒋᑦ ᐅᐸᖅᑲᑦᑕᖅᑕᕙᓂᖕᒋᑦ ᓴᓇᕕᐅᓕᖅᐸᑕ ᑕᒪᓂ ᐊᖑᓇᓯᒋᐊᖅᕙᓂ; ᐊᓯᔾᔨᖅᑯᑎᒃ ᓴᓇᔪᑦ ᓄᓇᖕᒐᓂ ᑲᔾᔭᖅᓇᖅᑐᑦ ᐸᒃᕙᓴᒃᑕᐅᑯᑎᒃ, ᐊᖑᓇᓱᒃᑕᐅᖅᑲᑦᑕᖅᑐᓪᓗ ᐆᒪᔪᑦ ᐅᓄᖅᓂᖕᒋᑦ ᑕᒪᐅᖕᒐᖅᑲᑦᑕᖅᑐᑦ. ᐊᒥᓱᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᓂᒃ ᐋᕿᒃᓯᐃᓯᒪᖕᒥᔪᑦ ᑕᒻᒃᑯᓄᖕᓚ ᐊᒃᓲᑯᐊᖑᔭᐃᒃᑯᑎᓂᒃ ᒪᑯᓂᖕᓚ: ᐊᒃᓱᐊᖑᑕᐃᓕᒪᑎᑦᑎᑯᑎᒃ ᐅᔭᕋᖕᓂᐊᖅᕙᓂ ᐃᒡᑯᓕᐅᖅᑕᐅᔪᓂᒃ ᐋᕿᒃᓯᑦᑎᐊᖅᓯᒪᓇᓱᐊᕐᑯᑎᒃ ᑖᒃᑯᓂᑐᐊᖅ ᑭᓱᐊᓂ ᐱᓕᕆᖅᑲᑦᑕᕐᑯᑎᒃ ᑲᒪᑦᑎᐊᕐᑯᑎᒃ ᓴᓇᖅᑯᑎᓂᒃ ᐊᐅᓚᑦᑎᔪᑎᖅᑲᐅᕐᑯᑎᒃ, ᐅᔾᔨᖅᓱᕈᑎᖅᑲᐅᕐᑯᑎᑯ.

ᑕᒪᐃᑎᒎᓪᓕ, ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᒥᐊᒃᑯᒋᔭᐅᓇᔭᖅᑐᑦ ᐊᒻᒪᓗ ᑲᑎᓪᓗᒋᑦ ᓴᓇᕕᐅᔪᓄᑦ ᐃᒃᐱᖕᓇᕈᑕᐅᓇᔭᖅᑐᑦ ᐃᓅᔪᑎᖅᑲᖅᓯᑎᑦ ᓄᓇᒥᓂᑦ ᑮᓇᐅᔭᒃᓴᐅᑎᖅᑲᖅᑐᓄᑦ ᐊᑐᖅᑲᑦᑕᖅᑐᓄᓪᓗ ᐊᒃᓲᑯᐊᖑᔾᔫᖕᒋᓐᓂᖅᑲᖅᑕᐅᖕᒥᔪᑦ ᐊᒻᒪᓗ ᑖᒪᓂᑐᐊᖑᓂᐊᖅᓯᑎᒃ. ᐊᒻᒪᓗ ᓯᓕᒃᑲᓐᓂᖅ, ᐊᑐᖅᓂᓇᓂᐊᖅᑕᖕᒋᓐᓄᑦ ᐅᔭᕋᖕᓂᐊᖅᕕᒃ ᑖᒪᓂᕐᒥᐅᓄᑦ ᑲᔪᓯᒋᐊᓪᓚᒃᑲᓐᓂᕈᑕᐅᓂᐊᕐᒪᑕ ᐱᖅᑯᓯᑐᖅᑲᖅᒥᑎᒎᑦ ᓄᓇᒥᓂᒃ ᐊᑐᕈᑎᖕᒋᓐᓄᑦ ᐱᒋᐊᓪᓚᒃᑎᑕᐅᔪᓐᓇᕐᒪᑕ ᑕᒪᓂᕐᒥᐅᑦ ᑮᓇᐅᔭᒃᓴᖅᓂᖅᓴᐅᓕᖅᐸᑕ ᐃᖅᑲᓇᐃᔭᒃᓴᖅᑲᐅᖅᓂᖅᓴᐅᓕᖅᐸᑕ ᓴᓇᕕᐅᔪᓂ. ᓴᓇᕕᐅᔪᒥᑦ ᐊᓯᖕᒋᓐᓂ ᓄᓇᖅᑲᖅᑐᓄᑦ ᐃᑳᓯᓂᐊᖕᒋᓐᓂᖅᑲᖅᑕᐅᔪᑦ ᓄᓇᒥᑦ ᐃᓅᔪᑎᖅᑲᖅᓯᑎᑦ ᐊᑐᖅᑲᑦᑕᖅᑐᓄᑦ.

ᓄᓇᒥᑕᔭᐃᑦ ᓂᖅᑮᑦ

ᐊᒥᓱᓂᒃ ᓱᕈᔪᖕᓇᖅᑐᖅᑲᑐᐃᓐᓇᕆᐊᓕᒃ ᓴᓇᕕᐅᔪᓂᑦ ᐱᔪᓂᒃ ᓄᓇᒥᑕᔭᓄᑦ ᓂᖅᑭᓄᑦ ᐃᒃᐱᖕᓇᖅᓂᖅᑲᖅᑐᓂᒃ ᐃᓅᓯᓕᒫᖕᓗᓂ ᐅᔭᕋᖕᓂᐊᖅᕕᒃ. ᐃᓛᖕᒋᓕᒃ ᑖᓐᓇ ᐅᔭᕋᖕᓂᐊᖅᕕᑦ ᓴᕙᕋᔭᒃᓴᓕᐅᖅᕕᐅᓂᐊᖅᒪᑦ, ᓴᕙᕋᔭᕈᔪᓂᒃ

ᐱᑕᖃᐅᓪᓗᑐᕐᓂᐊᕐᒪᑦ ᐱᑕᖃᕐᓂᖅᓴᐅᓕᕐᓗᓂ ᐳᔪᐊᕐᑭᔪᓂᑦ ᓴᓇᕕᐅᔪᓂᓗ ᐅᔭᕋᙱᐊᖅᑎᓪᓗᒋᑦ. ᐊᒃᓱᐊᓗᒃ ᐊᒃᓱᓗᐊᔭᐃᒃᑯᑎᓂᒃ ᐱᑕᖃᐅᓚᖓᔪᖅ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᔪᑎᖃᐅᕐᓗᑎᒃ ᓴᓇᕕᐅᔪᓂ ᐊᒃᓱᓗᐊᓕᔭᐃᒃᑯᑎᓂᒃ ᐱᑕᖃᕐᑯᖏᓪᓗᒋᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᓕᑐᐃᓐᓇᕆᐊᓖᑦ ᐊᕙᑎᑦᑎᓐᓄᑦ ᓯᓚᖓᓄᑦ (ᐊᓂᖅᑎᕆᓇᖅᑐᒧᑦ, ᐃᒪᕐᒧᑦ, ᑎᒃᑕᐅᕕᐅᔪᓄᓪᓗ, ᒪᓂᕋᖓᓂ ᓄᓇᕋᓄᑦ ᓄᓇᓄᓪᓗ) ᐊᒻᒪᓗ ᓄᓇᒥᑕᔭᓄᑦ ᓂᕿᒋᔭᐅᖃᑦᑕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ (ᐃᖃᓗᖕᓄᑦ ᐊᒻᒪᓗ ᓂᕐᔪᑎᓄᑦ). ᐆᒃᑐᕋᐅᑕᐅᓚᕐᒪᑕ ᑕᒪᒃᑯᐊ ᖃᓄᑎᒋ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕋᔭᕆᐊᖏᑦ, ᓂᕿᑦᑎᐊᕙᐅᓂᖏᓐᓄᑦ ᑕᒫᓂ ᓂᕐᔪᑏᑦ ᐊᓯᔾᔩᔪᑕᐅᔮᖏᒻᒪᑕ ᐊᒃᓱᐊᓗᒃ ᒫᓐᓇᒥᓂᑦ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᐱᖅᑯᓯᕆᔭᐅᔪᓄᓪᓗ. ᑕᐃᒪᓐᓇ ᓇᓚᐅᑦᑖᖅᓯᒪᖕᒪᑕ ᓴᓇᕕᐅᔪᖅᐸᑦ ᓯᕚᓕᕈᑕᐅᓂᐊᖏᓐᓂᕋᖅᓯᑎᒃ ᐆᒪᔪᓄᑦ, ᐊᒻᒪᓗ ᑲᑎᓯᒋᑦ ᐊᒥᓱᓕᖅᐸᑕ ᓴᓇᕕᐅᔪᑦ ᐊᓯᖏᓐᓄᑦ ᓄᓇᖃᖅᑐᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᔮᓇᑎᒃ.

<u>ᓇᐃᓪᓕᒋᐊᕐᓗᒋᑦ ᑐᑭᑖᕈᑕᐅᔪᑦ</u>

ᑕᒪᐃᑎᒍᓪᓕ ᓴᓇᕕᐅᔪᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᔮᖏᓐᓂᕋᖅᑕᐅᔪᑦ ᐱᒻᒪᕆᐊᓗᖕᒥᒃ ᐊᑲᐅᖏᑦᑐᒥᒃ ᑕᒪᓂᕐᒥᐅᓄᑦ (ᐊᒥᐊᒃᑯᒋᔭᐅᔪᓂᒃ, ᑲᑎᑕᐅᔪᓂᒃ ᐊᓯᖏᓐᓄᑦ ᓄᓇᖃᖅᑐᓄᑦ ᑎᒃᑕᐅᔪᓂᒃ) ᓯᓚᖓᓄᑦ, ᓄᓇᖓᓄᑦ, ᐃᒪᑦᑎᐊᕙᓄᑦ, ᐃᑭᕐᒥᐅᑕᓄᑦ, ᐊᒻᒪᓗ ᐃᓅᖏᓐᓄᑦ ᑕᒫᓂᕐᒥᐅᑦ. ᓴᓇᕕᐅᔪᖅᐸᑦ ᐱᐅᓂᖅᓴᒧᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᖅᑐᑦ ᓄᐃᑎᑕᐅᓂᐊᕐᒪᑕ ᐊᔾᔩᖏᑦᑐᓄᑦ ᐃᓅᔪᑎᒋᔭᐅᓪᓗᑎᒃ ᑮᓇᐅᔭᒃᓴᐅᑕᐅᔪᓄᑦ ᐱᓗᐊᖑᐊᖅᑐᒥᒃ ᓄᓇᓕᖕᒥᐅᑦ ᐃᖅᑲᓇᐃᔮᒃᓴᖅᑲᓕᕐᓗᑎᒃ ᐊᒻᒪᓗ ᐊᔪᕈᓐᓃᖅᓴᖅᑕᐅᓗᑎᒃ ᐊᔾᔩᖏᑦᑐᓂᒃ ᓴᖅᑯᑎᓂᒃ:

Kangiqhinnaqtut Uqauhiit Nainaqhimayut

Sabina Guulit Silverlu Kuapurisan (Sabina-kut) hanaiyaqtat Uuktugut Avatiliqutinut Aktuanit Uqauhiit (Uuktugut EIS-nga) taphumunga uuktugauyuq pivaliatitnia tamna Hanningayuq Kuugaq Havanga (tamna Havanguyuq). Tamna Uuktugut EIS-nga tuniyauyuq tapkununga Nunavut Avatiligiyit Katimayit, Nunavut Imaligiyit Katimayit, kavamatkut naunaiyaqni havaktit nunaliuyunilu ilauyut naunaiyaqninut uqauhiqaqvinutlu.

Una atuqtauvakniqhaq nainaqhimayuq hatqiqtitai naunaiqnit tapkuat Uuktugutit EIS-nga, pinahuaqhugit pityutauyut naunaiqtait atuqtitlugu uqaqatigiknit havaqatigiknilu atuqniqpauninut tapkuat pilaqnit aktuanit nunaliuyut kavamaitlu naunaiyaqni havaktit. Tamna Uuktugut EIS-nga piqaqtitai unniqtuttiaqhimayut naunaiyaqni tapkuat Havanguyup huniumaittitlugu avatiliqutai, nigiugiyat avatiliqutit inuliqutitlu-maniliugutit aktuanit, hunavaluit aktuanit, nunaqatigingittut ihumaginit piqatailu ihuaqhautit munaqhityutitlu upalungaiyautit.

<u>Tamna Uuktugutilik</u>

Sabina-kut tapkuat Kanatamiuni mikitqiyat piqaqnit nanminilgit pinahuat hivunmuktitni tahamna Hanningayuq Kuugaq Havanga. Sabina-kut ataniqaqvilgit talvani North Vancouver, British Columbia ahiinilu aapisilgit talvani Ikaluktutiak, Nunavut tamnalu Thunder Bay, Ontario. Sabina-kut maniyagiyai havaqatigit amihunik havanguyumut pivaliatitni atuqpaknit pinahauqtutlu hivunmuktitnia tamna Hanningayuq Kuugaq Havanga atutqikhalamik, kiinauyaliqutinut havattiqtumik piplugu.

<u>Havanguyup Ilagiyai Huliniitlu</u>

Sabina-kut 100% nanminigiyat Hanningayuq Kuugaq Havanga tamna uuktutilik guulit uyagakhiuqvik inilik tahamani nigingani Kitikmeotni tahamani Uataani Nunavut.

Tamna uuktugutauyuq Havanguyuq ilalik uyagakhiuqvik aulania malgukni atuni nunakni taiyauyuk tapkuak Goose Havanga tamnalu George Havanga, ikayuqhiqtut ukiumi apqutinut atatyutai tapkuat Havanguyut tamnalu Tagiumi Iliuqaivik Nuna kangiani Kingaok (Titigauyaq 1 tamnalu 2). Tamna qanitniqhaq ukiup ilani nunaliuyut talvunga Havanguyumut tapkuat Kingaok (Bathursth Inlet) tamnalu Omingmaktok (Bay Chimo), inilgit tahamani kanangnangata-nigiani hinaani tahaphuma Kingaok, tukliginik. Ikaluktutiak tamnalu Kugluktuk qanitniqpak nunaliuyuk talvunga Havanguyumun, inilgit mikhaani 300 kilaamitat ungalata pingangnani tamnalu 375 kilaamitat talvanga Tagiumi Iliuqaqvik Nuna, tukligiknit.

Goose Havakvia – Pingahut angmaumayut iluttuqhimayut pivaliatitauniat talvani Goose Havakvia, taiyauyuq Goose Atuqniqpaq, Umwelt tamnalu Llama. Tamna nunap iluani uyagakhiuqniq aulania amuhiviuniaq havikhanik talvanga ataani taphuma Umwelt angmaumayuq ilutuniq, Tamaita havikhat piyauyut tamatkiknit Havakviknit hanayauniat talvani Goose Havakviani. Guulit kikkagikhiyauyut kuviyauniat kinguliqpaamik hananit havaguhiqmi. Tapkuat amiakuit havikhat, taiyauyut uyagakhiuqnikut, tutquqtauniat uyagaktaqnikut kuvigaqvianut hiamaktailivik haniani havikhaliuqviup hanaviani. Uyaqat piittut guulinik (uvaluniit naamangittumik guulinik) qaligiktitauniat hanianut angmaumayuq ilutuniqmun. Tamaita imait aktuqtait uyagakhiuqvikmun iqakutlu aulatauniat hapuhimalugit haniani imait qanugitni iqaluitlu. Ahii havagutit talvani Goose Havakviani ilaqaqniat hiniktaqvik havaktunut, mittaqvik, hannavik, hiqluaq, hannaviit uqhukhatlu tutquqvi qattaqyuaqaqvik (Titigauyaq 3).

Titigauyaq 1

Havanguyup Inaa

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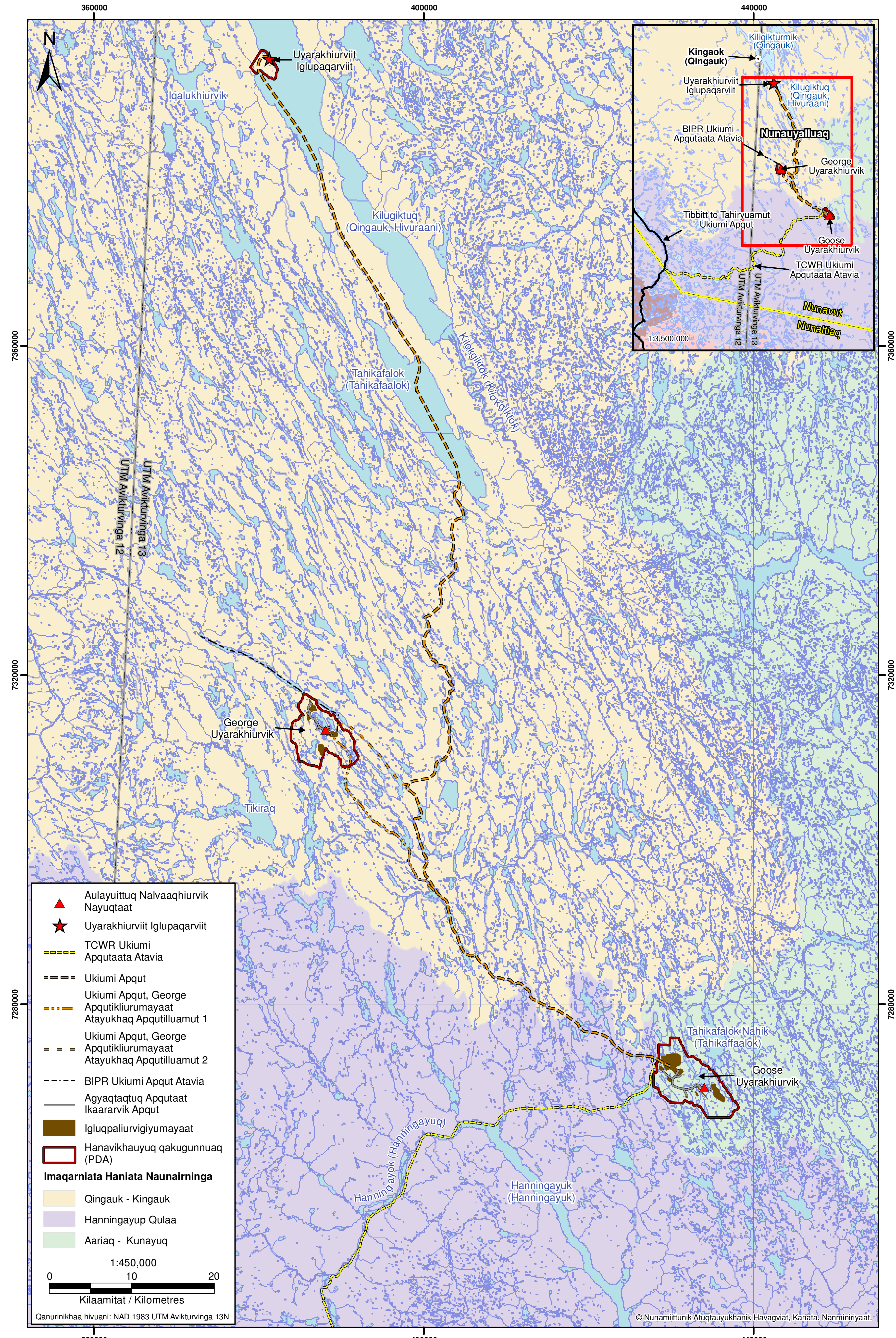
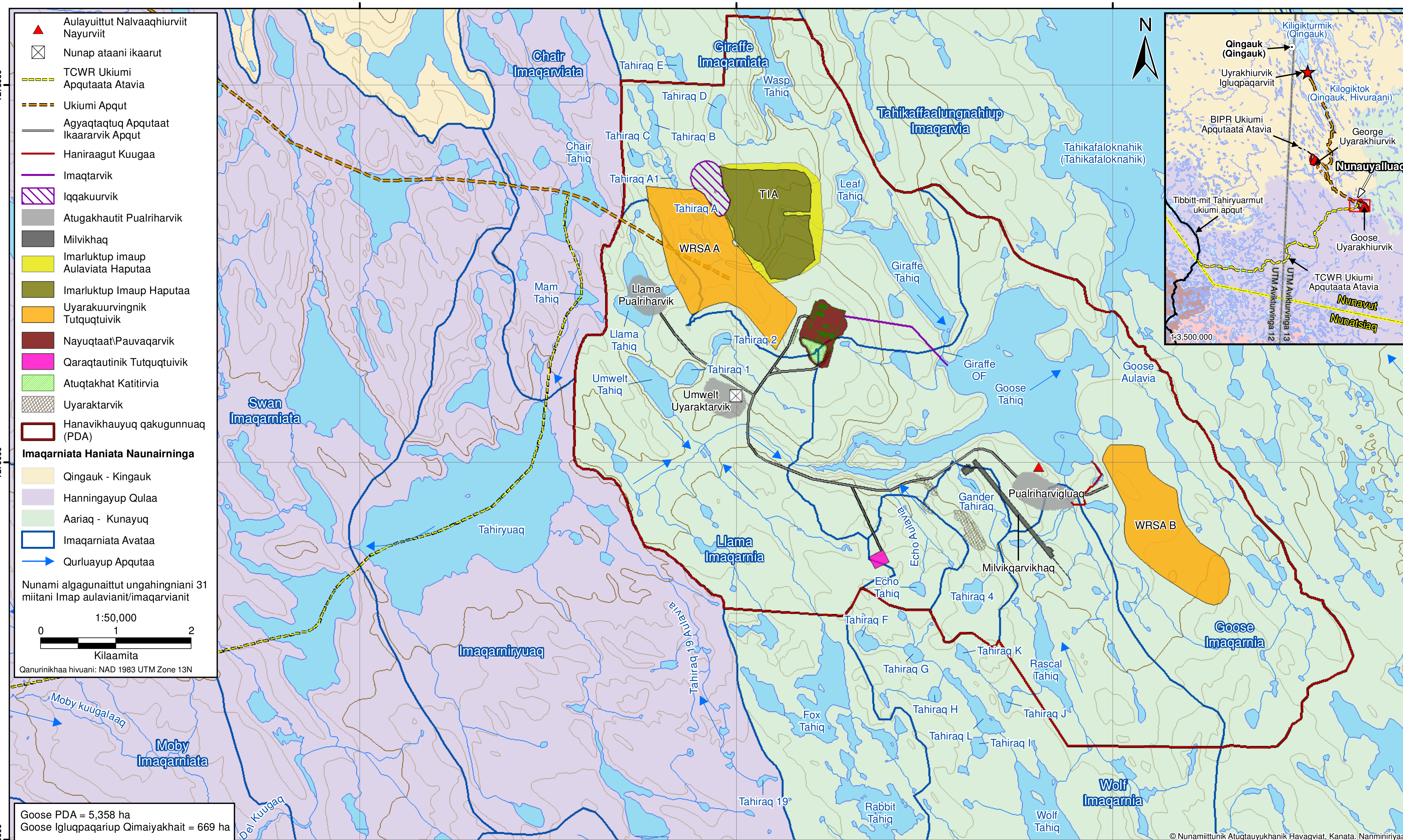


Titigauyaq 2

Sabina GOLD & SILVER CORP.

Havanguyup Inaa Atuqnikha 2013-mun DEIS-ngi

Rescan an ERM company



Titigauyaq 3

Havaakhauhip Havagviat Aulapkaidjutinginnilu - Goose Uyarakhiurvik

Sabina GOLD & SILVER CORP. Rescan an ERM company

George Havakvia – Tamna George Havakvia inilik mikhaani 50 kilaamitat talvanga Goose Havakvianit. Pingahut angmaumayut ilutunit pivaliatitauniat talvani George Havakviani, taiyauyuq Lone Cow Tahigaq Ungallaq, Locale 1 tamnalu Locale 2. Tamaita havikhait uyagakhiugauyut talvanga George Havakvianit angmaumayuq iluttuniq qaligiktitauniat atuqtitugu auyani nuktigaulutiklu ukiungani apqutmi talvunga Goose Havakvik hanayauyukhat. Tamna George Havakvia ilaqaqniaqmiyuq hiniktaqvik havagutinik, mittaqvik, hannavik, hiqluaq, hannaviit uqhukhatlu tutqumavi qattaqyuaqaqvik (Titigauyaq 4).

Tagiumi Iliuqaqvik Nuna – Tamna Tagiumi Iliuqaqvik Nuna atuqtauniaq ukiuq tamaat umiaqpakkut agyaqnit atuqtitlugu hikuiqnia auyani kihimik. Atulaknia tulakvik kalutatluniit uhiyaqvia hanayauniaq ikayuqnianut uhiiyaqni umiaqpait agyaqnit umityat. Iliuqaqvit nunat pinguqtauniat tutqumaninut puugiyauyut hanalgutitlu tahapkuat uhiyaqtauyut hivuani hunat agyaqniahaqtitlugit talvunga Goose tamnalu George havakvit ukiumi apqutikkut. Uqhukhat tutqumavt qattaqyuqaqvit piyauniat ukhukhalgiagutit uhigiyait uqhukhanikagyaqtauniat talvunga uyagakhiuqvik havakvinut ukiumi apqutikkut. Hiniktaqvik pinguqtauniaqluttauq (Titigauyaq 5).

Ukiumi Apqutit Atatyutai – Ukiup ilani ukiungani apqutit atuqtauniat ilakhanut aulatyutit. Tahapkuat apqutit aulaniat akungani Goose Havakvik tamnalu George Havakvik tamnaluttauq atatyuta talvanga Havakviknit talvunga Tibbitt talvunga Tahiqyuaqmun Ukiumi Apqut atuqtaulaqmiyuq atuqtitlugu tamna hivullit ikittut ukiut (Titigauyaq 2).

Atuqninit tamaita tukligikhat taphumunga Havanguyuq, Sabinakut upalungaiqniaqtai havaklugitlu aulanit pilugit hanatyuhikhat utiqtitninut tamna Havanguyuq inaa hivuganaittumik avatiliqutinutlu huniumaittumik pihimania. Sabinakut havakniaqtat halumaqtiqpaliania huliniit atuqniani tamna uyagakhiuqviuyuq. Havagutit ituptigauniat ahivaqtiqlugitlu iniqat tapkuat atuguminaqnit. Angmaumayut iluttuqhimayut, iqakut uyaqat tutqumavit, uyagaktaqnikut hiamaktailivit, tuapaktaqvit, apqutit ahiilu aktuqtauyut inait takukhaunit avugiyauttaqnilu huniumaiqlugit, halumaqtiqnit atulaigiaqata. Avatiliqutit munaginit kayuhiniat umiqaqtitlugu pivikha.

Tamna atuqnia taphuma Havanguyup tikitlugu 29 ukiunut. Una ilalik tapkuat hanayaunia tamna Havanguyuq, uyagakhiuqvik tatya havakhat piqaqni, ituptiqnia umiknialu tapkuat havakvit, tamnalu havaknia kinguagut avatiliqutit munaginit:

- Hannavik Hannaiyaqnia: 2 ukiuk
- Hanania: 2 ukiuk
- Aulania: 10 ukiut
- Halumaqtiqnia Umiknialu: 10 ukiut
- Umiqaqtitlugu Munaginia: 5 ukiut

Atulaqnit Naunaiyaqni

Atulaqnit tahamani Havanguyuq naunaiyaqhimayut malikhugit tahapkuat pityutauni: piluaqnaqtuliqutit atuguminaqni; akituni; atulaqnit aktuanit avatiliqutinut; atugaulaqnitlu halumaqtiqnit. Atutauni, uqaqatigikni iliquhitlu ilihimani ihumagiyauyut ilaginit tapkuat atulaqtut naunaiyaqnit.

Uqaqatigiknit Pipkaqnitlu

Uplumimun atuqpiaqhimayut uqaqatigikni pipkaqnilu pivikhat tugangayunut nunaliuyut timiuyutlu piqatauyumalat taphumunga Havanguyumun. Tahapkuat ilalgit inungnut katimanit, katimanit atuqpiaqtunut ilauyunut ilauyutlu ilagit (Hamlauyut, inutqutyat, Anguhiqiyit, inuuhuktut), katimanit nunaliuyunut uqauyiyit ilagit Ikaluktutiakmi tamnalu Kugluktuk, tapkuat Kitikmeot Inuit Katutyiqatigiit, Kavamatkut Nunavut tamnalu Nunatsiaq tapkuatluttauq tamaita tugangayut Kavamatuqatkut havakvit. Pihimayut piluaqtumik pinahuaqnit nunaliuyut tapkuat Ikaluktutiak, Kugluktuk, Kingaok, Omingmaktok, Uqhuqtuuq, Taloyoak, tamnalu Kugaaruk.

Tuhagakhat piyauyut atuqhugit tahapkuat uqaqatigikni pipkaqnilu pivikhat ikayuqtat Sabinakut naunaiqtat pityutit ihumalutitlu hugiaqnikhainut tapkunani Uuktugutit EIS-ngi. Sabinakut piniaqhimayut kayuhinit inungnut uqaqatigini pipkaqnilu huliniit atuqniani tapkuat avatiliqutit naunaiyaqni pityuhit atuqnialu tamna Havanguyuq.

Ilitquhit Ilihimania

Sabinakut ilittugiyat tapkuat atuqpaknit pinaginia Ilitquhit Ilihimani atuqpiaqnilu nunalit nunaliuyut inait atuqnianut. Ilitquhit Ilihimani atuqpiaqtut akayuqhiutikmata atuqtut naunaiyautit inuliqutitlu-kiinauyaliugutitlu tuhagakhat; piqaqtitni nutat tamnaluniit ahiagut titigaqhimaittut tuhagakhat; piqaqtitnilu atulaqnit ihumagini tukiliuqniluniit tapkuat ihumagiyakhaiyut.

Pinahuaqhugit auqpiaqni tugangayut Ilitquhit Ilihimanit naamaktumik ihumagiyauni taphuma Havanguyup atuqnit katutyiqatai tapkuat Kitikmeot Inuit Katutyiqatigiit katitiqninut naunaiyaqnilu pilaqtut tuhagakhat. Ilagiplugitlu inungnut piyaulat tuhagakhat atuqtauyut ilaginut tahamani Nunatsiaq. Ilitquhit Ilihimanit atuqnilgit angiyumik havangi tapkuat Havanguyuq hanatyuhikha ihumaliugutitlu.

Nainaqhimayut Aktuayauyut Naunaiyaqni

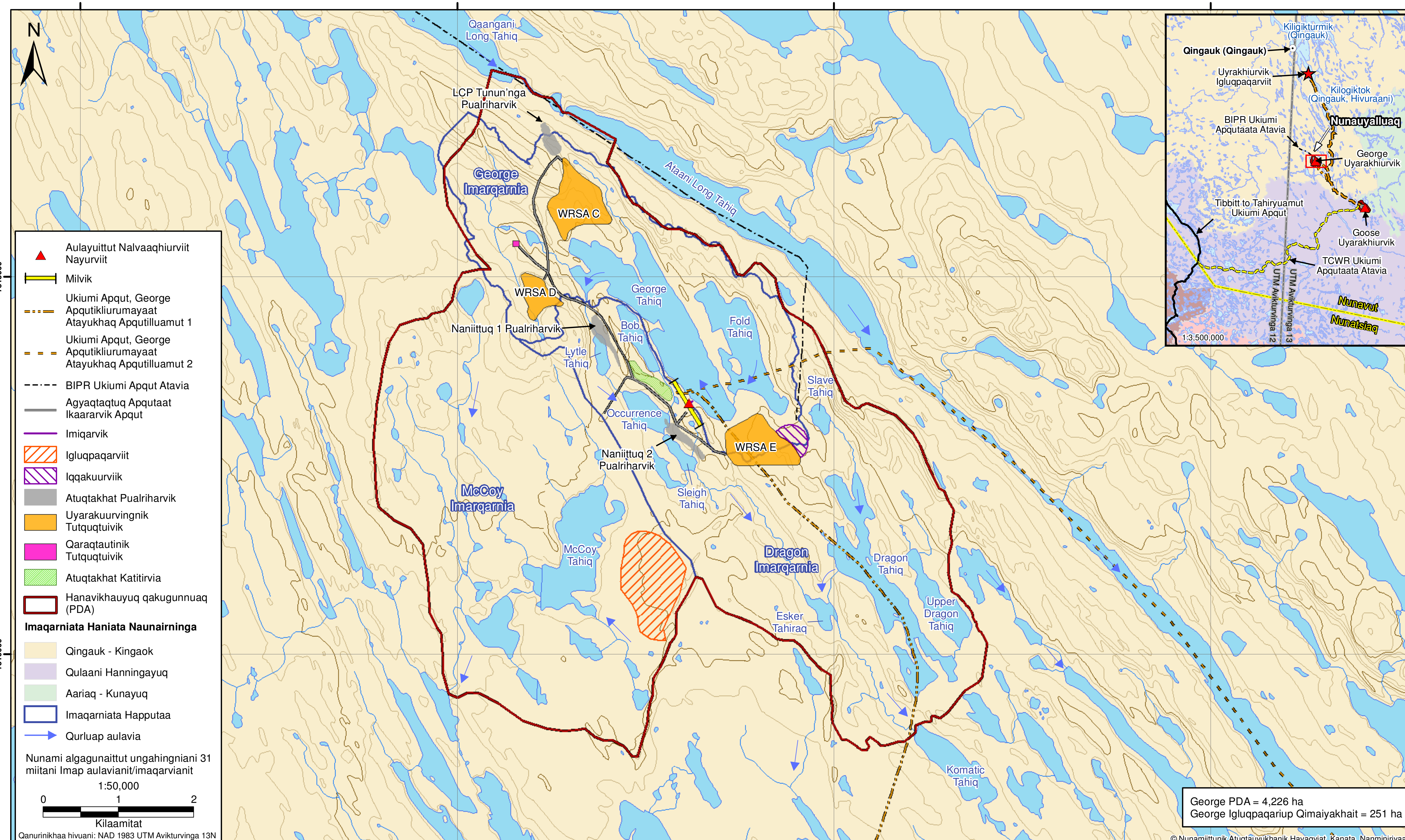
Pinnagiyat Uumatyutinut Ilagiyai (VEC-ngit) tapkuatlu Pinnagiyat Inuliqutit Kiinauyaliugutitlu Ilagiyai (VSEC-ngit) tahapkuat puqtuniqhat hivuliutyaqnit piplugit piluaqtumik nunalit avikhimania, nunaliuyut tamnaluniit inungnut tamaitnut. Tapkuat naunaiyaqni pilaqtut Havanguyup aktuanit tautuktai pilaqtut aktuanit akuniauyuq ihumaginilu pilaqni piplugit haniani Havanguyuq (nunaliani naunaiyaqni nuna), attaqtuniqhami nunami iluani nunaliit avikhimaniani ilautitlugit atulat tamaitnut Nunavut.

Atuqhugu naunaiyaqniq pityuhiq tapkuat piqatigiktaqni Havanguyup tahapkununga allatqit VEC-ngit tapkuatlu VSEC-ngit naunaiqtauyut atuqniqhatlu naunaipkutat uumayut allatqit naunaiqtauyut qauyihaqhugitlu. Naunaiyaiyit naunaiqtuqni ilaliutiplugit ilitquhit ilihimanit atuqtauyut nalautagahuaqhugit kitutliqak atulat aktuanit. Tahapkunani ihuittumik Havanguyuq piqatainut pittaililaqnit, upalungaiyautit pivaliatitauyut mikhigiagahuaqhugit ihuaqhigiaqniluniit tahapkuat aktuanit.

Pinnagiyat Uumatyutinut Ilagiyai

Hilaliqutit Avatigiyait

Aniqhaktugap Qanugitnia – Havanguyuq huliniit pilaqtut pinguqtaqnit puyuit tahapkuatlu pityutaulat puyuq tamnalu huguilat ilattaqnit. Nuktiqnit aulataunilu huliniit upalungaiyaqni mikhigiagutit piiyaqniluniit pilat aktuanit aniqhaktugap qanugitninut ilalgit: Ikumatyutit piyagakitnit pinahuaqni, pinahuaqni mikhigiaqni uqhukhat atuqni, tapkuat atuqni imaq puttiutittailititluniit imalgit mikhigiaqninut puyuq uyaqiuqhimaittunut apqutinut, nuktigauni hunat hanalgutitlu hiqutigutiqaqvikmi havagutinut. Atuqnilu puyuqnut munaqhityutit havagutit tahapkuatut kinipayut allaqtigutit, puqnut igluqpait, halumaigipkutitlu. Piplugit qulaani pinahuaqnit, tapkuat amiakut aktuanit aniqhaktugaqmun qanugitni angivalangittut. Piittuq nigiugiyaqnut katittaqnit nunaliuqataungittunutluniit aktuanit aniqhaktugap qanugitninut.



Titigauyaq 4

Havaakhauhip Havagviat Aulapkaidjutinginnilu - George Uyarakhiurvik

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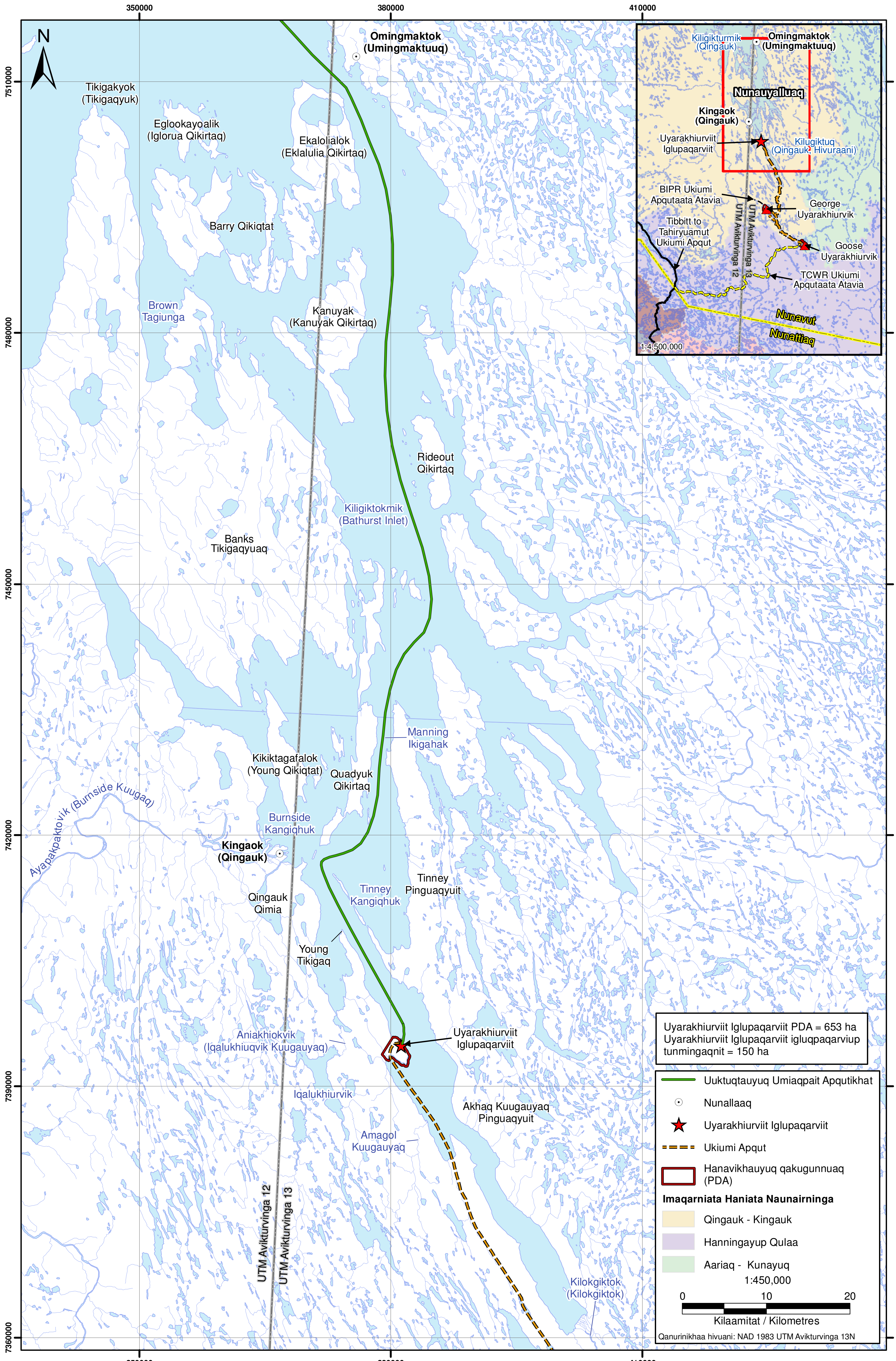

Titigauyaq 5

Sabina GOLD & SILVER CORP.

Tagiumi Uhiiyaqvik Umiaqpaitlu Apqutat

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Nipi tamnalu Hayukniq – Hanayaunia aulanialu taphuma Havanguyuq pipkainiaq nipinik hayukniqniklu talvanga hanayauniani hanalgutinit, uhiyut akhaluutit, qaqtainiq akhaluutitlu tingmititlu aulaqtaqnit. Ihuaqhigiaqni aulataunilu pityutit upalungaiyaqni mikhigiaqninut piiqniluniit atulat aktuanit nipimun hayukniqmunlu ilalgit: atuqpiaqnit hanalgutit ihuaqhihimani naamaktunik huppuktautinik nipikhigiagutiniklu, atuqpalaqtailuni huliniit tahapkuatut qaqatainiq qangattaqtiqnilu tingmitit ilagut upluani, igluqpaqaqtitnilu hunialaittut hunat igluqpakni atuqlugitluniit puqtauhimanit, avallut, nipikhigiagutit aniattailitit qaligiktitaqnitlu. Piplugit tahapkuat qulaani pityuhit, tapkua tamiakut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit nipinut hayuktaqniqnutlu.

Maniqami Avatigiyauyut

Piguaqhaqtut tahapkuatlu Ayyikkutaittut Nunat Qanugitni – Hanayaunia tamna Havanguyuq pityutaulaq tammaininik piguqtut ayyikkutaittutlu nunap qanugitni. Tapkuat ihuaqhigiaqnit aulanilu pityutauyut hanatyuhikhat piiqninut mikhigiaqninutluniit pilat Havanguyup aktuani ilalgit: mikhigiaqni taphuma Havanguyuq tunmigaqnit. Atuqni ukiumi apqutit, mikhigiaqnilu qimaknikut puyut ayuqnaittagangat. Tapkununga aktuanit naunaiyaqni, ihumagiyauyut tapkuat tamaita PDA-ngi tammaiyauniat. Ilaqpiaq, tamna nuna nauhimayut/ayyikkutaittut nunap qanugitni tammainit mikiniqpauniat avatqutaqtailiniaqmata kinguliqpamik tunmigaqnit taphuma Havanguyup. Tapkuat qimakkut katitlugit aktuanit (nauhimayut tammainit) angivalalaittut. Piittuq nuaqatigingittut ilagininik tapkuat angivalangitnit qimainit aktuanit.

Tuktut – Piqaqtuq pingahunik iluilikmi tuktut amihuaqyuit tahamani nunaliit avikhimaniani: tapkuat Kingaok amihuaqyuit, nalvaqtauyut atuqniahauniani nugiuqniahaqtitlugit, tapkuatlu Beverly amihuaqyuit (tapkuangugaluit Ahiak amihuaqyuit), nalvaqtauyut auyauhuiqhaqniani ukiakhalihamilu; tapkuatlu Dolphin Unionlu amihuaqyuit (titiqtauyut uumayunut allatqikni taiyauyut ihumalugiyauyut). Pilat Havanguyumun-tugangayut aktuani ilalgit: nayuqpaktat tammaini, ulapihaqni piplugu nipituniq, ulapihaqni nuktiqniqmun, tugaqpiaqhugit tuqupkaqnit aaniqtitnilu, tugaqpiaqhugit tuqunit, upakhigauni, hatqiqviuni halumailgunut, ikikligiaqniyt nugiuqnit piaganiktuqnit. Ihuaqhigiaqnit aulataunilu pityuhit piiqninut mikhigiaqniluniit atulat aktuanit ilalgit: mikhigiaqni Havanguyuq tunmigaqni, nipitunit pittailini, kayumaqnit munaginit, atuqni ukiumi apqutit, iqakut aulanit avugiyauvaktutlu tiguttaqnit pittailininut upakhiqni angutikhanit iqakunut pittailinilu hatqiumanit halumailgunut, atuqpalianilu tapkuat Angutikhat Ihuaqhigiaqnit Munagininutlu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut.

Akhait – Akhait tapkuat kavamatuqatkutnit titigaqtauyut angutikhat tapkuanguni “taihimayut ihumalugiyauni” titiqtauyutlu aktuagaulat Nunavutmi. Atulat Havanguyumun-tugangani aktuanit ilalgit: nayuqpaktai tammainit, ulapihaqni piplugit nipituniq (naunaipkutagiplugu ahianuktitnit nunanit nayuqpaktainit), ulapihaqni aulaqpakni, tugaqpiaqhugit tuqupkaqni aaniqtitnilu, tugaqpiaqhugit tuqunit, upaktauhiqnit, hatqiqnitlu halumailgunut, ikikligiaqnilu nugiuqni piagaqaqnit. Ihuaqhigaqni aulanitylu pityuhit piiqninut mikhigiaqniluniit pilat aktuanit ilalgit: mikhigiaqnit Havanguyup tunmigaqni, nipitunit pittailini, kayumaqtailinit, atqunit ukiumi apqutit kihimiuyuq, iqakut aulani avugiyauyutlu tiguttaqnit pityuhit pittailininut upaktaqhiqni angutikhat iqakunut pittailinilu hatqiqnit halumailgunut, atuqpaliani tapkuat Angutikhat Ihuaqhigiaqni Munaginilu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut.

Umingmait – Atulat Havanguyuq aktuanit umingmaknut ilalgit: nayuqpaktai tammainit, ulapihaqni piplugit nipituniq (naunaipkutagiplugu ahianuktitnit nunanit nayuqpaktainit), ulapihaqni aulaqpakni, tugaqpiaqhugit tuqupkaqni aaniqtitnilu, tugaqpiaqhugit tuqunit, upaktauhiqnit, hatqiqnitlu halumailgunut, ikikligiaqnilu nugiuqni piagaqaqnit. Ihuaqhigiaqnit aulataunilu pityuhit piiqninut mikhigiaqniluniit atulat aktuanit ilalgit: mikhigiaqni Havanguyuq tunmigaqni, nipitunit pittailini, kayumaqnit munaginit, atuqni ukiumi apqutit, iqakut aulanit avugiyauvaktutlu tiguttaqnit pittailininut upakhiqni angutikhanit iqakunut pittailinilu hatqiumanit halumailgunut, atuqpalianilu tapkuat Angutikhat Ihuaqhigiaqnit Munagininutlu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut.

Qalviit tapkuatlu Mitqulgulgit – Qalviit (angutikhat ihumalugiyauyut) tapkuatlu aqyaluktut amaqut tikkuaqtauyut piplugit mitqulgit angutikhat tapkununga EIS-ngit. Aktuanit ilalgit Havanguyuq huliniit ahiangugutaulat tahapkununga naunaipkutainut: nayuqpaktai tammainit, ulapihaqni piplugit nipituniq (naunaipkutagiplugu ahianuktitnit nunanit nayuqpaktainit), ulapihaqni aulaqpakni, tugaqpiaqhugit tuqupkaqni aaniqtitnilu, tugaqpiaqhugit tuqunit, upaktauhiqnit, hatqiqnitlu halumailgunut, ikikligiaqnilu nugiuqni piagaqaqnit. Ihuaqhigiaqnit aulataunilu pityuhit piiqninut mikhigiaqniluniit atulat aktuanit ilalgit: mikhigiaqni Havanguyuq tunmigaqni, nipitunit pittailini, kayumaqnit munaginit, atuqni ukiumi apqutit, iqakut aulanit avugiyauvaktutlu tiguttaqnit pittailininut upakhiqni angutikhanit iqakunut pittailinilu hatqiumanit halumailgunut, atuqpalianilu tapkuat Angutikhat Ihuaqhigiaqnit Munagininutlu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut. Atulat nunaqatigingittunut aktuanit ihumagiyauyut tapkununga katitlugit aktuanit naunaiyaqni angivalangittutlu.

Tikitpaktut Tingmiat – Atulat Havanguyuq-tugangani aktuanit tahapkununga tikitpaktut tingmiat ilalgit: nayuqpaktai tammainit, ulapihaqni piplugit nipituniq (naunaipkutagiplugu ahianuktitnit nunanit nayuqpaktainit), ulapihaqni aulaqpakni, tugaqpiaqhugit tuqupkaqni aaniqtitnilu, tugaqpiaqhugit tuqunit, upaktauhiqnit, hatqiqnitlu halumailgunut, ikikligiaqnilu nugiuqni piagaqaqnit. Ihuaqhigiaqnit aulataunilu pityuhit piiqninut mikhigiaqniluniit atulat aktuanit ilalgit: mikhigiaqni Havanguyuq tunmigaqni, nipitunit pittailini, kayumaqnit munaginit, atuqni ukiumi apqutit, iqakut aulanit avugiyauvaktutlu tiguttaqnit pittailininut upakhiqni angutikhanit iqakunut pittailinilu hatqiumanit halumailgunut, atuqpalianilu tapkuat Angutikhat Ihuaqhigiaqnit Munagininutlu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut. Piittuq nigiugiyauyunut katitlugit aktuanit nunaqatigingittutlu aktuanit tikitpaktunut tingmianut.

Kilgaviit – Tapkuatkilgaviit naniyauyut tahamani nunaliit avikhimaniani nauyaqyaqtat nunat tahapkuat imnaqni-uplulgit kaayuat (angutikhat ihumalugiyauyut); tapkuat maniqami-uplulgit naittumik hiutilgit ukpiit (angutikhat ihumalugiyauyut); tapkuat naktugalliit (qanugililat); tamna kilgavik (qanugililaq); tamnalu kaayuat (qanugililat). Pilat Havanguyumun-tugangayut aktuanit ilalgit: nayuqpaktai tammainit, ulapihaqni piplugit nipituniq (naunaipkutagiplugu ahianuktitnit nunanit nayuqpaktainit), ulapihaqni aulaqpakni, tugaqpiaqhugit tuqupkaqni aaniqtitnilu, tugaqpiaqhugit tuqunit, upaktauhiqnit, hatqiqnitlu halumailgunut, ikikligiaqnilu nugiuqni piagaqaqnit. Ihuaqhigiaqnit aulataunilu pityuhit piiqninut mikhigiaqniluniit atulat aktuanit ilalgit: mikhigiaqni Havanguyuq tunmigaqni, nipitunit pittailini, kayumaqnit munaginit, atuqni ukiumi apqutit, iqakut aulanit avugiyauvaktutlu tiguttaqnit pittailininut upakhiqni angutikhanit iqakunut pittailinilu hatqiumanit halumailgunut, atuqpalianilu tapkuat Angutikhat Ihuaqhigiaqnit Munagininutlu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyaqnik katittaqnit aktuani nunaliqatigingittutlu aktuanit angivalangittut.

Imatqiktut Avatigiyait

Nunap Qangani Imaliqutit – Pilaqnit Havanguyuq aktuani ilalgit immap atuqnia, havakvikmi imaq aulataunia huliniit, ukiumilu apqutit. Ihuaqhigiaqnit aulataunilu pityuhit tahapkuat piigutauyut mikhigiagutitluniit pilaqnit aktuanit ilalgit: tapkuat hanatyuhikhat anginiqhamik imaq atuqnianut aktilat atuqpiaqtunut imaqaqniuyut hapuhimanahuaqhugit piyaqaqpiaqtut Iqaluit nayuqpaktai, tahapkuat Imaqmiutaligiyit atuquyait ukiumi apqutit imaiyaqnit, kikliqaqtitni havagutit nunaliknut imaqaqniuyunut, tahapkuat ukiumi apqutit hanayauni ihuaqhihimanilu Imaqmiutaligiyit aulaninut uqauhiit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyauyunik katitlugit aktuanit nunaqatigingittutluniit aktuanit imaliqutit.

Imatqiktut Imamp Qanugitnia – Pilaqnit Havanguyuq-tugangani aktuayut ilalgit: Havanguyuq Huliniit ahiangugutaulat tahapkununga naunaipkutat immap qanugitnianut piplugit kukniit, imaiyaqnit, halumaqtiqhimayut kuviyaqnit, tingmititlu katagaqviginit: immap qanugitni, katitlugit naptuyut puktalaqnit, piguqhautit, haviit, hydrocarbon-ngit, uumayuttauyut aniqhaktugiaqaqnit, tuqunait, cyanidelu. Ihuaqhigiaqni aulataunilu piyauni piiqninut mikhigiaqniluniit tapkuat pilat aktuanit ilalgit: Havanguyuq hanatyuhikhaliat piyuanit tahapkuatut atuqnit nualiqutinut naamaktunik atuqtakhat apqutitlu tungaviitlu, atuqpalianilu ihauqhigiaqnit piyauni titigaqhimayut talvani Havakvik Immap Munagini Aulataunilu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyauyunik katitlugit aktuanit nunaqatigingittutluniit aktuanit imatqiktut imat qanugitninut.

Imatqiktut Halumaitgut Qanugitni – Pilat Havanguyuq-tuganganit aktuani ilalgit: Havanguyuq huliniit ahiangugutaulat tahapkununga naunaipkutat piplugit kuukviunit, imaiyaqnit, halumaqtiqhimayut kuvigaqnit, tingmitinitlu katagaqnit, hunavaluit aktilangi, piguqhautit umayuvaluitlu carbon-ngi, haviit haydrocarbonlu. Ihuaqhigiaqni aulataunilu pityuhit piyauniat piiqninut mikhigiaqniluniit nungulaqtailiniit, atqupalianilu ihuaqhigiagutitpiyaunit titigaqhimayut talvani Havakviup Imaq Munaginia Anulataunilu Upalungaiyautit. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyauyunik katitlugit aktuanit nunaqatigingittutluniit aktuanit imatqiktut imait qanugitninut.

Imatqiktut Iqaluit/Imaqmiuttat Nayuqpaktai – Havanguyuq huliniit tahapkuat pilat tugaqpiaqhugit aktuani imatqiktut Iqaluit/imaqmiuttat ilalgit: tapkuat tammaini tahiq nayuqtauvaktut piplugu imaiyaqni, pivaliatitni angmaumayut iluttuqnit, imiqtaqvit inungnut havikhaliugutitlu atuqninut, ukiumi apqut hanayauni. Tapkuat atuqniqhat ihuaqhigiagutit piyaunit pittailininut pilat aktuanit imatqiktunut Iqaluit/imaqmiutat nayuqpaktai hanayaunit havagutit piplugit pittailini imatqiktut Iqaluit nayuqpaktai. Naunaipkutagiplugu, iliuqaqni uyagaktaqnikut hiamaktailivia iqakutlu uyaqat nunanut iqaluqaqnilgunut imaqnut. Ahiattauq atuqpiaqtuq ihuaqhigiagut pityuhiq pinguqtauni anginiqhamik imaugaqnit atuqnit. Piplugit tahapkuat pityuhit, piittuq, katitaqninut nunaqatigingittutluniit aktuanit nigiugiyaungittut imagiktunut Iqaluit/imaqmiutat nayuqpaktainut.

Imatqiktumi Iqaluqatigit – Uumani naunaiyaqnit pinahuaqtugut malguknik amigaitnit imatqiktumi imagipyaktumiluniit Iqaluit allatqiknit, Tahiqmi Ihugaqyuit Hulukpaugatlu. Tamna atuqniqpaq pilq Havanguyuq-tugangani aktuanit imatqiktumi iqaluqatigit tuquvaknit/amigaitnit ikiklivaliani piplugit tahiq imakhigiaqni, hanani ukiumi apqutit, hanani tapkuat Havanguyup tunmigaqni, imiqtaqvit inungnut havikhaliugutitlu atuqni ukiumiluniit apqutit hanayauni, qaqtainiqlu qaqtautinut. Tapkuat atuqniqhat ihuaqhigiaqnit piyauni pittailininut pilat aktuanit imatqiktut Iqaluit/imaqmiutat nayuqpaktaui hanayaunit havagutit piplugit pittailini imatqiktuni Iqaluit nayuqpaktai. Ahii atqupiaqtut ihuaqhigaigutit piyaunit tahapkuat pinguqtauni anginiqhamik imaq imaugaqnia atuqnia. Piplugit tahapkuat piyaunit, piittuq qimaiviuni, katittaqnit nunaqatigingittutluniit aktuanit nigiugiyaungittut.

Tagiumi Avatigiyauyut

Tagiumi Imaq Qanugitnia – Pilat Havanguyuq aktuanit ilalgit umiaqpait huliniit; halumailgut pipkaqnit imaqmut piplugit havakvikmi hannaiyaqnia, hanayaunia, halumaqtigaunialu; havakvikmi aktuqnit imait;

ukiumi apqutit; uqhukhat, uqhuqyuaq, kiniqtuvaluitlu tipiqaqnit hydrocarbon-ngit (PAH-ngi); halumaqtiqhimayut kuvigaqnit; puyuqtailititlu. Ihuaqhigiaqni aulataunilu pityuhit piiqninut mikhigiaqniluniit pilat aktuanit ilalgit: kayumiqpaliqni umiaqpait kayumaqnit pihimapkainaqnilu umiaqpait itiniapanut imaqnut, tugaqtitni kuukviunit ilutuniqnut tugaqtitnilu imait katitiqviuyunut tahigaqnut talvani MLA-mi, atuqhugit nunaliqutit naamaknit hunat apqutinut tungaviknutlu, malikhaqhugit aulattiyit naunaipkutait halumaqtiqninut kuvigaqnit, atuqhugitlu nakuuniqhanik aulattiniqmun pitquhit tutquqviknut, nuktigainiqmun, atuqnilu uqhukhat, qaqtautit, tamnalu hivuganaqtut hunat tahapkualuttauq puttiutittailitit ikualattivitlu. Piplugit tahapkuat qulaani pityuhit, tapkua tamaittut aktuanit angivalangittut. Piittuq nigiugiyauyunik katitlugit aktuanit nunaqatigingittutluniit aktuanit imatqiktut imait qanugitninut.

Tagiumi Halumailgut Qanugitni – Pilat Havanguyuq aktuanit ilalgit umiaqpakkut huliniit; halumailgut pipkaqnit imaqmut piplugit havakvik hannaiyaqnia, hanayaunia, halumaqtiqnialu; havakvik aktuqni imaq; uqhukhat, uqhuqyuat, kiniqtuvaluitlu tipiqaqnit hydrocarbon-ngit (PAH-ngi); halumaqtiqhimayut kuvigaqnit; puttiutitaipkutatlu. Ihuaqhigiaqni aulataunilu pityuhit piiqninut mikhigiaqniluniit pilat aktuanit ilalgit: tugaqtitni kuukviunit ilutuniqnut tugaqtitnilu imait katitiqviuyunut tahigaqnut talvani MLA-mi, atuqhugit aulattiyit naunaipkutait tahapkununga halumaqhimayut kuvigaqnit, atuqnilu nakuuniahanik aulattiniqmun pitquhit tutqumaninut, nuktigaqninut, atuqnilu uqhukhat, qaqtautit, hivuganaqtutlu hunat tahapkualuttauq puttiutittailitit ikualattivitlu. Piplugit qulaani pityuhit, tapkuat qimagauyut aktuanit angivalangittut. Piittuq nigiugiyauninik katihimanit aktuani nunaqatigingittutlu aktuanit imatqiktut immat qanugitninut.

Tagiumi Iqaluit/Imaqmiutat Nayuqpaknit – Havanguyut huliniit pilat tugaqpiqhugit aktuanit tagiumi Iqaluit/imaqmiutat nayuqpakni ilalgit tapkuninga immap-iluani hanayauni tapkuat MLA-ngi havagutit (immap-iluani hanayauniukiup ilaani tulakvik hinaanilu uhiliqtuqvik). Hanaplugit hanahimayut tagiumi tikigait, piiqhimalaqtavut angiyumikluniit mikhigiaqni uuma pilat aktuanit. Piittuq qimaiviunia nunaqatigingittutluniit aktuanit nigiugiyaungittut.

Tagiuqmi Iqaluqaqniuyut – Pilat Havanguyuq aktyuanit pinahuat tapkuninga Ukiuqtaqtumi Iqalukpiit ilalgitlu: pilat tugaqpiaqhugit tuqunit tahapkunanga immap iluani hanayaunit qaqtainitlu, amigaitni aktuanit tahapkuat atuliqninit uumayut allatqit nakhiutyauyut umiaqpait imaqtaitnit, tamnalu immap ataani nipitunit umiaqpait huliniinit. Ihuaqhigiaqni piyaunit piiqninut mikhigiaqniluniit pilat aktuanit ilalgit kiklilityutai aktilangaimaqmi hanayaunit, pilaitnit umiaqmi imait himiqtaunit, atuqtitnilu kayumaqtiginit kikligiyait umiaqpaknut aulaqnit tahamuna nunaliit avikhimaniagut naunaiyaqni nunat. Piplugit qulaani piyaunit, tapkuat qimagaunit katitaunilu aktuanit angivalangittut. Piittuq nunaqatigingittunut ilagiyanik tapkuat angivalangittut qimagaunit aktuanit.

Tagiumi Tingmiaqyuit/Tagiumi Tingmiat – Tagiumi Tingmiaqyuit tagiumilu tingmiat ilalgit tikitpaktut tingmiat allatqit atuqtaulat tagiumi nunat atuqtitlugu quyagitnaq ukiungani piplugitlu allatqikni ilagit qaplunaani uumayut allatqit ilautitlugit mitqit, tingmianuit, kangut qukyuitlu, tingmiavaluit, nauyat, aahangitlu ihumagiyauyut qanugililat uumayut allatqit. Pilat Havanguyuq aktuanit ilalgit ulapihaqnit (naunaipkutagiplugu, nipituniq) mikhigiaqnilu piaganiktaqnit. Ihaquhigiaqgutit piyauni piiqninut mikhigaiqniluniit pilat aktuanit ilalgit: naunaiqnit pittailiniluniit tagiumi tingmiaqyuit tagiumilu tingmiat utaqivakvit, pittailini ulapihaqnit qanugililat nunat pivaliatitninut naunaiqpagiqhimayut tingmivakvit apqutai ayuqnaittagangat piqaqtitninut qunmut hanimutlu pittailivikhait ungahiknit utaqiviuyunit tingmianut, pinguqtitni tingminit puqtuni 650 miitat qulaani naunaiqtat utaqivit nunat. Piplugit tahapkuat qulaani pityutit, tapkuat qimainit katittaqnilu aktuanit angivalangittut. Piittuq nunaqatigingittut ilagiyainut angivalangittut qimaivit aktuani.

Nattinait – Pilat Havanguyuq aktuanit ilalgit: ahianguqni nayuqtauvaktut, ulapihaqnit (naunaipkutagiplugu, nipitunit), tugaqpiaqhugit tuqutauni aaniqnitlu, tugaqpiaqhugit tuqunit, hatqiumani halumailgunut, mikhigiaqnilu piaganiktuqnit. Ihauqhigaiqni piyauni piiqnit mikhigiaqniluniit pilat aktuanitilalgit: naunaiqni pittailinilu nattiit ivavi. Nigiungittugut kitunikliqak qimaiviuni, katihimanit nunaqatigingittutlunit aktuanit nattiqnut.

Pinnagiyauyut Inuliqutit-kiinauyaliugutit Ilagiyai (VSEC-ngit)

Inuliqutit Avatigiyai

Inituqlit Inait – Tapkuat hanayauni taphuma Havanguyup pilaqnilgit aktuani inituqlit inait. Tamna atuqniqhaq ihuaqhigiagut piyaunia pinia inigiyait pittailini Havanguyumun hanatyuhikhainut. Kitutliqak inituqlit inait naunaiqtauyut atuqtitlugu hanayaunia, aulania, umiktaunialu naunaiyaqtauniat tapkunanga Havanguyup pituqaligiyianit, titigaqtaulutik, tuhaqhityutaulutiklu tapkununga Kavamatkut Nunavut, Ilitquhigiliyit. Pittailininut tamnalu/tamnaluniit ihuaqhigiaqnit atuqtauni, nigiungittugut kitunikliqak qimaiviunit, katitaqnit nunaqaqatigingittutluniit aktuanit ilihimayauyut inituqlit inait.

Inuliqutit-kiinauyaliugutit

Kiinauyaliugutit Pivaliatitni – Ilagiaqnit kiinauyaliugutit allatqiknit nigiugiyauyut piplugit tapkuat Havanguyuq qanugitnilgit tapkunanga: ilagiaqni nunalit havaktitaunit, ilagiaqnit maniliugauyut, niuvgutauyutlu; Havanguyuq-tugaqnit akiliqtutit (nunalikni, nunaliit avikhimaniani) piplugit atuqtut nanminilgit iniqaqtut Kitikmeotni quyagitnaqlu Nunavutmi, ilagiaqgutauni kiinauyaliqutit piqaqnit pilqni atqutunut nanminilgit; tapkuat ilagiaqni nutat nanminilgit atatqtuhivaliqniluniit atuqtut nanminilgit tahamani Kitikmeotni piqaqtitiyut hunanik kivgaqtutinikluniit hivuagut pilaqnit; tamnalu/tamnaluniit pivaliatitni tapkuat; ilagiagutitluniit hanivaiviunit tapkuat, Inuit-nanminigiyai nanminilgit. Ilagiaqni kiinauyaliugutit aglivalianit, allatqiknit, havagiyaunilu nigiugiyauyut nakuuyumik qimaiviunit aktuani kiinauyaliugutinut pivaliatitnit.

Nanminilgit Pilaqnit – Havanguyuq hulinit nigiugiyauyut atugahuaqtitninut aglivaliani allatqiknilu tahapkunani Inuit ukiuqtaqtumilu nanminilgit ilalgit: piqaqtitni kanturagutit kanturakpaliqtitnilu pilaqnit, piluaqtumik pitaginit hunat kivgaqtutitlu tahapkunanga nunalikni piqaqtitiyut; tunityutaunilu inmingnut maniliugutait, ilagiaqnit niuvilaqninut nunalikni nunaliuyunut. Tapkuat nigiugiyauyut ilagiaqnit nunalikni nanminilgit huliniit inmingnut nigiugiyauyut pipkaqnit ilagiagutikhat angiyunut hanivaivit (hanivaivit attaqtuhivaliqnit nanminilgit pinguqtauniluniit nutat nanminilgit) nigiugiplugu tamna Havanguyuq. Nunalikni nanminilgit hatqiqviuniat pilaqniqnut uuktugutit tapkununga Havanguyuq havakhat, ikayuqtigiplugit tahapkuat Havanguyuq atquhugit ihuaqhigiaqnit aulataunilu pityuhit pinguqtauyut anginiqhamik ihuaqutauni kanturagutit pilaqnit nunaliuyutlu piqaqnit hunat kivgaqtutitlu. Ahianguqni aglivalianit allatqiknilu Inuit ukiuqtaqtumilu nanminilgit nigiugiyauyut pihimani nakuuyumik qimaivit aktuanit.

Havaktitni – Tamna Havanguyuq nigiugiyauyuq aktuaninik havanguyut atquhugit: 1) ahianguqnit havakhat maniliuguhitlu aktilat; 2) ahianguqnit pilaqnit havaktiuyut ; tamnalu 3) ahianguqnit uuktuqataulat nunalikni havaktit. Ihuaqhigiaqni aulataunilu pityutit pinahuaqni ilihaqnit, havaktikhaqhiuqnit, pihimainaqnitlu pivaliatitauyut pivaliqtitninut piqataunit nunalikni Inuit Havanguyumi havaktit tapkuatlu unniqtutiaqhimayut tapkunani Havaktiuyunut Upalungaiyautit. Tugaqpiaqhugit Havanguyuq havaktit pitagaunilu pityutaulat ihuittumik ahianguqnit nunalikni uuktuqataunit havakhanut. Tamna Havanguyuq pingutitai atulat inungnut tatya havaktitni Kitikmeotni qimakninut tatya havagiyaqtik tapkununga uyagakhiuqvikmi-tugangayut havakhat. Atuqhugu una pilaqnit aktuani, pilaitpiagunaqhiyuq nigiugingitavutlu kitutliqak qimaiviunit, katihimanit nunaqatigingittutluniit aktuanit.

Ilihaqniq Ilihautitlu – Tapkuat atulaqnit aktuani Havanguyup ilihaqniqmun ilihautitlu ilalgit ahianguqnit piyauyumaqpiaqninut ilihaqniq ilihautitlu, ahianguqnilu inuuhuktut qanugiliuguhit ilitquhitlu ilihaqniqmun ilihautitlu. Sabina-kut nigiuktut katutyiqatigikni nunaliuyuni kavamauyut, ilihaqviuyutlu, Inuit timigiyai, ahiilu uyagakhiuqniqmun uuktugutilgit ikayuqninik tapkuat pinguqtitnit nunaliit avikhimaniani ilihaqniqmun havagutit ilagiagutitlunit uyagakhiuqvikmi havakhat ilihaqnit havagutit. Ahianguqnit piyauyumaninut ilihaqniq ilihautitylu, tahapkualuttauq ahianguqni inuuhuktut qanugiliuguhit ilitquhitlu ilihaqniqmun ilihautitlu, nalautagauyut nakuuyumik qimaiviuni aktuanit.

Aaniaqtailiniq Nunaliuyutlu Inuuhigiknit – Tamatkiknik nakuuyumik ihuittumiklu qimaiviunit aktuanit nalautagauyut Aaniaqtailiniqmun nunaliuyutlu inuuhigiknit piplugit ahianguqni inmingnut ilagitlu niuviqpaknit. Pikpata nunalikni nunaliuyut pitaqtut havakhanik taphumunga Havanguyuq niguaqata niugutigini ilagiagutngit manikhat nakungittunut (naunaipkutagiplugu, pinakniqmun, angayaqnaqtut, imingaknaqtutluniit) pilutiklu nakungittunut inuliqutit pitquhinut, una piniaq nakungitumik aktuanit nunaliuyunut. Kihimik, manikhat atuqtauyut nakuhivaliqninut atuqtauvaktut inuuhiqmun (naunaipkutagiplugu, nakuhivaliqni igluqpak, niqiqattiaqniq) ilagiplugit ahiit amigaittut nakuuyumik aktuanit piqatai taphuma Havanguyup havaktitaunit pilqtut piplugit angipyaktumik ilagiagutait. Tamaitnut, tapkuat qimaiviuni, katitlugit nunaqatigingittutlu aktuanit nakungittumik ahianguqnit inmingnut ilaginutlu niuvgutauni, nakungittumiklu ahianguqnit ilaginut iglumiutatlu qanugitnit, naunaiqtauyut Angivalangittut.

Nunap Atuqnia

Ilitquhiungittut Nuna Piqaqnitlu Atuqnit – Maniliugutit nuna atuqnia ilalgit piluaqtumik kiinauyaliugutit angunahuaqtit, pulaqtuliginiq, havikhaqhiuqniq, aulagutit umiaqpaitlu. Tamna havanguyuq aktualaq kiinauyaliugutit pulagaqtuliqutit huliniit piplugit: ahianguqnit pilaqni nuna piqaqnitlu; ahianguqni atuqpaknit tahapkuat nunamittutuqat avatigiyait; ahianguqnitlu tapkuat amigaittut ulapihaqtatlu piqaqnit. Piqaqtuq qaphinik nakuniqhanik pitquhit aulanit ihuaqhigiagutitlu piyauni pihimayut kivgaqtutauyut mikhigiaqninut nakungittumik aktuanit, pititlugit anginiqpamik ihuaqutauni qanugitnit. Ilitquhiungittut nuna atuqtauni pihimaittut avataanu tapkuat kikligiyai tahaphuma Nunavutagauyup Nuna pilaittuqlu nunaqatigingittunut aktuanit.

Ilagiagutit Kiinauyaliugutit Nunalu Atuqnia – Tapkuat Inuit Kitikmeotni atuinaqpaktut ilihimaniqmingnik nunamik avatigiyauyuniklu (Inuit Qaujimajatuqangit). Ilagiagutit kiinauyaliugutit nunaplu atuqni (angunahuaqniq, iqalukhiuqniq, nanigiaqtuqniq, katitiginiq) pilaq aktuani tapkunanga: ahianguqnit pilaqninut nuna piqaqnitlu; ahianguqnit atuqtauhimayut nunamittutuqat avatigiyait; ahianguqnilu tapkuat amigaitni humittaqnilu piqaqnit. Piqaqtuq qaphinik aulaninut ihuaqhigiagutitlu piyauni ilautitlugit: ihuaqhigiagutit tapkunanga Havanguyuq hanatyuhikha, nakuniqpanik pitquhit aulanit pityuhit, munaginitlu.

Tamaitnut, tapkuat nakungittumik qimaiviuni katitlugitlu aktuanit tahapkununga ilagiagutit kiinauyaliugutit nunaplu atuqnia angivalangittut. Ilagiplugitlu, tapkuat ihuaqutit taphumanga Havanguyuq kivgaqtutaulat ihuaqhihimaninut ilitquhit ilagiagutit nunap atuqtauni anginiqhamik piplugit tapkuat pilaqniqhauninut pihimaittumik kiinauyaliugutit aglivaliani havakhatlu maniliugutauni piqatait taphuma Havanguyup. Tamna Havanguyuq nigiugiyaungittuq qanugitninut nunaqatigingittut aktuanit ilagiagutauyunut nuna atuqtiuyunut.

Angutat Niqit

Piqaqtuq qaphinik halumailgunik pilaqninik tapkuat angutat niqit atuqtitlugu tamna Havanguyuq, Piplugu tamna uuktugutauyuq Havanguyuq haviknut uyagakhiuqviunia, haviit katihimanit tahamani avatigiyauyumi ahianguqniaqtukhauyut piplugu Havanguyuq pivaliatitnia. Angiyumik ihuaqhigiaqnit aulanilu piyauni pihimaniat mikhigiaqninut piiqniluniit pilat aktuanit avatigiyauyumut hunanut (hila,imaq, halumailgut, nuna, nauhimayutlu) angutatlu niqit inmingnut (Iqaluit, angutikhatlu). Piplugit tapkuat aktilangit qanigitnilu piplugit tahapkuat aktuanit naunaiyaqni, tapkuat qanugitni angutat niqit nigiugiyaungittut ahianguqni angipyaktumik tahapkunanga huniumaittitlugu qanugitninit. Piplugu nigiugiyaungittut Havanguyuq qimaiviunit aktuanit, piittuq pilat katitlugit nunqaqatigingittutluniit aktuanit.

Nainaqhimayut Iniqtigutit

Tamaitnut, tamna Havanguyuq nigiugiyauyuq qanugitninut angivalangittumik nakuungittunut aktuanit (qimaiviuyut, katihimanit nunaqatigingittutluniit) tahaminga hilamun, nunamun, imatqiktunut, tagiumun, inungnutlu avatigiyainut. Tamna Havanguyuq piniaq nakuuyumik aktuanit allatqinut inuliqutit-kiinauyaliugutit piplugit ilautitlugit nunalikni havakhat ayuitnitlu pivaliatitnit.

Executive Summary

Executive Summary

The Back River Project (the Project) is a proposed gold project owned by Sabina Gold & Silver Corp. (Sabina) within the West Kitikmeot region of Nunavut.

The Project is composed of three main areas with interconnecting winter roads: the Goose Property, the George Property, and a Marine Laydown Area situated along the eastern shore of southern Bathurst Inlet. Sabina has prepared an Environmental Impact Statement to identify and assess potential environmental and social effects resulting from the Project that meets the requirements outlined in the Nunavut Land Claim Agreement and the Nunavut Impact Review Board Guidelines for the Preparation of an Environmental Impact Statement for the Back River Project (NIRB File No. 12MN036; NIRB 2013).

Sabina intends to build a mine which is safe, environmentally responsible, and beneficial to all parties involved. Sabina will balance good stewardship in the protection of human health and the natural environment with the need for economic growth. The Project will bring much needed training and employment opportunities, as well as increased investment in services, to the people of the Kitikmeot region and Nunavut as a whole. Prefeasibility Studies, completed in October 2013, positively identified the economic viability and potential of the Back River Project.

<u>Mine Plan</u>

The mine plan reflects an estimated ten year operating mine life based on currently known resources, with a total ore feed of 15.0 million tonnes to a single mill at the Goose Property. Continued exploration may extend projected mine life. Any significant increases to the project may trigger a subsequent Environmental Assessment process.

The Project includes several mineral targets: Umwelt, Llama and Main at Goose Property; Lone Cow Pond North (LCP North), Locale 1, and Locale 2 at George Property. Annual resupply will be completed using the Marine Laydown Area, located in Bathurst Inlet, and winter ice roads will be utilized to interconnect these sites.

Ore will be mined using conventional open pit and underground methods then trucked to the mill located at the Goose Property for processing using standard gravity and leach recovery processes. Ore from both Goose and George Properties will be processed at this one location while waste rock will be stored in several designated storage areas on the surface or backfilled in mine workings at both properties. Tailings from the mill will be stored in a single Tailings Impoundment Area located near the mill.

<u>Project Phases</u>

The life of the Back River Project is 29 years (from Site Preparation to Post-closure). It is expected that site preparation activities could begin as early as 2014 followed by two years of construction (Table 1).

The Operations Phase is expected to continue for 8 to 10 years, based on the mineral deposits that are currently known. Sabina will continue exploration activities in the area and further discoveries may extend mine operation beyond ten years.

The available gold mineralization will ultimately be exhausted, whereupon the mine will enter the closure and reclamation phase. This phase, expected to last about ten years, will decommission the mine, demolish the buildings, and return the site to a stable condition having no significant effect on the environment. Following closure, monitoring will be undertaken for a period of time to ensure the area remains both chemically and physically stable.

Table 1. Project Phases

Activities	Duration	Year (Estimated)
Site Preparation	2 years	2014-2016
Construction	2 years	2016-2017
Operation	10 years	2017-2026
Reclamation and Closure	10 years	2027-2037
Post-closure Monitoring	5 years	2038-2043

Throughout the Project life, Sabina will seek to recruit a stable workforce capable of operating the mine efficiently and safely while giving first opportunity to northern residents.

Alternatives

Alternatives within the Project have been evaluated according to the following criteria: technical feasibility; costs; potential impacts to the environment; and amenability to reclamation. Input received during community and government engagement and consultation has been considered in the alternatives assessment and as feasibility studies advance, alternatives assessment criteria will also include community acceptability or preference as well as, the potential for enhancing positive socio-economic effects.

Two categories of alternatives are identified. Tier one alternatives outline options for different methods of executing the project in key areas, for example open-pit versus underground mining. Once the decisions have been made related to these larger alternatives, a second tier of alternatives will be considered with the aim of optimizing performance. These alternatives will consider various ways to execute each of the chosen key components and trade-off analyses will be undertaken to choose the best approach. As engineering advance alternatives will be further refined and assessed and may alter the final Project plan.

Economic and Operating Environment

The Project represents significant socioeconomic benefits. If the mineral resource is not developed, the potential effects and predicted benefits would not be realized. The total GDP impact is estimated to be over $600 million during the Construction phase. The Project will bring tax revenues of approximately $53 million to the federal and $44 million to the provincial and territorial governments across Canada during construction. The Project will substantially benefit Nunavut and will contribute as much as $97 million in GDP to Nunavut during these two years. Construction is estimated to result in a total of about 6,250 person-years of direct, indirect and induced employment across Canada.

Total Canadian GDP impacts of the Project are predicted at $2,857 million over the 10 years of production. Total tax revenue during operation is estimated at $519 million, consisting of $263 in federal and $255 in provincial/territorial tax revenue. The Project will substantially benefit Nunavut and will contribute as much as $532 million in GDP to Nunavut during the Operation phase. The Project is also expects that the total direct, indirect and induced employment for Canada as a whole will be approximately 28,000 person-years over the 10 years.

The remote location, long supply route and severe Arctic climate impose challenges to the project which do not occur on other southern Canadian projects. As a result, the Project depends on the relatively high gold grades discovered to date and the relatively high gold prices that have prevailed over the past few years. Falling gold prices and rising costs for wages, materials and supplies could impact Sabina's ability to construct and sustain the Project.

Logistics

The preferred methods of accessing this remote location are via year-round air transportation, two open water marine shipping routes to Bathurst Inlet, and winter road links between the three Properties. There will be all-weather airstrips at both Goose and George Properties while the Marine Laydown Area at Bathurst Inlet will be serviced by an ice strip in the winter, and float plane in the summer months. Crew movements to the Goose Property will be facilitated by chartered air service. George Property personnel will be flown from the Goose Property by small aircraft. The current use of helicopters to service exploration crews will continue in proportion to Sabina's continued exploration and environmental monitoring effort during mine construction and operation.

It is estimated that 80% of the summer sealift will originate from Belledune, New Brunswick, with the balance from Hay River, Northwest Territories. Freight originating in Belledune will travel by self-lightering ship. Fuel will travel in tanker ships and then will be transferred through floating hose to storage tanks at the Marine Laydown Area. Freight originating in Hay River will travel in barges down the Mackenzie River entering Bathurst Inlet from the west. Incoming and outgoing cargo and fuel will be staged at the Marine Laydown Area while awaiting transfer to the project sites by winter road or awaiting the appropriate ship for back-haul.

Two winter roads will be constructed for the Back River Project. The Goose-Marine Laydown Area Winter Road is approximately 160 km in length. The Goose-George Winter Road is a spur road connecting George to the Goose-Marine Laydown Area Winter Road and is approximately 20 km in length. A third 220-km-long winter road, connecting the Project to the Tibbitt to Contwoyto Winter Road is under consideration. Ground transportation within each site is by all-weather roads. These routes cross only shallow, seasonal creeks. These crossings will comprise 3 to 5 small bridges, the remainder being culverts.

A direct implication of the remoteness of the site is a heavy emphasis on all aspects of health and safety, including that of the equipment and infrastructure. Equipment must be well maintained and safety provisions must be rigorously enforced as assistance from external sources is not readily available. Thus, on-site emergency and medical facilities will be relatively self-reliant.

Project Infrastructure

The Goose Property, George Property and Marine Laydown Area will all be self-sufficient for operating infrastructure, accommodations, administration, laydown areas, stockpiles, diesel-fired power generation, maintenance shops, warehousing, water and waste management facilities.

The Goose Property is the hub of the Project with the process plant, three open-pits, one underground operation, and a camp capable of housing 700 employees during construction and 350 during operations. A diesel fuel tank farm will house in excess of one year's supply in four 10-million litre (ML) plus one 5-ML tanks. Storage will be available for 20,000 tonnes of explosives.

The George Property is located 60 km north of the Goose Property and will have three open-pit mines. However, there is no processing plant at this location and the deposits are significantly smaller. Therefore the infrastructure is not as extensive. The camp is capable of housing 300 people during Construction and 150 during Operations. A diesel fuel tank farm will house three 5-ML tanks and space will be available for 100 tonnes of ammonium nitrate.

The Marine Laydown Area at Bathurst Inlet is located approximately 130 km north-northwest of the Goose site. It is the primary staging area for equipment, material, fuel and supplies required for the construction and operation of the Project. The Marine Laydown Area is comprised of a barge ramp for two barges, a temporary dock installed seasonally and a laydown and storage and maintenance facilities. A tank farm will contain diesel fuel in four 10-ML plus one 5-ML tanks. There will be dedicated storage for 20,000 tonnes of explosives. The camp is capable of housing 100 people during Construction and 50 during Operations.

Waste Rock and Tailings Management

The Tailings Impoundment Area is sited north-northwest of the Process Plant. It will be capable of accepting all process tailings produced during the mine life along with collected runoff and precipitation. Its basin and embankments will be lined with high-density polyethylene (HDPE) geomembrane and inserted between nonwoven geotextile to mitigate damage and losses to achieve zero discharge.

Goose Property utilizes two waste rock storage areas and the George Property will have three waste rock storage areas designed to deal with the potentially acid-generating and non-potentially acid-generating mining waste. Over the life-of-mine, a total of 133,000 kilotonnes (kt) of mining waste will be produced, including the overburden. Of that, Goose will produce 60,000 kt of potentially acid-generating material and 51,000 kt of non-potentially acid-generating material and George will produce 7,000 kt of potentially acid-generating material and 8,000 kt of non-potentially acid-generating material. The disposal and closure of these materials will begin with progressive reclamation during Operations, which entails capping potentially acid-generating stockpiles with non-potentially acid-generating material to promote aggregation of permafrost and encapsulation.

Borrow Pits and Quarry Sites

Sabina will establish borrow pits and/or quarries at the Goose site and will use this as a source of crushed rock and aggregate to build local all-season haul roads, laydown areas, airstrip extension and support other such construction and maintenance activities. Initial open pit mining will provide further crushed rock and aggregate. For George and the Marine Laydown Area, small borrow pits and/or quarries are planned for building the required infrastructure. The need for material will be minimized by balancing cut-to-fill ratios where possible.

Mineralogy and Mining

The gold is hosted in iron formations that are hosted in Archaean-age rocks of types common in the Canadian Shield. The sulphide content of the ore ranges from trace up to 5%. No other valuable metals are present in the ore in quantities that can be commercially extracted. The gold occurs as fine native gold, only occasionally visible to the naked eye. The minable mineral reserves for the Back River Project total 14,990 kt at 5.85 g/t for a quantity of contained gold of 2,464 Koz.

The ore at all open pits (Goose: Umwelt, Llama and Goose Main; George: Locale 1, Locale 2 and LCP North) will be recovered using conventional load-haul mining methods. All six deposits extend below the maximum depth for open pit mining and the maximum open pit depth will be approximately 200 m below ground surface. Only the Umwelt deposit extension has been identified as economically viable and underground mining operations will occur from 175 m to 650 m below ground surface using the post pillar cut-and-fill method.

Ore from the Goose workings will be stockpiled to a maximum of 1 million tonnes of high grade material and a maximum of 3 million tonnes for the low-grade material. Ore from the George mine workings will be stored at the George run-of-mine stockpile. A mobile crusher will reduce the size of the ore after which it will be stockpiled (maximum 500,000 tonnes) until transport to the Goose Property during the winter road season.

Exploration has identified several prospective targets in the general Project area. Sabina will continue to explore these during mine construction and operation with the possibility of extending the mine life beyond current expectations. Such deposits would likely be mined as satellites of the currently planned operation centered on Goose in order to make full use of existing infrastructure.

Mineral Processing

During operations, all ore will be processed using conventional gravity concentration and cyanidation techniques. The process plant's nominal capacity is 5,000 tonnes of ore per day. Three separate facilities will house the process: crushing plant; fine ore surge bin and related feeding and reclaim systems; and main processing plant. The process will comprise crushing (primary through tertiary), ball mill grinding, gravity concentration, cyanidation by carbon-in-leach process and gold recovery from the loaded carbon. Gold dore bars will be produced on site at an average rate of approximately 300,000 ounces per annum. The product will be flown off-site for further refinement.

Environmental Management

Sabina's Environmental Management System contained in Volume 10, provides a framework for the environmental and socio-economic monitoring activities to be implemented through the life of the Project. The System incorporates the strategies employed for adaptive management, the precautionary principle and sustainable development. Within this framework, individual management plans have been drafted to address all aspects of the company's activities and contain the detailed mitigation measures and monitoring programs to be implemented throughout the life of the Project in order to eliminate or minimize adverse effects. The System also verifies that standard operating procedures reflect legal requirements pertaining to the Project, and that conditions set at the time of the Project's authorizations as well as requirements pertaining to the relevant laws, regulations and permits are met. All Project employees and contractors are required to comply with these management plans. The reporting and documentation requirements for these management plans, auditing, and process of management review and revisions are all specified in the Environmental Management System. The Environmental Management System will offer enough flexibility to respond to the monitoring results in a timely fashion so to reduce or eliminate potential adverse residual effects to the natural and socio-economic environments.

Water Management

The base source of process water will be reclaimed from supernatant residual from the consolidated tailings. The reclaim pumping system located at the Tailings Impoundment Area will consist of a decant structure and heat-traced and insulated overland plastic piping. Additional make-up water may be required from a fresh water source during periods of insufficient reclaim.

As well, freshwater will be required to support the domestic and industrial water requirements at the Goose Property, George Property, and Marine Laydown Area. The Goose and George sites will draw fresh water from Goose and George Lakes, respectively. A supplemental source of water at is Propeller Lake at the Goose Property and Fold Lake at the George Property. Water treatment facilities will provide potable water at all sites. In addition, a desalination unit will be installed at Marine Laydown Area.

The terrain at all three sites is relatively flat with weakly developed, wandering, seasonal creek drainage. However, the overall approach to site water management is to divert water around mine workings and infrastructure to minimize impacts. The Goose Main pit will require a minor creek diversion and plans for the Goose airstrip extension suggest diverting a creek that currently flows across the extension. Both of these creeks flow into Goose Lake and volumes will remain unaffected, but the location of discharge points to the lake would change.

In order to access mineral resources, partial or complete dewatering of surface lakes will be required. At the Goose Property, Llama Lake will need to be dewatered to access the Llama deposit. At the George Property, partial dewatering through the construction of perimeter dykes of two shallow lakes, Lytle Lake and Occurrence Lake, will be required as part of the development of the open pits at Locale 1 and Locale 2 respectively. Impermeable retention dikes will be constructed to isolate the pits from these lakes. A dewatering plan will be prepared and implemented upon regulatory approval prior to construction of the dikes in Lytle and Occurrence lakes.

All six open pits will be situated in permafrost thus significant groundwater inflow is not expected. Inflow from snowmelt and summer precipitation will be addressed by conventional pumping to settling ponds prior to discharge to the environment. Dewatering of the underground mine will be achieved using a combination of submersible and horizontal pumps located throughout the working levels, pumping via multiple lifts. At Goose Property, all contact water will be diverted to the Tailings Impoundment Area and at the George Property, contact water will report to water management facilities.

Waste Management

Waste products will be sorted at waste management facilities located at each site. Material will be reduced, reused or recycled wherever possible. The Goose and George Properties will utilize landfills for nonhazardous approved material. Other materials will then be safely stored pending transportation to approved offsite recycling or disposal facilities. All camps will have an incinerator for combustion of nonhazardous and combustible wastes and a hazardous waste storage area. Sewage and grey water from the camp and maintenance facilities will be treated in wastewater treatment plants (rotating biological contactor). Treated sewage effluent will then be discharged to a designated and approved area in the terrestrial environment, the Tailings Impoundment Area, or to a wastewater management structure. Any discharge will be conveyed through structures designed to minimize erosion and degradation of the permafrost.

Closure and Reclamation

Sabina will undertake progressive reclamation activities throughout the mine life. Facilities will be decommissioned and removed at the end of their useful life. Achieving chemical and physical stability will be key focuses of final mine closure. This will include encapsulation of mine wastes (potentially acid-generating waste rock and tailings) with non-potentially acid-generating rock and flooding the open pits. In order to mitigate water treatment, the open pits will be actively filled with lake water to reduce the generation of acid and the leaching of metals. Mine closure is expected to take 10 years and consist of three phases followed by a minimum of five years of post-closure monitoring.

- Phase 1 - Approximately two years of active reclamation and active filling of the open pits with lake water.
- Phase 2 - Up to seven years of additional active filling of the open pits at the Goose site.
- Phase 3 - A final demobilization at the beginning of Year 10.

Industry-standard reclamation methods will be employed to close out the remainder of the three Project sites. Hazardous materials will be collected for off-site disposal including hazardous components of vehicles and equipment (i.e., fuel tanks, gear boxes and hydraulic oil). Equipment stripped of hazardous components will be disposed in an open pit or within a closure landfill constructed in one of the waste rock storage areas. Buildings will be demolished and disposed of in the same closure landfill. Culverts will be removed from roads and the natural drainage restored, but the roads will otherwise remain intact. Equipment and materials at the Marine Laydown Area will be disposed on-site following the same decontamination procedures. Rockfill used to create the laydown area will be used to create an on-site landfill at the Marine Laydown Area.

Public Consultation

Public consultation and engagement is a legal requirement in Nunavut, an industry best practice, and an important corporate commitment. The establishment of open, respectful, and jointly beneficial relationships with local communities and stakeholders have been, and will continue to be, key priorities for Sabina. Sabina further recognizes the unique characteristics of the Inuit lifestyle and has strived to engage local communities in a culturally sensitive and appropriate manner. The Company is also committed to maintaining ongoing dialogue with local communities and will continue to be open to suggestions as to how its public consultation and engagement activities can be improved.

Sabina's public consultation and engagement program is multi-faceted. It includes a commitment to cultural sensitivity and inclusiveness, and the use of various community engagement methods and tools. These include public meetings, meetings with key stakeholders and stakeholder groups (e.g., Hamlets, HTOs, youth), meetings with community advisory groups in Cambridge Bay and Kugluktuk, Project site visits, social media (e.g., websites and Twitter/email/RSS feeds), a Project newsletter, other distribution materials, establishment of a Cambridge Bay office, use of local employees and contractors including a Cambridge Bay-based Community Liaison Officer, execution of a Traditional Knowledge study in partnership with the Kitikmeot Inuit Association, execution of various socio-economic/environmental studies, the future negotiation of an Inuit Impact and Benefit Agreement with the Kitikmeot Inuit Association, other forms of community engagement (e.g., radio shows, trade show participation, cross-cultural training, and community advertisements), and community donations.

Sabina began its public consultation and engagement program in June 2012. Since then, dozens of formal meetings and numerous informal meetings with Project stakeholders have been held. Meeting minutes were taken during many of Sabina's public consultation and engagement activities, and have been incorporated into a public consultation database that contains over 150 topic directories. This database has been analyzed to identify key issues and concerns amongst communities and stakeholders. These can be categorized under three main themes: community benefits and engagement, employment and training, and environmental management and monitoring.

Sabina has and will continue to engage with the Kitikmeot Inuit Association, which is the primary Inuit organization with rights and responsibilities in the Project area. Kitikmeot Region communities have also been a key focus of Sabina's public consultation and engagement activities. These communities have been categorized based on the different levels of consultation and engagement employed by Sabina in each location. Categories were determined using a community's proximity to the Project, their potential to be affected by Project-related socio-economic and ecosystemic effects, and linkages to other aspects of the Project. A number of Northwest Territories Aboriginal organizations have been (or will be) engaged for the Project. These engagements have occurred primarily through informational meetings with the leadership and other representatives of these organizations.

Information obtained through public consultation and engagement has played a role in the planning and design of the Project in a number of ways including baseline data collection, impact prediction, significance assessment, and the development of mitigation and monitoring programs. Importantly, all key issues and concerns identified by local communities have been addressed by Sabina in the DEIS through various plans, policies, and commitments. Public consultation and engagement will also provide new information to be considered as the Project advances. For example, Sabina's Community Involvement Plan (see Volume 10) commits the company to regular meetings and community engagement throughout the Project's development and operation. Likewise, procedures are in place to document and respond to any community feedback, suggestions, and concerns that arise. Sabina will also adapt its Community Involvement Plan as necessary to ensure it remains relevant and effective.

Government Engagement

The purpose of Sabina's government engagement program has been to provide government officials with clear and comprehensive information regarding the proposed Project and the various mitigation plans that support its development. Sabina has also regularly communicated important Project timelines and milestones to government officials, so that they can more effectively plan their workloads and be sufficiently prepared to participate in the environmental assessment process. To date, the goals of Sabina's government engagement program have been to:

- develop two-way communication and dialogue that builds trust and results in action;
- provide information to government officials about the Project in a timely, transparent, and accessible fashion to support government agencies in their review processes; and
- obtain information and knowledge from government agencies in order to help Sabina address issues and develop appropriate mitigation strategies.

Sabina has engaged a number of federal agencies on various occasions about the Project, including the Canadian Northern Economic Development Agency (in particular, the Northern Projects Management Office), Fisheries and Oceans Canada, Aboriginal Affairs and Northern Development Canada, Environment Canada, Natural Resources Canada, and Transport Canada. Sabina has often looked to the Northern Projects Management Office to help coordinate information exchange, and assemble the most appropriate federal officials to participate in meetings and other events such as site visits.

The Government of Nunavut participates in, and provides expertise during, the environmental assessment and review process for proposed mines in Nunavut. Sabina will continue to work with the Government of Nunavut co-ordinator for its government engagement activities but will also engage specific departments as needed (e.g., those interested in socio-economic and wildlife issues). The Government of the Northwest Territories will be involved primarily in the assessment of transboundary and cumulative effects for the Project.

Sabina has used a wide range of government engagement methods and has emphasized building trust and personal relationships to the greatest extent possible. Introductory and follow-up meetings have been held with regional and headquarters management teams of various government agencies. These meetings involved as many relevant people as possible (and appropriate), across various interest areas.

Sabina recognizes there will be an ongoing need for both formal and informal government engagement activities. Any significant Project-related correspondence will be provided directly to Nunavut Impact review Board and will become part of the public record, as required by their process.

Traditional Knowledge

Traditional Knowledge (TK) can be defined as a "cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission" (NIRB 2007). TK studies provide a valuable way of documenting spatial and temporal patterns of hunting, harvesting, fishing, habitation and travel in a given area. They can also provide detailed information on local ecological processes, socio-cultural patterns and institutions, spirituality, ethical and other matters. Sabina recognizes the inherent value of TK and the importance local communities place on its use in the environmental assessment of proposed developments. As such, Sabina has made significant efforts to engage local communities through incorporation of their TK into the Project's planning and design. Specific details as to how TK has been incorporated into the DEIS are summarized in Table 3.1-1 (Volume 3) - Uses of Traditional Knowledge in Sabina's Draft Environmental Impact Statement for the Back River Project, and are described in further detail in relevant volumes of the DEIS.

Sabina has, or will, utilize five primary sources of TK: a Naonaiyaotit Traditional Knowledge Project (NTKP) database report for the Project, theme-based TK workshops, a report on existing and publically available Northwest Territories TK, the results of public consultation and engagement activities, and other sources (e.g., land use workshops). Likewise, Inuit Qaujimajatuqangit values have helped guide Sabina's decision making for the Project and have been incorporated into the design of the Company's overall Project management approach. Sabina has partnered with the Kitikmeot Inuit Association in two key elements of its TK study – preparation of the NTKP database report and execution of the theme-based TK workshops. The basis of this partnership was a TK Agreement signed between Sabina and the Kitikmeot Inuit Association in May 2012. Signing of this agreement provided Sabina with access to TK held by the Kitikmeot Inuit Association in the NTKP database. The agreement also outlines the terms and conditions pertaining to Sabina's use of the TK.

Sabina has considered TK on an equal basis with all scientific forms of information collected for the Project. For example, TK has been integrated into various environmental and socio-economic baseline studies conducted for the Project. This information has helped complement existing scientific and socio-economic information, provide new and otherwise unrecorded information, and/or provide alternative views and/or interpretations to be considered. The results of the NTKP database report (i.e., KIA 2012) were additionally used for scoping and refining the initial VEC/VSEC list for the Project. A draft list of VECs/VSECs was also presented to each community advisory group in November 2012 and at public meetings in each Kitikmeot community in April 2013 for review and comment. As a result of TK being incorporated into Sabina's baseline data collection and impact prediction/effects assessment activities, Sabina's final significance determinations have thus been informed by TK. Significance assessment methods and conclusions were additionally scheduled to be presented in each Kitikmeot community and with each community advisory group in November 2013 for review and comment.

Finally, TK has helped inform the development of mitigation and monitoring programs for the Project. Public concerns have been raised (e.g., during public consultation and engagement activities) in regards to the potential for the Project to negatively affect wildlife (particularly caribou) and other environmental and socio-economic components. Mitigation and management strategies have thus been developed for a number of VECs and VSECs that will serve to minimize the potential effects of the Project on those components valued by Inuit. TK will also be used in the monitoring of potential Project effects. Not only has TK contributed to the baseline against which future effects can be measured, but locally shared TK will also provide new observations and information to be considered as the Project advances. The future gathering and use of TK has been incorporated into a number of management plans for the Project. For example, Sabina's Community Involvement Plan commits the company to regular public meetings and community engagement throughout the Project's lifecycle. Likewise, procedures will be in place to document and respond to any community feedback, suggestions, and concerns that arise.

Valued Components

The scoping of potential Valued Ecosystem Components (VECs) and Valued Socio-economic Components (VSECs) involved Sabina-led public consultations, the use of Traditional Knowledge (TK), regulator consultations and regulatory considerations, and recommendations presented in the NIRB EIS guidelines (NIRB 2013). The *Inuit Traditional Knowledge of Sabina Gold & Silver Corp., Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project Report* (KIA 2012) was consulted extensively for TK information. Based on these sources, the following VECs and VSECs and Subjects of Note were identified:

Atmospheric Environment (Volume 4)

- VECs: Air Quality, Noise and Vibration
- Subject of Note: Climate and Meteorology

Terrestrial Environment (Volume 5)

- VECs: Vegetation and Special Landscape Features, Caribou, Grizzly Bear, Muskox, Wolverine and Furbearers, Migratory Birds, Raptors
- Subject of Note: Geology, Permafrost, Landforms and Soils

Freshwater Environment (Volume 6)

- VECs: Hydrology, Water Quality, Sediment Quality, Fish/Aquatic Habitat, Fish Community
- Subject of Note: Groundwater, Limnology and Bathymetry

Marine Environment (Volume 7)

- VECs: Water Quality, Sediment Quality, Fish/Aquatic Habitat, Fish Community, Seabirds/Seaducks, Ringed Seals
- Subject of Note: Physical Processes

Human Environment (Volume 8)

- VECs: Archaeology, Socio-Economics, Land Use, Country Foods
- Subject of Note: Paleontology, Human Health and Environmental Risk Assessment

All VECs and VSECs were assessed over spatial and temporal scales. Spatially, potential effects were evaluated within a Local Study Area (LSA) and a larger Regional Study Area (RSA). Temporally, potential effects were considered during the Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases. Specific legislation was considered during the assessment, including appropriate federal and territorial objectives/standards.

The following presents summaries of the existing environment, primary Project activities that are anticipated to interact with the VECs and VSECs, mitigation measures, effects assessment, and if applicable, cumulative effects assessment for each VEC and VSEC. Information required in the EIS guidelines for the Subjects of Note can be found in the detailed supporting volumes.

Atmospheric Environment

Air Quality

The air quality in the RSA is predominantly pristine, reflecting the Project location's remoteness and the lack of, and localized nature of, sources of anthropogenic air emissions sources. Activities associated with the Project have the potential to generate emissions of criteria air contaminant (CACs) and also lead to dust and acid deposition. Mitigation and management activities planned to reduce or eliminate potential effects on air quality include: energy efficiency measures, measures to reduce fuel use, the use of water or dust suppression fluids to reduce dust from unpaved roads or from transported material and equipment in the crushing facility, and the use of emission control systems such as wet scrubbers, baghouses, and filters. For the anticipated peak activity year, the modeling study predicted that concentrations of SO_2, CO, and dust deposition would be below the objectives/standards at all locations and the NO_2, $PM_{2.5}$ and acid deposition exceedances were contained within the Project Development Areas (PDAs). The remaining two air quality indicators (TSP and PM_{10}) showed exceedances outside the PDA, and thus would remain as residual effects after mitigation. However, contingent on the implementation of mitigation measures outlined in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17), the significance of residual effects for air quality is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on air quality.

Noise and Vibration

The existing noise and vibration environment is pristine with no significant nearby anthropogenic noise or vibration sources. Construction and operation of the Project will introduce noise and vibration sources largely in the form of construction equipment, haul vehicles, blasting and vehicle and aircraft traffic. Mitigation and management measures planned to reduce or eliminate potential effects on noise and vibration include: ensuring equipment is fitted with appropriate mufflers and silencers, limiting activities such as blasting and take-off and landing of aircraft to certain times of the day, and housing stationary sources in buildings or using enclosures, berms, acoustic screening and shrouding. The results of quantitative noise modelling for the peak activity year show that predicted noise levels are below the criteria for interference with speech communications (humans), complaints (humans), high annoyance (humans), noise induced rattling (humans) and noise induced hearing loss (humans). Similarly, there are not expected to be any cosmetic and structural damage of buildings (humans) effects from Project-generated vibration. However, noise levels are predicted to exceed relevant criteria for loss of habitat (wildlife) and disturbance (wildlife) at various identified receptors due to construction and operation activities, blasting, road traffic and aircraft movements. In addition, noise levels from mine construction and operations are predicted to temporarily exceed the sleep disturbance (humans) criteria at the proposed location of the Goose camp. Therefore, three potential effects would remain as residual effects after mitigation: sleep disturbance (humans), habitat loss (wildlife) and disturbance (wildlife). Residual effects of the Project on wildlife are included in the terrestrial wildlife chapters (Volume 5, Chapters 5-10). The predicted residual effect of the Project on noise and vibration (sleep disturbance for humans) is limited to within the Project footprint, with a moderate magnitude as noise levels are predicted to exceed the criteria for sleep disturbance by less than 5 dBA, and reversible within the life span of the Project. Contingent on the implementation of mitigation measures outlined in the Noise Abatement Plan (Volume 10, Chapter 18), the significance of this residual effect is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on noise and vibration.

Terrestrial Environment

Vegetation and Special Landscape Features

Terrestrial ecosystem mapping and rare plant surveys were conducted in 2012 within the 134,370 ha vegetation and terrestrial wildlife LSA. A total of 890 plant species identifications were made during the terrestrial ecosystem mapping and rare plant field surveys within the LSA and RSA. Identified plants were generally widespread across the area. Construction of the Project could result in the loss of vegetation and special landscape features. The mitigation and management measures designed to eliminate or minimize potential Project effects include: minimizing the Project footprint, using winter roads, and reducing fugitive dust where possible. For the effects assessment, it was assumed that the entire PDA would be lost. In reality, the area of vegetation/special landscape feature loss will be much less as it will be confined to the final footprint of the Project. Contingent on the implementation of mitigation measures outlined in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for vegetation and special landscape features is predicted to be **Not Significant**. A cumulative effects assessment was conducted for the terrestrial RSA, and the significance of the residual cumulative effect (vegetation loss) is predicted to be **Not Significant**. There is not a transboundary component to the non-significant residual effects.

Caribou

There are three barren-ground caribou herds whose ranges overlap with the terrestrial RSA. Satellite collaring data indicate that the Bathurst herd is found in the western portion of the terrestrial RSA primarily during post-calving period, and the Beverly herd (formerly the Ahiak herd) is found in the terrestrial RSA, primarily during the late-summer and early-fall. Results of aerial surveys conducted between 2001 and 2010 and the use of remote motion-triggered cameras in the RSA and adjacent and west of the RSA confirm results of satellite collar data. The winter distribution of Dolphin and Union caribou likely overlaps the marine RSA to a small extent during the winter. The Dolphin and Union herd is *SARA* listed as a species of special concern while the Bathurst herd and the Beverly herd have not been assessed by COSEWIC. Potential Project-related effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter roads, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for caribou is predicted to be **Not Significant**.

A potential cumulative effects assessment was conducted based on the post-calving and summer seasonal ranges of the Bathurst herd and the summer and winter ranges of the Beverly herd, and included areas within Nunavut and the Northwest Territories. As outlined in the EIS guidelines (NIRB 2013), the Minister of Aboriginal Affairs and Northern Development Canada highlighted the importance of the Bathurst herd caribou in the region and identified the need to conduct a cumulative effects assessment for this herd (letter dated December 17, 2012). In order to support the potential cumulative effects assessment for caribou, a broad-scale Resource Selection Function (RSF) model was developed for the Bathurst caribou herd on their post-calving and summer ranges. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of residual cumulative effects for caribou is predicted to be **Not Significant**. The cumulative effects assessment spatial boundary included a portion of the Northwest Territories for both the Bathurst herd and the Beverly herd. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant.**

Grizzly Bears

Barren-ground populations of grizzly bears are federally listed as species of “Special Concern” (SARA; COSEWIC 2012) and are listed as Sensitive in Nunavut (CESCC 2010). Mark-recapture DNA baseline studies conducted in 2012 identified a total of 61 grizzly bears in the RSA and an additional 62 bears were detected in an identically-sized study area directly west of the RSA. Potential Project-related effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise (e.g., displacement from areas of habitat), disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Winter roads were excluded from the assessment as grizzly bears are hibernating when these roads are constructed and used. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for grizzly bear is predicted to be **Not Significant**.

A potential cumulative effects assessment was conducted based on a buffer around Project infrastructure using the diameter of the largest area within which a grizzly bear can range and still interact with the Back River Project. Contingent on the implementation of mitigation measures outlined in the wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of cumulative effects for grizzly bear is predicted to be **Not Significant**. The cumulative effects assessment spatial boundary included a portion of the Northwest Territories for grizzly bears and is anticipated to be the largest area that any one grizzly bear may be able to interact with the Project. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

Muskox

Aerial baseline surveys conducted between 2001 and 2010 indicate that muskox occur at low densities in the RSA. Muskox have been routinely observed on the low, shelving hills, to the west of Bathurst Inlet and two other herds may occur near the Project, one to the southeast of the George Property Area and another near the Goose Property Area. Potential Project-related effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for muskox is predicted to be **Not Significant**.

A potential cumulative effects assessment was conducted for muskox based on a diameter around the Project using the longest straight line distance travelled by a radio-collared muskox in the west Kitikmeot region. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of cumulative effects for muskox is predicted to be **Not Significant**. The cumulative effects assessment spatial boundary included a portion of the Northwest Territories for muskox and is anticipated to include the largest straight line distance that a muskox may be able to interact with the Project. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

Wolverine and Furbearers

Wolverines and grey wolves were selected as the representative furbearer species for the DEIS. Wolverines and wolves in Nunavut are both ranked as “Secure” (CESCC 2010), but wolverines are federally listed as a species of “Special Concern” (COSEWIC 2003). Mark-recapture DNA baseline studies conducted for wolverine in 2012 identified a total 12 wolverine within a 1,692 km^2 area between the Goose and George Properties. Minimum recorded area estimates for individual wolverines ranged from 89 km^2 and 264 km^2, with an average area of 162 km^2. For grey wolf, aerial denning surveys conducted between 2007 and 2013 identified eight active wolf dens located within the wildlife RSA, of which five had successfully produced pups. Potential Project-related effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for wolverine and furbearers is predicted to be **Not Significant**.

A potential cumulative effects assessment was conducted based on the movement distances defined for wolverine and wolves that interact with the Project. For wolverine this area was identical to the RSA, but also included a buffer around the possible Tibbitt to Contwoyto Winter Road connector. For wolves, this area represents the summer ranges of the Bathurst and Beverly caribou herds as wolves follow caribou, for prey when they occur within range of the Project. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of cumulative effects for wolverine and furbearers is predicted to be **Not Significant**. Wolverine that may interact with the Project are not anticipated to travel into the Northwest Territories, thus transboundary effects for wolverine are not anticipated. The cumulative effects assessment spatial boundary for wolves included a portion of the Northwest Territories. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

Migratory Birds

Migratory birds and their nests are protected by the federal *Migratory Birds Convention Act* (1994) and the *Nunavut Wildlife Act* (2003), which prohibit destruction of bird nests when these are being used by birds, and prohibits disturbance to flocks of migratory birds. No species of migratory bird occurring in the RSA is listed as a species of conservation concern under the federal *Species at Risk Act* (SARA 2002). However, three waterbird and ten upland bird species occurring in the RSA are listed as 'Sensitive' under the CESCC designations for Nunavut (CESCC 2010). Potential Project-related effects include Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste and chemical handling measures to avoid attracting wildlife to wastes and contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for migratory birds is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on migratory birds.

Raptors

Five of the eight raptors species occurring in the wildlife RSA are species of conservation concern. The cliff-nesting peregrine falcon and the ground-nesting short-eared owl are listed as species of Special

Concern on Schedule 1 of the federal Species at Risk Act (Government of Canada 2013). Three additional cliff-nesting species - the golden eagle, gyrfalcon, and rough-legged hawk - are listed as "Sensitive" in Nunavut by the Canadian Endangered Species Conservation Council *SARA* (CESCC 2010). Ground-based surveys for upland birds confirmed that ground-nesting raptors occur relatively rarely within the wildlife RSA. Potential Project-related effects included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads, waste management and chemical handling measures to avoid attracting wildlife, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20). Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for raptors is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on raptors.

Freshwater Environment

Surface Hydrology

Baseline hydrology data are available for the Goose Property LSA from 2010 to 2013 and for the George Property LSA from 2012 and 2013. Potential Project effects include water use, site water management activities, and winter roads. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: the design of maximum water use volumes for waterbodies in order to protect fish habitat, following DFO protocols for winter water withdrawal, confinement of infrastructure to local watersheds, and following winter road construction and maintenance DFO operational statements. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for hydrology is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on hydrology.

Freshwater Water Quality

Baseline water quality data have been collected in the George and Goose LSAs since 1994, with extensive water sampling programs being carried out from 2010 to 2013. Potential Project-related effects include Project activities that could alter the following indicators for water quality via runoff, water withdrawals, treated discharge, and aerial deposition: pH, TSS, nutrients, metals, hydrocarbons, BOD, chorine, and cyanide. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: Project design features such as using geochemically suitable material for roads and pads, and the implementation of mitigation measures contained in the EMS. Contingent on the implementation of measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the significance of residual effects for freshwater water quality is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on freshwater water quality.

Freshwater Sediment Quality

Baseline freshwater sediment quality data have been collected in the George and Goose LSAs since 2007, with the most continuous sampling conducted from 2010 to 2013. Potential Project-related effects include Project activities that could alter the following indicators via runoff, water withdrawals, treated discharge, and aerial deposition: particle size, nutrients and organic carbon, metals, and hydrocarbons. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: erosion protection and the implementation of site-specific measures outlined in the EMS. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the significance of residual effects for freshwater sediment quality is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on freshwater sediment quality.

Freshwater Fish/Aquatic Habitat

Comprehensive baseline studies on freshwater fish/aquatic habitat have been conducted in the Goose and George Property LSAs from 2010 to 2013. More than 30 streams have been characterized in the Goose Property LSA, and more than 20 in the George Property LSA. Within the Goose LSA, there are permanent barriers to fish migration along the stream between Pond A and Giraffe Lake (where the Tailings Impoundment Area has been located) and along the stream between Umwelt Lake and Goose Lake. Potential indirect effects are addressed as part of the freshwater water quality and sediment quality assessments. Project activities that have the potential to directly affect freshwater fish/aquatic habitat include the loss of lentic habitat due to lake dewatering, development of open pits, water withdrawal for domestic and process use, and winter road construction. Stream habitat may also be lost due to the construction of mine infrastructure. The primary mitigation measure to avoid potential effects on freshwater fish/aquatic habitat is the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible. The Tailings Impoundment Area and waste rock storage areas have been located to avoid fish-bearing waters. Another key mitigation measure is the establishment of maximum water volume uses which have been based on protecting sensitive life stages of fish in Goose, Propeller, and George lakes. Unavoidable losses of fish habitat (e.g., loss of Llama Lake due to Llama Open Pit) may be mitigated through the implementation of a Conceptual Fish Offsetting Plan. Therefore, no residual effects are anticipated on the VEC freshwater fish/aquatic habitat. As no Project residual effects are anticipated, there are no effects that could act cumulatively with other projects. Therefore no cumulative effects or transboundary effects are expected.

Freshwater Fish Communities

The freshwater fish communities in the Goose and George Property LSAs are characteristic of Arctic freshwater ecosystems and include freshwater as well as anadromous species at the Marine laydown Area. Baseline studies have been conducted from 2010 to 2013 within the LSAs. The freshwater fish communities are typical of inland, headwater regions of the Canadian Arctic. Lake Trout was the dominant species, followed by Round Whitefish, Arctic Grayling, Slimy Sculpin, and Ninespine Stickleback. Other species found within the LSAs include Burbot and Lake Whitefish. No Arctic Char have been captured within either of the Goose or George LSAs, although they are likely present within the freshwater RSAs.

Potential Project-related effects on the VEC freshwater fish community focused on the two abundant freshwater or anadromous fish species in the LSAs, Lake Trout and Arctic Grayling. The main potential Project-related effects are direct mortality or population decreases due to lake dewatering, building of winter roads, construction of the Project footprint, water withdrawal for domestic and process use or winter road construction, and blasting with explosives. The primary mitigation measure to avoid potential effects on Lake Trout and Arctic Grayling is the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible. The Tailings Impoundment Area and waste rock storage areas have been located to avoid fish-bearing waters. Another key mitigation measure is the establishment of maximum water volume uses which have been based on protecting sensitive life stages of fish in Goose, Propeller, and George lakes. Unavoidable losses to these freshwater fish species (e.g., loss of Llama Lake due to Llama Open Pit) may be further mitigated through the implementation of a Conceptual Fish Offsetting Plan. The significance of the residual effect of the possible reduction in Arctic Grayling populations as a result of the loss of Llama Lake and local drainages was determined to be **Not Significant**. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), no residual effects for Lake Trout are anticipated. There are no anticipated cumulative effects or transboundary effects on Arctic Grayling and Lake Trout.

Marine Environment

Marine Water Quality

Baseline marine water quality data have been collected in the marine RSA in Bathurst Inlet since 2001 and within the LSA in 2013. Potential Project effects include shipping activities; sediment introduction to water as a result of site preparation, construction, and reclamation; site contact water; winter roads; explosives; fuels, oils, and polycyclic aromatic hydrocarbons (PAHs); treated discharges; and dust deposition. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: minimizing vessel speeds and restricting vessels to deeper waters, intercepting runoff in ditches and diverting the water to a collection pond at the Marine Laydown Area, using geochemically suitable material for roads and pads, adhering to regulatory guidelines for treated discharges, and using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials as well as for dust suppression and incineration. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for marine water quality is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on marine water quality.

Marine Sediment Quality

Sediment quality data have been collected in the marine RSA in Bathurst Inlet since 2001 and directly within the LSA in 2013. Potential Project effects include shipping activities; sediment introduction to water as a result of site preparation, construction, and reclamation; site contact water; fuels, oils, and polycyclic aromatic hydrocarbons (PAHs); treated discharges; and dust deposition. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include: intercepting runoff in ditches and diverting the water to a collection pond at the Marine Laydown Area, adhering to regulatory guidelines for treated discharges, and using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials as well as for dust suppression and incineration. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for marine sediment quality is predicted to be **Not Significant**. There are no anticipated cumulative effects or transboundary effects on marine sediment quality.

Marine Fish/Aquatic Habitat

Baseline data on marine habitat have been collected in the RSA in Bathurst Inlet since 2001 and in the LSA in 2012 and 2013. Potential indirect effects are addressed as part of the marine water quality and sediment quality assessments. Project activities that have the potential to directly affect marine fish/aquatic habitat include the in-water construction of Marine Laydown Area infrastructure (in-water construction of a seasonal dock and beach ramp). The following measures are expected to fully mitigate the potential Project effect on marine fish/aquatic habitat: measures in place to eliminate or reduce potential effects to water quality and sediment quality, and the possible use of a Conceptual Fisheries Offsetting Plan. Therefore, no residual effects are anticipated on the VEC marine fish/aquatic habitat. No cumulative effects or transboundary effects are expected.

Marine Fish Community

Nineteen fish species have been captured during baseline studies between 2001 and 2013, or are presumed to occur, in the marine LSA. Dominant species include Fourhorn Sculpin, Capelin, Pacific Herring, and Starry Flounder. None of the species sampled during the baseline studies are threatened or endangered. Arctic Char were not captured during baseline studies, but are presumed to occur in the LSA due to the presence of char spawning rivers and streams in the marine RSA. Potential Project effects focused on Arctic Char and include potential direct mortality from in-water construction and blasting, population effects from introduced species carried by ballast water, and underwater noise from shipping activities. Mitigation measures to eliminate or reduce potential effects include limiting the amount of in-water construction, eliminating ballast water exchange, and enforcing speed limits for ships navigating through the RSA. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the Shipping Plan (Volume 10, Chapter 15), and the Noise Abatement Plan (Volume 10, Chapter 18), the significance of the residual effect for marine fish communities as assessed for Arctic Char is predicted to be **Not Significant**. A potential cumulative effects assessment was conducted for the marine RSA. The residual cumulative effect of noise was determined to be **Not Significant**. There is not a transboundary component to the non-significant residual effect.

Seabirds/Seaducks

Seabirds and seaducks include migratory bird species that may use marine areas during any time of year and encompass a diverse group of avian species including eiders, scoters, geese and swans, dabbling ducks, diving ducks, loons, and gulls. Seabirds and seaducks and their nests are protected by the federal *Migratory Birds Convention Act* (1994). The following three seabird and seaduck species are listed as "Sensitive" under the Canadian Endangered Species Conservation Council (CESCC) designations for Nunavut: common eider, glaucous gull, and long-tailed duck (CESCC 2010). Aerial and ground surveys were conducted in the marine wildlife RSA between 2007 and 2013 during breeding (June and July) and staging periods (August) and documented a total of 23 species in the marine RSA in Bathurst Inlet during the staging surveys. Potential Project effects include disturbance (e.g., noise) and reduced reproductive productivity. Mitigation measures to eliminate or reduce potential effects include: identification and avoidance of seabird and seaduck staging areas, avoidance of disturbing sensitive areas by developing pre-determined flight paths when possible to provide horizontal and vertical buffer distances from staging birds, establishing a flight altitude of 650 m above known staging areas, and avoidance of staging areas. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Management Plan (Volume 10, Chapter 20), the significance of the residual effects is predicted to be **Not Significant**. A potential cumulative effects assessment was conducted for the marine RSA. The residual cumulative effects were determined to be **Not Significant**. There is not a transboundary component to the non-significant residual effects.

Ringed Seals

Aerial surveys were conducted during the spring moulting period (mid-May through mid-July) between 2007 and 2013 in the marine RSA to assess abundance and distribution of ringed seals. Results indicated that ringed seal abundance was spatially variable in Bathurst Inlet, with moderate densities present in most parts of the inlet, except in the southern RSA south of Kingaok where very low densities of adult and 8 to 10-week old pups were found. Ringed seal lairs were only found in the northern RSA during surveys; no lairs were observed in the southern RSA or the LSA. Potential Project effects include alteration of habitat, disturbance (e.g., noise), direct mortality and injury, indirect mortality, exposure to contaminants, and reduced reproductive productivity. Shipping for the Project will be conducted during the open-water periods only (August 25 to October 31) when ringed seal density in the marine LSA and RSA is anticipated to be very low. Activities occurring at the Marine Laydown Area are expected to be during the open-water shipping period and during the winter when the winter roads are operational (December through March). These time periods correspond to periods when seals are not in the vicinity of the LSA or southern RSA (south of Kingaok). Mitigation measures to eliminate or reduce potential effects include: identification and avoidance of seal lairs. The Project is not predicted to result in any residual effects on ringed seals and no cumulative or transboundary effects are anticipated to occur.

Human Environment

Archaeological Sites

Recent site-specific baseline studies have been conducted within the Project Potential Development Areas (PDAs), and the archaeological LSA and RSA in 2001, 2002, 2004, 2007, 2010 to 2013. Some historical information within the RSA is available from the 1970s and 1990s. The construction of the Project has the potential to impact archaeological sites. The main mitigation measure will be site avoidance by Project design. However, where avoidance is not possible, mitigation of archaeological sites will be conducted prior to construction activities. Any archaeological sites not previously recorded that are discovered during construction, operations, and closure will be inspected by the Project archaeologist, documented, and reported to the Government of Nunavut, Department of Culture and Heritage using the “Chance Find Procedure.” These sites will be subject to the same level of management and mitigation afforded to the currently known archaeological sites outlined above. With avoidance and/or mitigation implemented, residual effects on known archaeological sites are anticipated to be **Not Significant**. Due to the spatially localized nature of archaeological sites there are no cumulative effects or transboundary effects from the Project on the VSEC archaeological sites.

Socio-economics

The assessment of potential effects of the Project on socio-economics considers five VSECS: 1) economic development; 2) business opportunities; 3) employment; 4) education and training; and 5) health and community well-being. A total of 10 potential effects were identified, resulting in seven positive residual effects, two negative residual effects, and one effect with both positive and negative residual effects. Positive residual effects were described but were not evaluated for significance or carried in to potential cumulative or transboundary effects assessment. Negative residual effects were further evaluated for determination of significance, and were also included in potential cumulative and transboundary effects assessments.

Economic Development

The Kitikmeot Region has a mixed economy, focusing on public sector services, private sector market economies, and traditional activities. Formal economic sectors of particular importance include: government administration, health care and social services, education, retail, construction, transportation, tourism services, arts and crafts, and mineral exploration and development (Statistics Canada 2007). The service sector is the base of the Kitikmeot economy, providing employment to around 80% of the employed labour force. Overall, increases to economic diversity are anticipated as a result of the Project and are characterized by: increased local employment, increased incomes, and spending; Project-related expenditures (locally, regionally) with existing businesses located in the Kitikmeot and across Nunavut, increasing the financial resources available to existing businesses; the addition of new businesses or expansion of existing businesses within the Kitikmeot Region that provide goods or services previously unavailable; and/or the development of, or additional investment in, Inuit-owned businesses. Increased economic growth, diversity, and performance are expected to have a positive residual effect on the VSEC economic development. As the residual effect was determined to be positive, the effect was not carried through for further cumulative or transboundary assessment.

Business Opportunities

The Government of Nunavut dominates the service sector and is the major economic driver of the Kitikmeot communities. Government employment and income support provides the main source of income for residents and this, in turn, supports the presence of the private sector in each community. Project activities that are anticipated to promote growth and diversity among Inuit and northern businesses include: provision of contract and sub-contract opportunities, specifically the procurement of goods and services from local suppliers; and contribution to personal incomes, increasing the purchasing power of local residents. The expected increase in local business activity itself is expected to bring about an increase in capital investment (e.g., investment in the expansion of businesses or the creation of new businesses) in anticipation of the Project. Local businesses will be presented with opportunities to bid on Project work, facilitated by the Project through mitigation and management measures established to maximize the benefits of contracting opportunities and the local sourcing of goods and services. Changes to the growth and diversity of Inuit and northern business are anticipated to have a positive residual effect on the VSEC business opportunities. As the residual effect was determined to be positive, the effect was not carried through for further cumulative or transboundary assessment.

Employment

The potential labour force within the Kitikmeot communities was approximately 3,475 in 2006. The active labour force among these same communities was approximately 2,185 individuals, indicating an average participation rate of 62.9%. The Project is expected to affect the VSEC employment through: 1) changes to employment and income levels; 2) changes to the capacity of the labour force; and 3) changes to competition for local labour. Mitigation and management measures that focus on training, recruitment, and retention have been developed to enhance the participation of local Inuit in Project employment and are detailed in the Human Resources Plan (Volume 10, Chapter 28). The strategies to enhance Project effects on employment include: a Labour Relations Strategy; a Preferential Recruitment Strategy; a Workforce Training Strategy; and a Workforce Transition Strategy. The targeted recruiting of Inuit employees is expected to reduce the higher than average unemployment rates. The Project will also inform local businesses, organizations, and hamlets of their hiring requirements and procurement practices in advance of the implementation of Construction and Operation and will collaborate to reduce any adverse effects of increased competition for local labour.

Overall, the employment and income effects of the Project are highly beneficial and have the potential to enable increased standards of living for Kitikmeot families. Direct Project employment and procurement are expected to increase the capacity of the labour force, specifically the skills and experience of Kitikmeot workers. Increased capacity is predicted to lower unemployment rates, promote economic growth, and enhance ability of the regional workforce to support future projects. Changes in income and employment levels, as well as changes in the capacity of the labour force, are anticipated to have positive residual effects on the VSEC employment.

Direct Project employment and procurement may cause negative changes to local competition for labour. That is, the Project creates the potential for individuals currently employed in the Kitikmeot Region to leave their current employment for mine-related employment. However, most Kitikmeot residents employed elsewhere are not expected to leave their current employment to obtain work with the Project. This residual effect is rated as **Not Significant**. A cumulative effects assessment was conducted including those projects and human activities in the Kitikmeot and NWT considered to have potential effects within the socio-economic RSA that are relevant to current residents. The cumulative residual effect of ‘changes to competition for local labour’ is expected to be unlikely and **Not Significant**. As this residual cumulative effect is unlikely, the potential transboundary implications are negligible.

Education and Training

Each of the study communities, with the exception of Bathurst Inlet and Omingmaktok, is provided with kindergarten, elementary, and secondary schooling. Students are provided with the opportunity to obtain their high school certificate (or equivalent) within their home community. The potential effects of the Project on education and training include changes to the demand for education and training, and changes to youth attitudes and behaviours toward education and training. Sabina expects to partner with local governments, educational institutions, Inuit organizations, and other mine proponents to contribute to the creation of a regional training facility or additional mine employment training programs at the NAC. Further discussion of community investment is provided in the Community Involvement Plan (Volume 10, Chapter 26). The Workforce Training Strategy, as defined in the Human Resources Plan (Volume 10, Chapter 28), specifies actions to enhance the benefits of Project employment within the local communities by developing strategic partnerships; contributing to local programs and training initiatives; providing in-house training and career development; employment of an Inuit Employment and Training Coordinator; and engaging youth through mentorship programs. Overall, changes to the demand for education and training, as well as changes in youth attitudes toward education and training, are predicted to have positive residual effects. As the residual effects are anticipated to be positive, no cumulative or transboundary effects assessments were conducted.

Health and Community Well-being

Nunavummiut experience lower rates of arthritis, diabetes, asthma, and high blood pressure as compared to Canadians. However, more Nunavummiut are overweight and obese, and have a higher incidence of cancer (512.1 per 100,000) as compared to Canadians generally (404.9 per 100,000). General community well-being, as described by AANDC's community well-being indicator, was relatively low within Kitikmeot communities. The effects of the Project on Health and community well-being (CWB) are anticipated to be both positive and negative and include: changes to the life skills of those employed with the Project; changes to individual and family spending; and changes to family/household function. Engagement in economic productive work, the management of finances, and responsibility associated with employment are expected to assist with or support decision making and increase life skills. Enhancement measures have been developed to promote the retention of positive Project effects locally including those aimed to increase the number of Inuit employed (e.g., EFAP, financial management counselling) as detailed in the Human Resources Plan (Volume 10, Chapter 28). The Project is anticipated to increase the life skills of individuals who obtain Project-related employment, resulting in a residual positive effect on the VSEC Health and CWB.

Both positive and negative residual effects are predicted on Health and CWB due to changes to individual and family spending. Should local residents that obtain employment with the Project choose to spend their increased incomes unproductively (e.g., on gambling, drugs, and alcohol) and engage in negative social behaviours, this will have a negative effect on CWB. However, income used to improve standards of living (e.g., improvements to housing, food security) coupled with the other numerous positive effects associated with Project employment have the potential to result in substantial increases to CWB. Overall, the residual effects of negative changes to individual and family spending, and negative changes to family and household structure, are determined to be **Not Significant.** A cumulative effects assessment was conducted including those projects and human activities in the Kitikmeot and NWT considered to have potential effects within the socio-economic RSA that are relevant to current residents. The cumulative residual effects are expected to be **Not Significant**. A transboundary assessment was also conducted. The residual effects of the Project on health and CWB are expected to be most relevant to small northern communities. Both residual effects are expected to be negligible outside the Kitikmeot Region. Special consideration was given to potential transboundary effects to health systems in the NWT as a result of Project reliance on medical services. The Project is not expected to have transboundary effects on the health system in the NWT due to the fly-in/fly-out operation of the Project and the provision of required medical services at the Project site. Project employees are expected to continue to utilize health services in their home communities and will have access to health services at the Project site as required.

Land Use

The assessment of potential effects of the Project on land use considers two VSECS: 1) non-traditional land and resource use; and 2) subsistence economy and land use. A total of three potential effects were identified acting on each VSEC, resulting in a total of six potential effects. All of the potential effects were identified as negative residual effects. Negative residual effects were further evaluated for determination of significance.

Non-traditional Land and Resource Use

Commercial land use consists primarily of sport hunting, tourism, mineral exploration, and transportation and shipping. The only interaction between the Project and non-traditional land and resource use is predicted for ecotourism activities potentially affected by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. More specifically, there is one operator, the Bathurst Inlet Lodge, known to sometimes use an area adjacent to the Marine Laydown Area within the land use LSA, as well as other areas within the RSA, during the summer season. There are several best practice management and mitigation measures in place which serve to reduce potential adverse effects of the Project, while maximizing the potentially beneficial outcomes as they relate to non-traditional land and resource. The management and mitigation measures can be found in both built-in Project design components, as well as specific additional measures that were developed based upon identified needs. Mitigation has been identified as it specifically applies to wildlife within the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), and mitigation for noise and air quality can be found in the Noise Abatement Plan (Volume 10, Chapter 18) and the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17). The residual effects are rated as **Not Significant.** A cumulative effects assessment was conducted including those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. Overall, the residual cumulative effects are rated as **Not Significant.** The residual cumulative effects of the Project on non-traditional land use do not extend beyond the boundaries of the Nunavut Settlement Area (NSA) and therefore, cannot result in transboundary effects.

Subsistence Economy and Land Use

The Inuit culture and way of life are intrinsically connected with the land. The Inuit people of the Kitikmeot have always depended on Inuit Qaujimajatuqangit, or knowledge of the land and environment. Subsistence land use such as hunting, fishing, trapping, and gathering, take place throughout the land use RSA. Subsistence economy and land use is potentially affected by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. There are several management and mitigation measures in place which serve to mitigate impacts to the subsistence economy, including mitigation by Project design, best practice management measures, and monitoring. Subsistence land use activities will also be facilitated through the provision of the worker rotation schedule, fly-in/fly-out Project operation, and support of land users and the development of land use knowledge. Mitigation has been identified as it specifically applies to wildlife within the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), and mitigation for noise and air quality can be found in the Noise Abatement Plan (Volume 10, Chapter 18) and the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17). Ongoing communication with local individuals and communities will be facilitated by regular public meetings and meeting with the Cambridge Bay and Kugluktuk Community Advisory Groups (CAGs). Feedback will be obtained from mine employees, local land users, the community HTOs and hamlets, as well as from the CAGs themselves in order to provide ongoing updates and make adjustments to management practices as needed. Overall, the negative residual effects on the VSEC subsistence economy and land use are rated as **Not Significant.** In addition, the benefits of the Project may serve to maintain traditional subsistence land use to a greater extent than would be possible without the economic growth and employment income associated with the Project. A cumulative effects assessment was conducted including those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. Overall, the residual cumulative effects are rated as **Not Significant.** Kitikmeot region land users did not report travel outside the NSA for the purpose of subsistence harvesting. As a result, the Project is not expected to result in transboundary effects on subsistence land users.

Country Foods

Country foods are animals, plants, and fungi used by humans for nutritional or medicinal purposes that are harvested through hunting, fishing, or gathering of vegetation (Health Canada 2010). There are a number of Contaminants of Potential Concern (COPCs) that may be present in the country foods LSA during the life of the Project. These potential contaminants were assessed and potential effects were characterized taking into consideration mitigation and management strategies. Metals occur naturally in the country foods LSA, sometimes at concentrations exceeding guideline limits (particularly in soil), due to natural physical and geological processes. Because the proposed Project is a metal mine and metal concentrations in the environment are most likely to change as a result of Project development, metals were selected for quantitative evaluation of their potential to affect the quality of country foods. Extensive mitigation and management measures will be in place to minimize or eliminate potential effects on environmental media (air, water, sediment, soil, and vegetation) and country foods themselves (fish and wildlife). These are detailed in Volume 4 (Atmospheric Environment), Volume 5 (Terrestrial Environment), Volume 6 (Freshwater Environment), Volume 7 (Marine Environment), and Volume 10 (Management Plans).

Based on the country foods baseline screening level assessment results, consumption of country foods from the country foods LSA were shown to not present any health risks from the selected COPCs to local human consumers under baseline conditions. Based on the qualitative and quantitative results of the effects assessment, the quality of country foods is not expected to change substantially from baseline conditions. Therefore, human health due to the consumption of country foods from within the country foods LSA is not expected to change in comparison to the baseline levels. No residual effects were identified and no health effects to human consumers of country foods are expected as a result of the Project activities or infrastructure during any phase of the Project. As there are no anticipated Project residual effects, there are no potential cumulative effects or transboundary effects.

Project-Related Effects Assessment Conclusions

Results from the Project-related effects assessment identified non-significant residual effects, but no significant residual effects. All identified residual effects were either of low magnitude, confined to a localized area, reversible, or short term once mitigation and management measures were considered. Offsetting was also considered as a possible mitigation measure for the assessment. Positive residual effects were identified for the VSECs economic development, business opportunities, employment, and education and training.

Hence, the overall effect of the Project on the atmospheric, terrestrial, freshwater, marine, and human environments is determined to be **Not Significant**.

Cumulative Effects Assessment Conclusions

Potential cumulative effects assessments were conducted for each VEC or VSEC that had an identified Project-related residual effect. There were no significant Project-related residual effects identified (see Chapter 6 of this Main Volume), but all non-significant Project-related residual effects were subjected to a potential cumulative effects assessment.

Results from the cumulative effects assessment identified non-significant residual cumulative effects, but no significant residual cumulative effects. All identified residual cumulative effects were either of low magnitude, confined to a localized area, reversible, or short term once mitigation and management measures were considered. Positive residual effects were not included in a potential cumulative effects assessment or transboundary analysis.

Hence, the overall effect of the Project to act cumulatively with other past, present or reasonably foreseeable future projects on the atmospheric, terrestrial, freshwater, marine, and human environments is determined to be **Not Significant**.

Transboundary Assessment Conclusions

One of the NIRB's 10 minimum EIS requirements is to include a transboundary impact analysis. The requirement states that "where relevant, an EIS must include an assessment of all significant adverse ecosystemic or socio-economic transboundary effects." There are no significant residual effects identified for the Project. However, all non-significant negative residual effects were subjected to a transboundary analysis. Positive residual effects were not included in a transboundary analysis.

The transboundary nature of residual effects was addressed as part of the cumulative effects assessments, and no significant residual cumulative effects are anticipated.

Hence, the Project is not expected to result in significant transboundary effects to the atmospheric, terrestrial, freshwater, marine, and human environments.

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ᐱᓕᕆᐊᕆᔾᐅᔪᖅ Back Riverᒥᒃ ᐊᑎᖃᖅᑐᖅ (ᐱᓕᕆᐊᕆᔾᐅᔪᖅ) ᒨᓗᓯᐅᕐᕕᒃᓴᐅᕗᖅ ᓇᒥᓂᕆᔾᐅᓪᓗᓂ Sabina Gold & Silver Corp.–ᑯᓐᓄᑦ (Sabina–ᑯᑦ) ᑕᐃᑲᓂ ᐅᐊᓕᓂᕐᒥ ᕿᑎᕐᒥᐅᓂ ᓄᓇᕗᒥ.

ᐱᓕᕆᐊᕆᔾᐅᓂᐊᖅᑐᖅ ᐱᖓᓲᓕᖓᕗᖅ ᑲᑎᖓᓪᓗᑎᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᐅᕐᑲᑦᑕᖅᑐᑦ: ᑖᒃᑯᐊ Goose Property, ᑖᓐᓇ George Property, ᐊᒻᒪ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐊᑐᖅᑕᐅᑦᐊᓕᒃ ᑲᓇᖕᓇᖓᑕ ᓯᒄᔾᖓᓂ ᓂᒋᐊᓂ ᕿᖓᐅᑉ. Sabina ᐊᕙᑎᒥᐅᑕᓂᒃ ᖃᐅᔨᓴᖅᓯᒪᓕᖅᐳᑦ ᓇᓗᓇᐃᖅᓯᓇᓱᐊᖅᑐᑎᒃ ᐊᑐᕈᓇᕋᔾᖅᑕᒥᖕᓂᒃ ᐊᕙᑎᒥᐅᑕᓄᑦ ᐃᓄᓕᕆᓂᕐᒧᓪᓗ ᐃᒃᐱᖕᓇᕐᓂᐅᓂᐊᖅᑐᒥᒃ ᑕᒪᓐᓇ ᐱᓕᕆᐊᕆᔾᐅᓂᖓᓂ ᑖᕙᓂ ᒪᓕᖕᓂᐊᖅᓗᓂ ᓄᓇᕗᑖᕈᑕᐅᓯᒪᔪᓂ ᐊᖏᕈᑎᓂ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᑲᑎᒪᔩᑦ ᒪᓕᒋᐊᕐᑲᕐᑯᔾᖏᓐᓂᒃ ᐸᕐᓇᒃᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᕙᑎᓂᑦ ᐋᒃᑐᖅᑕᐅᓂᕆᔾᐅᓂᐊᖅᑐᓄᑦ ᑕᐃᑲᓂ Back River–ᒥ ᐱᓕᕆᐊᕆᔾᐅᔪᒥ (NIRB File No. 12MN036; NIRB 2013).

Sabina–ᑯᑦ ᐅᔾᕋᕐᓂᐊᕐᕕᓕᐊᕐᓂᐊᕐᒪᑕ ᐅᓗᕆᐊᓇᖏᑦᑐᒥ, ᐊᕙᑎᒥᐅᑕᒧᑦ ᐊᑲᐅᑦᓯᐊᕐᓗᓂ, ᐃᑲᔪᕐᓂᖃᕐᓂᐊᕐᓗᓂᓗ ᑕᒪᐃᓐᓂᒃ. Sabina–ᑯᑦ ᐱᓕᕆᐊᖃᕐᓂᐊᖅᐳᑦ ᑲᒪᒋᔭᖃᑦᓯᐊᕐᓗᑎᒃ ᓴᐳᒻᒥᔭᖃᑦᓯᐊᕐᓗᑎᒡᓗ ᐋᓐᓂᐊᖅᑖᖅᑕᐃᓕᒪᑎᑎᓂᕐᒥᒃ ᓄᓇᓗ ᓴᐳᒻᒥᑦᓯᐊᕐᓗᒍ ᐱᕈᖅᐸᓪᓕᐊᕐᑯᓪᓗᒋᓪᓗ ᑮᓇᐅᔭᓕᐅᕈᑎᒃᓴᐃᑦ. ᐱᓕᕆᐊᖅ ᐱᓕᕆᐊᕆᔾᐅᓕᖅᐸᑦ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᐊᖅᐳᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓗᑎᒡᓗ, ᐊᒻᒪᓗ ᐱᔾᔨᕋᐅᑎᒃᓴᐃᑦ ᐱᑕᖃᕐᓂᖅᓴᐅᓕᕐᓗᑎᒡᓗ, ᐃᓄᖕᓄᑦ ᕿᑎᕐᒥᐅᓄᑦ ᓄᓇᕗᒥᐅᓄᓪᓗ ᑕᒪᐃᓐᓄᑦ. ᖃᓄᐃᓕᖓᓂᒃ ᓯᕗᓂᐊᓂ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᐳᖅ ᐊᒃᑐᐱᕆ 2013-ᒥ, ᓇᓗᓇᐃᔭᐃᓚᐅᖅᐳᓪᓗ ᑮᓇᐅᔭᓕᐅᕈᑎᒃᓴᓂᒃ ᑕᐃᑲᓂ ᐱᓕᕆᐊᕆᔾᐅᓂᐊᖅᑐᑦ Back River–ᒥ.

<u>ᐅᔾᕋᕐᓂᐊᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᖅ</u>

ᐅᔾᕋᕐᓂᐊᕐᕕᖕᒥᒃ ᐊᐅᓚᑦᓯᓂᕐᒥᒃ ᐸᕐᓇᒃᓯᒪᒍᑎᖃᖅᐳᑦ ᐊᕐᕌᒍᓄᑦ ᕐᑯᓕᓄᑦ ᐅᔾᕋᕐᓂᐊᕐᓂᐊᖅᓗᑎᒃ ᒫᓐᓇ ᖃᐅᔨᒪᔾᐅᔪᑦ ᒪᓕᒃᓗᒋᑦ, ᑲᑎᑦᑐᒋᑦ ᐅᔾᕋᕐᓂᐊᖅᑕᐅᔪᑦ 150 ᒥᓕᔾᓐ ᑕᓐᓴᓂᒃ ᐅᕐᑯᒪᐃᓐᓂᖃᕐᓂᐊᖅᓗᑎᒃ ᑖᕙᓂ ᓯᖃᓕᕕᐅᖃᑦᑕᕐᓂᐊᖅᑐᒥ Goose Property–ᒥ. ᖃᐅᔨᓴᒃᑲᓐᓂᕐᓗᑎᒃ ᐱᓕᕆᕝᓴᐅᒃᑲᓐᓂᕋᔾᖅᑐᓂᒃ ᕿᓂᓚᐅᕐᓗᑎᒃ ᐅᔾᕋᕐᓂᐊᕐᕕᒃ ᓴᖅᑮᔾᒃᑲᓐᓂᕈᓐᓇᖅᐳᑦ ᐊᑯᓂᐅᓂᖅᓴᖅ. ᑕᐃᒪᓐᓇ ᐊᑯᓂᐅᓂᖅᓴᖅ ᐅᔾᕋᕐᓂᐊᕐᓂᐊᖅᐸᑕ ᐊᕙᑎᒥᐅᑕᓂᒃ ᖃᐅᔨᓴᒃᑲᓂᕈᑎᖃᕋᔾᖅᐳᑦ.

ᓴᓇᔾᐅᓂᐊᖅᑐᖅ ᐃᓚᐅᑎᑎᔪᓐᓇᕐᓂᐊᖅᐳᖅ ᐅᑯᓂᖓ: Umwelt, Llama ᐊᒻᒪ Main ᑕᐃᑲᓂ Goose Property–ᒥ; Lone Cow Pond North (LCP North), Locale 1, ᐊᒻᒪ Locale 2 ᑕᐃᑲᓂ George Property–ᒥ. ᐊᕐᕋᒎᑕᒫᖅᓯᐅᑎᒥᒃ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᑎᑭᑎᑦᓯᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᐊᖅᑯᑎᓕᐅᖅᓯᒪᔪᖅ ᐅᒥᐊᕐᔪᐊᓄᑦ ᐊᑐᕐᓗᒍ, ᑕᐃᑲᓃᑦᑐᖅ ᕿᖓᐅᒥ, ᐅᑭᐅᒃᑯᓪᓗ ᐊᖅᑯᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᐊᕐᓗᓂ ᑕᐃᑯᖓᐅᓗᑎᒃ ᐅᐸᒃᑕᒥᖕᓄᑦ.

ᐅᔾᕋᕐᓂᐊᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᒪᑐᐃᖓᓖᖅᑐᒥᒃ ᓄᓇᒥᒃ ᐅᔾᕋᕐᓂᐊᕐᕕᖃᕐᓗᑎᒃ ᐊᒻᒪ ᓄᓇᐅᑉ ᐊᑖᓂ ᐅᓯᔾᐅᖃᑦᑕᕐᓗᓂ ᓯᖃᓕᕕᖑᒧᑦ ᑕᐃᑲᓃᑦᑐᒧᑦ Goose Propety-ᒥ ᓴᓗᒻᒪᖅᓴᐃᓗᑎᒃ ᖁᒡᕙᖅᓯᒪᔪᒃᑯᑦ ᐊᒡᒍᖅᑕᐅᖃᑦᑕᕐᓂᐊᕐᓗᑎᒃ ᐃᕿᖅᑐᕈᑎᒃᑯᑦ. ᑕᒪᐃᓐᓂᑦ ᐱᔾᐅᕙᓪᓕᐊᔪᑦ ᐃᕿᖅᑐᒐᒃᓴᐃᑦ ᑏᒃᑯᓇᖓᑦ Goose ᐊᒻᒪ George Properties ᐊᑕᐅᓯᕐᒥ ᑖᕙᓂ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᕐᑲᑦᑕᕐᓗᑎᒃ ᑕᒪᒃᑯᐊ ᐅᔾᕋᑦ ᑐᖅᑯᖅᑕᐅᕙᓪᓕᐊᓗᑎᒃ ᑕᐃᒃᑲᖅᐸᓪᓕᐊᔪᑦ ᑕᒪᐃᓐᓂᑦ ᐅᔾᕋᕐᓂᐊᕐᕕᐅᔪᓂᑦ. ᑕᒪᒃᑯᐊ ᐃᕿᖅᑐᕈᑎᕆᕙᓪᓕᐊᔾᖏᑦ ᐃᕿᖅᑐᕐᕕᖕᒥ ᐊᕙᓗᔾᐃᓯᒪᔪᒥ ᐃᓕᔾᐅᕙᓪᓕᐊᓗᑎᒃ ᓴᓗᒻᒪᖅᓴᐃᕕᐅᑉ ᓴᓂᐊᓂ.

ᓴᓇᔭᐅᓂᐊᖅᑐᖅ ᖃᓄᖅ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᐊᕐᓂᖏᑦ

ᑖᓐᓇ ᐱᓕᕆᐊᕆᔭᐅᔪᖅ Back River–ᒥ ᐊᕐᕌᒍᕐᑲᖅᐳᖅ 29-ᓂᒃ (ᐸᕐᓇᒃᑕᐅᕙᓪᓕᐊᓚᐅᕐᓂᖓᓂᑦ ᒪᑐᔭᒃᓴᐅᓂᐊᕐᓂᖓᓄᑦ ᑎᑭᓪᓗᒍ). ᑕᐃᒪᓐᓇ ᐸᕐᓇᒃᑕᐅᕙᓪᓕᐊᓂᕈᓐᓇᖅᓱᓂ 2014–ᒥ ᐊᕐᕌᒍᓄᑦ ᒪᕐᕉᖕᓄᒃ ᓴᓇᓕᕐᑐᑎᒃ ᐱᓕᕆᕝᕕᒃᓴᒥ (ᓇᑐᓇᐃᔭᖃᓯᒪᔪᖅ 1–ᒥ).

ᐊᐅᓚᑕᐅᓂᖓᑕ ᐱᕙᓪᓕᐊᓂᖓ ᑲᔪᓯᑎᑕᐅᓂᐊᖅᓱᓂ ᐊᕐᕌᒍᓄᑦ 8–ᓂᑦ ᖁᓕᓄᑦ ᐃᒪᖄ, ᖃᓄᑎᒥ ᐱᑕᖃᕐᖓ ᐊᑭᑐᔫᒃᓴᖅ ᒪᓕᒃᑐᒍ ᑕᐃᑲᓂ ᖃᐅᔨᒪᔭᐅᔪᑦ ᒫᓐᓇ. Sabina ᕿᓂᖏᓐᓇᕐᓂᐊᖅᐳᑦ ᐊᑭᑐᔫᒃᓴᓂᒃ ᑕᐃᑲᓂ ᓇᓂᓯᒃᑲᓐᓂᖅᐸᑕᑐ ᐅᔭᕋᖕᓂᐊᕐᕕᒃ ᐱᓕᕆᕝᕕᐅᒃᑲᓐᓂᓕᕐᑐᓂ ᐊᕐᕌᒍᑦ ᖁᓕᑦ ᐅᖓᑖᓄᑦ.

ᖃᐅᔨᒪᔾᔪᑦ ᒎᑐᑎ ᑕᐃᑲᓂ ᓄᖑᓐᓂᐊᕐᒪᑦ, ᑕᐃᒪᓐᓇᑐ ᐅᔭᕋᖕᓂᐊᕐᕕᒃ ᒪᑐᒋᐊᓕᕐᑐᓂ ᓄᓇᒥᒃ ᐋᖅᑭᒃᓱᐃᒃᑲᓐᓂᓕᕐᑐᑎᒃ. ᑕᐃᒪᓐᓇᐃᓕᐅᓕᖅᐸᑕ ᐊᕐᕌᒍᓄᑦ ᖁᓕᓄᑦ ᐱᓕᕆᐊᖅᑲᕐᓂᐊᖅᐳᑦ, ᑕᐃᒪᓐᓇ ᐊᑐᖅᑕᐅᖏᓕᕐᑎᕆᑐᑎᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥᒃ, ᐃᒡᓗᕐᔪᐊᓪᓗ ᓱᕋᒃᑎᖅᑕᐅᑐᑎᒃ, ᓄᓇ ᐅᑎᖅᑎᓐᓇᓱᐊᕐᑐᒍ ᑕᐃᒪᓐᓇ ᓇᓂᓚᐅᖅᑕᖓᑎᑐᑦ ᑕᐅᑦᑐᖃᕋᓱᐊᖅᑎᓪᓗᒍ ᐊᕙᑎᒥᐅᑕᒧᑦ ᓱᕋᒃᑎᕆᑦᑕᐃᓕᕐᑯᓪᓗᒍ. ᒪᑐᓯᒪᓕᖅᐸᑦ, ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᐳᖅ ᐊᑯᓂᑲᓪᓚᒃ ᑕᐃᑲᓂ ᓱᓇᕐᑲᕐᒪᖔᑦ ᐊᒻᒪᓗ ᖃᓄᖅ ᑕᐅᑦᑐᖓ ᐱᕙᓪᓕᐊᓂᕐᑲᓯᐊᕋᓗᐊᕐᒪᖔᑦ.

ᓇᑐᓇᐃᔭᖃᓯᒪᔪᖅ 1. ᓴᓇᔭᐅᕙᓪᓕᐊᓂᖓ

ᖃᓄᐃᓕᐅᕐᓂᖏᑦ	ᖃᓄᖅ ᐊᑯᓂᐅᑎᒋᔪᖅ	ᐊᕐᕌᒍᖅ (ᓇᓚᑦᓵᖃᓯᒪᔪᖅ)
ᓄᓇ ᐸᕐᓇᒃᑕᐅᓂᖓ ᓴᓇᕝᕕᐅᓂᐊᖅᑎᓪᓗᒍ	2 ᐊᕐᕌᒍᑦ	2014-2016
ᓴᓇᓂᖏᑦ	2 ᐊᕐᕌᒍᑦ	2016-2017
ᐊᐅᓚᓂᖏᑦ	10 ᐊᕐᕌᒍᑦ	2017-2026
ᓴᑐᒪᖅᓴᐃᓂᖏᑦ ᒪᑐᓯᓂᖏᓪᓗ	10 ᐊᕐᕌᒍᑦ	2027-2037
ᒪᑐᔭᐅᓯᒪᓕᖅᑎᓪᓗᒍ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ	5 ᐊᕐᕌᒍᑦ	2038-2043

ᐱᓕᕆᓂᖏᓐᓂ, Sabina ᐃᖅᑲᓇᐃᔭᖅᑎᑖᖅᑐᕐᓂᐊᖅᐳᑦ ᐊᐅᓚᑦᓯᔪᓐᓇᖅᑐᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥᒃ ᐊᐅᓪᓛᑦᓯᐊᖅᑎᑎᔪᓐᓇᖅᑐᓂᒃ ᐅᑐᕆᐊᓇᖏᑦᑐᒃᑯᑦ ᑲᒪᒋᔭᕐᑲᕈᓐᓇᖅᑐᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑕᐅᑦᓯᐊᕐᑐᑎᒃ.

ᐊᓯᐊᒍᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᖅ

ᐊᓯᖏᑦ ᐱᓕᕆᐊᑉ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓕᖅᐳᑦ ᒪᓕᒃᑐᑎᒃ ᐅᑯᓂᖓ: ᓴᓇᒪᓂᕐᒧᑦ ᐊᔪᕐᓇᕋᔭᖏᓐᓂᖓᓄᑦ; ᐊᑭᖏᑦ; ᐊᕙᑎᒥᐅᓄᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᕋᔭᕐᓂᖏᑦ; ᓴᑐᒪᖅᓴᖅᑕᐅᔭᐊᕈᓐᓇᕐᓂᖓ ᐱᐊᓂᒃᐸᑕ ᐅᔭᕋᖕᓂᐊᖅᑐᓕᕆᓂᕐᒥᒃ. ᐅᕐᑲᐅᓯᕆᔭᐅᓚᐅᖅᑐᑦ ᓄᓇᓕᖕᓂ ᑲᕙᒪᒃᑯᓪᓗ ᖃᐅᔨᒪᑎᒋᔭᐅᔪᓪᓗ ᑲᑎᒪᑎᔨᑎᓪᓗᒋᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᑦ ᖃᓯᐊᒍᑦ ᖃᐅᔨᓴᕈᑕᐅᔫᓴᐅᓂᐊᕐᑐᑎᒃ ᓯᕗᓂᐊᒍᑦ ᐱᓕᕝᕕᐅᓚᐅᖏᓐᓂᐊᓂ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ, ᐊᓯᐊᒍᓪᓗ ᒪᓕᒃᑕᐅᓂᐊᖅᑐᑦ ᑕᒪᒃᑯᐊ ᓄᓇᓕᖕᓂᒥᐅᑦ ᐊᖏᖅᓯᒪᓂᖏᑦ ᐱᒍᒪᓂᖅᓴᐅᓂᖏᑦ ᐊᓯᖏᓐᓂᒃ, ᐊᒻᒪᓗ ᐃᓅᓯᓕᕆᓂᕐᒧᑦ–ᐃᓄᓕᕆᓂᕐᒧᓪᓗ ᐊᒃᑐᖅᑕᐅᒍᑕᐅᔪᓐᓇᖅᑐᑦ ᒪᓕᒃᓱᒋᑦ.

ᒪᕐᕉᖕᓂᒃ ᐊᓯᐊᒍᑦ ᐱᓕᕆᐊᖑᔪᓐᓇᖅᑐᓂᒃ ᓇᑐᓇᐃᖅᓯᔾᔪᑦ. ᓯᕗᓪᓕᖅ ᖃᓪᓕᐅᑉᑐᓂ ᖃᓄᖅ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᐊᕐᓂᖓ ᖃᓄᐃᑦᑐᓂᒡᒍ ᐱᓕᕆᐊᖃᕐᓂᐊᕐᓂᖏᑦ, ᓵᕐᒍ ᐆᒃᑑᑎᒥᒍᑦ ᒪᑐᐃᖓᖅᑐᖅ ᐅᔭᕋᖕᓂᐊᕐᕕᒃ ᐅᕙᓘᓐᓃᑦ ᓄᓇᐅᑉ ᐊᑖᓂ ᐅᔭᕋᖕᓂᐊᕐᕕᖃᕐᓂᖅ ᓇᓪᓕᐊᒃ ᐊᑐᖅᑕᐅᓂᐊᕐᓂᖓᓄᑦ. ᑕᐃᒪᓐᓇ ᐃᓱᒪᓕᐅᖅᓯᒪᓕᖅᐸᑕ ᐊᖏᓂᖅᓴᓂᒃ, ᐊᓯᖏᑦ ᐊᓪᓕᐅᓂᖅᓴᐃᑦ ᐃᓱᒪᓕᐅᕆᑎᒋᔭᐅᓂᐊᕆᓪᓗᑎᒃ ᖃᓄᖅ ᐱᓕᕐᔪᐊᕐᓂᖅᓴᐅᓂᕐᒧᑦ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ. ᑕᒪᒃᑯᐊ ᖃᓄᖅ ᐊᑐᓂ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᓂᖏᑦ ᓂᕈᐊᖅᑕᐅᓂᖏᑦ ᐱᓕᕆᒍᑎᒃᓴᑦ ᖃᐅᔨᓴᕐᓂᐊᖅᓱᑎᒡᓗ ᖃᓄᖅ ᐱᓕᕆᒍᑎᖏᑦ ᐱᕙᓪᓕᐊᑎᑎᓂᖏᓐᓄᑦ ᐊᑲᐅᓂᖅᓴᒃᑯᑦ. ᑕᒪᒃᑯᐊ ᓴᓇᒪᓂᖅᑭᑎᑦ ᐱᕙᓪᓕᐊᑎᓪᓗᒋᑦ ᐋᖅᑭᐊᖅᑕᐅᖅᑲᑦᑕᕐᑐᑎᒃ ᖃᐅᔨᓴᖅᑕᐅᖅᑲᑦᑕᕐᑐᑎᒡᓗ ᐊᓯᐊᒍᑦ ᐋᖅᑭᐊᖅᑕᐅᖅᑲᑦᑕᕐᑐᑎᒃ ᑭᖑᓪᓕᖅᐹᒃᑯᑦ ᐱᓕᕆᐊᖑᔪᖅ ᐸᕐᓇᒃᑕᐅᓂᖓ.

<u>ᐱᕙᓪᓕᐊᒍᑎᑦ ᑮᓇᐅᔭᓕᐅᕈᑎᑦ ᐊᒻᒪᓗ ᐊᐅᓚᒍᑎᓪᓗ</u>

ᑕᒪᓐᓇ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᖅ ᐃᓄᓕᕆᓂᕐᒧᑦ ᑮᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᐃᑲᔪᕐᓂᖅᑲᕐᓂᐊᖅᐳᖅ. ᐅᔭᖅᓐᓂᐊᕐᕿᑉᐸᑕ, ᑕᒪᒃᑯᐊ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐱᕚᓪᓕᕈᑕᐅᓂᐊᖅᑐᓪᓗ ᓴᖅᑭᓐᓂᐊᓚᐅᕐᕿᒻᒪᑕ. ᑲᑎᓪᓗᕐᑦ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᓂᐊᖅᑐᑦ ᓇᓚᐅᑦᓵᕈᑕᐅᓯᒪᕗᑦ ᐅᕝᕙᓖᓄᑦ $600 ᒥᓕᔭᓐᓇᑖᓚᐃᑦ ᓴᓇᕙᓪᓕᐊᑐᐃᓐᓇᕐᓂᕐᓐᓂ ᓱᓕ. ᐱᓕᕆᐊᖑᓂᐊᖅᑐᖅ ᑖᒃᓯᔭᐃᔭᖅᑎᑕᐅᓂᐊᖅᐳᑦ ᐃᒻᒪᖃ $53 ᒥᓕᔭᓐᑖᓚᓂᒃ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᕐᓐᓄᕐᒐᐅᔪᓂᒃ ᐊᒻᒪ $44 ᒥᓕᔭᓐᑖᓚᐃᑦ ᓄᓇᓕᐅᑉ ᒐᕙᒪᒃᑯᕐᓐᓄᑦ ᓄᓇᕐᔪᐊᑉ ᒐᕙᒪᒃᑯᕐᓐᓄᓪᓗ ᑲᓇᑕᒥ ᓴᓇᓂᕐᓐᓂ. ᐱᓕᕆᐊᖅ ᐃᑲᔪᕐᓂᐊᖅᐳᖅ ᓄᓇᕗᒥᒃ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᑎᑎᓗᑎᒃ $97 ᒥᓕᔭᓐᑖᓚᓂᒃ ᓄᓇᕗᒧᑦ ᐊᕐᕌᒍᓂ ᒪᕐᕉᓐᓂ. ᓴᓇᓂᕐᓐᓂ ᐅᔭᖅᓐᓂᐊᕐᕕᖕᒥᒃ ᑲᑎᓪᓗᕐᑦ 6,250 ᐱᓕᕆᑎᑕᐅᓂᐊᖅᐳᑦ ᐱᓕᕆᑎᑎᓗᑎᒡᓗ ᑲᓇᑕᒥᐅᓂᒃ.

ᑲᑎᓪᓗᕐᑦ ᑲᓇᑕᒥ ᑮᓇᐅᔭᓕᐅᕈᑎᐅᕙᓪᓕᐊᔪᑦ ᐱᓕᕆᐊᓂᕐᒫᖅᑎᓪᓗᒍ ᓇᓚᐅᑦᓵᕈᑕᐅᓯᒪᕗᖅ $2,857 ᒥᓕᔭᓐᑕᓚᐃᑦ ᐊᑐᖅᑕᐅᒐᔭᕐᓂᕐᓐᓄᑦ ᐊᕐᕌᒍᓂ ᕐᑯᓕᓂ ᓴᓇᓂᕐᓐᓂ ᐅᔭᖅᓐᓂᐊᕐᓂᕐᓐᓂ. ᑲᑎᓪᓗᕐᑦ ᑖᒃᓯᔭᐃᔭᕈᑎᕐᓐᓄᑦ ᑮᓇᐅᔭᓕᐅᕈᑎᒋᔭᐅᓂᐊᖅᑐᑦ ᐊᐅᓚᓂᕐᓐᓂ ᓇᓚᐅᑦᓵᖅᑕᐅᓯᒪᓪᓗᓂ $519 ᒥᓕᔭᓐᑖᓚᐅᓂᐊᕐᓂᕐᓐᓄᑦ, ᐊᒻᒪ $263 ᑲᓇᑕᐅᑉ ᑲᓇᑕᑯᕐᓐᓄᕐᒐᓂᐊᖅᑐᑦ ᐊᒻᒪ $255 ᒥᓕᔭᓐᑖᓚᐃᑦ ᓄᓇᓕᕐᔪᐊᑦ ᓄᓇᓕᕐᓂᓗ ᐊᕕᒃᑐᖅᓯᒪᓂᐅᔪᓂ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᓂᐊᖅᓗᑎᒃ ᑖᒃᓰᔭᐃᔭᕈᑎᕐᓐᓂᑦ. ᐱᓕᕆᐊᖅ ᐃᑲᔪᕐᓂᐊᖅᐳᖅ ᓄᓇᕗᒥᐅᓂᒃ ᐊᒻᒪᓗ ᐃᑲᔪᕐᓂᖅᑲᕐᓗᓂ $532 ᒥᓕᔭᓐᑖᓚᑎᒍᑦ ᑮᓇᐅᔭᓕᐅᕈᑎᕐᓐᓄᑦ ᓄᓇᕗᒥᐅᑦ ᐊᐅᓚᓂᕐᓐᓂ ᓱᓕ ᐱᓕᕆᓂᕐᓐᓂ. ᐱᓕᕆᐊᖅ ᓂᕆᐅᒋᔭᐅᓪᓗᓂᓗ ᑲᑎᓪᓗᕐᑦ ᑕᒪᓐᓇ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᐊᕐᓂᕐᓐᓄᑦ ᑲᓇᑕᒥᐅᓂᒃ ᑕᒪᐃᓐᓂᒃ ᐃᒪᓐᓇᑎᒋ 28,000 ᑉᑯᑐᐃᓐᓇᐃᑦ ᐊᕐᕌᒍᒥ ᐊᕐᕌᒍᓄᑦ ᕐᑯᓕᓄᑦ ᐱᓕᕆᓂᕐᓐᓂ.

ᐅᕝᕙᓯᒃᑐᒥᐅᑕᐅᓂᕐᓐᓄᑦ ᖃᓂᑦᕐᖃᑦᑕᐅᑎᕐᓐᓂᕐᓐᓄᑦ, ᐅᕝᕙᓯᒃᑐᒧᓪᓗ ᐊᑐᖅᑕᐅᔫᒃᓴᓂᒃ ᐊᒡᔭᖅᑐᐃᐱᐊᕐᑲᕐᓂᕐᕐᓐᓄᑦ ᐃᒃᕿᕐᓇᖅᓗᓂᓗ ᐅᑭᐅᖅᑕᕐᖅᑐᒥ ᐊᒃᓱᕈᕐᓇᕐᓂᐊᖅᐳᖅ ᓴᓇᔭᐅᓂᐊᖅᑐᒥ ᖃᓪᓗᓈᑦ ᓄᓇᕐᒐᓐᓂ ᓴᓇᔭᐅᑲᐅᑎᒋᔪᓐᓇᖅᑐᑦ ᓴᓂᐊᒍᑦ. ᑕᒪᓐᓇ ᐱᔾᔪᑎᒋᓪᓗᒍ, ᓴᓇᔭᐅᓂᐊᖅᑐᒥ ᓂᕆᐅᒋᔭᕐᑲᕆᐊᕐᑲᕐᓂᐊᖅᐳᑦ ᒎᓗᑎᕐᑲᕐᔪᐊᕆᐊᕐᑲᕐᓂᕐᒐᓄᑦ ᐊᑭᑐᓂᐊᕐᓂᕐᓐᓄᓪᓗ ᒪᓕᒡᓗᕐᑦ ᒎᓗᑎᑦ ᐊᑭᕐᑦ ᐊᕐᕌᒎᓂᐊᖅᑐᒥ. ᒎᓗᑎᑦ ᐊᑭᑭᒡᓕᕙᓪᓕᐊᒃᐸᑕ ᐱᓕᕆᓘᓪᓗ ᑮᓇᐅᔭᓕᐅᒃᑲᓐᓂᖅᑎᑕᐅᕆᐊᖃᖅᐸᑕ ᐊᑭᑐᓂᖅᓴᓂᒃ, ᐱᕐᑯᑎᓪᓗ ᓱᓇᑐᐃᓐᓇᐃᑦ ᐊᑐᖅᑕᐅᕆᐊᖃᖅᑐᑦ ᐊᑲᐅᕐᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᐳᑦ Sabina–ᒥ ᐱᓕᕆᓂᕐᓐᓄᑦ ᐱᕙᓪᓕᐊᑎᑎᓂᕐᓐᓄᓪᓗ.

<u>ᐊᒡᔭᖅᑐᐃᕐᑲᑦᑕᕐᓂᖅ ᐅᓯᕐᑲᑦᑕᕐᓂᖅ</u>

ᑕᐃᒪ ᐅᐸᒃᑕᐅᕐᑲᑦᑕᕐᓂᐊᖅᐳᖅ ᐊᕐᕌᒍᒥ ᖃᕐᒪᑕᔩᒃᑯᑦ, ᐅᒥᐊᕐᔪᐊᓄᑦ ᑐᓚᒃᑕᕐᕕᕐᑲᕐᓗᓂᓗ ᒪᕐᕌᓕᕐᒐᔪᓂᒃ ᓯᑯᐃᔭᖅᓯᒪᔪᓂᒃ ᕿᕐᒐᐅᒥ, ᐊᒻᒪᓗ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᕐᑲᕐᓗᓂ ᐱᕐᒐᓱᓄᑦ ᐱᓕᕆᕕᖕᓄᑦ ᐃᖕᒋᕐᕋᔭᖅᑲᑦᑕᕐᓂᐊᖅᓗᑎᒃ. ᖃᕐᒐᑕᐃᓐᓇᖅ ᖃᕐᒐᑕᔩᕐᑲᕈᓐᓇᕐᓂᐊᖅᐳᑦ ᑕᐃᑲᓂ Goose ᐊᒻᒪ George ᐱᓕᕆᕕᖕᓂ ᐅᒥᐊᕐᔪᐊᕐᑲᕐᕕᒃ ᕿᕐᒐᐅᒥ ᐅᑭᐅᒃᑯᑦ ᓯᑯᒥ ᒥᑦᑕᕐᕕᕐᑲᕐᓗᓂ ᐊᒻᒪ ᐃᒪᒃᑯᑦ ᒥᕐᑲᑦᑕᕐᓗᑎᒃ ᐊᐅᔭᒃᑯᑦ ᖃᕐᒐᑕᔩᑦ. ᖃᕐᒐᑕᔩᒃᑯᑦ ᓵᑐᒃᑯᑦ ᐊᒡᔭᖅᑕᐅᕐᑲᑦᑕᕐᓂᐊᖅᐳᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑦ ᑕᐃᑯᕐᒐ Goose Property–ᒧᑦ. ᑕᐃᑲᓂ ᐃᖅᑲᓇᐃᔭᖅᑎᑦ George Property–ᒥ ᐊᒡᔭᖅᑕᐅᕐᑲᑦᑕᕐᓗᑎᒃ ᑕᐃᑯᕐᒐ Goose Property–ᒧᑦ ᖃᕐᒐᑕᔩᕐᑳᓛᒃᑯᑦ. ᒫᓐᓇ ᕐᑯᓕᒥᒎᓕᓪ ᐊᑐᖅᑕᐅᕐᓇᕐᓂᐊᖅᐳᑦ ᐊᑭᑐᔪᓂᒃ ᕿᓂᖅᑎᕐᒋᑦ ᑕᐃᑲᓂ ᐊᕙᑎᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᓐᓂᓗ ᓴᓇᓂᕐᓐᓂ ᐅᔭᖅᓐᓂᐊᕐᕕᒃᓴᒥᒃ ᐊᐅᓚᕐᑯᓂᕐᓐᓂᓗ.

ᓇᓚᐅᑦᓵᖅᓯᒪᕗᑦ 80% ᐊᐅᔭᒃᑯᑦ ᐱᕐᑯᑎᑖᕆᔭᐅᔪᑦ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐱᔭᐅᕐᑲᑦᑕᕐᒪᑕ Belledune, New Brunswick–ᒥᑦ, ᐊᒥᐊᒃᑯᕐᒋᑦ Hᐃᐊᕆᕗᒥᑦ, ᓄᓇᕐᓯᐊᒥᑦ. ᑕᒪᒃᑯᐊ ᑎᑭᓴᖅᑕᐅᔪᑦ Belledune–ᒥᑦ ᐅᒥᐊᕐᔪᐊᒃᑰᕐᑲᑦᑕᕐᓂᐊᖅᐳᑦ. ᐅᖅᓱᐊᓗᒃ ᐅᖅᑯᐊᓗᕐᑲᐅᑎᕐᑲᖅᑐᓂᒃ ᐅᒥᐊᕐᔪᐊᑦ ᐅᓯᕐᑲᑦᑕᕐᓂᐊᖅᓗᑎᒃ ᐳᑦᑕᔩᒃᑯᑦ ᓱᓪᓗᓕᒃᑯᑦ ᐃᒻᒥᖅᑐᖅᑕᐅᕐᑲᑦᑕᕐᓂᐊᕐᓗᑎᒃ ᐅᖅᓱᐊᓗᕐᑲᐅᑎᕐᑲᕕᓐᓄᑦ ᑕᐃᑲᓂ ᐅᒥᐊᕐᔪᐊᕐᑲᕕᖕᒐᓂ ᐱᔭᐅᕙᓪᓕᐊᓗᑎᒃ Hᐃᕆᕗᒥᑦ ᓯᑲᐅᒃᑰᕐᑲᑦᑕᕐᓂᐊᖅᓗᑎᒃ ᒪᑲᓐᓯ ᑰᖓᒍᑦ ᕿᕐᒐᐅᒧᑦ ᐅᐊᓕᓂᕐᒥᑦ. ᑕᒪᒃᑯᐊ ᑎᑭᑉᐸᓪᓕᐊᔪᑦ ᐊᐅᓪᓚᖅᐸᓪᓕᐊᔪᓪᓗ ᐱᕐᑯᑎᑦ ᐅᖅᓱᐊᓗᐃᓪᓗ ᐃᓂᕐᑲᖅᑎᑕᐅᓂᐊᖅᐳᑦ ᐅᒥᐊᕐᔪᐊᓕᕆᕕᖕᒐᓂ ᐅᓯᔭᐅᔮᓴᐅᓗᑎᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑯᑦ ᐅᑭᐅᖅᐸᑦ ᐅᒥᐊᕐᔪᐊᒥᒃ ᐅᑕᕿᓪᓗᑎᒃ ᐅᑎᕐᓂᐊᖅᑐᒥᒃ ᐅᓯᔭᐅᔮᓴᐅᓂᐊᕐᓗᑎᒃ.

ᒪᕐᕿᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃ ᓴᓇᔭᐅᓂᐊᖅᐳᑦ Back River–ᒥ ᓴᓇᔭᐅᔪᒥ. ᑖᓐᓇ ᐅᒥᐊᕐᔪᐊᕐᑲᕐᕕᒃ Goose--ᒥ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑯᑦ ᐅᖓᓯᖕᓂᕐᑲᖅᑎᒋᕗᖅ 160 ᑭᓛᒥᑕᓂᒃ. ᑕᐃᑲᓂ Goose-George ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᑦ ᑲᑎᕐᓯᕗᑦ George ᐊᒻᒪ Goose--ᐅᒥᐊᕐᔪᐊᕐᑲᕐᕕᖕᒥ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒧᑦ ᐅᖓᓯᖕᓂᕐᑲᖅᓗᓂ 20 ᑭᓛᒥᑕᓂᒃ. ᐊᒻᒪ ᐱᖓᔪᖓᓂ ᐅᖓᓯᖕᓂᕐᑲᖅᓗᓂ 220-ᑭᓛᒥᑕᓂᒃ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᐅᕙᒃᑐᖅ, ᐊᖅᑰᓴᖅᓗᓂ ᐱᓕᕆᐊᒧᑦ Tibbitt–ᒥᑦ Contwoyto–ᒧᑦ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᖓᓂ ᐃᓯᒪᒃᓴᖅᓯᐅᕈᑎᒋᔭᐅᓂᐊᖅᓗᓂ ᓴᓇᔭᐅᒐᔭᕐᓂᖓᓄᑦ. ᓄᓇᒃᑯᑦ ᐃᖏᕐᕋᕐᑲᑦᑕᖅᓗᑎᒃ ᐊᑐᓂ ᑖᒃᑯᓄᖓ ᕐᑲᖓᑐᐃᓐᓇᒃᑯᑦ ᐊᖅᑯᓯᐅᖅᑕᐅᓯᒪᔫᒃᑯᑦ. ᑖᒃᑯᐊ ᐊᖅᑯᑎᑦ ᐃᒃᑳᑦᑐᓪᓗᓂᒃ ᑰᒐᓛᕐᑲᖅᓗᑎᒃ ᐃᑎᓗᐊᖏᑦᑐᓂᒃ. ᐃᑳᕈᑎᓕᐅᕐᕕᐅᓂᐊᖅᓗᑎᒡᓗ ᐱᖓᓱᓂᒃ ᑕᓪᓕᒪᓂᒡᔫᓐᓃᑦ ᒥᑭᔪᓂᒃ, ᐃᓚᖏᑦ ᑰᒡᕕᕐᑲᕐᓗᑎᒃ ᐃᑳᕐᕕᓕᐅᖅᓯᒪᔪᓂ. ᑕᐃᒪᓐᓇ ᐅᖓᓯᒃᑎᑕᐅᓯᒪᕗᑦ ᐋᓐᓂᐊᖅᑖᖅᑕᐃᓕᒪᑎᑎᕐᑯᔿᓪᓗᑕ ᐅᓗᕆᐊᓇᖏᑦᑑᕐᑯᓪᓗᒋᓪᓗ ᐃᓄᐃᑦ, ᑖᒃᑯᐊᓗ ᐱᕐᑯᑎᑦ ᐃᒡᓗᕐᔪᐊᓪᓗ. ᐱᕐᑯᑎᑦ ᑲᒪᒋᔭᐅᓯᐊᖏᓐᓇᕐᓂᐊᖅᐳᑦ ᐅᓗᕆᐊᓇᖏᑦᑑᕐᑯᓪᓗᒋᑦ ᑕᒪᓐᓇᓗ ᑲᒪᒋᔭᐅᓯᐊᖏᓐᓇᕐᓗᓂ ᐃᑲᔪᖅᑕᐅᓗᓂ ᓯᓚᑖᓂᒥᐅᓄᑦ ᐊᑐᐃᓐᓇᐅᓕᕝᖓᑕ. ᑕᐃᒪᓐᓇ, ᑐᐊᕕᕐᓇᖅᑐᓕᕆᐅᑎᒃᓴᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᐅᑎᒃᓴᐃᓪᓗ ᐱᓕᕆᐊᕆᔭᐅᔪᓐᓇᕐᓂᐊᖅᐳᑦ ᐅᕙᑦᑎᓐᓄᑦ.

ᐱᕐᑯᑎᕐᔪᐊᓕᐅᕐᓂᖅ

ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᖓ Goose Property, George Property ᐊᒻᒪ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᖕᒥ ᓇᖕᒥᓂᖅᓯᕐᓂᐊᖅᐳᑦ ᐊᐅᓚᖠᓗᑎᒃ ᐱᕐᑯᑎᕐᔪᐊᓂ, ᓯᓂᒃᑖᕐᕕᖕᓂᒃ, ᑎᑎᕐᑲᓕᕆᕝᕕᖕᓂᒃ, ᐃᓂᒃᓴᓂᒡᓗ, ᑐᖅᑯᖅᑎᕆᓯᒪᓗᑎᒡᓗ ᐊᑐᖅᑕᐅᔪᒃᓴᓂᒃ, ᐅᖅᓯᐊᓗᒃᑰᖅᑐᓂᒃ ᐃᑯᒪᓕᒡᔪᐊᒃᑯᑦ ᐅᖅᑯᒃᑰᖅᑐᓂᒃ ᐊᐅᓚᐅᑎᕐᑲᕐᓂᐊᖅᓗᑎᒃ, ᓴᓇᕕᕐᑲᕐᓂᐊᖅᓗᑎᒡᓗ, ᓯᕐᓗᐊᕐᑲᕐᓂᐊᖅᓗᑎᒡᓗ, ᐃᒪᕐᑲᐅᑎᕐᑲᕐᓗᑎᒡᓗ ᐃᕿᖅᑐᕐᕕᕐᑲᕐᓂᐊᖅᓗᑎᒡᓗ.

ᑕᐃᑲᓂ Goose Property–ᒥ ᐊᑯᓐᓂᖅᔭᐅᕗᑦ ᐱᓕᕆᐊᓂᑦ ᑕᐃᑲᓂ ᐱᓕᕆᕝᕐᑲᖅᓗᓂ, ᐱᖓᓱᓂᒃ ᒪᑐᐃᖑᖅᑐᓂᒃ ᐅᔾᔨᖓᓂᐊᕐᕕᕐᑲᖅᓗᓂ, ᐊᑕᐅᓯᖅ ᓄᓇᐅᑉ ᐊᑖᓂ, ᐊᒻᒪ ᐃᓂᒋᔭᐅᔪᖅ 700-ᓄᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᓄᑦ ᓴᓐᓇᐅᑎᓪᓗᒍ ᐃᓂᒃᓴᕐᑲᕐᕕᐅᓗᑎᒃ ᓯᓂᒃᑖᕐᕕᖕᓂᒃ ᐊᒻᒪ 350-ᓂᒃ ᐊᐅᓚᖠᓂᖏᓐᓂ. ᐅᖅᓯᐊᓗᒃᑰᖅᑐᖅ ᐊᐅᓚᐅᑎᖅᑐᒥᒃ ᐅᖅᓯᐊᓗᕐᑲᐅᑎᕐᑲᕐᕕᕐᑲᕐᓂᐊᖅᓗᑎᒃ ᐅᑭᐅᑉ ᐅᖓᑖᓄᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᐅᕐᑲᑦᑕᕐᓂᐊᖅᓗᓂ ᐅᖅᓯᐊᓗᕐᑲᐅᑎᕐᑲᕕᖓ ᒪᓕᒡᓗᒍ ᓯᑕᒪᓂ 10 ᒥᓕᔪᓐ ᓵᑕᓄᑦ ᐃᓂᒋᔭᐅᓂᐊᕐᓗᓂ ᐊᒻᒪ ᐊᑕᐅᓯᖅ 5–ML ᖑᓂᕋᖅᑕᐅᔪᖅ ᐅᖅᓯᐊᓗᕐᑲᐅᑎᕐᑲᕕᒃ. ᐃᓂᒃᓴᕐᑲᑎᑕᐅᓂᐊᕆᓪᓗᑎᒃ ᐃᓂᒋᔭᐅᔪᓐᓇᖅᓗᓂ 20,000 ᑖᓐᓴᓂᒃ ᐅᕐᑯᒪᐃᓐᓂᕐᑲᖅᑐᓂᒃ ᕐᑳᑦᑕᖅᑐᓄᑦ.

ᑕᒡᕙᓂ ᐱᓕᕆᕕᐅᔪᖅ George Property 60 ᑭᓛᒥᑕᓂᒃ ᐅᖓᓯᖕᓂᕐᑲᖅᓗᓂ ᐅᐊᖕᓇᐊᖓᓂ Goose Property–ᐅᑉ ᐅᔾᔨᖓᓂᐊᕐᕕᕐᑲᕐᓂᐊᖅᓗᓂᓗ ᐱᖓᓱᓂᒃ ᒪᑐᐃᔭᔪᓂ. ᑭᓯᐊᓂᓗ, ᑕᐃᑲᓂ ᓴᓗᒻᒪᒃᓴᐃᕐᑲᑦᑕᕐᓂᐊᖏᐸᑦ ᓴᓗᒻᒪᒃᓴᖅᑕᐅᒋᐊᕐᑲᖅᑐᓪᓗ ᒥᑭᓂᖅᓴᐅᓪᓗᑎᒃ ᑕᐃᑲᓂ ᐱᕐᑯᑎᕐᔪᐊᕐᑲᖏᓐᓂᖅᓴᐅᕗᑦ. ᐃᓂᒋᔭᐅᔪᓐᓴᖅᓗᓂᓗ 300ᓄᑦ ᓴᓇᑎᓪᓗᒋᑦ ᐊᒻᒪ 150 ᐊᐅᓚᖠᑎᓪᓗᒋᑦ ᐅᔾᔨᖓᓂᐊᖅᑎᓪᓗᒋᑦ. ᐅᖅᓯᐊᓗᕐᑲᐅᑎᕐᑲᕐᓂᐊᖅᐳᑦ ᐱᖓᓱᓂᒃ ᐊᖏᓂᕐᑲᖅᑎᒋᔪᓂᒃ 5-ML ᐊᒻᒪ ᑕᒪᒃᑯᐊ ᐃᕿᖅᑐᕈᑎᑦ ᐊᖏᓂᕐᑲᖅᑐᑦ 100 ᑖᓐᓴᓂᒃ ᐱᑕᕐᑲᕐᓂᐊᖅᓗᑎᒃ ᐃᕿᖅᑐᕈᑎᑦ.

ᐅᒥᐊᕐᔪᐊᒃᑰᕐᕕᒃ ᕿᖓᐅᒥ 130 ᑭᓛᒥᑕᓂᒃ ᐅᖓᓯᖕᓂᕐᑲᖅᐳᖅ ᐅᐊᖕᓇᖅᐸᓯᖓᓂ Goose. ᐱᕐᑯᑎᕐᑲᕐᕕᐅᓂᐊᖅᓗᓂ, ᓱᓇᑐᐃᓐᓇᕐᓂᒡᓗ, ᐅᖅᓯᐊᓗᖕᓂᒡᓗ ᐱᕐᑯᑎᓂᒡᓗ ᓴᓇᒍᑎᒃᓴᓂᒃ ᐊᒻᒪᓗ ᐊᐅᓚᒍᑎᒃᓴᓂᒃ ᑕᐃᑲᓂ ᐅᔾᔨᖓᓂᐊᕐᕕᖕᒥ. ᐅᒥᐊᕐᔪᐊᕐᑲᕐᕕᒃ ᓂᐅᕋᐃᕕᕐᑲᕐᓂᐊᖅᐳᖅ ᓯᑲᐅᒥᒃ ᒪᕐᕿᒃ ᓯᑲᐅᒃ, ᑭᓴᕐᕕᒡᓗ ᐃᓕᔭᐅᓯᒪᓚᐅᐃᓪᓚᕐᑲᑦᑕᕐᓗᓂ ᓯᕐᓗᐊᕐᑲᕐᓗᓂᓗ ᓴᓇᒃᑯᕕᕐᑲᕐᓗᓂᓗ. ᐅᖅᓯᐊᓗᕐᑲᐅᑎᕐᑲᕐᕕᒃ ᐅᖅᓯᐊᓗᒃᑕᕐᑲᕐᓂᐊᖅᐳᖅ ᓯᑕᒪᓂᒃ ᐃᓂᕐᑲᕐᓗᓂ 5-ML ᐅᖅᓯᐊᓗᕐᑲᐅᑎᑦ. ᓯᕐᓗᐊᕐᑲᕐᓗᑎᒡᓗ 20,000 ᑖᓐᓴᓂᒃ ᐅᕐᑯᒪᐃᓐᓂᕐᑲᖅᑐᓂᒃ ᕐᑳᖅᑕᖅᑐᓂᒃ ᐃᓗᓕᕐᑲᕐᓂᐊᖅᓗᓂ. ᐃᓂᒋᔭᐅᔪᓐᓇᕐᓗᓂᓗ 100–ᓄᑦ ᐃᓄᖕᓄᑦ ᓴᓇᕕᐅᑎᓪᓗᒍ 50-ᓄᑦ ᐊᐅᓚᓕᖅᑎᓪᓗᒍ.

ᐅᔾᔨᕐᑲᑦ ᐃᒋᑦᑐᒃᓴᐃᑦ ᐃᕿᖅᑐᕈᑎᓂᒡᓗ ᑲᒪᒋᔾᔨᕐᑲᕐᓂᖅ

ᐃᕿᖅᑐᕈᑎᓂᖕᒌᖅᑐᑦ ᐅᐊᖕᓇᖅᐸᓯᖓᓂ ᓴᓗᒻᒪᒃᓴᐃᒍᑕᐅᑉ ᐃᓂᕐᑲᕐᓂᐊᖅᐳᖅ ᐅᔾᔨᖓᓂᐊᕐᕕᕐᑲᕐᓂᖓᓂ ᐃᕿᖅᑐᖅᑕᐅᕐᑲᑦᑕᕐᓂᐊᖅᓗᑎᒃ ᑕᐃᑲᓂ ᑲᑎᖅᓯᐃᓗᑎᒃ ᒪᕐᑯᖅᐸᓪᓕᐊᓂᐅᔪᕐᓗ ᐃᓂᒃᓴᐅᔪᖅ ᐃᒪᕐᒧᑦ ᐊᕙᓗᒥᐅᑕᕐᑲᕐᓂᐊᖅᐳᖅ ᐊᐅᒃᓴᕋᐃᑦᑐᒥᒃ ᐆᕐᑲᕐᓗᓂ ᑕᐃᒪᓐᓇ ᓱᕋᔾᔭᐃᒃᑯᑎᕐᑲᕐᓗᓂᓗ ᑕᒡᕙᓂ ᐃᓕᔭᐅᓯᒪᓗᓂ ᑕᒡᕙᓂ ᐃᓂᒋᔭᐅᒧᖅ Goose Property–ᒥ ᒪᕐᕿᖕᓂᒃ ᓯᕐᓗᐊᖅᑕᕐᑲᕐᓂᐊᖅᐳᖅ ᐊᑐᖅᑕᐅᖏᑦᑐᓄᑦ ᐅᔾᔨᕐᑲᓄᑦ ᐃᓂᒃᓴᐅᓂᐊᖅᑐᒥᒃ

ᐊᒻᒪᓗ ᑕᐃᑲᓂ George Property–ᒥ ᐱᖓᓱᓂᒃ ᐅᔭᖃᓂᒃ ᐊᑐᖅᑕᐅᖏᑦᑐᖃᕐᕕᐅᓂᐊᕐᓗᓂ ᐃᕐᖃᖅᑐᕐᕕᒃᓴᐅᓂᐊᖅᑐᓂᒃ.ᐅᔭᕋᕐᓂᐊᕐᕕᖃᖅᑎᓪᓗᒍ ᓱᓕ ᑲᑎᓪᓗᒋᑦ 133,000 ᑭᓘᑕᖕᓯ ᐃᕐᖃᖅᑐᕆᑎᑦ ᑕᐃᑲᓃᖃᑦᑕᕐᓂᐊᖅᐸᑦ ᐃᓚᐅᓗᓂ ᑕᑕᓐᓂᕆᔭᖓ. ᑖᒃᑯᖓᑦ Goose–ᒥ 60,000 ᑭᓘᑕᖕᓯᓂᒃ ᐃᕐᖃᖅᑐᕆᑎᖃᕐᓂᐊᖅᓗᑎᒃ ᐊᒻᒪ George ᐃᕐᖃᖅᑐᐃᖃᑦᑕᕐᓂᐊᖅᓗᓂ 7,000 ᑭᓘᑕᖕᓯᓂᒃ ᐊᒻᒪᓗ 8,000 ᑭᓘᑕᖕᓯᓂᒃ ᐃᕐᖃᖅᑐᕆᑎᖃᕐᓗᓂ ᐊᐅᓚᓂᖏᓐᓂ ᒪᑐᔭᐅᖃᑦᑕᕐᓂᐊᖅᓗᑎᒃ ᑖᒃᑯᓂ ᖁᐊᖑᐃᓐᓇᕐᓂᖓᓂ ᐃᓕᔭᐅᖃᑦᑕᕐᓗᑎᒃ.

ᐅᔭᖃᓂᒃ ᓱᖃᓕᕐᓯᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᐅᔭᕋᕐᓂᐊᕐᕕᖕᒥ

Sabina ᐱᓕᕆᕖᑦᔭᒥᖕᓂ Goose–ᒥ ᐃᑎᖅᓴᓕᐅᕐᓂᐊᖅᐸᑦ ᓯᐅᕋᖅᑕᕐᕕᑦᖃᑦᑕᕐᓂᐊᕐᓗᓂᑦ ᐊᖅᑯᓯᐅᕆᑎᒃᓴᐅᓂᐊᕐᓗᑎᒃ ᖃᖓᑐᐃᓐᓇᒃᑯᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᓂᒃ, ᐅᒥᐊᕐᔪᐊᖃᕐᕕᒃᓴᓕᐅᕆᑕᐅᓂᐊᕐᓗᑎᒡᓗ, ᒥᕖᖕᖏᓪᓗ ᐅᐃᒍᕆᐊᕆᑕᐅᓂᐊᖅᓗᑎᒃ ᓴᓇᕐᕆᑕᐅᓂᐊᖅᓗᑎᒡᓗ ᐋᖅᑭᒃᓱᐃᒍᑕᐃᓂᐊᖅᓗᑎᒡᓗ. ᒪᑐᐃᖖᒋᖅᑐᒥᒃ ᐅᔭᕋᕐᓂᐊᕐᕕᖃᖅᓗᑎᒃ ᐅᔭᖃᓂᒃ ᓱᖃᓯᕐᓯᖃᑦᑕᒃᑲᓐᓂᒃᓂᐊᖅᐸᑦ ᐊᑐᓚᒃᓴᒥᖕᓂᒃ. ᑕᐃᑲᓂ George–ᒥ ᐊᒻᒪᓗ ᐅᒥᐊᕐᔪᐊᓕᕆᕖᒃᓴᒥ, ᒥᑭᔪᓂᒃ ᐃᑎᖅᓴᓕᐅᕐᓂᐊᖅᐸᑦ ᐊᒻ/ᐅᖁᔾᔫᓐᓃᑦ ᐱᖁᑎᕐᔪᐊᓕᐅᕆᑎᒃᓴᐅᓂᐊᖅᑐᓂᒃ ᐅᔭᕋᕐᓂᒃ ᓱᖃᓯᕐᓯᖃᑦᑕᕐᓂᐊᖅᓗᑎᒃ. ᑕᐃᒪᓐᓇᓗ ᓱᖃᓕᓯᒪᔪᓂᒃ ᐊᒥᓚᖅᓯᓂᐊᖏᒻᒪᑕ ᐊᑐᕆᓐᓇᖅᑕᒥᖕᓂᒃ ᑭᓯᐊᓂ ᐊᑐᖃᑦᑕᕐᓂᐊᖅᐸᑦ ᓱᖃᓕᕐᓯᓗᐊᖏᑕᐃᓕᒪᓗᑎᒃ.

ᖃᓄᐃᑦᑑᓂᖓ ᐅᔭᕋᕐᓂᐊᖅᑕᐅᔪᖅ

ᒎᓗᑎᑦ ᐃᓚᒃᓴᖃᐅᖅᐸᖅ ᓴᕕᕋᔭᒃᓴᓂᒃ ᐃᔅᓴᕐᓂᑕᕕᓂᕐᓂᖕᒑᖅᓗᓂ ᐅᔭᕋᓂᒃ ᑲᓇᑕᒥ ᑕᐃᒪᓐᓇ ᐅᔭᕋᐃᑦ ᖃᓄᐃᑦᑑᓂᖏᑦ ᒪᓕᒃᓗᒋᑦ ᔫᓇᒥᐅᑕᐃᑦ. ᐱᑕᖃᓇᓪᓗᓂᓗ ᑕᓇᐅᕐᓚᖕᒥᒃ ᑎᐱᕐᓗᐊᖅᑐᒥᒃ ᑕᒪᓐᓇ 5%–ᖑᖑᓪᓗᓂ. ᐊᓯᖏᓐᓂᒃ ᐊᑭᑐᔫᒃᓴᓂᒃ ᐅᔭᕋᒃᑕᖃᖏᑦᓗᓂ ᑮᓇᐅᔭᓕᐅᕆᓐᓇᖅᑐᓂᒃ. ᒎᓗ ᒥᑭᔫᑕᐅᓪᓗᓂ ᒎᓗᑎᑐᖃᐅᓪᓗᓂ, ᐃᓛᓐᓂᒃᑯᑦ ᑭᓯᐊᓂ ᑕᑯᒃᓴᐅᖃᑦᑕᖅᓗᓂ ᖃᑯᑎᒃᑯᑦ ᑕᑯᓇᓱᐊᒐᖅᓗᒍ. ᐅᔭᕋᕐᓂᐊᖅᑕᐅᓂᐊᖅᑐᖅ ᑕᐃᑲᓂ Back River–ᒥ ᑲᑎᑦᓗᒍ 14,990 kt–ᖑᔫᖅ ᐊᒻᒪ 5.85 g/t–ᖑᓪᓗᓂ ᒎᓗᑎ ᐃᒪᓐᓇᑎᒋ ᐊᖏᑎᒋᒃᐸᑦ 2,464 Koz.

ᒪᑐᐃᖖᒋᖅᑐᓂ ᐅᔭᕋᕐᓂᐊᕐᕕᐸᓂ ᑖᒃᑯᓇᓂ (Goose: Umwelt, Llama ᐊᒻᒪ Goose Main; George: Locale 1, Locale 2 ᐊᒻᒪ LCP North) ᐱᔭᐅᒃᑲᓐᓂᕐᕕᐅᓂᐊᖅᐸᖅ ᐸᐊᕐᓇᑎᕐᔪᐊᓂᒃ ᐊᑐᕐᓗᑕ ᐅᔭᕋᕐᓂᐊᕆᑎᓂᒃ. ᑕᒪᕐᒥᒃ 6 ᑖᒃᑯᐊ ᐃᓂᖃᕐᕕᐅᔪᑦ ᒪᑐᐃᖖᒋᖅᓗᑎᒃ ᐅᔭᕋᕐᓂᐊᕐᕕᐅᕗᑦ ᐃᑎᔪᒻᒪᕆᐅᓪᓗᑎᒃ 200 m ᓄᓇᐅᑉ ᐊᑖᓄᑦ. ᑕᓐᓇᑐᐊᖅ Umwelt ᐃᓂᕆᔭᐅᔪᖅ ᐅᐃᒍᕆᐊᖅᑕᐅᕆᐊᖃᕐᓂᖕᒐᓄᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓕᖅᐸᖅ ᐱᓕᕆᕖᒃᑲᓐᓂᕈᓐᓇᕐᓂᖕᒐᓄᑦ ᐃᒪᓐᓇᐃᓕᐅᖅᑕᐅᓂᐊᖅᓗᓂᓗ 175 m–ᒥᑦ 650-ᒧᑦ ᐊᑖᓂ ᓄᓇᐅᑉ ᐱᓕᕆᐊᕆᔭᐅᓗᓂ ᓇᔪᒥᒍᑎᒃᓴᓕᐅᕐᓗᑎᒃ ᐊᒻᒪ ᓱᕋᒃᑕᐃᓕᒍᑎᖃᕐᓗᑎᒃ ᐃᓕᔭᐅᓂᐊᖅᓗᑎᒃ.

ᐅᔭᕋᕐᓂᐊᖅᑕᐅᔪᑦ ᑖᒃᑯᖓᑦ Goose–ᒥᑦ ᐃᓕᐅᖃᖅᑕᐅᓂᐊᖅᐸᑦ ᐅᖁᒪᐃᓐᓂᖃᖅᑎᕆᓗᑎᒃ 1 ᑕᖕᓯᒥᒃ ᐸᖅᑐᑎᕆᓗᑎᒃ ᐊᒻᒪ 3 ᒥᓕᔭᓐ ᑕᖕᓯᓂᒃ ᐃᓕᐅᖃᖅᑕᐅᓗᑎᒃ ᑕᐃᒪᓐᓇ. ᑖᒃᑯᖓᑦ George-ᒥᑦ ᐱᔭᐅᖁᓪᓕᐊᔪᑦ ᑐᖅᑯᖅᑕᐅᖃᑦᑕᐊᖅᓗᕐᓂᐊᖅᐸᑦ ᑕᐃᑯᖓ George–ᒥᖕᒌᖅᑐᓂᑦ. ᑖᓇ ᐊᐅᓛᖃᑦᑕᖅᑐᖅ ᓱᖃᓕᒧᑦ ᒥᑭᓪᒋᐊᖅᑎᑎᖃᑦᑕᕐᓂᐊᖅᐸᑦ ᓱᖃᓕᓗᓂᒥᑦ ᐊᖏᓂᖅᓴᐃᑦ ᐃᓕᐅᖃᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᓗᑎᒡᓗ (ᐊᖏᓂᖅᓴᐃᑦ 500,000 ᑕᖕᓯ) ᐊᒡᔭᖅᑕᐅᓚᐅᖏᓐᓂᖏᓐᓂ Goose Property-ᒧᑦ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᓯᐅᖅᑕᐅᓯᒪᔪᒃᑯᑦ.

ᕿᓂᖅᓯᒪᓪᓗᑕ ᓇᓗᓇᐃᖅᓯᓚᐅᖅᐸᒍᖅ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᖃᓄᐃᓕᐅᕆᑎᕆᓂᐊᖅᑕᑦᑎᓐᓂᒃ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᓂ Sabina ᖃᐅᔨᓴᐃᓐᓇᕐᓂᐊᖅᐸᑦ ᑕᒪᒃᑯᓂᖓ ᐅᔭᕋᕐᓂᐊᕐᕕᒃ ᓴᓇᔭᐅᑎᓪᓗᒍ ᐊᐅᓚᑎᓪᓗᒍᓗ ᐅᔭᕋᕐᓂᐊᒃᑲᓐᓂᕈᓐᓇᕆᐊᒃᓴᖅ. ᑕᐃᒪᓐᓇ ᐱᓕᕆᐊᕆᔭᐅᒃᑲᓐᓂᕈᓐᓇᕐᓂᐊᕐᓗᑎᒃ ᐱᖁᑎᕆᔭᐅᓗᑎᒃ ᓖᓐᓇ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ ᓴᓂᐊᒍᑦ ᑕᐃᑲᓂ Goose–ᒥ ᐊᑐᖅᑕᐅᕙᐊᕆᓐᓇᖁᓪᓗᒋᑦ ᐱᖁᑎᕐᔪᐊᓕᐅᖅᑕᐅᓯᒪᔪᑦ.

ᓱᖃᓕᔭᐅᔪᒃᓴᐅᓂᖏᑦ

ᐊᐅᓚᑦᓯᓂᖏᓐᓂ ᐅᔭᕋᕐᓂᐊᖅᑎᑦ, ᑕᒪᕐᒥᒃ ᕿᓂᕐᕕᐅᓂᐊᖅᑐᑦ ᐊᑭᑐᔪᓂᒃ ᓱᖃᓕᔭᐅᖃᑦᑕᕐᓂᐊᖅᐸᑦ ᑲᑕᒐᖅᑎᑕᐅᖁᓪᓕᐊᓗᑎᒃ ᐊᐅᒃᑕᔪᓂᒃ ᐅᔭᖃᓄᑦ ᐊᑐᕐᓗᑎᒃ ᑐᖁᓇᖅᑐᖃᖅᑐᒥᒃ. ᐋᔭᐅᔪᓐᓇᕐᓂᐊᖅᐸᑦ ᐅᖁᒪᐃᑎᕆᔪᓂᒃ

5,000 ᑕᓐᓴᓂᒃ ᐅᓪᓗᑕᒑᑦ. ᐱᖓᓱᓂ ᐃᓂᖏᔭᐅᔪᓂ ᑕᐃᒪᓐᓇ ᓯᖃᓕᕙᖃᖏᓐᓂᐊᖅᐳᑦ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᖃᖏᓗᑎᒃ: ᓯᖃᓕᕙᒃ; ᓯᖃᓕᔭᐅᕙᓪᓕᐊᔪᖃᖏᕙᖓ ᒥᑭᔪᓂᒃ ᐊᓯᖏᓪᓗ ᓴᓗᒻᒪᖅᓴᐅᑎᑦ ᐃᑉᐱᖅᑐᐃᕕᒃ, ᑕᐃᒃᑯᓂ ᐱᓕᕆᕝᕕᖓᓂ. ᓯᖃᓕᓂᖅ (ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐊᖅᑯᑎᖃᖏᓗᑎᒃ ᐱᖓᓲᓕᐊᖓᔪᓂᒃ), ᐊᖓᒨᒃᑐᖃᖅᑐᒧᑦ ᓯᖃᓕᔭᐅᓂᖏᑦ, ᑲᑕᖅᑎᑕᐅᕙᓪᓕᐊᒍᑎᒃᑯᑦ, ᑐᖁᓐᓇᖅᑐᒃᑯᑦ ᐊᐅᒃᑎᑕᐅᕙᓪᓕᐊᒍᑎᒃᑯᑦ ᒎᓗᑎᒥᒃ ᐱᕙᓪᓕᐊᓂᖅ. ᒎᓗᑎᑦ ᐃᑏᑕᕈᑎᖏᑦ ᓴᓇᔭᐅᖃᑦᑕᖏᓗᑎᒃ ᑕᐃᒃᑯᓂ ᐱᓕᕆᕝᕕᖕᒥ ᐃᒻᒪᖃ ᐃᒪᓐᓇᑎᒋ 300,000 ᐊᐅᓐᓯᓯ ᐊᖏᕿᒧᑦ. ᐊᐅᓪᓚᖅᑎᑕᐅᖃᑦᑕᖏᓗᑎᒃ ᐋᖅᑭᒃᓱᖅᑕᐅᔭᖅᑐᖏᓗᑎᒃ.

ᐊᕙᑎᒥᐅᑕᓕᕆᓂᖏᒃ ᐱᓕᕆᐊᖃᖏᓂᖅ ᑲᒪᒋᔭᖃᖏᓂᖅ

Sabina−ᒥ ᐊᕙᑎᒥᐅᑕᓂᒃ ᑲᒪᒋᔭᖃᖏᓂᖅ ᑖᕝᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᓂ ᐅᖃᐅᓯᕆᔭᐅᓯᒪᔪᖅ ᐃᓚᖓᓂ 10-ᖓᓂ, ᐅᓂᒃᑳᖅᓯᒪᕗᖅ ᖃᓄᐃᓕᐅᖏᓂᐊᖏᓂᖏᓐᓄᑦ ᐊᕙᑎᒥᐅᑕᓕᕆᓂᖏᑦ ᐃᓅᓯᓕᕆᓂᖏᑦ−ᑮᓇᐅᔭᓕᐅᖏᓂᖏᓪᓗ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᐊᑐᓕᖅᑕᐅᓂᐊᖅᓗᑎᒃ ᐅᔭᕋᖏᓂᐊᖏᓂᖏᓐᓂ ᓱᓕ. ᖃᓄᐃᓕᐅᕈᓯᕆᓂᐊᖅᑕᖏᑦ ᑲᒪᒋᔭᖃᖏᓂᖏᑦ ᑕᒪᑐᒥᖓ, ᐅᔾᔨᖅᑐᕐᓯᐊᕆᐊᖃᖏᓂᖏᓪᓗ ᐱᕙᓪᓕᐊᕐᓯᐊᖅᑎᑎᓂᖏᓪᓗ ᐱᔾᔪᑎᖃᖏᓂᐊᖅᐳᑦ. ᑕᐃᒪ, ᐊᐅᓚᕐᓯᓂᖏᑦ ᐸᖅᓇᒃᓯᒪᒍᑕᐅᔪᑦ ᐊᓯᖏᓐᓄᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᕗᑦ ᓱᓇᑐᐃᓐᓇᖏᓂᒃ ᑲᑉᐸᓂᐅᑉ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᖏᓐᓂᒃ ᐊᒻᒪ ᖃᓄᐃᓕᐅᖃᑦᑕᖏᓂᐊᖏᓂᖏᓐᓄᑦ ᐱᓕᕆᓂᖏᒥᖓ ᐅᔭᕋᖕᓂᐊᖏᕙᒃᑕᖃᖏᓂᖓᓗ ᐃᓗᐃᓪᓕᐅᕈᑎᖃᓗᐊᖅᑕᐃᓕᒪᑎᑎᓇᓯᐊᖅᓗᑎᒃ. ᖃᓄᐃᓕᐅᕈᑎᖃᕆᓪᓗᑎᒃ ᑕᒪᒃᑯᐊ ᐱᓕᕆᒍᓯᖏᑦ ᒪᓕᑦᓯᐊᕆᐊᖃᖏᒪᑕ ᒪᓕᒐᖏᓂᒃ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᓂᒃ, ᐊᒻᒪ ᖃᖓ ᐱᔭᐅᒋᐊᖃᖏᓂᖏᓐᓄᑦ ᐊᒻᒪᓗ ᒪᓕᒋᐊᖃᖏᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᒫᓂᒃ, ᐱᖁᔭᕿᓖᓂᓪᓗ ᐱᔨᓇᐅᑎᖏᓪᓗ ᒪᓕᕐᓯᐊᖁᓪᓗᒋᑦ. ᑕᒪᖏᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᐅᔭᕋᖕᓂᐊᖏᕙᐅᑉ ᑳᓐᑐᕌᖅᑎᖏᓪᓗ ᒪᓕᒋᐊᖃᖅᐳᑦ ᐊᐅᓚᑕᐅᓂᖓᓄᑦ ᐸᖅᓇᒃᓯᒪᒍᑕᐅᔪᓂᒃ. ᑕᒪᒃᑯᐊ ᑎᑎᖅᑕᐅᖃᑦᑕᕆᐊᖃᖅᑐᑦ ᒪᓕᒃᑕᐅᕙᓪᓕᐊᔪᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓂᖏᓐᓄᑦ, ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᖏᓂᖏᓐᓄᓪᓗ ᕿᒥᕐᕈᔭᐅᖃᑦᑕᖏᓂᐊᖅᐳᑦ ᐊᐅᓚᕐᔨᒋᔭᐅᔪᓄᑦ ᐋᖅᑭᒃᓱᖅᑕᐅᖃᑦᑕᖏᓗᑎᒡᓗ ᒪᓕᒡᓗᒋᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᕙᑎᓂᒃ ᐊᐅᓚᕐᓯᓂᖏᑦ ᐱᓕᕆᒍᓯᖅ. ᐊᕙᑎᒥᐅᑕᓂᒃ ᐊᐅᓚᕐᓯᒍᑎᖃᖏᓂᖅ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᐳᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᖏᓂᐊᖏᓗᓂᓗ ᓈᒻᒪᒃᓯᓕᖓᖓᑦ ᐃᓗᐃᓪᓕᐅᕈᑎᖃᖅᑕᐃᓕᒪᖏᑦᑐᒍ ᓄᓇᒥᐅᑕᐃᑦ ᐃᓅᓯᖓᓄᓄ ᑮᓇᐅᔭᓕᐅᕈᑎᖓᓄ ᐊᑕᐅᑦᓯᒃᑯᑦ.

ᐃᒪᖏᒥᒃ ᑲᒪᒋᔭᖃᖏᓂᖅ ᐊᐅᓚᑦᓯᓂᖅ

ᐃᒪᖏᒥᒃ ᐃᑉᐱᖅᑐᕈᑎᖃᖏᖃᑦᑕᖏᓂᐊᖅᐳᑦ ᑖᕝᕙᖓᑦ ᐃᒪᐃᔭᖏᕙᐅᕙᓪᓕᐊᔪᒥᒃ ᐱᖃᑦᑕᖏᓗᑎᒃ ᐃᑉᐱᖅᑐᖏᕙᖕᒥᑦ. ᑕᒪᓐᓇ ᐃᒪᖅ ᐃᑉᐱᖅᑐᖅᑕᐅᕙᖓᓂ ᐱᔭᐅᕙᓪᓕᐊᔪᖅ ᐱᔭᐅᖃᑦᑕᖏᓂᐊᖅᐳᖅ ᑯᕙᔭᐅᓗᓂ ᐆᓇᖅᑐᓕᐅᕈᑎᖃᖅᑐᒥᑦ ᓄᓇᐅᑉ ᖄᖓᓂ ᐃᓕᓯᒪᔪᒥᑦ ᐊᐅᒃᓴᕿᐃᑦᑐᒥᑦ ᓱᓪᓗᓕᖕᒥᑦ. ᐊᒻᒪ ᐃᒪᑭᑉᐸᑦ ᐊᑐᖅᑕᐅᔫᒃᓴᖅ ᐱᔭᐅᖃᑦᑕᕈᓂ ᐃᒪᖃᐅᑎᖃᖏᕙᖕᒥᑦ ᐃᒪᑭᒡᓕᒑᖓᑦ.

ᐊᒻᒪ, ᓴᓗᒪᔪᒥᒃ ᐃᒥᖅᑕᖏᑦᑕᖏᓂᐊᖅᐳᑦ ᐃᓄᖕᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᒥᒃ ᐊᒻᒪ ᐱᓕᕆᕝᕕᖕᒥ ᑕᐃᒃᑯᓂ ᐅᔭᕋᖕᓂᐊᖏᕙᖕᓄᑦ ᐱᓕᕆᕝᕕᖕᓂ Goose Property, George Property, ᐊᒻᒪ ᐅᒥᐊᖏᔪᐊᓕᕆᕝᕕᖕᒥ. ᑖᕝᕙᓂ Goose ᐊᒻᒪ George ᐱᓕᕆᕝᕕᖕᓂ ᓴᓗᒪᔪᒥᒃ ᐃᒥᖅᑕᖏᑦᑕᖏᓂᐊᖅᐳᑦ ᑖᒃᑯᓇᖓᑦ ᑕᓯᖏᓂᑦ ᐊᑎᖃᖅᑐᓂᑦ Goose ᐊᒻᒪ George Lakes−ᓂᑦ, ᑕᒪᐃᓐᓂᑦ. ᐃᒪᖏᒥᒃ ᐊᑐᒃᑳᓂᕈᓐᓇᒃᑳᓂᕈᓐᓇᖅᐳᑦ ᐃᒪᖅᑕᖏᓂᖓᓂᒃ ᑕᐃᒃᑯᓂ Propeller Lake−ᒥ ᑕᐃᒃᑯᓂ Goose Property ᐊᒻᒪ Fold Lake ᑕᐃᒃᑯᓂ ᐱᓕᕆᕝᕕᖓᓂ George Property. ᐃᒪᖏᒧᑦ ᓴᓗᒻᒪᖅᓴᐅᑎᑦ ᐃᒪᖅᑲᖅᑎᑎᒍᑕᐅᔪᓐᓇᖏᓂᐊᖅᐳᑦ ᓇᓂᑐᐃᓐᓇᖅ ᐱᓕᕆᕝᕕᖕᓂ. ᐊᒻᒪ, ᐃᓕᐅᖃᐃᓂᐊᕆᓪᓗᑎᓗ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᒃᓴᓂᒃ ᐃᒪᖏᒥᒃ ᑕᐃᒃᑯᓂ ᐅᒥᐊᖏᔪᐊᖏᕙᐅᓂᐊᖅᑐᒥ.

ᑕᐃᒃᑯᓂ ᓄᓇᖓ ᐱᖓᓱᓂ ᐃᓂᖏᔭᐅᔪᓂ ᒪᓂᕋᖅᐳᖅ ᑰᒑᓛᖅᑲᐅᖅᓗᓂᓗ ᓇᓂᑐᐃᓐᓇᖅ. ᑭᓯᐊᓂ, ᑕᒪᐃᑎᒎᑦ ᐃᒪᖃᐅᑎᖃᖏᕙᖃᖏᓐᓂᖏᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ ᑕᒪᓐᓇ ᐃᒪᖅ ᐊᒃᑐᖃᑦᑕᕐᖏᓪᓗᓂ ᐅᔭᕋᖕᓂᐊᖏᕙᖕᒥ ᐱᓕᕆᕝᕕᖕᒥ ᐱᖁᑎᖏᔪᐊᓂᓗ ᐃᖏᕿᖁᑎᑕᐅᖃᑦᑕᖏᓂᐊᖅᐳᖅ. ᑕᐃᒃᑯᓂ Goose Main−ᒥ ᓴᖑᑎᑎᕆᐊᖃᖏᓂᐊᖅᐳᑦ ᑰᒑᒥᒃ ᐊᒻᒪ ᑕᐃᒃᑯᓂ ᒥᕝᕙᒃ ᐅᐃᒍᕆᐊᖅᑕᐅᓂᐊᖏᓐᖓᓄᑦ ᑰᒑᖓ ᓴᖑᑎᑕᐅᕆᐊᖃᖏᓂᐊᕆᕗᖅ. ᑕᒪᖏᒃ ᕙᓛᒃ ᑰᖓᒪᑎᒃ ᐱᓕᕆᕝᕕᖓᑦ Goose Lake−ᒧᑦ ᑰᓗᐊᖏᒃᑲᓗᐊᖅᑰᓂ ᐃᒪᖃᓗᐊᖏᒃᑲᓗᐊᖅᑰᓂ ᐊᑲᐅᖏᑦᑐᕈᑕᐅᓂᐊᖏᑦᑰᓂᓗ, ᑭᓯᐊᓂ ᓇᐅᒃᑰᖏᓂᖓ ᑰᒑᑉ ᐊᓯᐊᓄᐊᖅᐸᓪᓕᐊᓂᐊᕋᓗᐊᖅᑰᓂ.

ᑕᐃᒪᓐᓇ ᐅᔭᕋᓐᓂᐊᕐᓂᐊᕐᓗᑕ, ᐃᓚᖓᒍᑦ ᑕᒪᐃᑎᒍᓪᓘᓐᓃᑦ ᐃᒪᐃᔭᐃᒋᐊᖃᖅᐳᒍᑦ ᑕᓯᕐᒥᒃ. ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᒥ Goose Property, ᐊᒻᒪ Llama Lake–ᒥ ᐃᒪᐃᔭᐃᒋᐊᖃᕐᓂᐊᖅᐳᒍᑦ ᑕᐃᑲᓂ ᐅᔭᕋᓐᓂᐊᕐᓂᐊᕐᓗᑕ Llama–ᒥᑦ. ᑕᐃᑲᓂᓕ George Property–ᒥ ᐃᒪᐅᔭᐃᓂᐊᖅᐳᑦ ᐊᕙᓗᓂᐊᕐᒪᑕ ᐃᒪᕐᓂᒃ ᐃᓚᖏᓐᓂᒃ ᒪᕐᕈᓐᓂ ᐃᒃᑲᑦᑐᓂ ᑕᓯᕐᓂᒃ, ᑕᐃᑲᓂ Lytle Lake ᐊᒻᒪ Occurrence Lake, ᑕᐃᒪᓐᓇ ᓴᓇᔭᐅᑎᐊᕐᑲᕐᓂᐊᕐᒪᑕ ᒪᑐᐃᖅᓯᒪᔾᔪᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥᒃ ᐱᓕᕆᐊᕐᑲᕿᓐᓇᕐᑯᓪᓗᑕ ᑕᐃᑲᓂ Locale 1 ᐊᒻᒪ Locale 2. ᐊᕙᓗᓕᐅᕐᓂᐊᖅᐳᑦ ᐃᒪᕐᓄᑦ ᓴᐳᒻᒥᔭᐅᒍᑎᒃᓴᓂᒃ ᑕᒪᓐᓇ ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᐃᒻᒥᖅᑐᖅᑕᐅᓕᕐᑯᓪᓗᒍ ᑖᒃᑯᓇᖓᑦ ᑕᓯᕐᓂᑦ. ᐸᕐᓇᒃᓯᒪᒍᑎᓕᐅᕐᓂᐊᖅᐳᑦ ᐃᒪᐃᔭᐃᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᐊᑐᓕᖅᑎᑎᓂᐊᕐᓗᑎᓪᓗ ᐱᕐᑯᔭᑎᒍᑦ ᐊᖏᖅᑕᐅᓚᐅᕐᓗᑎᒃ ᓴᓇᔭᐅᓚᐅᖏᓐᓂᖏᓐᓂ ᓴᐳᒻᒥᒍᑎᒃᓴᐃᑦ ᑕᐃᑲᓂ ᑕᓯᕐᓂ Lytle ᐊᒻᒪ Occurrence lakes–ᓂ.

ᑖᒃᑯᐊ ᑕᒪᕐᒥᒃ 6 ᐅᔭᕋᓐᓂᐊᕐᕕᑦ ᒪᑐᐃᖓᖅᑐᑦ ᐃᓂᖅᑲᕐᓂᐊᖅᐳᑦ ᖁᐊᖅᓯᒪᐃᓐᓇᖅᑐᒥ ᑕᐃᒪᓐᓇ ᐃᒪᐃᔭᐃᓗᐊᕐᓂᐊᖏᓚᑦ ᓄᓇᐅᑉ ᐊᑖᓂᑦ. ᑕᒪᒃᑯᐊ ᐊᐳᑎᒥᑦ ᐊᐅᒃᐸᓪᓕᐊᔪᑦ ᐊᐅᔭᒃᑯᓪᓗ ᒪᑯᓕᕌᖓᑦ ᓱᓪᓗᓕᒃᑯᑦ ᐃᒪᐃᔭᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᐊᕙᑎᑐᐃᓐᓇᕐᒧᐊᖅᑎᑕᐅᓚᐅᕐᖏᓐᓂᐊᓂ. ᑕᐃᒪᓐᓇ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥᑦ ᐃᒪᐃᔭᐃᖃᑦᑕᕐᓂᐊᖅᓱᑎᒃ ᐃᒪᕐᒧᑦ ᒥᓱᒃᓯᒪᔪᖅᑕᖃᕐᓗᓂ ᓱᓪᓗᓕᖕᒥᒃ ᐱᓕᕆᕝᕕᒥ, ᑕᒪᒃᑯᓂᖓ ᐊᒥᓯᓂᒃ ᒥᓗᑲᐅᑎᖃᕐᓗᓂ. ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᒥ Goose Property–ᒥ, ᐃᒪᖅ ᓴᙱᑎᑕᐅᓂᐊᖅᐳᖅ ᐃᕿᖅᑐᕐᕕᖕᒧᑦ ᐊᒻᒪᓗ ᑕᐃᑲᓂ George Property–ᒥ, ᐃᒪᖅ ᑲᒪᒋᔭᐅᓂᐊᖅᐳᖅ ᐃᒪᖅ ᐊᐅᓚᑕᐅᓂᖓᓄᑦ ᐅᓂᒃᑳᕆᑕᐅᖃᑦᑕᕐᓗᓂ.

<u>ᐃᒪᖅ ᓴᓗᒪᖏᑦᑐᖅ ᖃᓄᖅ ᑲᒪᒋᔭᐅᓂᐊᕐᓂᖓ</u>

ᓴᓗᒪᖏᑦᑐᑦ ᐊᒡᒍᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᑕᐃᑲᓂ ᐃᓂᖅᑲᕐᓗᑎᒃ ᐊᑐᓂ ᐃᓂᒋᔭᐅᕙᓂ. ᑕᐃᒪᓐᓇ ᐱᑕᖃᕐᖏᓐᓂᖅᓴᐅᓕᖅᑎᑎᓂᐊᕋᑦ, ᐊᑐᒃᑲᓐᓂᖅᑲᑦᑕᕐᓗᑕᓗ ᐱᔪᓐᓇᕐᓂᓴᖅᐳᑦ ᒪᓕᒡᓗᒋᑦ. ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᐅᕙᓂ Goose ᐊᒻᒪ George Properties ᐊᑐᖅᑲᑦᑕᕐᓂᐊᖅᐳᑦ ᓄᓇᒥᒃ ᐃᓕᐅᕐᑲᐃᓗᑎᒃ ᑕᑕᑎᓄᓗᑎᒃ ᐅᓗᓄᐊᓇᖅᑐᖅᑲᕐᑎᑦᑐᓂᒃ ᓴᐅᓯᖅᑲᑦᑕᕐᓗᑎᒃ. ᐊᓯᖏᑦ ᐱᖁᑎᑦ ᑕᐃᑯᖓ ᑐᖅᑯᖅᑎᑕᐅᔪᓐᓇᕐᓂᐊᓄᓪᓗᑎᒃ ᐊᐅᓪᓚᖅᑎᑕᐅᓚᐅᕐᖏᓐᓂᕐᖏᓐᓂ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐃᑯᐊᓪᓚᒃᑎᑕᐅᓂᐊᕐᓗᑎᒃ. ᑕᒪᕐᒥᒃ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᐃᑯᐊᓪᓚᒃᑎᑎᕐᑲᕐᕕᖅᑲᕐᓂᐊᖅᐳᑦ ᐅᓗᓄᐊᓇᕐᑦᑐᑦ ᐃᑯᐊᓪᓚᒃᑎᑕᐅᖅᑲᑦᑕᕐᓂᐊᕐᒪᑕ ᐊᒻᒪ ᐊᓯᐊᓂᒃ ᐅᓗᕿᐊᓇᖅᑐᓂᒃ ᑐᖅᑯᖅᑎᓄᕝᕐᑲᕐᓗᑎᒃ. ᑭᓈᓗᐃᑦ ᖁᕐᕕᖕᒥᑦ ᑯᕕᔭᐅᑎᐊᕐᑲᖅᑐᑦ ᐊᒻᒪ ᖁᕐᕕᖕᒥᖓᖅᑐᑦ ᐃᒪᖅ ᓴᓗᒪᖏᑦᑐᖅ ᑕᐃᑲᖓᑦ ᐱᓕᕆᕝᕕᖕᓂᑦ ᓴᓗᒪᒃᓴᐃᕝᕕᖑᐊᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᐳᖅ ᐃᒪᕐᒧᑦ (ᑲᐃᕙᒃᑐᖅ ᐃᒪᕐᒧᑦ ᓴᓗᒪᖅᓴᐃᒍᑦ). ᑕᒪᒃᑯᐊ ᖁᕐᕕᖕᓂᖓᖅᑐᑦ ᐃᒪᐃᑦ ᓴᓗᒪᖅᓴᖅᑕᐅᓯᒪᔪᖅ ᐃᑎᑕᐅᖃᑦᑕᕐᓂᐊᕐᓗᓂ ᐊᓯᐊᓄᑦ, ᐃᕿᖅᑐᕐᕕᖕᒧᑦ ᐃᑎᑕᐅᓗᓂᓗ, ᐅᕙᓘᓐᓃᑦ ᓴᓗᒪᖏᑦᑐᕐᑲᕐᕕᖕᒧᑦ ᐃᒪᕐᑲᐅᑎᕐᑲᕐᕕᖕᒧᑦ. ᑕᒪᓐᓇ ᑕᒪᐅᖓᑐᐃᓐᓈᖅᑐᖅ ᐃᓕᔭᐅᖅᑲᑦᑕᕐᓂᐊᕐᓗᓂ ᑕᒪᐅᖓᑐᐃᓐᓇᖅ ᖁᐊᖅᓯᒪᐃᓐᓇᖅᑐᒧᑦ ᓄᓇᒧᑦ.

<u>ᒪᑐᔭᐅᓂᖓ ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᓴᓗᒪᖅᓴᖅᑕᐅᓂᖓᓗ</u>

Sabina ᓄᓇᒥᒃ ᓴᓗᒪᖅᓴᐃᓂᐊᖅᐳᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᐱᓕᕆᑎᓪᓗᒋᑦ ᓱᓕ ᓴᓗᒪᖅᓴᐃᕙᓪᓕᐊᖏᓐᓇᕐᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐃᒡᓗᕐᔪᐊᑦ ᐊᑐᖅᑕᐅᖏᓕᖅᑐᑦ ᓱᕋᒃᑎᖅᑕᐅᓂᐊᖅᐳᑦ. ᑕᒪᒃᑯᐊ ᐃᕿᖅᑐᕆᑕᐅᓂᑯᑦ ᑐᑯᓐᓇᖅᑐᖅᑲᖅᑐᑦ ᐱᓕᕆᐊᕐᓇᔭᐅᓪᓚᓇᖓᓂᐊᖅᓱᑎᒃ ᒪᑐᔭᐅᕙᓪᓕᐊᓂᐊᓕᖅᐸᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᒃ. ᒪᑐᓯᒪᔪᓂᒃ ᐆᖅᑲᐃᓂᐊᖅᓱᑎᒃ ᐃᕿᖅᑐᕆᑕᐅᕙᓚᐅᖅᑐᓂᒃ (ᑕᒪᒃᑯᐊ ᐃᕿᖅᑐᕐᕕᕕᓂᖅ ᐃᓚᒃᓴᖃᖅᓱᓂ ᑐᖁᓇᑐᐃᓐᓇᓇᐊᖃᖅᑐᓂᒃ ᐆᓐᓇᖅᑐᓂᒡᓗ) ᑕᒪᒃᑯᐊᓗ ᐆᓐᓇᖅᑐᖅᑲᕐᑦᑐᑦ ᐅᔭᖃᑦ ᐊᓯᐊᓄᖓᐅᑎᑕᐅᓗᑎᒃ ᐊᒻᒪ ᐃᒻᒥᖅᑐᖅᑕᐅᓗᑎᒃ ᐅᔭᕋᓂᕝᕕᐅᓚᐅᖅᑐᑦ. ᐃᒪᕐᒥᒃ ᓴᓗᒪᖅᓴᐃᔾᔨᐊᕐᑯᓪᓗᑕ, ᑖᒃᑯᐊ ᒪᑐᐃᖍᖅᑐᑦ ᐅᔭᕋᓂᕝᕕᑦ ᑕᓯᕐᒥᑦ ᐃᒻᒥᖅᑐᖅᑕᐅᓂᖅᐳᑦ ᐃᓚᒃ ᐊᓯᖏᑦ ᑕᒪᐅᖓᑐᓈᕆᓐᓂᖅᓴᐅᕐᑯᓪᓗᒋᑦ ᐃᓗᓕᕆᑦ. ᐊᕐᕌᒍᓄᑦ ᕿᓕᓄᑦ ᐱᓕᕆᐊᓇᔭᐅᓂᐊᕐᓗᓂ ᐊᒻᒪ ᒪᑐᓯᒪᓕᖅᐸᑦ ᖃᐅᔮᓴᖅᑕᐅᕆᓐᓇᕐᓗᓂ ᐊᕐᕌᒍᓄᑦ ᑕᓪᓕᒪᓄᑦ.

- ᐱᓕᕆᐊᕆᔭᐅᓂᖓ 1 - ᓴᓗᒪᖅᓴᐃᓐᓇᕐᓗᓂ ᐊᕐᕌᒍᓄᑦ ᒪᕐᕉᖕᓄᑦ ᑕᒪᒃᑯᐊᓗ ᒪᑐᐃᖍᖅᑐᑦ ᐅᔭᕋᒃᓯᐅᕐᕕᐅᓚᐅᖅᑐᑦ ᐃᒻᒥᖅᑐᖅᑕᐅᕙᓪᓕᐊᖏᓐᓇᕐᓗᑎᒃ ᑕᓯᕐᒥᑦ.
- ᐱᓕᕆᐊᕆᔭᐅᓂᖓ 2 - ᐊᕐᕌᒍᓄᑦ 7–ᓄᑦ ᒪᑐᐃᖍᖅᑐᖅ ᐃᒻᒥᖅᑐᖅᑕᐅᖏᓐᓇᕐᓗᓂ ᓴᐅᔭᐅᖏᓐᓇᖅᐸᓪᓕᐊᓗᓂᓗ ᑕᐃᑲᓂ Goose ᐃᓂᒋᔭᐅᔪᖅ.

- ᐱᓕᕆᐊᕆᔭᐅᓂᖓ 3 – ᑭᖑᓪᓕᖅᐹᖅᓯᐅᑎᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᐃᓪᓕᑎᕆᓂᖅ ᐊᕐᕌᒍᐊᓂ ᖁᓕᖓᓂ.

ᐱᓕᕆᕝᕚᔪᐊᒥᒃ ᓴᓗᒻᒪᖅᓴᐃᓂᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᖅ ᒪᑐᔭᐅᕙᓪᓕᐊᓕᖅᑎᓪᓗᒍ ᐊᒥᐊᒃᑯᖏᑦ ᐱᖓᓱᑦ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᑦ. ᑐᖁᓈᖅᑐᖅᑳᖅᑐᑦ ᐅᓗᕆᐊᓇᖅᑐᖅᑳᖅᑐᑦ ᑲᑎᑕᐅᓂᐊᖅᐳᑦ ᑕᐃᖁᖓᐅᖏᑦᑐᖅ ᐃᓕᔭᐅᓂᐊᕐᒪᑕ ᑕᒪᒃᑯᐊᓗ ᓄᓇᓯᐅᑎᕙᓂᑦ ᐅᓗᕆᐊᓇᖅᑐᖅᑕᖅᑳᖅᑐᑦ ᐱᖁᑎᓪᓗ (ᓱᕐᓗ, ᐅᖅᓱᐊᓗᖅᑲᐅᑎᖅᑳᑦ, ᐊᐅᓚᔾᔪᑦ ᐱᖁᑎᑦ ᐅᖅᓱᖅᑎᕈᑎᕙᓂᑦ). ᐱᖁᑎᑦ ᓴᓇᖁᑎᑦ ᐲᔭᕝᕙᐅᓯᒪᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᖁᑎᖏᓐᓂᒃ ᒪᑐᐃᖕᒎᖅᑐᒍᑦ ᓴᐅᔭᐅᓂᐊᖅᐳᑦ ᐅᔭᖃᖃᕝᕙᕙᓂᕐᒍᑦ. ᐃᓗᕐᔪᐊᑦ ᓱᕋᒃᑎᖅᑕᐅᓗᑎᒃ ᓴᐅᔭᐅᓂᐊᖅᐳᑦ ᑖᕙᓂ. ᑕᒪᒃᑯᐊ ᑰᒍᑎᑦ ᑰᓚᒌᓄᑦ ᐃᓕᔭᐅᓚᐅᖅᑐᑦ ᐲᔭᖅᑕᐅᓂᐊᖅᐳᑦ ᐊᖅᑯᑎᓂᑦ ᑕᐃᒪᓐᓇᐃᓐᓂᕆᓚᐅᖅᑕᖓᓗ ᓄᓇᐅᒃ ᐋᖅᑭᒃᓱᖅᑕᐅᓗᓂ ᐊᖅᑯᑦ ᐱᑕᖅᑲᐃᓐᓇᕋᓗᐊᕐᓗᓂ. ᐱᖁᑎᑦ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᒥ ᑕᐃᒪᓐᓇᑦᑕᐅᖅ ᐲᔭᖅᑕᐅᓂᐊᖅᐳᑦ ᓴᓗᒻᒪᒃᓴᖅᑕᐅᓚᐅᕐᓗᑎᒃ. ᑕᒪᓐᓇ ᓄᓇ ᐅᔭᕋᓕᒃ ᐊᑐᖅᑕᐅᓚᐅᖅᓯᒪᔪᖅ ᐊᑐᖅᑕᐅᒃᑲᓐᓂᕐᓂᐊᖅᐳᖅ ᑕᐃᑲᓂ ᓴᐅᓯᒍᑕᐅᓗᓂ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᒥ.

<u>ᑭᒃᑯᑐᐃᓐᓇᐃᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ ᑲᑎᒪᖅᑲᑎᒋᔭᐅᓂᖏᑦ</u>

ᑭᒃᑯᑐᐃᓐᓇᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ ᑲᑎᒪᖅᑲᑎᒋᔭᐅᓂᐊᖅᐳᑦ ᑕᐃᒪᓐᓇ ᐅᓂᒃᖃᕝᕕᐅᖅᑲᑦᑕᕐᓗᑎᒃ ᐱᓕᕆᖅᑲᑎᒋᓗᒋᓪᓗ ᒪᓕᒐᑎᒍᑦ ᑕᒪᓐᓇ ᐱᔭᐅᕆᐊᖅᑲᖅᒪᑦ ᓄᓇᕗᒥ, ᐱᓕᕆᕝᒃ ᐃᓕᖁᓯᖅᑲᔪᐊᕆᐊᖅᑲᖅᒪᑦ ᑕᐃᒪᓐᓇ ᐱᒻᒪᕆᐅᓪᓗᓂᓗ ᑕᐃᒪᓐᓇᐃᒋᐊᖅᑲᖅᓂᖏᑦ. ᒪᑐᐃᖕᒑᔪᐊᕆᐊᖅᑲᖅᓂᐊᖅᐳᑦ, ᐅᐱᒋᔭᖅᑲᖅᑐᑎᒡᓗ, ᐊᒻᒪ ᐱᓕᕆᖅᑎᒋᒡᓗᑎᒃ ᓄᓇᓕᖕᓂᒥᐅᓪᓗ ᐃᓚᒋᔭᐅᔪᓪᓗ ᐱᓕᕆᐊᓄᑦ, ᑕᐃᒪᓐᓇᐃᓕᖓᐃᓐᓇᕐᓂᐊᖅᓱᑎᒡᓗ ᓯᕗᓪᓕᖅᐸᐅᑎᑕᐅᓗᓂ Sabina–ᑯᓐᓄᑦ. Sabina–ᑯᑦ ᐃᓕᑕᖅᓯᓯᒪᕗᓪᓗ ᐊᔾᔨᐅᖏᓐᓂᖏᓐᓄᑦ ᐃᓄᐃᑦ ᐃᓅᓯᑐᖅᑲᖏᑦ ᐃᓚᐅᑎᑎᓂᐊᖅᓱᑎᒡᓗ ᐃᓄᖕᓂᒃᒃ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐃᓕᖁᓯᖏᑦ ᐅᐱᒋᔭᐊᕐᓗᒋᑦ. ᑲᐸᓂᒃᑯᑦ ᐅᖃᓪᓚᖅᑎᖃᐃᓐᓇᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᓄᓇᓕᖕᓂᒃ ᖃᓄᑐᐃᓐᓇᖅ ᐃᓗᐊᕐᓂᖅᓴᒃᑯᑦ ᐱᓕᕆᔪᓐᓇᕐᓂᖏᓐᓄᑦ ᐅᖃᐅᑎᔭᐅᒃᐸᑕ ᓈᓚᖕᓂᐊᖅᐳᑦ ᑐᓴᐅᒪᑎᑦᑕᕐᓂᕐᒥᒃ ᐱᓕᕆᖅᑎᖅᑲᕐᓂᕐᒥᒡᓗ ᐱᕙᓪᓕᐊᑎᓯᔪᐊᕐᑯᓪᓗᒋᑦ.

Sabina–ᑯᑦᑭᒃᑯᑐᐃᓐᓇᕐᓂᒃ ᐃᓄᖕᓂᒃ ᑲᑎᒪᑎᑎᖅᑲᑦᑕᕐᓂᖅ ᐱᔾᔪᑎᖅᑲᖅᐳᖅ ᐊᔾᔨᒋᖕᒋᑦᑐᓂᒃ. ᐃᓕᕐᑯᓯᑐᖅᑲᖏᓐᓂᒃ ᐃᓄᐃᑦ ᐃᒃᐱᒍᓯᑦᓯᐊᕆᐊᖅᑲᕐᓂᕐᒧᑦ ᐃᓚᐅᑎᑎᒋᐊᖅᑲᕐᓂᕐᒧᓪᓗ, ᐊᔾᔨᒌᖏᑦᑐᓂᒡᓗ ᓄᓇᓕᖕᓂ ᐊᑐᖅᑕᐅᕐᑯᔭᐅᔪᓂᒃ ᓴᓇᕐᑯᑎᓂᒡᓗ ᐊᑐᕐᑯᔭᐅᔪᓂᒃ ᓄᓇᓕᖕᓂᒥᐅᓄᑦ ᒪᓕᒡᓗᑎᒃ. ᑭᒃᑯᑐᐃᓐᓇᕐᓂ ᑲᑎᒪᑎᑎᖅᑲᑦᑕᕐᓗᓂ, ᐃᓚᒋᔭᐅᖅᑲᑕᐅᔪᓂᒡᓗ ᐊᒻᒪᓗ ᐊᓯᖏᓐᓂᒃ ᑎᒥᐅᔪᓂᒃ (ᓱᕐᓗ, Hᐊᒻᓚᒃᑯᑦ, ᐊᖑᓇᓯᐊᖅᑐᓕᕆᔨᒃᑯᑦ ᒥᑭᒋᐊᕐᓂᐊᖅᑎᓪᓗ ᑲᑎᒪᔩᖏᑦ, ᒪᒃᑯᒃᑐᑦ), ᓄᓇᓕᖕᓂᒥᐅᓂᒡᓗ ᖃᐅᔨᒪᑎᒋᔭᐅᔪᓂᒃ ᐃᖅᑲᓗᒃᑑᑦᑎᐊᒥ, ᖁᕐᓗᖅᑑᒥ, ᐱᓕᕆᐊᖅᑲᖅᑐᑦ ᐳᓚᕋᕝᕙᐅᖅᑲᑦᑕᕐᓂᐊᖅᐳᑦ, ᐱᕙᓪᓕᐊᔪᑎᒍᑦ ᑕᑯᒃᓴᐅᑎᑎᖅᑲᑦᑕᕐᓗᑎᒡᓗ (ᓱᕐᓗ ᖃᓇᑕᐅᔭᒃᑯᑦ ᐊᒻᒪᓗ ᑐᕝᕚᒃᑯᑦ/ᑎᑎᖅᑲᐅᓯᐊᒃᑯᑦ ᖃᓇᑕᐅᔭᒃᑯᑦ/ᐊᓯᖏᑦᑎᒍᓪᓗ), ᐱᓕᕆᐊᕆᔭᐅᔪᖅ ᐱᓪᓗᒍ ᑐᓴᒃᓴᖅᑲᖅᑎᑎᖅᑲᑦᑕᕐᓗᑎᒃ ᐊᓯᖏᓐᓂᒡᓗ ᑐᓴᒃᓴᐅᑎᓂᒃ ᐱᔪᑎᒋᓪᓗᒋᑦ ᐃᖅᑲᓗᒃᑑᑦᑎᐊᒥ ᑎᑎᕋᕝᕕᖅᑲᕐᓗᑎᒃ, ᑕᐃᑲᓂᒥᐅᓂᒃ ᐱᓕᕆᑎᑎᓗᑎᒃ ᑳᑐᖅᒌᒃᑎᖅᑲᕐᓗᑎᒡᓗ ᐃᖅᑲᓗᒃᑑᑦᓯᐊᒥ ᓄᓇᖅᑲᖅᑐᓂᒃ ᑐᓴᐅᒪᑎᑎᔩᖅᑲᕐᓗᑎᒃ ᓄᓇᓕᖕᒥ, ᖃᐅᔨᒪᑎᒋᔭᐅᓂᐊᕐᓗᓂᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖅᑲᖏᑦᑎᒍᑦ ᖃᐅᔨᓴᕐᓂᖅ ᐱᓕᕆᖅᑎᖅᑲᕐᓗᓂ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑲᑎᒌᒃᑯᖏᓐᓂᒃ, ᐱᓕᕆᖅᑎᖅᑲᕐᓗᑎᒃ ᐃᓄᓕᕆᓂᕐᒧᑦ–ᑮᓇᐅᔭᓕᕆᓂᕐᒧᑦ/ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓗᓂ, ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᐋᔩᖅᑲᑎᒌᖕᓂᖅ ᐃᓄᐃᑦ ᐃᑲᔪᖅᑕᐅᒍᑎᒃᓴᖏᓐᓄᑦ ᓴᓂᓕᒥᐅᑕᐃᑦ ᐱᓕᕝᕕᐅᔪᓂ ᐱᓕᕆᖅᑎᖅᑲᕐᓗᑎᒃ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑲᑎᒌᒃᑯᖏᓐᓂᒃ ᕿᑎᕐᒥᐅᓂ ᓄᓇᓕᖕᓂᓗ ᐃᒪᓐᓇ (ᓱᕐᓗ ᓈᓚᐅᑎᒃᑯᑦ, ᑕᑯᒃᓴᐅᑎᑎᒍᑎᒃᑯᑦ ᐃᓚᐅᑎᑎᓗᓂ, ᐃᓕᖁᓯᑐᖅᑲᓇᔭᐅᔪᓂ ᐃᓕᓐᓂᐊᖅᑎᑎᔪᖅᑲᕐᓗᓂ ᓄᓇᓕᖕᓂᓗ ᑐᓴᒃᓴᖅᑲᖅᑎᑎᕙᓪᓗᑎᒃ) ᓄᓇᓕᖕᓂᓗ ᑮᓇᐅᔭᑎᒍᑦ ᐃᑲᔪᕈᑎᖅᑲᖅᑲᑦᑕᕐᓗᑎᒃ ᑎᒥᐅᔪᓄᑦ.

Sabina ᑭᒃᑯᑐᐃᓐᓇᕐᓂᒃ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᑲᑎᒪᖅᑎᖅᑲᑦᑕᕆᐊᓕᓚᐅᖅᐳᑦ ᔫᓐ 2012–ᒥ. ᑕᐃᒪᖓᓂᑦ, ᐊᒥᓱᐊᖅᑎᖅᑯᑎᒃ ᑲᑎᒪᖅᑎᑳᖅᑲᑦᑕᖅᓯᒪᓕᖅᐳᑦ ᑲᑎᑐᐃᓐᓇᖅᑲᑦᑕᖅᑯᑎᒡᓗ ᑖᒃᑯᐊ ᐱᓕᕆᔨᐅᔪᑦ ᓄᓇᓕᖕᓂᒥᐅᓪᓗ. ᑲᑎᒪᔪᑕᐅᕙᓪᓕᐊᔪᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᖅᑲᑦᑕᓚᐅᖅᐳᑦ ᑲᑎᒪᖅᑎᒋᔭᐅᓪᓗᑎᒃ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ Sabina–ᑯᑦ ᖃᓄᐃᓕᐅᕈᑎᖅᑲᐅᑎᑎᓪᓗᒋᓪᓗ, ᐃᓚᒋᔭᐅᓕᖅᓯᒪᓪᓗᑎᒡᓗ ᑐᑭᓯᒋᐊᕈᑎᒃᓴᖏᓐᓄᑦ ᐃᓗᓕᖅᑲᖅᑯᑎᒃ ᑕᒪᕐᒥᒃ 150-ᓂᒃ ᐊᔾᔨᒋᖕᒋᑦᑐᓂᒃ ᐱᓕᕆᐊᖅᑲᕐᓂᕐᒧᑦ. ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᑎᒡᓗ ᑎᑎᕋᖅᓯᒪᔪᑦ ᓇᓗᓇᐃᖅᓯᒍᒪᓪᓗᑎᒃ ᐱᔪᑎᒋᔭᐅᔪᓂᒃ ᐃᓱᒫᓗᒍᑕᐅᔪᓂᒡᓗ ᓄᓇᓕᖕᓂᒥᐅᓄᑦ ᐃᓚᒋᔭᐅᔪᓄᓪᓗ. ᐱᖓᓲᓕᖓᓪᓗᑎᒃ ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᕗᑦ ᐃᒪᓐᓇ:

ᓄᓇᓕᖕᓄᑦ ᐃᑲᔪᖅᑕᐅᒍᑎᒃᓴᐃᑦ ᑲᑎᒪᕐᑲᑎᕐᑲᕐᑕᕐᓂᕐᓗ, ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖅ ᐊᒻᒪ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᓂᖅ ᐊᕝᑎᒥᐅᑕᐃᑦ ᐊᐅᓚᑕᐅᓯᐊᕐᓂᖏᑦ ᐊᒻᒪ ᖃᐅᔨᓴᖅᑕᐅᓯᐊᕐᑲᕐᑕᕐᓂᖏᑦ.

Sabina ᐱᓕᕆᕐᑲᑎᕐᑲᖅᓯᒪᕗᑦ ᐱᓕᕆᕐᑲᑎᕐᑲᐃᓐᓇᕐᓂᐊᖅᐸᓪᓗ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᕐᑲᑎᒌᒃᑯᖏᓐᓂᒃ, ᑖᒃᑯᐊ ᐃᓄᐃᑦ ᑲᑐᔾᔨᕐᑲᑎᒌᒃᑯᖏᑦ ᐱᔪᓐᓇᕐᓂᕐᑲᕐᒪᑕ ᐱᓕᕆᐊᒃᓴᕐᑲᖅᑯᑎᒡᓗ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᓂᐊᖅᑐᒥᒃ. ᕿᑎᕐᒥᐅᑦ ᓄᓇᓕᖏᑦ ᑲᑎᒪᕐᑲᑎᒋᔭᐅᕐᑲᕐᑕᖅᐳᑦ ᑖᒃᑯᓇᖓ ᐅᔭᕋᖕᓂᐊᖅᑎᓄᑦ ᖃᓄᐃᓕᐅᕐᑲᑎᒋᔭᐅᕙᒃᑲᑎᒡᓗ. ᑖᒃᑯᐊ ᓄᓇᓖᑦ ᐊᒡᒍᖅᑐᖅᑕᐅᓯᒪᕗᑦ ᐊᔾᔨᒌᖏᑦᑐᒃᑯᑦ ᐱᓕᕆᕐᑲᑎᒋᔭᐅᓪᓗᑎᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᑕᐅᓪᓗᑎᒡᓗ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥ ᐊᑐᓂ. ᑕᐃᒪᓐᓇ ᐊᒡᒍᖅᑐᐃᒋᐊᓚᐅᖅᐳᑦ ᖃᓄᑎᒋ ᖃᓂᑎᒋᓂᖅᑭᓐᓄᑦ ᐱᓕᕆᕕᐅᔪᒧᑦ, ᐃᒃᐱᒍᓱᒃᑎᑕᐅᑐᐃᓐᓇᕆᐊᕐᑲᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᕕᐅᔪᒧᑦ ᐃᓅᓯᖏᑦ-ᐆᓇᐅᓴᓕᐅᕈᑎᖏᑦ ᓄᓇᒥᐅᑕᓂᑦ ᐆᓇᐅᓴᓕᐅᕈᑎᖏᑦ ᐊᒻᒪ ᖃᓄᖅ ᐊᒃᑐᐊᓂᕐᑲᕐᓂᖏᑦ ᐱᓕᕆᕕᐅᔪᒥ. ᐊᓯᖏᓪᓗ ᓄᓇᓯᐊᒥ ᓄᓇᕐᑲᖅᑳᖅᓯᒪᔪᑦ ᑎᒥᖏᑦ ᐃᓚᐅᓂᐊᕆᓪᓗᑎᒃ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒧᑦ ᐃᓚᐅᓕᖅᐸᑎᒡᓗ. ᑕᐃᒪᓐᓇ ᐃᓚᐅᓕᖅᑎᑕᐅᓯᒪᓪᓗᑎᒃ ᑲᑎᒪᕐᑲᑎᒋᔭᐅᕙᒃᐸᑎᒃ ᓯᕗᓕᖅᑎᖏᑦ ᑭᒡᒐᖅᑐᖅᑎᕐᑲᖅᐸᑎᒡᓘᓐᓃᑦ ᑎᒥᐅᔪᓂᑦ.

ᑐᑭᓯᒋᐊᕈᑎᒃᓴᕐᑲᖅᐸᑕ ᑲᑎᒪᑐᑕᐅᕙᒃᑐᓂᑦ ᐸᕐᓇᒃᓯᒪᕐᑲᑎᕐᑲᕈᓐᓇᖅᐳᒍᑦ ᐊᖅᑭᒃᓱᐃᕐᑲᑎᒌᒃᓯᒪᓗᑕᓗ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒥᒃ ᕐᑲᓄᑐᐃᓐᓇᖅ ᐃᓚᐅᑎᑕᐅᓗᑎᒃ ᑕᒪᒃᑯᐊ ᖃᐅᔨᓴᖅᑕᐅᕙᒌᖅᓯᒪᔪᑦ ᐅᔭᕋᖕᓂᐊᖅᑐᕐᑲᓚᐅᖕᓂᓐᓂᐊᓂ, ᕐᑲᓄᐃᒍᑕᐅᔪᓐᓇᖅᑐᓂᒡᓗ, ᖃᐅᔨᓴᕈᑕᐅᔪᓐᓇᖅᑐᓂᒡᓗ, ᕐᑲᓄᐃᓕᐅᓇᐊᕈᑎᒃᓴᓂᒃ ᖃᐅᔨᓴᕈᑎᒃᓴᐃᓪᓗ. ᐱᑐᐊᖅᑐᒥᒃ, ᑕᒪᒃᑯᐊ ᐱᓪᓚᕆᐅᑎᑕᐅᔪᑦ ᐃᓱᒫᓗᒍᑕᐅᔪᓪᓗ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᑐᑦ ᓄᓇᓕᖕᓄᑦ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓕᖅᐳᑦ Sabina–ᑯᓐᓄᑦ ᑖᒃᑯᓇᓂ DEIS–ᑯᑎᒍᑦ ᐊᔾᔨᒌᖏᑦᑐᒃᑯᑦ ᐸᕐᓇᐅᑎᕐᑲᕐᓗᑎᒃ, ᐊᑐᐊᕙᕐᑲᕐᓗᑎᒃ, ᐊᒻᒪ ᐱᓂᐊᕐᓂᕋᐅᑎᕐᑲᕐᓗᑎᒃ. ᓄᑖᓂᒡᓗ ᓴᖅᑭᐸᐸᓕᐊᔪᕐᑲᕐᓂᐊᖅᐸᖅ ᑲᑎᒪᕐᑲᑕᐃᓐᓇᖅᐳᑎᒃ ᓄᓇᓖᓪᓗ ᐱᓕᕆᕕᒡᓗ. ᐆᒃᑑᑎᒋᓗᒍ ᐅᔭᕋᖕᓂᐊᕐᕕᒃ Sabina ᓄᓇᓕᖕᓂ ᐃᓚᐅᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒋᓯᒪᔭᖕᖓ (ᑕᑯᒋᐊᕐᓗᒍ ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10) ᑲᑉᐸᓂᒃᑯᑦ ᑲᑎᒪᕐᑲᑎᕐᑲᐃᓐᓇᓇᐊᕐᑲᖅᐳᑦ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐱᓕᕆᕐᑲᑎᕐᑲᕐᓗᑎᒡᓗ ᐱᓕᕆᓂᓕᒡᒥᓂ ᐊᐅᓚᓂᕐᒥᖕᓂ. ᑕᐃᒪᓐᓇᓗ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᓂᒃ ᑕᑯᒋᐊᕈᓐᓇᖅᐳᒍᑦ ᑭᐅᒍᑎᒃᓴᐃᑦ ᓄᓇᓕᖕᓂᒥᐅᓄᑦ ᑖᒃᑯᓇᓃᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂ, ᕐᑲᓄᐃᓕᐅᕐᑯᔾᔪᑎᓪᓗ ᐃᓱᒫᓗᑎᓪᓗ. ᐊᔭᕋᖕᒋᓂᐊᖅᑎᑦ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐱᓕᕆᕐᑲᑎᕐᑲᕐᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᖏᑦ ᓄᑖᖑᖅᑎᑕᐅᕐᑲᕐᑕᕐᓂᐊᖅᐳᑦ ᐊᐅᓛᓯᐊᕐᑯᓪᓗᒋᑦ.

<u>ᒐᕙᒪᒃᑯᑦ ᐃᓚᐅᓂᖏᑦ</u>

ᒐᕙᒪᒃᑯᑦ ᐃᓚᐅᑎᑕᐅᕗᑦ Sabina–ᑯᑦ ᐱᓕᕆᓂᖏᓐᓂ ᖃᐅᔨᒪᑎᑕᐅᕐᑯᓪᓗᒋᑦ ᒐᕙᒪᒃᑯᑦ ᕐᑲᓄᐃᓕᐅᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᓂᕐᒥᓂ ᕐᑲᓄᕐᓗ ᐱᕙᓪᓕᐊᑎᑎᓂᖏᓐᓄᑦ. Sabina ᑐᓴᖅᑎᑎᕐᑲᕐᑕᖅᐸᕐᓗᑎᒃ ᐱᒻᒪᕆᐅᔪᓂᒃ ᑐᓴᒃᓴᓂᒃ ᕐᑲᖕᒐ ᕐᑲᓄᕐᓗ ᐱᕙᓪᓕᐊᓂᕐᒥᖕᓄᑦ, ᑕᒪᒃᑯᐊ ᒐᕙᒪᒃᑯᑦ ᐸᕐᓇᒃᓯᒪᔨᐊᕈᓐᓇᕐᑯᓪᓗᒋᑦ ᐱᓕᕆᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔨᐊᕐᓗᑎᒡᓗ ᒐᕙᒪᒃᑯᑦ ᐃᓚᐅᓂᕐᒧᑦ ᐊᕝᑎᒥᐅᑕᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᖏᓐᓂ. ᐅᓪᓗᒥᒧᑦ ᑎᑭᑦᓱᒍ, ᐃᒪᓴᐃᓕᐅᕐᓂᐊᕐᓂᕋᖅᓯᒪᕗᑦ Sabina–ᑯᑦ ᒐᕙᒪᒃᑯᓐᓄᑦ:

- ᐱᕙᓪᓕᐊᑎᑎᓗᑎᒃ ᒪᕈᐃᓕᖕᒐᔪᓂᒃ ᑐᓴᐅᒪᑎᑎᒍᑎᒃᓴᓂᒃ ᐅᕐᑲᕐᑲᑦᑕᕈᑎᒃᓴᓂᒡᓗ ᐅᒃᐱᕆᕐᑲᑦᑕᐅᑎᔪᐊᕐᓗᑎᒃ ᐱᓕᕆᕐᑲᑎᑦᔪᐊᕐᑯᓪᓗᒋᑦ;
- ᑐᓴᐅᒪᑎᑎᕐᑲᑦᑕᕐᓗᑎᒃ ᒐᕙᒪᒃᑯᓐᓄᑦ ᐱᓕᕆᐊᕆᔭᒥᖕᓂᒃ ᐱᔾᔪᑎᕐᑲᕐᓗᑎᒃ ᕐᑲᑯᑎᒃᑯᑦ, ᑕᑯᒃᓴᐅᔪᐊᕐᓗᑎᒃ ᐊᒻᒪ ᐊᑐᐃᓐᓇᐅᔪᐊᕐᓗᑎᒃ ᐃᑲᔪᕈᓐᓇᕐᑯᓪᓗᒋᑦ ᒐᕙᒪᒃᑯᑦ ᑎᒥᕐᑯᑎᖏᓐᓂᒃ ᕿᒥᕐᕈᕙᓪᓕᐊᓂᖏᓐᓂᒃ; ᐊᒻᒪ
- ᑐᑭᓯᐅᒪᔪᑎᑦᕐᑲᑦᑕᕐᓗᑎᒃ ᖃᐅᔨᒪᔪᑎᒃᓴᖅᑖᕐᑲᑦᑕᕐᓗᑎᒡᓗ ᒐᕙᒪᒃᑯᑦ ᑎᒥᕐᑯᑎᖏᓐᓂᑦ ᐃᑲᔪᕈᓐᓇᕐᑯᓪᓗᒋᑦ ᒐᕙᒪᒃᑯᑦ Sabina–ᒥ ᐱᓕᕆᔪᑦ ᕐᑲᓄᑐᐃᓐᓇᖅ ᐋᖅᑭᒃᓱᖅᑕᐅᒍᑎᒃᓴᓂᒃ.

Sabina ᐅᕐᑲᓪᓚᕐᑲᑎᕐᑲᕐᑲᑦᑕᖅᓯᒪᕗᑦ ᕐᑲᑦᔫᖅᑕᖅᐸᑎᒃ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᑦᑕ ᐱᓕᕆᓃᖏᓐᓄᑦ ᐱᓕᕆᐊᖕᒐᑦ ᐱᔪᑎᕆᓪᓗᒍ, ᐃᓚᐅᑎᑕᐅᓪᓗᑎᒃ ᑖᒃᑯᐊ ᑲᓇᑕᒥ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᕙᓪᓕᐊᔪᓕᕆᓂᕐᒧᑦ ᑎᒥᐅᔪᑦ (ᐱᓗᐊᖅᑐᒥᒃ, ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓕᕆᐊᖅᑲᖅᑐᓂᒃ ᐊᐅᓚᔨᕕᖕᒥ ᐊᓪᓚᕕᖅᑲᖅᑐᑦ), ᐃᖅᑲᓗᓕᕆᔨᒃᑯᑦ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᒃᑯᓪᓗ ᑲᓇᑕᒥ, ᐃᓄᓕᕆᔪᕐᑲᒃᑯᓪᓗ, ᐊᕝᑎᒥᐅᑕᓕᕆᔨᒃᑯᓪᓗ ᑲᓇᑕᒥ, ᓄᓇᒥᐅᑕᓕᕆᔨᒃᑯᓪᓗ ᑲᓇᑕᒥ, ᐊᒻᒪ ᐃᖏᕐᕋᕐᑲᑦᑐᓕᕆᔨᒃᑯᑦ

ᑲᓇᑕᒥ. Sabina ᖃᐅᔨᒋᐊᖃᑦᑕᖅᓯᒪᔪᑦ ᐱᓕᕆᖃᑎᖃᕈᒪᓪᓗᑎᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐊᐅᓚᔪᔾᔪᑦ ᐊᓪᓚᕝᕙᖓᓄᑦ ᐃᑲᔪᕈᒪᓪᓗᑎᒃ ᑐᑭᓯᒋᐊᕈᑎᒃᓴᓂᒃ ᓴᖅᑭᑎᑎᓂᕐᒥᒃ, ᐊᒻᒪ ᑲᑎᑎᕐᓯᓪᓗᑎᑦ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᑦᑕ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᓐᓂᒃ ᐃᓚᐅᕐᑯᓪᓗᒋᑦ ᑲᑎᒪᓂᕐᒧᑦ ᐊᓯᖏᓐᓄᓪᓗ ᑕᑯᔭᖅᑐᕐᓂᕐᒥᒃ ᐅᓯᕋᖕᓂᐊᕐᕙᖕᖓᓂᒃ.

ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᑦ ᐃᓚᐅᖃᑦᑕᖅᐳᑦ ᖃᐅᔨᒪᑎᕐᑲᑦᑕᕐᓗᑎᒡᓗ, ᐊᕙᑎᒥᐅᑕᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᖏᓐᓂ ᕿᒥᕐᕈᐊᒐᖃᕐᓂᖏᓐᓂᓪᓗ ᐅᔾᔨᖕᓂᖃᕐᕕᒃ ᓄᓇᕗᒥ. Sabina ᐱᓕᕆᖃᑎᖃᐃᓐᓇᕐᓂᐊᖅᐳᖅ ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᓐᓂᒃ ᐱᓕᕆᐊᖃᕐᓗᑎᒃ ᒐᕙᒪᒃᑯᑦ ᖃᓄᐃᓕᐅᖃᑕᐅᓂᖏᓐᓄᑦ ᐱᓕᕆᐊᖑᔪᒥ ᐃᓕᖏᓪᓗ ᐃᖅᑲᓇᐃᔮᕕᖏᑦ ᒐᕙᒪᒃᑯᑦ ᐃᒪᓐᓇᐃᓕᐅᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᐱᒋᐊᖃᕈᑎᒃ (ᓱᕐᓗ, ᐃᓄᓕᕆᓂᕐᒧᑦ ᐱᓇᐅᔭᓕᐅᕆᓂᕐᒧᓪᓗ ᐆᒪᔪᓕᕆᓂᕐᒧᓪᓗ). ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᑦ ᐱᓕᕆᖃᑎᒋᔭᐅᓂᐊᖅᐳᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᓄᓇᐅᑉ ᐱᒡᓕᕆᖕᓂᒃ ᐱᓕᕆᓂᖏᓐᓂ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ.

Sabina-ᑯᑦ ᒐᕙᒪᒃᑯᓐᓂᒃ ᐊᔾᔨᒌᖏᑦᑐᒃᑯᑦ ᐱᓕᕆᖃᑎᖃᕐᓯᒪᔪᑦ ᐅᑉᐱᕆᖃᑦᑕᐅᑎᒍᒥᒃᓯᒪᓪᓗᑎᒡᓗ ᐱᓕᕆᖃᑎᒌᑦᓯᐊᒃᑲᓐᓂᕈᒪᓪᓗᑎᒡᓗ. ᐱᒋᐊᓕᑕᐃᓐᓇᖅᐳᑎᒃ ᑲᑎᒪᖃᑎᒌᒃᓯᒪᔪᑦ ᐊᒻᒪ ᑲᑎᒪᖃᑎᒌᒃᑲᓐᓂᖃᑦᑕᖅᐳᑎᒃ ᓄᓇᓕᖕᔪᐊᓂ ᐊᖑᔪᖃᖃᕝᕕᐅᔪᓂ ᑎᒥᖁᑎᖏᓐᓄ ᒐᕙᒪᒃᑯᑦ. ᑲᑎᒪᓂᖏᓐᓂ ᐃᓚᐅᑎᑎᖃᑦᑕᖅᐳᑦ ᐃᓄᖕᓂᒃ ᐃᓚᐅᒋᐊᖃᖅᑐᓂᒃ (ᓈᒻᒪᒃᑐᒃᑯᓪᓗ) ᐊᔾᔨᒌᖏᑦᑐᓂᒡᓗ ᐱᔾᔪᑎᖃᖅᐳᑎᒃ.

Sabina-ᑯᑦ ᖃᐅᔨᒪᔪᑦ ᑕᐃᒪᖓᓂᑦ ᑕᒪᕐᒥᒃ ᐱᓕᕆᕝᕕᒃ ᒐᕙᒪᒃᑯᓪᓗ ᑲᑎᒪᖃᑎᒌᑦᑕᕆᐊᖃᕐᓂᐊᕐᒪᑕ. ᖃᓄᐃᓐᓇᖅ ᐱᓕᕆᐊᖑᔪᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ ᓄᓇᕗᒥ ᐊᕙᑎᒥᐅᑕᓂᒃ ᑲᑎᒪᔨᓄᑦ ᐱᓕᕆᐊᓇᔭᐅᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᑭᒃᑯᐃᓐᓇᕐᓗ ᑎᑎᖃᐅᑎᖏᑦ ᓴᖅᑭᑕᐅᖃᑦᑕᕐᓂᐊᖅᐳᑎᒃ, ᑕᐃᒪᓐᓇ ᐱᒋᐊᖅᑕᐅᓂᖏᓐᓄᑦ ᒪᓕᒃᓱᒍ.

<u>ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ</u>

ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᕗᖅ "ᑲᑎᑕᐅᓯᒪᓪᓗᑎᒃ ᑎᒥᐅᔪᓄᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ, ᐃᓕᖁᓯᕆᔭᐅᑦᑕᖅᑐᑦ, ᐊᒻᒪ ᐅᑉᐱᕆᔭᐅᔪᑦ, ᐱᔭᐅᓯᒪᓪᓗᑎᒃ ᐊᑐᖅᑕᐅᑦᑕᖅᓯᒪᓪᓗᑎᒡᓗ ᐅᖃᐅᓯᕆᔭᐅᑦᑕᖅᓯᒪᓪᓗᑎᒡᓗ ᖃᐅᔨᒪᔭᐅᔪᖃᐅᓂᖏᓐᓄᑦ ᐊᖑᔪᖃᕆᔭᐅᔪᓂᑦ ᓯᐅᓯᖏᓐᓄᑦ ᑕᐃᒪᓐᓇ ᐱᕈᖅᓴᕙᓪᓕᐊᓪᓗᑎᒃ" (NIRB 2007). ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᑎᑎᕋᖅᑕᐅᓯᒪᕗᖅ ᐅᖃᐅᓯᖃᖅᐳᖅ ᐊᖑᓇᓱᐊᕈᓯᑐᖃᐃᑦ, ᓂᕿᒃᓴᖅᓯᐅᕈᑎᑐᖃᐃᑦ, ᐃᖃᓗᒃᓯᐅᕈᑎᑐᖃᐃᑦ, ᐆᒪᔪᐃᑦ ᐃᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᖑᑎᑦ ᐃᖏᕐᖃᓂᖏᓐᓂᒡᓗ ᐆᒪᔪᐃᑦ ᖃᐅᔨᒪᒍᑎᑦ. ᑐᑭᓯᐅᒪᒍᑎᒃᓴᐅᔪᓐᓇᓪᓗᑎᒡᓗ ᐆᒪᔪᖃᕐᕕᒃᑐᓂᒃ ᓄᓇᓕᖕᓂ, ᐃᓄᓕᕆᓂᕐᒧᑦ ᐃᓕᖁᓯᑐᖃᓕᕆᓂᕐᒧᓪᓗ ᖃᓄᐃᓕᐅᕈᑕᐅᕙᓪᓕᐊᔪᓂᒃ, ᐃᓂᒋᔭᐅᔪᓂᒡᓗ, ᐅᑉᐱᕐᓂᕆᔭᐅᔪᓂᒡᓗ, ᐱᔪᓐᓇᕐᓂᕆᔭᐅᔪᓂᒡᓗ ᐊᓯᖏᓐᓂᒡᓗ. Sabina ᐃᓕᑕᖅᓯᓯᒪᔪᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐊᑐᕐᓂᖃᓪᓚᕆᖕᓂᖏᓐᓄᑦ ᐱᒻᒪᕆᐅᓂᖏᓐᓄᓪᓗ ᓄᓇᓕᖕᓂ ᐊᑐᖅᑕᐅᓂᖏᓐᓄᓪᓗ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᐊᖅᑐᓂ. ᑕᐃᒪᓐᓇ, Sabina ᐃᓚᐅᑎᑦᓯᓯᐊᖅᐳᑦ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐊᑐᓇᐊᖃᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᐊᒥᓄᑦ ᐸᕐᓇᒃᐸᓪᓕᐊᓂᖏᓐᓄᑦ ᐊᖅᑭᒃᓯᐅᕙᓪᓕᐊᓂᖏᓐᓄᓪᓗ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᒥᒃ. ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᔪᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐱᔾᔪᑎᖃᖅᑐᑦ ᑲᑎᑕᐅᓯᒪᔪᑦ ᑖᒃᑯᐊ ᑎᑎᕋᖅᓯᒪᔨᓂ DEIS ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 3.1-1 (ᑎᑎᖅᓯᒪᓂᖓᓂ 3) - ᐊᑐᖅᑕᐅᓂᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ Sabina-ᑯᑦ ᑎᑎᕋᖅᓯᒪᔭᖏᑦ ᓯᕗᓪᓕᑦ ᐊᕙᑎᒥᐅᑕᓕᕆᓂᕐᒧᑦ ᑖᕗᖓ Back River-ᒧᑦ ᐱᓕᕆᐊᖑᔪᒥ, ᐊᒻᒪᓗ ᐅᓂᒃᑳᖅᓯᒪᓪᓗᑎᒃ ᓇᓗᓇᐃᔭᖅᓯᒪᒃᑲᓂᖅᐳᑎᒃ ᑖᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᖁᑎᖏᓐᓂ DEIS-ᒥ.

Sabina ᐊᑐᖅᓯᒪᓕᖅᐳᑦ, ᐊᑐᕐᓂᐊᓕᖅᐳᓪᓗ ᑕᓪᓕᒪᓂᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ: ᓇᓗᓇᐃᔭᐅᑎᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ (NTKP) ᑎᑎᕋᖅᓯᒪᔨᑦ ᐅᓂᒃᑳᓕᐅᖅᓯᒪᔨᑦ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒧᑦ, ᑕᐃᒍᖅᑕᐅᒍᑎᖃᖅᐳᑎᒃ ᑲᑎᒪᒍᑕᐅᑦᑕᖅᐳᑎᒃ ᐃᓕᓐᓂᐊᕈᑕᐅᓪᓗᑎᒡᓗ, ᐅᓂᒃᑳᓕᐅᖅᓯᒪᓪᓗᑎᒃ ᑭᒃᑯᐃᓐᓇᖃᕐᓄᑦ ᑕᑯᒃᓴᐅᑎᑕᐅᔪᓂᒃ ᓄᓇᓯᐅᐊᒥ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐃᓄᐃᑦ, ᑲᑎᒪᖃᑎᒌᓪᓚᐅᖅᐳᑎᒃ ᑭᒃᑯᐃᓐᓇᓄᑦ ᐅᔾᔨᖕᓂᐊᖅᑎᓪᓗ ᐱᓕᕆᓪᓗᑎᒃ, ᐊᓯᖏᓐᓂᓗ ᖃᐅᔨᒪᒍᑎᖃᖅᐳᑎᒃ (ᓱᕐᓗ ᓄᓇᒥᒃ ᐊᑐᕐᓂᖏᓐᓄᑦ ᐃᓕᓐᓂᐊᕈᑎᖃᕐᓂᖅ). ᑕᐃᒪᓐᓇᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᐊᑐᖅᑕᐅᓯᒪᓕᓪᓗᑎᒃ Sabina-ᑯᓐᓄᑦ ᐱᓕᕆᐊᒥᓂ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᑎᒡᓗ ᑎᑎᕋᐅᔭᖅᑕᐅᓂᖓᓄᑦ ᑲᑉᐸᓂᐅᑉ ᐱᓕᕆᓂᕐᒧᑦ ᐊᐅᓚᑦᑕᕆᓐᓄᑦ. ᐅᔾᔨᖕᓂᐊᖅᑎᑦ ᐱᓕᕆᖃᑎᖃᖅᓯᒪᕗᖅ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᖏᓐᓂᒃ ᑕᐃᒪᓐᓇ ᖃᐅᔨᓴᕈᑎᖃᖅᐳᑎᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ – ᐸᕐᓇᒃᓯᒪᓂᖅ ᖃᐅᔨᒪᔭᐅᔪᑐᖃᐃᑦ

ᐅᓂᑳᓕᐅᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᐃᓕᓐᓂᐊᕈᑕᐅᓯᒪᓪᓗᑎᒡᓗ. ᑕᐃᒪᓐᓇ ᐱᓕᕆᖃᑎᒌᓚᐅᖅᓱᑎᒃ ᐊᖏᖃᑎᒌᒍᑎᒥᒃ ᐊᑎᓕᐅᖃᑎᒌᒃᓱᑎᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ ᐃᓕᓐᓂᐊᕈᑎᖃᓚᐅᖅᓱᑎᒃ Sbina ᐊᒻᒪ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᒃᑯᖕᒋᑦ ᒪᐃ 2012-ᒥ. ᑕᐃᒪᓐᓇ ᐊᖏᖃᑎᒌᒍᑎᖃᖅᓱᑎᒃ Sabina ᐊᑐᕈᓐᓇᕐᓂᐊᖅᐳᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ ᐱᓯᒪᔭᐅᔪᓂᒃ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᒃᑯᖕᒋᓐᓄᑦ ᑎᑎᖃᖁᑎᖕᒋᓐᓂ. ᐊᖏᖃᑎᒌᒍᑦ ᐅᖃᐅᓯᖃᖅᓱᓂᓗ ᖃᓄᖅ ᒪᓕᒃᑕᐅᔪᒃᓴᐅᓂᐊᕐᓂᖕᒋᓐᓄᑦ Sabina ᐊᑐᓕᖅᐸᑕ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ.

Sabina ᐃᓱᒪᒃᓴᖅᓯᐅᖅᓯᒪᕗᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐃᓚᓕᐅᑎᔪᐅᕝᔭᓇᐊᒃᓴᖕᒋᓐᓄᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕈᑎᓪᓗ ᑐᑭᓯᐊᕈᑎᒃᓴᐃᑦ ᑲᑎᑕᐅᔪᑦ ᐱᓕᕆᐊᖑᔾᑦ. ᓲᕐᓗ ᐆᒃᑑᑎᒋᓗᒍ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐃᓚᒋᔭᐅᓕᖅᐸᖅ ᐊᔾᔩᖏᑦᑐᓄᑦ ᐊᕙᑎᓂᒃ ᖃᐅᔨᓴᕈᑎᓂᒃ ᐃᓅᓯᓕᕆᓂᕐᒧᑦ-ᕿᓇᐅᔭᓕᐅᕈᑎᖃᕐᓂᕐᒧᓪᓗ ᖃᐅᔨᓴᕈᑕᐅᖅᑳᖅᓯᒪᔪᓂ ᐊᑐᖅᑕᐅᖃᑕᐅᓂᐊᖅᐳᑦ. ᑖᒃᑯᐊ ᑐᑭᓯᐊᕈᑎᒃᓴᐃᑦ ᐃᓚᒋᔭᐅᖃᑕᐅᕗᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔫᒃᑯᑦ ᐃᓄᓕᕆᓂᕐᒧᑦ-ᕿᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᑐᓂ, ᓇᓖᖑᓪᓗᑎᒃ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᖏᑦᓱᑎᒡᓗ ᑐᑭᓯᐊᕈᑎᒃᓴᐃᑦ ᐊᒻᒪ/ᐅᕙᓃᓐᓃᑦ ᑐᑭᑖᕈᑎᒃᓴᖏᑦ ᐃᓯᒪᓕᐅᕈᑎᒋᔭᐅᓂᐊᕐᓗᑎᒃ. ᐅᓂᒃᑳᓕᐅᕈᑕᐅᓯᒪᔪᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ ᐱᔮᑎᖃᖅᑐᑦ ᐅᓂᒃᑳᓕᐅᖅᓯᒪᔪᑦ (ᓲᕐᓗ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᒃᑯᖕᒋᓐᓂ 2012) ᐊᑐᖅᑕᐅᓚᐅᖅᐳᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᖕᒋᓐᓄᑦ VEC/VSEC ᑎᑎᕋᖅᓯᒪᔪᑦ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒧᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᐃᑦ ᐊᑐᓂᑦ ᓄᓇᓕᖕᓂᑦ ᑲᑎᒪᔨᐊᓖᖕᒋᓐᓂᖖᕈᖅᑐᑦ ᓄᕙᐱᓇ 2012 ᑲᑎᒪᑎᕝᓯᑎᓪᓗᒋᓪᓗ ᑭᒃᑯᐃᓐᓇᕐᓂᒃ ᓄᓇᓕᖕᓂ ᕿᑎᕐᒥᐅᓂ ᐊᑐᓂ ᐋᐳᕈ 2013–ᒥ ᕿᒥᕐᕈᓪᓗᑎᒃ ᐅᖃᐅᓯᒃᓴᖃᐅᖅᓱᑎᒡᓗ. ᑕᐃᒪ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑎᓪᓗᒋᑦ Sabina–ᑯᑦ ᖃᐅᔨᓴᕈᑎᒋᓂᐊᖅᑕᖕᒋᓐᓄᑦ ᑲᑎᖅᓱᖅᑕᐅᓂᐊᖅᑐᒃᑯᑦ ᖃᓄᖅ ᐃᒃᐱᒍᓱᒃᑎᑕᐅᓂᐊᕐᓂᖕᒋᓐᓄᑦ/ᖃᓄᐃᓕᐅᕈᑕᐅᓂᐊᕐᓂᖕᒋᓐᓄᓪᓗ ᐱᓕᕆᓂᖕᒋᓐᓂ ᐃᓄᖕᓄᑦ, ᑕᐃᒪ ᖃᐅᔨᒪᓕᖅᐳᑦ ᖃᓄᐃᓕᐅᕆᐊᖃᕐᓂᕐᒧᑦ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ ᑕᒪᒃᑯᓂᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ ᐊᑐᖅᓱᑎᒃ. ᖃᐅᔨᓴᕈᑕᐅᔪᑦ ᖃᓄᕐᓗ ᖃᐅᔨᒍᑕᐅᕙᓪᓕᐊᔪᑦ ᓴᖅᑭᑎᑕᐅᓂᐊᓚᐅᖅᐳᑦ ᐊᑐᓂ ᕿᑎᕐᒥᐅᓂ ᓄᓇᓕᖕᓄᑦ ᐊᑐᓂ ᓄᓇᓕᑦ ᑲᑎᒪᔩᖕᒋᑦ ᓄᕙᐱᓇ 2013–ᖑᓕᖅᐸᑦ ᕿᒥᕐᕈᔭᐅᓂᐊᕐᓗᑎᒃ ᐅᖃᐅᓯᖅᑲᐅᓂᐊᕐᓗᑎᒡᓗ.

ᑮᖑᓪᓕᖅᐹᖓᒍᑦ, ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐃᑲᔪᖅᐳᑦ ᑐᓴᖅᑎᑕᐅᓯᒪᓂᖕᒋᓐᓄᑦ ᖃᓄᐃᓕᐅᕆᐊᖃᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᕆᐊᖃᕐᓂᕐᒧᓪᓗ ᐱᓕᕆᐊᒃᓴᒥᖕᓂᒃ ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᖕᒥ. ᑭᒃᑯᐃᓐᓇᐃᑦ ᐃᓱᒫᓗᒍᑎᒥᖕᓂᒃ ᐅᖃᐅᓯᖅᓯᒪᕗᑦ (ᓲᕐᓗ, ᑲᑎᒪᑎᑕᐅᖏᓪᓗᒋᑦ ᐃᓄᐃᑦ ᖃᓄᐃᓕᐅᖅᑳᖅᑕᐅᑎᑎᓪᓗᒋᓪᓗ ᐱᓕᕆᕝᕕᒃ ᑭᒃᑯᐃᓐᓇᐃᓪᓗ) ᐊᑲᐅᖏᓕᐅᖅᑎᑎᑐᐃᓐᓇᕆᐊᖃᕐᓂᖕᒐᓄᑦ ᐱᓕᕆᕝᕕᒃ ᐆᒪᔪᕐᓂᒃ (ᐱᓗᐊᖅᑐᒥᒃ ᑐᑐᓂᒃ) ᐊᓯᖏᓐᓂᒡᓗ ᐊᕙᑎᒥᐅᑕᓂᒃ ᐃᓅᓯᓕᕆᓂᕐᒧᓪᓗ-ᕿᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᐱᔮᑎᖃᖅᑐᓂᒃ. ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐃᑦ ᐊᐅᓚᑦᓯᓂᕐᒧᓪᓗ ᐸᕐᓇᒃᓯᒪᒍᑎᒃᓴᐃᑦ ᐋᖅᑭᒃᓱᖅᑕᐅᓯᒪᓕᖅᐳᑦ ᑕᒪᒃᑯᓇᖓ VECs ᐊᒻᒪ VSECs ᐃᒃᐱᒍᓱᓗᐊᖅᑎᑦᓯᒋᐊᖃᕐᕆᑉ>ᑦ ᐅᔭᕋᖕᓂᐊᖅᑐᑦ ᐃᓄᐃᑦ ᐱᓐᓇᕆᔭᕆᓐᓂᒃ. ᐊᑐᖅᑕᐅᓂᐊᖅᐳᓪᓗ ᖃᐅᔨᓴᕐᓂᖕᒋᓐᓄᑦ ᐱᓕᕆᕝᕕᒃ ᖃᓄᖅ ᐃᓗᐃᓪᓕᐅᖅᑎᑎᓂᖓᓄᑦ. ᐊᑐᖅᑕᐅᓯᒪᓪᓗᑎᒡᓗ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒧᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ, ᐊᒻᒪ ᓄᓇᓕᖕᓂ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐊᑐᖅᑕᐅᕙᓪᓕᐊᑎᓪᓗᒋᑦ ᓇᑖᓂᒃ ᓴᖅᑭᐸᑉᐸᓪᓕᐊᔪᖅᑲᕐᓂᐊᕐᒪᑦ ᑐᑭᓯᐊᕈᑎᒃᓴᖃᕐᓂᐊᖅᓱᑕᓗ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᒃᓴᓂᒃ ᐱᓕᕆᕙᐅᓂᐊᖅᑐᒧᑦ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᖃᓄᐃᓕᐅᕋᔭᕐᓂᖕᒋᓐᓄᑦ. ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᓐᓂᒃ ᐱᓕᕆᐊᖃᕐᓂᕐᒧᑦ ᑲᑎᒪᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᐊᐅᓚᑦᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᖃᕐᓗᑎᒃ. ᓲᕐᓗ, Sabina–ᑯᓪᓗ ᓄᓇᓕᖕᓂᒥᐅᓪᓗ ᐸᕐᓇᖃᑎᒌᖕᓂᖕᒋᓐᓄᑦ ᐱᓕᕆᐊᖕᒐᓂ ᐅᖃᖅᓯᒪᕗᖅ ᑲᐸᓂ ᑲᑎᒪᖃᑎᖃᖃᑦᑕᕐᓂᐊᕐᓂᖕᒋᓐᓄᑦ ᓄᓇᓕᖕᓂᓗ ᖃᓄᐃᓕᐅᖃᑦᑕᐅᑎᕙᓪᓗᑎᒃ ᐱᓕᕆᓂᕐᒥᖕᓂ. ᑕᐃᒪᓐᓇᓗ, ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓂᐊᖅᐳᑦ ᑭᐅᑦᑕᕈᑕᐅᓗᑎᒡᓗ ᓄᓇᓕᖕᓄᑦ, ᖃᓄᕐᓗ ᐅᖃᐅᓯᖅᐸᓪᓕᐊᓂᖕᒋᑦ ᐃᓱᒫᓗᒍᑎᖃᕐᓂᖕᒋᓪᓗ ᒪᓕᒃᑕᐅᓂᐊᖅᓱᑎᒃ.

<u>ᐊᑐᕐᓂᖃᓪᓚᖕᓂᖕᒋᑦ</u>

ᑕᒪᒃᑯᐊ ᓄᓇᒥᐅᑕᐃᑦ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᓪᓗᑎᒃ ᐊᑐᕐᓂᐊᕐᓂᐊᕐᓂᖕᒋᑦ (VECs) ᐊᒻᒪᓗ ᐃᓅᓯᓕᕆᓂᕐᒧᑦ–ᕿᓇᐅᔭᓕᕆᓂᕐᒧᓪᓗ ᐱᔮᑎᒋᔭᐅᔪᑦ (VSECs) ᐃᓚᐅᑎᑎᕗᑦ ᐅᔭᕋᕐᓂᐊᖅᑎᑦ Sabina ᑲᑎᒪᑎᑎᕐᑲᑦᑕᖅᓱᑎᒃ ᑭᒃᑯᐃᓐᓇᕐᓂᒃ, ᑕᒪᒃᑯᐊ ᐊᑐᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᖃᖕᒋᑦ ᐱᔮᑎᖃᖅᓱᑎᒃ, ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᐊᖃᖅᑐᑦ ᑲᑎᒪᖃᑎᒋᔭᐅᖃᑦᑕᖅᓱᑎᒡᓗ ᐊᒻᒪᓗ ᐃᓱᒪᒃᓴᖅᓯᐅᖅᓱᑎᒃ ᐊᑐᓕᕐᑯᓯᓪᓗᑎᒡᓗ ᒪᓕᒃᑕᐅᕐᑯᔭᐅᔪᓂᒃ ᑖᒃᑯᓇᓂ NIRB EIS

ᒪᓕᖁᔾᖏᓐᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ (NIRB 2013). ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᐅᖃᖏᑦ ᐅᔾᕋᖕᓂᐊᖃᐅᑉ Sabina ᒎᑐᑎᓯᐅᖃᖕᒐᓂ ᓯᐅᕙᖅᓯᐅᖃᖕᒐᓂᓪᓗ *Sabina Gold & Silver Corp., Back River (Hannigayok ᕼᐊᓂᖕᒐᔫᖕᒥ ᐱᓕᕆᐊᖅ) ᓇᐅᓇᐃᔭᐅᑎᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᕈᖃᖏᓐᓄᑦ ᐅᓂᒃᑳᑦ (ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᖏᑦ 2012) ᓴᓇᔭᐅᓚᐅᖅᐳᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᐅᓂᐊᕐᓗᑎᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᕈᖃᖏᑦ ᐱᓪᓗᒋᑦ ᑐᑭᓯᒋᐊᕈᑎᒃᓴᐃᑦ.Naonaiyaotit Traditional Knowledge ᐅᓂᒃᑳᓕᐅᖅᑕᐅᓯᒪᔪᑦ (ᕿᑎᕐᒥᐅᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᖏᑦ 2012) ᖃᐅᔨᒪᔫᓄᑦ ᓴᓇᔭᐅᓚᐅᖅᐳᖅ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᕈᖃᖏᓐᓂᒃ ᐊᑐᖅᑕᐅᔪᒃᓴᐅᓂᐊᖅᓱᑎᒃ. ᑖᒃᑯᐊ ᒪᓕᒃᓱᒋᑦ, ᐅᑯᐊ ᐊᑐᓚᒃᓴᐃᑦ* VECs and ᐊᒻᒪ VSECs ᐅᑯᐊ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓚᐅᖅᐳᑦ:

<u>ᓯᓚᓕᕆᓂᖅ (ᑎᑎᖅᓯᒪᓂᖕᒐᓂ 4)</u>

- ᖃᐅᔨᒪᔭᐅᔪᑐᖃᐃᑦ): ᐊᓂᖅᓵᖅᑐᖅᕕᒃ ᓴᓗᒪᒋᐊᕐᓂᖕᒐ, ᓂᐱᖃᕐᓂᖅ ᓴᔪᖕᓂᖅ ᐊᐅᓚᓂᖅ
- ᐱᔾᔪᑎᒋᔭᐅᔪᖅ: ᓯᓚ ᓯᓚᓕᕆᓂᕐᒧ

<u>ᓄᓇ ᐊᕙᑎᒥᐅᑕᖅ (ᑎᑎᕋᖅᓯᒪᓂᖕᒐ 5)</u>

- ᖃᐅᔨᒪᔭᐅᔪᑐᖃᑦ: ᐱᕈᖅᑐᑦ ᓂᕿᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᖃᓄᐃᑦᑑᓂᖕᒐ ᓴᓇᓯᒪᓂᖕᒐ, ᑐᒃᑐᐃᑦ, ᐊᒃᓴᐃᑦ, ᐅᒥᖕᒪᐃᑦ, ᖃᕐᕕᑦ, ᐃᖏᕐᕋᔭᒃᐸᒃᑐᑦ ᑎᖕᒥᐊᑦ, ᕿᓯᑐᐃᓐᓇᕐᓂᒃ ᓂᕆᕙᒃᑐᑦ ᑎᖕᒥᐊᑦ.
- ᖃᐅᔨᒪᔭᐅᒋᐊᕐᖃᖅᑐᑦ: ᓄᓇ ᖁᐊᖅᓯᒪᐃᓐᓇᕐᓂᖕᒐ, ᓄᓇ ᖃᓄᐃᑦᑑᓂᖕᒐ ᐃᑉᔪᕐᒧ

<u>ᑕᓯᐅᑉ ᐃᒪᖕᒐ ᖃᓄᐃᑦᑑᓂᖕᒐ ᐊᕙᓗᒥᐅᑕᖅ (ᑎᑎᕋᖅᓯᒪᓂᖕᒐ 6)</u>

- ᖃᐅᔨᒪᔭᐅᔪᑐᖃᑦ: ᐃᒪᓕᕆᓂᖅ, ᐃᒪᐅᑉ ᓴᓗᒪᓂᖕᒐ, ᓴᓗᒪᖕᒋᓐᓂᖕᒐ, ᐃᖃᓗᐃᑦ/ᐃᒪᕐᒥᐅᑕᐃᑦ, ᐃᖃᓗᐃᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ
- ᖃᐅᔨᒪᔭᐅᔭᕆᐊᓕᒃ: ᐃᒪᐅᑉ ᐃᖅᑲᖕᒐ, ᓱᓇᖃᐅᑎᖕᒋᑦ ᐃᒪᐅᑉ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ

<u>ᐃᒪᓕᕆᓂᖅ (ᑎᑎᕋᖅᓯᒪᓂᖕᒐ 7)</u>

- ᖃᐅᔨᒪᔭᐅᔪᑐᖃᑦ: ᐃᒪᐅᑉ ᖃᓄᐃᑦᑑᓂᖕᒐ, ᑭᓱᖃᕐᓂᖕᒐ ᐃᒪᖅ, ᐃᖃᓗᐃᑦ/ᐃᒪᕐᒥᐅᑕᐃᑦ, ᐃᖃᓗᐃᑦ, ᑎᖕᒥᐊᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ/ᒥᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ, ᓇᑦᓯᑦ
- ᖃᐅᔨᒪᔭᐅᔭᕆᐊᓕᒃ: ᖃᓄᐃᓕᐅᖅᐸᓪᓕᐊᓂᖕᒋᑦ

<u>ᐃᓄᖃᖅᕕᐅᖃᑦᑕᖅᑐᑦ (ᑎᑎᕋᖅᓯᒪᓂᖕᒐ 8)</u>

- ᖃᐅᔨᒪᔭᐅᔪᑐᖃᑦ: ᐃᑦᓴᕐᓂᑕᐃᑦ, ᐃᓅᓯᓕᕆᓂᖅ-ᑮᓇᐅᔭᓕᐅᕐᓂᖅ, ᓄᓇᒥᒃ ᐊᑐᕐᓂᖅ, ᐃᓄᐃᑦ ᓂᕿᑐᖃᖏᑦ
- ᖃᐅᔨᒪᔭᐅᔭᕆᐊᓕᒃ: ᓴᐅᓂᕕᓂᑦ, ᐃᓄᖕᓄᑦ ᐋᓐᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᓂᖅ ᐊᒻᒪ ᐊᕙᑎᒥᐅᑕᓂᒃ ᐅᐳᕆᐊᓇᖅᑐᖃᕐᓂᖕᒐᓄᑦ.

ᑕᒪᒃᑯᐊ ᑕᒪᕐᒥᒃ ᖃᐅᔨᒪᔭᐅᔪᑐᖃᐃᑦ **VECs** ᐊᒻᒪ **VSECs** ᖃᐅᔨᓵᖅᑕᐅᓚᐅᖅᐳᑦ ᐊᑐᖅᑕᐅᓯᐊᖁᓪᓗᒋᑦ ᐊᑐᖅᑕᐅᓚᐅᐱᓪᓚᖃᑦᑕᖁᓪᓗᒋᓪᓗ. ᐊᑐᖅᑕᐅᓯᐊᖁᓪᓗᒋᑦ, ᐃᒪᓐᓇᐃᒍᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ ᓄᓇᓕᖕᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᓂ (LSA) ᐊᒻᒪ ᐊᖏᓂᖅᓴᖅ ᓄᓇᓕᕐᔪᐊᒥ ᖃᐅᔨᓴᕈᑎᒋᔭᐅᓪᓗᑎᒃ (RSA). ᐃᓛᓐᓃᓐᓇᒃᑯᑦ, ᖃᓄᐃᓕᐅᕈᑕᐅᔫᓐᓇᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᐸᕐᓇᒃᑎᓪᓗᒋᑦ ᐱᓕᕆᕕᖕᒥ, ᓴᓇᔭᐅᓂᖕᒐᓂᓗ, ᐊᐅᓚᓂᖕᒐᓂᓗ, ᓴᓗᒻᒪᒃᓴᖅᑕᐅᓕᕐᓂᖕᒐᓂᓗ ᐊᒻᒪ ᒪᑐᔭᐅᓂᖕᒐᓂ ᒪᑐᔭᐅᑎᓪᓗᒍᓗ ᐱᓕᕆᐊᕆᔭᐅᓂᖕᒐᓂ. ᒪᓕᒐᐃᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᖃᐅᔨᓴᕐᓂᕐᒥᖕᓂ, ᐃᓚᐅᓪᓗᑎᒃ ᑲᓇᑕᐅᑉ ᓄᓇᕗᐊᑉ ᓄᓇᕘᑦ ᒪᓕᒐᖏᑦ ᖃᓄᐃᓕᐅᕈᑎᒋᔭᐅᖁᔭᖏᑦ/ᐊᑐᖅᑕᐅᖁᔭᖏᓪᓗ.

ᐅᑯᐊ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐅᖃᐅᓯᖃᖅᐳᑦ ᒫᓐᓇ ᐅᕙᑎᒥᐅᑕᓄᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ, ᓱᕗᓪᓕᕐᒥ ᖃᓄᐃᓕᐅᕈᑎᒋᓂᐊᖅᑕᖕᒋᑦ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ ᖃᐅᔨᒪᔭᐅᔪᓄᑦ ᐊᒃᑐᐊᓂᐊᖅᑐᑦ, ᐃᓱᐃᓪᓕᐅᕈᑕᐅᔪᒥᒃ ᒥᒃᓵᒋᐊᖅᑎᑎᓯᒪᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᒪᕈᑎᓄᑦ ᐊᒻᒪ ᐊᑐᖅᑕᐅᓂᐊᖅᐸᑦ, ᐊᔾᔩᖕᒋᑦᑐᓂᒃ ᐱᔾᔪᑎᖃᕐᓗᓂ ᖃᐅᔨᓴᕈᑎᑦ ᖃᐅᔨᒪᔭᐅᔪᖅᑲᓂᑦ. ᑐᑭᓯᒋᐊᕈᑎᒃᓴᐃᑦ ᐱᑕᖃᓇᐊᖃᖅᐳᑦ ᑕᒡᕙᓂ ᒪᓕᒃᓴᓂ ᖃᐅᔨᒪᔭᐅᒋᐊᖃᖅᑐᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᓇᓂᔭᐅᔾᔪᓐᓇᖅᐳᑦ ᐅᑯᓇᓂ ᑎᑎᕋᖅᓯᒪᓂᓇᔭᐅᔪᓂ.

ᓯᓚᓕᕆᓂᖅ

ᐊᓂᖅᓵᖅᑐᖅᕕᒋᕙᒃᑕᕗᑦ ᖃᓄᐃᓐᓂᖓ

ᐊᓂᖅᓵᖅᑐᖅᕕᒋᕙᒃᑕᕗᑦ ᑕᒫᓂ RSA–ᒥ ᓴᓇᒪᕗᖅ, ᐃᓯᒪᒋᓪᓗᒍ ᓇᓂ ᐱᓕᕆᓂᖕᒋᓐᓄᑦ ᐅᖓᓯᒃᑐᒥ ᓱᓇᑕᖅᑲᖕᒋᑦᑐᒥ, ᓴᓗᒪᔪᒥᓪᓗ ᐱᕙᓪᓕᐊᑉᓗᓂ. ᖃᓄᐃᓕᐅᕐᓂᖕᒋᑦ ᒪᓕᒃᑯᒋᑦ ᐱᓕᕆᕕᖕᒥ ᐊᓂᖅᓵᖅᑐᖅᕕᑉᑎᓐᓄᐊᕆᑐᐃᓐᓇᕆᐊᖅᑲᖅᐳᑦ ᓯᕿᓇᖅᑐᓂᒃ (CAC–ᓂᒃ) ᑕᒪᒃᑯᓂᖓᓗ ᓴᕕᕋᔭᒃᓴᓂᒃ ᐳᔪᓂᓪᓗ ᐊᒻᒪ ᐆᓐᓇᖅᑐᖅᑲᖅᑐᓂᒃ. ᖃᓄᐃᓕᐅᕈᑕᐅᓂᐊᖅᑐᑦ ᐊᐅᓚᒍᑕᐅᓂᐊᖅᑐᓪᓗ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ ᒥᒃᓵᒋᐊᑎᒃᓴᓄᑦ ᓯᕈᔪᖅᑲᖕᒋᓐᓂᖅᓴᐅᑎᑎᓇᓯᐊᕐᓂᕐᓗ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᐃᒪᓇᐃᓕᐅᕐᓂᐊᖅᐳᒍᑦ: ᐅᒻᒪᕐᑯᑎᓂᒃ ᐊᑐᕐᓯᐊᕐᓂᕐᒧᑦ ᐱᓕᕆᒍᑎᑦ, ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᕐᒧᑦ ᐅᖅᓱᐊᓗᖕᒥᒃ, ᐃᒪᕐᒥᒃ ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᖅ ᐳᔪᐃᔭᐃᖅᑲᑦᑕᕐᓂᖅ ᐊᖅᑯᑎᒥᑦ ᐅᕙᔫᓐᓃᑦ ᐊᒡᔭᖅᑕᐃᓯᒪᔪᓂᑦ ᐳᔪᓕᐅᕈᑎᓂᑦ ᐱᕐᑯᑎᓂᓪᓗ ᓯᖅᑲᓕᕕᖕᒥ, ᐊᑐᖅᑲᑦᑕᕐᓂᖅ ᖃᐅᓯᖅᑐᓂᒃ ᐳᔪᐃᔭᐃᓂᕐᒧᑦ, ᐹᖅᑕᐃᓂᒃ ᐳᔪᖅᑲᐅᑕᐅᖅᑲᑦᑕᖅᑐᓂᒃ, ᓴᓗᒻᒪᖅᓴᐅᑎᖅᑲᕐᓂᕐᓗ ᐳᔪᓂᒃ. ᐱᓕᕆᓐᓇᐅᓪᓗᐊᕐᓂᐊᖅᑐᒥ ᐊᕐᕌᒍᒥ ᖃᐅᔨᓴᕈᑕᐅᓪᓗᓂ ᐆᒃᑑᑎᒋᔭᐅᔪᖅ ᓇᓚᐅᑦᓵᕈᑎᖃᓚᐅᖅᐳᖅ ᐱᑕᖅᑲᖅᓂᐊᖅᓂᖓᓄᑦ ᓯᕈᔪᖕᓂᒃ ᐃᒪᓇᐃᑦᑐᓂᒃ SO_2, CO, ᐊᒻᒪ ᐳᔪᓂᒃ ᐊᑖᓃᖓᔪᖅᑐᓂ ᐃᓯᓕᕕᖓᑕ/ᒪᓕᒃᑕᐅᖅᑯᔭᐅᔪᑦ ᓇᓂᑐᐃᓐᓇᖅ ᐃᓂᒋᔭᐅᔪᓂ ᐊᒻᒪ ᑕᒪᒃᑯᐊ NO_2, $PM_{2.5}$ ᐊᒻᒪ ᐆᓐᓇᖅᑐᖅᑲᖅᑐᖅ ᐅᖓᑖᓄᐊᕈᑎᖕᒋᑦ ᑕᒡᕙᓂ ᐱᓕᕆᕕᐅᔪᒦᓚᐅᕐᒪᑕ ᕿᓯᐊᓂ. ᑖᒃᑯᐊ ᒪᕐᕉᒃ ᐊᓂᖅᓵᖅᑐᖅᕕᑦᑎᓐᓂᖅᓘᖅᑐᑦ ᐊᑎᖅᑲᖅᑐᑦ ᖃᐅᔨᓴᕈᑎᑦ (TSP ᐊᒻᒪ PM_{10}) ᓯᓚᑖᓂ ᐱᓕᕆᕕᐅᑉ, ᑕᐃᒪᓐᓇᓗ ᐱᑕᖅᑲᓗᐊᖅᑕᐃᓕᒪᑎᑕᐅᓂᐊᕋᓗᐊᖅᑐᓂ. ᕿᓯᐊᓂ, ᖃᓄᐃᑦᑐᒥᒃ ᑕᐃᒪᓐᓇᐃᓗᐊᖅᑕᐃᒪᓂᐅᔪᖅ ᒪᓕᒡᓗᒍ ᑕᒡᕙ ᐊᓂᖅᓵᑦᑐᖅᕕᒃᐳᑦ ᖃᓄᑎ ᑲᒪᒋᔭᐅᓂᖕᒋᑦ ᖃᐅᔨᓴᖅᑕᐅᖅᑲᑦᑕᕐᓂᖕᒋᓪᓗ ᐊᐅᓚᑕᐅᖕᒋᓪᓗ ᒪᓕᒃᑯᒋᑦ (ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10, ᓈᓇᐅᑎᖃᖅᓂᖓᓂ 17 ᑎᑎᕋᖅᓯᒪᔪᑦ) ᖃᐅᔨᓴᕈᑎᖃᖅᓯᒪᕗᑦ ᐊᓂᖅᓵᖅᑐᖅᕕᒋᕙᒃᑕᕗᑦ **ᓯᕿᖅᓯᒪᓗᐊᕐᓂᐊᖕᒋᓐᓂᕋᖅᑕᐅᓪᓗᓂ**. ᑕᐃᒪᓐᓇ ᐱᑕᖅᑲᐃᓐᓇᕐᓂᐊᖅᐳᖅ ᐊᓂᖅᓵᖅᑐᖅᕕᒥ ᓯᕿᖅᓯᒪᔪᓂᒃ. ᐊᓯᐊᓂ ᐃᖕᒋᕐᕋᔭᖕᓂᐊᕋᓯᒋᔭᐅᖕᒋᑉᐳᖅ ᐊᓂᖅᓵᖅᑐᖅᕕᐅᑉ ᓴᓗᒪᓂᖓ.

ᓂᐱᖃᕐᓂᖓ ᐊᐅᓚᓂᖓᓗ

ᓂᐱᖃᓗᐊᖕᒋᑦᐳᖅ ᐊᐅᓚᓂᖅᑕᖃᓗᐊᖕᒋᑦᑐᓂᓗ ᐱᓕᕆᕕᖕᒥ ᐱᖃᑕᖕᒋᑦᑐᓂᓗ ᐊᓯᖕᒋᓐᓂᑦ ᑕᐃᒪᐃᑦᑐᓂᒃ ᓯᒪᑖᓂᑦ. ᓴᓇᔭᐅᓂᖓ ᐊᐅᓚᑕᐅᓂᖓᓗ ᐱᓕᕆᕕᒃ ᐱᑕᖃᕐᓂᐊᕋᓗᐊᖅᑐᓂ ᓂᐱᓂᒃ ᐊᐅᓚᕙᓗᖕᓂᓪᓗ ᓴᓇᓂᖕᒋᓐᓂ ᐱᖅᑯᑎᖕᒋᓐᓂᑦ, ᐊᒡᔭᖅᑐᕈᑎᖕᒋᓐᓂᒃ ᓄᓇᓯᐅᑎᓂᑦ, ᖄᖅᑎᓇᓂᖕᒋᓐᓂ ᐊᒻᒪᓗ ᓄᓇᓯᐅᑎᖅᕙᓪᓗᓂ ᖃᖓᑕᔫᖅᕙᓪᓗᓗᓂᓗ. ᑕᐃᒪᓐᓇ ᐋᖅᑭᑦᑕᐅᕙᓪᓚᐊᓂᐊᖅᐳᑦ ᓂᐱᖃᕐᓂᖓ ᐊᐅᓚᓂᖓᓗ: ᑕᒪᒃᑯᐊ ᐱᓕᕆᒍᑎᖕᒋᑦ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒧᑎᑳᖅᑎᑕᐅᓗᑎᒃ, ᖄᖅᑎᓇᓂᕐᓗ ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓕᑕᐅᕙᓪᓗᓂ ᖃᖓᑕᔫᓪᓗ ᖃᖓ ᐊᐅᓪᓚᖅᑲᑦᑕᖅᓂᖕᒋᑦ ᑎᑭᖅᑲᑦᑕᖅᓂᖕᒋᓪᓗ ᐋᖅᑭᒃᑕᐅᓗᑎᒃ ᖃᖓᐅᓂᖓ ᒪᓕᒡᓗᒍ, ᐊᑐᖅᑲᑦᑕᖅᑐᑎᓪᓗ ᐃᓪᓗᑉ ᐃᓗᐊᓂ ᑐᓵᓗᐊᖅᑕᐃᓕᒍᑎᓂᒃ. ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᓪᓗ ᐊᕐᕌᒍᓂ ᑭᓯᒥ ᓂᐱᖃᓗᐊᕋᔭᕐᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓚᐅᖅᐳᑦ ᑕᒪᓐᓇ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᓂᐊᖕᒋᓐᓂᖓᓄᑦ ᐃᓄᐃᑦ ᐅᖃᓪᓚᖕᓂᖕᒋᓐᓄᑦ, ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᓂᐊᖕᒋᑦᑐᑎᓪᓗ ᐊᓪᕙᐊᕈᑎᒋᔭᐅᑐᐃᓐᓇᓇᐊᖅᑲᖅᓂᖕᒋᓐᓄᑦ ᑐᓵᑦᓯᐊᖕᒋᓕᕈᑕᐅᑐᐃᓐᓇᓇᐊᖅᑲᖅᓂᖕᒋᓐᓄᑦ ᐱᓕᕆᕕᖕᒥ. ᑕᐃᒪᓐᓇᓗ ᓯᓚ ᐊᔾᔨᖕᒋᓐᓂᒃ, ᓯᖃᒃᑎᓇᒍᑕᐅᓂᐊᖕᒋᑦᑐᓂᓗ ᐃᓪᓗᕐᔪᐊᓂᒃ ᐱᓕᕆᐊᕕᐅᔪᒥ, ᑕᐃᒪᓐᓇᓗ ᐆᒪᔪᐃᑦ ᐊᓪᕙᖅᑲᖅᑎᑕᐅᓂᐊᖕᒋᑦᑐᑎᒃ ᐸᕕᓴᖅᑕᐅᓂᐊᖕᒋᑦᑐᑎᓪᓗ ᓴᓇᓂᖕᒋᓐᓂ ᐊᐅᓚᓕᖅᑎᓪᓗᒋᓪᓗ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ, ᓴᓇᓂᖕᒋᓂᓗ ᐊᖅᑯᓯᐅᕐᓂᖕᒋᓂᓗ ᐊᐅᓚᖅᑲᑦᑕᖅᓂᖕᒋᓂᓗ ᐃᖕᒋᕐᕋᔭᓪᓗᑎᒃ ᑕᒪᐅᓇ ᐃᓱᐃᓪᓕᐅᕈᑕᐅᓂᐊᖕᒋᑦᐳᑦ ᐆᒪᔪᓄᑦ ᐃᓄᖕᓄᓪᓗ ᑕᐃᑲᓂ ᐱᓕᕆᕕᖕᒪᓂ Goose–ᒥ. ᑕᐃᒪ, ᐋᖅᑭᒃᓯᐃᓚᐅᖅᑎᓪᓗᒋᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓂᒃ, ᐱᖓᓱᓂᒃ ᐃᓱᐃᓪᓕᐅᕈᑎᖃᑐᐃᓐᓇᓇᐊᖅᑲᖅᐳᑦ: ᓯᓂᑦᓯᐊᖅᑎᑎᖕᒋᓂᒃ ᐃᓄᖕᓂᑦ, ᐆᒪᔪᐃᑦ ᐃᓂᖕᒋᓐᓂᑦ ᕿᒫᑐᐃᓐᓇᓇᐊᖅᑲᖅᓂᖕᒋᑦ ᐆᒪᔪᐃᓪᓗ ᐸᕕᓴᖅᑕᐅᒐᔭᕐᓂᖕᒋᑦ. ᑕᒪᒃᑯᐊ ᐆᒪᔪᐃᑦ ᐸᕕᓴᖅᑕᐅᒐᔭᕐᓂᖕᒋᓐᓄᑦ ᓄᓇᒥᐅᑕᐃᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᓪᓗᓂ ᑎᑎᖅᓯᒪᓂᖕᒋᓐᓂ ᐊᕙᒃᑐᖅᓯᒪᓂᖕᒋᓐᓂ (ᐃᓚᖓᓂ ᑎᑎᖅᓯᒪᔪᑦ 5, ᐊᕙᒃᑐᖅᓯᒪᓂᖕᒋᓐᓂ 5-10-ᒧᑦ.

ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖓ ᓂᐱᖃᓗᐊᕆᑲᓴᐊᖓᓄ ᐊᐅᓚᖃᑦᑕᕆᐊᑲᓴᖓᓄᓪᓗ (ᓱᓂᕐᓱᐊᖅᑎᑎᖏᓐᓂᖅ ᐃᓄᖕᓂᒃ) ᑮᓕᖃᖅᐳᖅ ᐱᓕᕆᐊᕆᔭᐅᓂᖓᓂ ᖃᓄᐃᓕᐅᖅᐸᓪᓕᐊᓂᖏᑦ, ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᒪᓕᒃᑯᑎᑦ ᓂᐱᖃᓗᐊᕐᓂᐊᖏᑉᐳᑦ ᐃᒪᓐᓇᑎᒋ 5 dBA, ᑕᐃᒪᐃᓐᓂᐊᖏᑦᑯᑎᓪᓗ ᑕᐃᒪᖓᓕᒡᒥᖅ ᐅᔭᕐᖏᓐᓂᐊᕐᕕᖃᕐᓂᖏᓐᓂ. ᒪᓕᒃᑯᑎᑦ ᐋᖅᑭᒃᓱᕆᑕᐅᓂᐊᖅᑐᑦ ᐊᑐᓕᖅᑎᑕᐅᓂᐊᖅᑐᓪᓗ ᑖᓐᓇ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒪᔪᓐᓇᕐᑯᓪᓗᒍ ᐱᓕᕆᕝᕕᒥ ᐸᕐᓇᑕᐅᓯᒪᔪᓂ (ᑎᑎᕋᖅᓯᒪᓂᖏᓐᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᕆᔭᖓᓂ 18), ᓇᓚᐅᑦᓵᖅᓯᒪᒍᑦ ᐃᒪᓐᓇᐃᓐᓂᐊᕐᓂᖓᓄᑦ. **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᖏᓐᓂᕋᖅᑕᐅᕙᑦ** ᓂᐱᖃᓗᐊᕐᓂᕐᒧᑦ ᐊᐅᓚᓗᐊᕐᓂᕐᒧᓪᓗ.

<u>ᓄᓇᒥᐅᑕᐃᑦ</u>

ᓄᓇᒥ ᐱᕈᖅᑐᑦ ᖃᓄᐃᓕᖓᓂᖓᓗ ᓄᓇᖓ

ᓄᓇᐅᑉ ᖃᓄᐃᑦᑑᓂᖓᓄᑦ ᓄᓇᖑᐊᓕᕐᓂᖅ ᐊᒻᒪ ᐱᕈᖅᑐᓂᒃ ᖃᐅᔨᓴᕐᓂᖅ ᐱᓕᕆᐊᕆᔭᐅᓚᐅᖅᐳᑦ 2012-ᒥ ᑖᓐᓇ ᑎᑎᖅᓯᒪᓂᖏᓐᓂ 134,370 ᐱᕈᖅᑐᑦ ᐆᒪᔪᖏᓪᓗ ᑕᐃᑲᓂ LSA. ᑲᑎᓪᓗᒋᑦ 890–ᓂᒃ ᐊᔾᔨᐅᖏᑦᑐᓂᒃ ᐱᕈᖅᑐᓂᒃ ᓇᓗᓇᐃᖅᓯᓚᐅᖅᐳᑦ ᓄᓇᖑᐊᓕᖅᑯᑎᒃ ᐱᕈᖅᑐᖅᓯᐅᖅᑯᑎᓪᓗ ᓇᓂᑐᐃᓐᓃᓚᐅᖅᑯᑎᓪᓗ ᓄᓇᒥ. ᓴᓇᔩᑦᑕ ᑕᐃᒪᓐᓇ ᓄᓇᕋᖏᑦ ᐱᕈᖅᑐᖏᓪᓗ ᐲᔭᖅᑕᐅᕙᔭᖅᐳᑦ. ᑕᒪᒃᑯᐊ ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᕐᒧᑦ ᓄᓇᕐᓂᒃ ᐲᔭᐃᑦᑕᐃᓕᒪᓗᐊᕐᓂᕐᒧᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᑦ ᐅᑯᐊᖑᓪᓗᑎᒃ: ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᖅ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃ ᐊᑐᕐᑲᑦᑕᕐᓂᖅ, ᐳᔪᓗᐊᖅᑎᑎᑦᑕᐃᓕᒪᓂᖅ. ᐃᓱᒪᓚᐅᑎᖅᐳᒍᑦ ᑕᒪᓐᓇ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᑕᒪᕐᒥᒃ ᖃᓄᐃᓕᐅᕈᑕᐅᓇᓱᐊᖅᑐᑦ ᐊᑐᖅᑕᐅᖏᑐᐃᓐᓇᕆᐊᖃᕐᓂᖏᓐᓄᑦ. ᑕᐃᒪ, ᑭᓱᐊᓂ, ᐲᔭᖅᑕᐅᓗᐊᕐᓂᖃᖏᑉᐳᑦ ᐱᕈᖅᑐᐃᑦ ᓄᓇᒥ ᐱᓕᕆᐊᕆᔭᐅᔪᑐᐃᓐᓇᕐᒧᑦ ᓄᓇᖓ ᐊᑐᖅᑕᐅᓂᐊᕐᒪᑦ ᐅᖓᑖᓅᖏᑦᑐᖅ. ᒪᓕᒡᓗᒋᑦ ᑕᒪᒃᑯᐊ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐋᖅᑭᒃᓱᕆᑕᐅᓂᕐᒧᑦ ᐅᖃᐅᓯᕆᔭᐅᓯᒪᔪᑦ ᐊᓂᖅᓵᖅᑐᕐᕕᖏᒃ ᓴᐳᒪᑎᑎᓂᕐᒧᑦ ᐊᐅᓚᕐᓯᒍᑎᖃᕐᓂᕐᒧᓪᓗ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 17) ᐊᒻᒪᓗ ᑕᐃᑲᓂ ᐃᒪᖅ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓄᑦ ᐊᐅᓚᑕᐅᓂᖓᓄᓪᓗ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᓂ (ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10 ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 7), ᑕᐃᒪ ᐊᑐᓗᐊᕐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᖅ ᓄᓇ ᐸᕕᓴᖅᑕᐅᓗᐊᖏᓪᓗᓂᓗ. ᖃᐅᔨᓴᓚᐅᖅᐳᑦ ᓄᓇ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᔭᕐᓂᖓᓄᑦ ᑕᒪᐅᖓ, ᐊᒻᒪ (ᐱᕈᖅᑐᑦ ᓄᓇᒥ ᐲᔭᖅᑕᐅᕙᔭᕐᓂᖏᓐᓄᑦ ᐱᔭᖅᑕᐅᓗᐊᕐᓂᐊᖏᓐᓂᕋᐃᓚᐅᖅᐳᓪᓗ. ᓄᓇᐅᑉ ᑮᓕᖓᓄᑦ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᖏᓐᓂᕋᐃᒍᑦ**.

ᑐᒃᑐᑦ

ᐱᖓᓱᓂᒃ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᑐᒃᑐᑦᑲᖅᐳᖅ ᓄᓇᒥᐅᑕᓂᒃ ᑕᒫᓂ ᓄᓇᐅᑉ ᐊᕕᒃᑐᖅᓯᒪᓂᖏᓐᓃᑦᑯᑎᓪᓗ. ᖁᖓᓯᕈᓯᖅᑐᐃᓪᓗᑕ ᖃᐅᔨᒍᑎᖃᓚᐅᖅᐳᒍᑦ ᕿᖓᐅᑉ ᑐᒃᑐᖏᑦ ᐅᐊᓕᓂᖅᐸᓯᖓᓃᓐᓂᖏᓐᓄᑦ ᓄᓇᐅᑉ ᓴᓇᕕᐅᓂᐊᖅᑑᑉ ᐱᓗᐊᖅᑐᒥᒃ ᓄᕋᓕᐅᕐᓇᐅᑎᓪᓗᒍ, ᐊᒻᒪᓗ Beverly–ᖑᓂᕋᖅᑕᐅᔪᑦ (ᐊᕼᐃᐊᒃᒥᒃ ᐊᑎᖃᖅᓯᒪᔪᑦ) ᓄᓇᒦᒻᒪᑕ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᒥ, ᐱᓗᐊᖅᑐᒥᒃ ᐊᐅᔭᒃᑯᑦ ᐅᑭᐊᒃᓵᓕᕋᖓᓪᓗ ᑕᐃᑲᓃᓗᐊᖃᑦᑕᖅᓗᑎᒃ. ᖃᖓᑦᑕᑫᒃᑯᑦ ᖃᐅᔨᓴᖅᐳᑎᒃ 2001 ᐊᒻᒪ 2010 ᐊᑯᓐᓂᖓᓂ ᐊᔾᔨᓕᐅᕈᑎᓂᒃ ᐊᐅᓚᔪᓄᑦ ᐊᑐᖅᐳᑎᒃᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᒥ ᓴᓂᐊᓂ ᐅᐊᖏᓇᖅᐸᓯᖓᓂᓗ ᖃᐅᔨᒍᑎᖃᓚᐅᖅᐳᒍᑦ ᖁᒻᒧᐊᒃᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᖁᖓᓯᕈᓯᖅᑐᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᕈᑎᒋᓪᓗᒋᑦ ᑲᑎᖅᓱᐃᓚᐅᖅᐳᒍᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ. ᐅᑭᐅᒃᑯᑦ ᑕᐃᑲᓂ Dolphin ᐊᒻᒪ Union ᑐᒃᑐᐃᑦ ᑕᓇᐅᒃᑯᑦ ᐃᑳᖃᑦᑕᕋᓱᒋᔭᐅᓪᓗᑎᒃ ᑕᐃᑯᖓ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᒧᑦ ᐅᑭᐅᒃᑯᑦ. ᑖᒃᑯᐊ ᑖᓐᓇ Dolphin ᐊᒻᒪ Union ᐊᑎᖃᖅᑎᑕᐅᓪᓗᑎᒃ SARA ᐊᒃᑐᖅᑕᐅᖁᔭᐅᖏᑦᑐᑦ ᑖᒃᑯᐊ ᕿᖓᐅᑉ Beverly–ᓗ ᑐᒃᑐᖏᑦ ᐃᒪᓐᓇ ᐊᑎᖃᖅᑐᒃᑯᑦ ᒥᐊᓂᕆᔭᐅᓪᓗᒃ ᐱᔭᐅᑦᑕᐃᓕᖁᔭᐅᖓᑕ ᐅᒪᔪᓂ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖏᑦᑐᑎᒃ ᑕᐃᒪᓐᓇ ᑲᒪᒋᔭᐅᕙᔭᕐᒪᖖᑕ Beverly ᑐᒃᑐᐃᑦ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᑐᐃᓐᓇᓇᐊᖃᖅᑐᑦ ᐃᓂᒋᕚᑦᑕᖏᑦ ᐊᖅᓵᖅᑕᐅᕗᓕᐊᓂᖏᑦ, ᓂᐱᖃᓗᐊᕐᓂᖓᓄᑦ ᐸᕕᓴᖅᑕᐅᓂᖏᑦ, ᐃᖏᕐᕋᔭᖕᓂᖏᓐᓄᑦ. ᐊᑲᐅᖏᓕᐅᖅᑎᑕᐅᓂᖏᑦ ᑐᖁᒍᑕᐅᓯᒪᔪᓪᓗ ᐋᓐᓂᕈᑕᐅᓯᒪᔪᓪᓗ, ᐸᕕᓴᖃᑦᑕᕐᓂᖏᓪᓗ ᓱᕈᕐᓇᖃᖅᑐᕕᐅᔪᓂ, ᖃᑦᔫᓇᕐᓂᓪᓗ ᕿᑐᖏᐅᖃᑦᑕᓕᕐᓂᖏᑦ. ᐊᖅᑭᒃᓯᐃᓂᖅ ᐊᐅᓚᑦᓯᓂᕐᓗ ᐱᓗᐊᖅᑕᐃᓕᒪᑎᑦᑐᔾᔨᓂᕐᒧᑦ ᐱᔪᑎᖃᖅᑐᑦ, ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒥᐊᖃᕐᓂᖅ, ᓱᒃᑲᓗᐊᖃᑦᑕᖏᓐᓂᖅ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑰᕐᓂᖅ, ᐊᒃᑕᑯᖃᕐᓂᖅ ᐊᒻᒪᓗ ᓱᕈᔪᖕᓂᒃ ᑲᒪᒋᔭᖃᖃᑦᑕᕐᓂᖅ: ᐆᒪᔪᓄᑦ ᓇᖕᓂᐊᕐᓂᖅ ᐅᐸᒃᑕᐃᓕᒪᖁᔪᓐᓂᖅ ᐃᒪᓐᓇ ᐊᐅᓚᓂᑕᐃᓕᒪᖁᔪᓐᓂᖅ, ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᑦ ᒪᓕᒃᑯᑎᑦ (ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10,

ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20). ᐊᑐᓕᖅᑎᑕᐅᓗᑎᒃ ᐋᖅᑭᒃᓱᐃᒍᑎᒃᓴᐃᑦ ᐅᖃᖅᓯᒪᔪᑦ ᒪᓕᒃᓗᒋᑦ ᐆᒪᔪᐃᑦ ᐋᖅᑭᒃᓱᕉᔾᔭᐅᓯᒪᒋᐊᖃᕐᓂᖏᑦ ᐊᒻᒪ ᑐᒃᑐᓄᑦ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓱᒋᖏᑦᓗᑎᒃ.**

ᖃᓄᐃᓕᐅᕋᔭᕐᓂᖓᓄᑦ ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐸᑦ ᓄᕋᓕᐅᕚᓂᒃᓯᒪᓕᖅᑎᓪᓗᒋᑦ ᐊᐅᔭᖅᓯᐅᓕᖅᑎᓪᓗᒋᓪᓗ ᕿᖓᐅᒥ ᑐᒃᑐᐃᑦ ᐊᒻᒪᓗ Beverly ᑐᒃᑐᖏᑦ ᑖᒥᓂ ᓄᓇᕗᒥ, ᓄᓇᕕᐊᒥᓗ ᐃᓂᖃᖅᑐᑦ. ᐊᕝᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᖅᓯᒪᓂᖏᒧᑦ ᒪᓕᒪᓕᒃᑕᐅᑎᐊᖃᖅᑐᑦ ᒪᓕᒃᓗᒋᑦ ᑎᑎᖃᖅᓯᒪᔪᑦ (ᓄᓇᕗH, ᒥᓂᔅᑕ ᐃᓄᓕᕆᔨᑐᖄᒥ ᐊᕝᑎᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᖏᑦ 2013), ᒥᓂᔅᑕ ᐃᓄᓕᕆᔨᑐᖃᒃᑯᓐᓄᑦ ᑲᓇᑕᒥ ᐅᖃᐅᓯᖃᓚᐅᕐᒪᑦ ᐱᒻᒪᕆᐅᓂᖏᓐᓄᑦ ᕿᖓᐅᒥᑦ ᑐᒃᑐᐃᑦ ᑖᕝᓂ ᖃᐅᔨᓴᖃᑦᑕᕈᓯᒃᓴᓂᒡᓗ ᓴᖅᑭᑎᑎᓚᐅᖅᓗᓂ (ᑎᑎᖃᐃᑦ ᑎᑎᕋᑦᑕᐅᓚᐅᖅᑐᑦ ᑎᓴᐱᕆ 17, 2012–ᒥ). ᖃᐅᔨᓴᖅᑕᐅᒍᑎᒃᓴᖏᑦ ᐱᑕᖃᖁᓪᓗᒋᑦ, ᖃᓄᖅ ᓂᕈᐊᖅᑕᐅᓯᒪᖃᑦᑕᕐᓂᐊᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐸᑦ ᕿᖓᐅᑉ ᑐᒃᑐᖏᑦ ᓄᕋᓕᐅᕚᓂᒃᓯᒪᓕᕚᖓᑕ ᐊᐅᔭᒃᑯᓪᓗ ᐃᓂᒋᖃᑦᑕᖅᑕᖏᑦ. ᒪᓕᒡᓗᓂ ᐊᑐᓕᖅᑕᐅᓂᖏᑦ ᐋᖅᑭᒃᓱᕆᑕᐅᓂᐊᕐᓂᖏᓪᓗ ᐆᒪᔪᐃᑦ ᐋᖅᑭᒃᓱᕉᔾᔭᐅᓂᐊᕐᓂᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᒍᑎᓄᓪᓗ ᐸᕐᓇᒃᓯᒪᒍᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 10 ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᐊᒻᒪ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᑕᐃᒪᓐᓇᐃᑦᑐᓂ ᖃᓄᐃᓕᐅᕆᑕᐅᓂᐊᕐᓂᖏᓐᓄᑦ ᐃᓱᒪᒋᔭᐅᓯᒪᕗᑦ. ᑕᐃᒪᓐᓇ ᓇᓐᓂᓐᓂᕈᑦ ᐃᓱᒪᒋᔭᐅᓯᒪᕗᑦ ᖃᐅᔨᓴᕆᑕᐅᓯᒪᔪᓂ ᖃᓄᐃᓗᐊᖏᓂᐊᕋᓱᒋᔭᐅᖏᑉᐸᑦ. **ᐊᑲᐅᖏᓕᐅᕆᖃᓗᐊᕐᓂᐊᖏᑉᐸᑦ.**

ᐊᒃᓴᐃᑦ

ᓇᑉᐸᖅᑐᖃᖏᑦᑐᒥᐅᑕᐃᑦ ᐊᒃᓴᐃᑦ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᓐᓄᑦ ᑎᑎᖅᑕᐅᓯᒪᕗᑦ “”ᐅᓗᕆᐊᓇᖅᑐᒦᓐᓂᖏᓐᓄᑦ ᐆᒪᔪᐃᑦ” (SARA; COSEWIC 2012) ᑎᑎᖅᑕᐅᓯᒪᓪᓗᑎᒡᓗ ᓄᓇᕗᒥ ᐃᒃᐱᒋᔭᐅᕙᐊᕆᐊᖃᕐᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᕐᓂᖏᓐᓄᑦ (CESCC 2010)–ᒥ. ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑐᖃᓂ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖏᑦ ᖃᐅᔨᓐᓇᕈᑕᐅᓚᐅᓯᖅᐸᑦ 2012-ᒥ 61–ᖑᓂᖏᓐᓄᑦ ᐊᒃᓴᐃᑦ ᑕᒡᕗᓂ ᐱᓕᕆᕙᖕᒥ ᐊᒻᒪᓗᒃᑲᓐᓂᖅ 62 ᐊᔾᔨᖓᓂ ᓄᓇᓕᐅᑉᒥ ᖃᐅᔨᒍᑕᐅᓚᐅᖅᐸᑦ ᐊᔾᔨᑦᑕᐃᓐᓇᖏᓐᓂᒃ ᐅᓄᕐᓂᖅᑐᑦ ᐱᓕᕆᕙᐅᔪᑉ ᐅᐊᖕᓇᖅᐸᓯᖓᓂ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒧᑦ ᐅᑯᐊᖑᕗᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓴᖅᑐᑦ: ᐃᓂᖃᕐᕕᐊᕈᓐᓅᖃᔭᕐᓂᖏᑦ, ᓂᐱᖃᓗᐊᕐᓂᖏᓐᓄᑦ ᕿᒫᑎᑕᐅᒐᔭᕐᓂᖏᑦ (ᔫᕐᓗ ᐃᓂᒋᔭᒥᖕᓂᒃ ᐊᓯᐅᔨᒐᔭᕐᓂᖏᑦ), ᐃᖏᕐᖃᔭᒍᓐᓇᕐᓂᖏᑦ ᐊᑐᖅᑕᐅᖏᓐᓂᖅᓴᐅᓕᖃᔭᕐᓂᖏᑦ ᐋᓐᓂᖅᑐᖅᑲᖃᔭᕐᓂᖓ ᑐᕐᑯᔪᖅᑲᖃᔭᕐᓂᖓᓗ ᐊᒻᒪ ᓱᕈᕐᓄᑦ ᐅᐸᖅᑦᑕᕐᑕᖃᔭᕐᓂᖏᑦ ᐸᕙᓴᖅᑦᑕᖃᔭᕐᓂᖏᓪᓗ ᕿᑐᖏᐅᖏᓐᓂᖅᓴᐅᓕᕈᓐᓇᕐᓗᑎᒡᓗ. ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᑦ ᖃᐅᔨᓴᕈᑎᓄᑦ ᐃᓚᐅᑎᑕᐅᓚᐅᖏᑉᐸᑦ ᐊᒃᓴᐃᑦ ᓯᓂᖅᑦᑕᕐᓂᖏᓐᓄᑦ ᑕᒪᒃᑯᐊ ᐊᖅᑯᑎᓕᐅᖅᑕᐅᓂᖏᓐᓂ ᐊᑐᖅᑕᐅᓂᖏᓐᓂᓗ. ᐊᑐᓗᐊᖅᑕᐃᓕᔭᐅᓂᐊᖅᐸᑦ ᑕᒪᒃᑯᓂᖓ ᐊᕝᑎᒥᐅᑕᖅ ᐊᒃᑯᖅᑕᐅᓗᐊᖅᑕᐃᓕᕐᑯᓪᓗᒍ, ᓂᐱᖃᓗᐊᖅᑕᐃᓕᕐᑯᔾᔫᓪᓗᑎᒡᓗ, ᔫᒃᑲᓗᐊᖃᑦᑕᖏᓪᓗᑎᒡᓗ ᐃᖏᕋᔪᑦ, ᐅᑭᐅᒃᑯᓪᓗ ᐊᖅᑯᑎᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖁᓪᓗᒋᑦ ᐆᒪᔪᐃᓪᓗ ᐊᒃᑐᖅᑕᐅᓗᐊᖅᑕᐅᓕᒋᐊᖃᕐᓂᖏᑦ ᒪᓕᒃᓗᒋᑦ ᐆᒪᔪᓕᕆᒍᑎᒃᓴᖏᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 10–ᒥ ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20). ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑎᑎᕋᖅᓯᒪᔪᕐᑯᑎᖏᓐᓂ ᖃᐅᔨᓴᕐᓂᕐᒧᓪᓗ ᐸᕐᓇᒃᓯᒪᒍᑎᖏᓐᓂ (ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᐊᒃᓴᓄᑦ. ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐸᑦ ᐱᓕᕆᕙᖓ ᐊᕝᓗᔭᐅᓯᒪᖃᑦᑕᕈᓐᓇᕐᓂᖓᓄᑦ ᐊᒃᓴᓄᑦ ᐃᑎᕐᕙᐅᔪᓐᓇᖏᓪᓗᓂ ᑕᐃᑯᖓᐅᖃᑦᑕᕋᓗᐊᕐᓗᑎᒃ ᐱᓕᕆᕙᖓᓄᑦ Back River–ᒧᑦ. ᒪᓕᒃᓗᒋᓪᓗ ᐆᒪᔪᑦ ᖃᓄᐃᓕᐅᖅᑕᐅᑎᐊᖃᕐᓂᖏᓐᓄᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ (ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᑕᐃᒪᓐᓇᐃᓕᐅᕈᑎᖃᕐᓂᐊᖅᓗᑎᒡᓗ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᐱᓕᕆᐊᓄᑦ, **ᐃᓗᐃᓪᓕᐅᕈᑎᖃᔭᖕᒋᓐᓂᖃᖅᑕᐅᕗᑦ.** ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖏᑦ ᓇᓂ ᐃᓂᖃᕐᓂᖏᑦ ᐊᔾᔨᒌᖏᑦᑐᓂ ᓄᓇᕗᐊᒥ ᐊᒃᓴᐃᑦ ᐊᒥᔫᓂᖅᓴᐅᑉᓗᑎᒃ ᑖᒥᓂ ᐱᓕᕆᕙᖕᒧᐊᖃᑦᑕᖅᑐᑦ. ᑕᐃᒪᓐᓇ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓱᒋᔭᐅᖏᑦᓗᑎᒡᓗ.**

ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐸᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᐱᓕᕆᕙᐅᓂᐊᖅᑐᒥ ᐊᕝᓗᓕᐅᖅᑕᐅᓯᒪᔪᖅ ᖃᓂᒋᔭᖓᓂ ᐃᓱᒪᒋᔭᖃᖅᓗᑎᒃ ᐊᒃᓴᐃᑦ ᓇᒨᖓᐅᔪᓐᓇᕐᓂᖏᓐᓄᑦ ᑕᐃᒪᓐᓇᓗ ᓴᓂᐊᓂᖃᑦᑕᕈᓐᓇᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᕙᐅᓂᐊᖅᑑᑉ Back River–ᒥ. ᐊᑐᓕᖅᑎᑕᐅᓗᓂ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕙᖃᓗᑎᒡᓗ ᐆᒪᔪᐃᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑎᑕᐅᓯᐊᖃᖏᓐᓂᖏᑦ ᐆᒪᔪᓕᕆᒍᑎᑦ ᒪᓕᒃᓗᒋᑦ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᑦ (ᑎᑎᖅᓯᒪᔪᑦ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᑕᐃᒪᓐᓇᓗ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᐱᓕᕆᒍᑎᖃᕐᓂᐊᕐᓗᑎᒃ, ᐊᒃᓴᐃᑦ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐸᑦ.** ᓄᓇᐃᑦ ᐃᓂᒋᓂᐊᖅᑕᖏᑦ ᐊᒃᓴᐃᑦ ᓄᓇᕗᐊᒥ ᐊᒻᒪᓗ

ᐱᑕᖃᕐᓂᐊᕆᓪᓗᑎᒃ ᑖᒥᓂ ᓄᓇᕘᐊᒥ. ᑕᐃᒪᓐᓇᐃᑎᓪᓗᒍ, ᑕᐃᒪᓐᓇ ᓄᓇᐃᑦ ᖄᖅᑭᖅᓯᒪᓂᐊᖅᐳᑦ ᐃᓂᕆᖃᑦᑕᕐᓂᐊᖅᑕᖅᑎᑦ **ᐊᑲᐅᖅᑭᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓯᕆᔭᐅᖅᑎᑉᐳᓪᓗ.**

ᐅᒥᖕᒪᑦ

ᖃᖓᑕᓲᒃᑯᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᑎᒃ 2001 ᐊᒻᒪ 2001 ᐊᑯᓐᓂᖓᓂ ᖃᐅᔨᓭᕈᑕᐅᓚᐅᖅᑐᑦ ᖃᐅᔨᓇᕈᑕᐅᓚᐅᖅᐳᑦ ᐱᓕᕆᕝᕕᐅᑉ ᐃᓗᐊᓂ ᐅᒥᖕᒪᒃᑕᖃᐅᕐᓂᖓᓄᑦ. ᐅᒥᖕᒪᒃᑕᖃᕋᓲᒃᓗᓂᓗ ᑕᒪᒃᑯᓇᓂ ᐃᑎᖅᓴᐅᓂᖅᓴᓂ ᐳᒃᑭᓐᓂᖅᓴᒥ ᓄᓇᒥ ᐅᐊᖕᓇᖓᓂ ᕿᖓᐅᑉ ᐱᓕᕆᕝᕕᐅᑉ ᖃᓂᖅᑭᔭᖓᓂᓗ ᐱᑕᖃᒃᑲᓐᓂᕆᓪᓗᓂ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓂᐊᓂ, ᑮᑭᐊᓂᓗ ᑕᐃᑲᓂ George Property Area–ᒥ ᐊᒻᒪᓗ ᓴᓂᐊᓂ ᐱᓕᕆᕝᕕᐅᖃᑕᐅᕚᑉ Goose Property Area.–ᒥ. ᖃᓄᐃᑦᑐᓂᒃ ᐃᓱᐃᓪᓕᐅᕈᑎᖃᕈᓇᕐᓂᕆᑦᐊᒻᒪ ᐅᑯᐊᖑᔫᑦ: ᐃᓂᖃᕐᑯᓐᓃᖅᑕᐅᔪᓇᖅᐳᑦ, ᓂᐱᖃᓗᐊᕐᓂᕆᓐᓄᑦ ᕿᒦᔪᓇᕐᓂᕆᑦ, ᐃᖅᑭᖁᓯᐊᕈᓇᐃᓪᓕᓗᑎᒃ, ᐊᒻᒪ ᑐᖁᖃᕐᓂᕆᑦ ᐋᓐᓂᕐᓂᕆᑦ, ᐅᐸᒃᑕᕐᓂᕆᑦ ᐱᓕᕆᕝᕕᐅᔪᓄᑦ, ᓱᕈᕐᓄᑦ ᐅᐸᒍᒪᓇᔭᕐᓂᕆᑦ, ᐊᒻᒪ ᕿᑐᕆᐅᓯᐊᕈᓐᓃᕈᓇᕐᓂᕆᑦ. ᐋᖅᑭᒃᓱᐃᒍᑕᐅᔪᓇᖅᑐᑦ ᐊᐅᓚᑕᐅᓂᕆᔭᐅᔪᓇᖅᑐᓪᓗ ᐃᓕᕆᐊᕿᔭᐅᓂᐊᖅᐳᑦ ᐊᑲᐅᖅᑭᓕᐅᕈᑎᒃᓴᖃᕐᑯᕆᑦᓗᑎᒃ, ᓂᐱᖃᓗᐊᖅᑐᒦᑦᑕᐃᓕᕐᑯᓪᓗᕆᓪᓗ, ᓱᑲᓗᐊᖅᑐᒥᓗ, ᐃᒪᒃᑰᖅᑐᓂᒃ ᐊᖅᑯᑎᖃᖅᑎᑎᓇᓱᐊᕐᓗᑎᒃ ᑲᒪᕆᔭᖃᖃᑦᑕᕐᓗᑎᒡᓗ ᐃᓚᒃᓴᕆᔭᐅᔪᓂᒃ ᐱᓕᕆᐊᖏᓐᓄᑦ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᓄᑦ ᐆᒪᔫᖕᓄᑦ ᐅᐸᒃᑕᑦᑕᐃᓕᕐᑯᓪᓗᕆᑦ ᓱᕈᖑᑦ ᐊᒃᑯᖅᑕᐅᕐᑯᓇᕆᑦ, ᐊᑐᖅᑕᐅᓗᑎᒡᓗ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᕆᐊᖃᖅᑐᑦ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᓂ 10 ᐊᕕᒃᓯᒪᓂᖓᓂ 20), **ᐃᓱᐃᓪᓕᐅᕈᑕᐅᓗᐊᖅᑐᖃᕐᓂᐊᕋᓯᕆᔭᐅᖅᑎᑦᑐᑦ.**

ᖃᓄᐃᑦᑐᓂᒃ ᐃᓱᐃᓪᓕᐅᕈᑎᖃᕈᓇᕐᓂᕆᑦᐊᒻᒪ ᐅᑯᐊᖑᔫᑦ: ᐃᓂᖃᕐᑯᓐᓃᖅᑕᐅᔪᓇᖅᐳᑦ, ᓂᐱᖃᓗᐊᕐᓂᕆᓐᓄᑦ ᕿᒦᔪᓇᕐᓂᕆᑦ, ᐃᖅᑭᖁᓯᐊᕈᓇᐃᓪᓕᓗᑎᒃ, ᐊᒻᒪ ᑐᖁᖃᕐᓂᕆᑦ ᐋᓐᓂᕐᓂᕆᑦ, ᐅᐸᒃᑕᕐᓂᕆᑦ ᐱᓕᕆᕝᕕᐅᔪᓄᑦ, ᓱᕈᕐᓄᑦ ᐅᐸᒍᒪᓇᔭᕐᓂᕆᑦ, ᐊᒻᒪ ᕿᑐᕆᐅᓯᐊᕈᓐᓃᕈᓇᕐᓂᕆᑦ. ᐋᖅᑭᒃᓱᐃᒍᑕᐅᔪᓇᖅᑐᑦ ᐊᐅᓚᑕᐅᓂᕆᔭᐅᔪᓇᖅᑐᓪᓗ ᐃᓕᕆᐊᕿᔭᐅᓂᐊᖅᐳᑦ ᐊᑲᐅᖅᑭᓕᐅᕈᑎᒃᓴᖃᕐᑯᕆᑦᓗᑎᒃ, ᓂᐱᖃᓗᐊᖅᑐᒦᑦᑕᐃᓕᕐᑯᓪᓗᕆᓪᓗ, ᓱᑲᓗᐊᖅᑐᒥᓗ, ᐃᒪᒃᑰᖅᑐᓂᒃ ᐊᖅᑯᑎᖃᖅᑎᑎᓇᓱᐊᕐᓗᑎᒃ ᑲᒪᕆᔭᖃᖃᑦᑕᕐᓗᑎᒡᓗ ᐃᓚᒃᓴᕆᔭᐅᔪᓂᒃ ᐱᓕᕆᐊᖏᓐᓄᑦ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᓄᑦ ᐆᒪᔫᖕᓄᑦ ᐅᐸᒃᑕᑦᑕᐃᓕᕐᑯᓪᓗᕆᑦ ᓱᕈᖑᑦ.

ᖃᖃᑦ ᒥᖅᑯᖃᑦᑐᓪᓗ ᐆᒪᔨᐃᑦ

ᖃᖃᑦ ᐊᒪᕈᐃᓪᓗ ᓂᕈᐊᖅᑕᐅᓚᐅᖅᐳᑦ ᒥᖅᑯᖃᖅᑰᑎᒃ ᐆᒪᕗᓂᖅᑭᓐᓄᑦ ᑖᒥᓂ ᖃᖃᑦ ᑕᒪᕿᒃ ᓄᓇᒦ "ᐅᓄᕐᓂᖅᑭᑦ ᓱᖁᒃᐸᓪᓕᐊᖅᑭᓐᓂᖁᖅᑕᐅᒌᑦ", ᑭᓯᐊᓂ ᖃᖃᑦ "ᐃᓱᓖᓗᒍᑕᐅᓪᓗᑎᒃ ᐱᓗᐊᖅᑕᐃᓕᖁᔭᐅᓪᓗᑎᒃ" (COSEWIC 2003). ᓇᓗᓇᐃᒃᑯᑕᓕᐅᖅᑕᐅᓪᓗᑎᒃ ᐅᑎᖅᑎᑕᐅᖃᑦᑕᓚᐅᖅᐳᑦ ᐱᔭᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ ᖃᖃᑦ 2012–ᒥ 12 ᖃᖃᑦ ᑖᕙᓂ ᐃᓂᖃᖅᑐᒥ 1,692 km^2 ᑖᕙᓂ Goose ᐊᒻᒪ George ᐱᓕᕆᕝᕕᔪᒥ. ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᓂ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᒎᖅ ᖃᖃᑦ ᐃᓂᖃᖅᑎᕆᔪᑦ ᐅᖓᓯᒃᑎᕆᔪᓂᒃ 89 km^2 ᐊᒻᒪ 264 km^2, ᐃᓂᕆᔭᖅᑎᑦ ᐊᖏᓂᖃᖅᑎᓪᓗᑎᒃ 162 km^2. ᐊᒪᕈᐃᑦ, ᖃᖓᑕᓲᒃᑯᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ, ᓇᓂᓗ ᐃᑎᖃᕐᓂᕆᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᐊᑯᓐᓂᖓᓂ 2007 ᐊᒻᒪ 2013–ᒥ ᓇᓗᓇᐃᖅᓯᓚᐅᖅᐳᑦ 8–ᖑᓚᐅᕐᓂᕆᓐᓄᑦ ᐃᑎᕆᑦ ᐊᑐᖅᑕᐅᕙᑦ ᐊᒪᕈᕐᓄᑦ ᑖᕙᓂ ᐱᓕᕆᕝᒥ, ᑕᓪᓚᒪᑦ ᐊᒪᕈᖃᖅᐳᑎᒃ. ᐱᓕᕆᐊᖃᖅᓯᒪᒎᑦ ᐃᓱᐃᓪᓕᐅᖅᑕᐃᓕᒪᒍᑎᖃᕐᓂᕐᒧᑦ ᑕᒪᒃᑯᐊ ᐃᓂᖃᕈᓐᓃᕈᐃᓐᓇᓕᐊᖃᕐᓂᕆᑦ, ᓂᐱᖃᓗᐊᖅᑕᐃᓕᕆᐊᖃᕐᓂᕆᑦ, ᐃᖅᑭᖁᔭᖅᓂᕆᑦ ᐃᓱᐃᓪᓕᐅᕈᑎᖃᓕᐊᖃᐃᓐᓇᕐᓂᕆᑦ, ᑐᖁᔪᖃᕈᐃᓐᓇᓕᐊᖃᕐᓂᖓ ᐋᓐᓂᖅᑐᖃᓕᐊᖃᕐᓂᖓᓗ ᓱᕈᕐᓄᑦ ᐅᐸᑐᐃᓐᓇᓕᐊᖃᕐᓂᕆᑦ ᕿᑐᕆᐅᕐᓂᕆᓐᓄᑦ ᐊᑲᐅᖅᑭᓕᐅᕈᑎᖃᕐᓇᕐᒪᑕ. ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᓂᐊᖅᑐᑦ ᐊᐅᓚᑕᐅᒍᑕᐅᓂᐊᖅᑐᓪᓗ ᐊᑲᐅᖅᑭᓕᐅᕈᑎᖃᖅᑕᐃᓕᕐᑯᓪᓗᕆᑦ ᐱᓕᕆᐊᓕᔭᐅᔪᖅ, ᓂᐱᖃᓗᐊᖅᑕᐃᓕᕐᑯᓪᓗᒍᓗ, ᓱᒃᑲᓕᓗᐊᖅᑕᐃᓕᕐᑯᓪᓗᕆᓪᓗ, ᐅᑭᐅᑦᑯᑦ ᐊᖅᑯᑎᒥᒃ ᐊᑐᖃᑦᑕᕐᓂᐊᖅᐳᑦ, ᐊᒃᑕᑯᖃᑦᑕᕐᓗᑎᒃ ᐊᓯᐊᒍᑦ ᐊᒻᒪ ᓱᕈᕐᓇᖅᑐᒥᒃ ᑲᒪᕆᔭᖃᖅᓯᐊᖃᑦᑕᕐᓗᑎᒃ ᐆᒪᔪᓄᑦ ᐅᐸᒃᑕᐅᖃᑦᑕᖁᖅᑭᓪᓗᒍ ᐊᒃᑕᑯᐃᑦ ᐊᓯᖅᑭᓪᓗ ᐆᓐᓇᖅᑐᑦ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᒪᓕᒡᓗᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᖑᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᒥ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᕆᔭᖓᓂ 20). ᑕᐃᒪᓐᓇ ᖃᖃᒃ ᖃᓄᐃᓕᖓᓂᐊᕐᓂᕆᓐᓄᑦ ᒥᖅᑯᖃᑦᑐᓪᓗ **ᐃᓱᐃᓪᓕᐅᓗᐊᕐᓂᖅᑲᓯᕆᔭᐅᖅᑎᑉᐳᑦ.**

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᑦ ᑕᒪᒃᑯᐊ ᐃᖏᕐᕋᔾᔪᓂᕆᔾᔪᖏᑦ ᖃᕝᕙᑦ ᐊᒪᕈᓪᓗ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓂᐊᓂ. ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᑦ ᖃᕝᕚᓂᒃ ᓇᒧᖓᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᖅᓱᑎᒃ ᖃᓄᑎᒋᓪᓗ ᐅᖓᓯᒃᑎᒋᔪᒧᐊᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐊᒪᕈᑦ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓂᐊᓃᖃᑦᑕᖅᑐᑦ. ᖃᕝᕕᒃ ᑕᕝᕙᓂ ᐊᔾᔨᒋᓚᐅᖅᐸᖏᑦ ᑖᒃᑯᐊ RSA, ᑭᓯᐊᓂ ᑭᓪᓕᖃᓚᐅᖅᓱᑎᒃ ᑕᕝᕙᓂ Tibbitt-ᒥᑦ Contwoyto ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᖓᓂ. ᐊᒪᕈᕐᓄᑦ ᖃᐅᔾᔨᒪᔪᐅᓪᓗᓂ ᑐᒃᑐᖃᕐᓂᖓᓄᑦ ᕿᖓᐅᑉ ᑐᒃᑐᖏᓐᓂ ᐊᒻᒪ Beverly-ᖑᓂᖅᑕᐅᔪᓂᒃ ᐊᒪᕈᑦ ᒪᓕᖃᑦᑕᕐᒪᑕ ᑐᒃᑐᓂᒃ, ᓂᕿᒃᓴᕆᐸᓗᓂᒋᑦ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓂᐊᓃᑦᑐᑦ. ᒪᓕᒡᓗᒍ ᐊᑐᓕᖅᑕᐅᓂᐊᕐᓂᖓ ᐋᖅᑭᒃᓯᕈᑎᒃᓴᐃᑦ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᒪᓕᒡᓗᒋᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᓪᓗ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᑦ (ᑎᑎᕋᖅᓯᒪᓂᖏᓐᓂ 10 ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᐊᒻᒪ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥ ᐅᔾᔮᖅᑐᕈᑎᖃᕐᓂᐊᕐᓗᑎᒃ ᑕᐃᒪᓐᓇ ᐱᓕᕆᕆᐊᖃᓕᕐᒥᒃᐸᑦ, ᖃᕝᕙᑦ ᒥᖅᑯᖃᖅᑐᓪᓗ ᐆᒪᔪᐃᑦ ᐃᓗᐃᓪᓕᐅᓗᐊᕐᓂᖃᕋᓱᒋᔭᐅᖕᒋᑉᐳᑦ. ᖃᕝᕕᒃ ᐱᓕᕆᕝᕕᖕᒦᖃᑦᑕᖅᑐᑦ ᐃᖏᕐᕋᓂᐊᕋᓱᒋᔭᐅᖕᒋᑉᐳᑦ ᓄᓇᖁᓯᐊᒧᑦ, ᑕᐃᒪᓐᓇ ᐃᖏᕐᕋᔭᖃᑦᑕᕐᓂᐊᕋᓱᒋᔭᐅᖕᒋᑦᑐᑦ. ᐊᒪᕈᖃᖅᐳᖅ ᐃᓚᖓᓂᓗ ᑕᓖᓂ ᓄᓇᖁᓯᐊᒥ. ᑕᐃᒪᓐᓇᐃᑎᓪᓗᒍ, ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᒍᑦ ᑕᐃᒪᓐᓇ ᓄᓇᕗᒧᑦ ᓄᓇᖁᓯᐊᒧᓪᓗ ᐅᑎᖅᑕᖅᑲᑦᑕᕐᓂᖏᓐᓄᑦ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᕋᓱᒋᔭᐅᖏᑦᑐᑎᓪᓗ.**

ᑎᖕᒥᐊᑦ ᐃᖏᕐᕋᔭᖅᑲᑦᑕᖅᑐᑦ

ᑎᖕᒥᐊᑦ ᐃᖏᕐᕋᔭᖅᑲᑦᑕᖅᑐᑦ ᓴᐳᔾᔭᐅᕙᑦ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᑦᑕ ᒪᓕᒐᖅᐊᖏᓐᓄᑦ *ᑎᖕᒥᐊᑦ ᐃᖏᕐᕋᔭᖅᑲᑦᑕᖅᑐᑦ ᐊᖏᕈᑎᒋᔭᐅᓯᒪᓂᖏᓐᓄᑦ ᐱᖁᔭᖅᐊᖅ* (1994) ᐊᒻᒪᓗ *ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᐱᖁᔭᖅᐊᖅ* (2003), ᒪᓐᓂᖕᒋᑦ ᓱᕋᒃᑎᖅᑕᐅᒋᐊᖃᖕᒋᑦᑐᑦ ᐊᑐᖅᑕᐅᓂᖕᒋᓐᓂ, ᐊᒻᒪᓗ ᐸᕝᓴᖅᑕᐅᒋᐊᖃᖕᒋᑦᑐᑎᒃ. ᐱᑕᖃᖕᒋᑉᐳᖅ ᑕᕝᕙᓂ ᐱᓕᕆᕝᕕᐅᔪᒥ ᐃᖏᕐᕋᔭᒃᐸᒃᑐᓂᒃ ᑎᖕᒥᐊᓂᒃ ᑕᐃᑲᓃᖃᑦᑕᖅᑐᖃᕐᓂᖓᓄᑦ ᐱᑕᖃᖕᒋᑉᐳᖅ ᑕᒪᒃᑯᐊ *ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᑦ ᐱᑕᖅᑕᐃᑦᑕᐃᓕᔪᑦ ᐱᖁᔭᖅᐊᖓ* ᒪᓕᒡᓗᒍ (SARA 2002). ᑭᓯᐊᓂ, ᑕᒪᒃᑯᐊ ᐱᖓᓱᒃ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᐃᒪᕐᒥᐅᑕᐅᕙᒃᑐᑦ ᑎᖕᒥᐊᑦ ᐊᒻᒪᓗ ᖁᓕᑦ ᑕᕝᕙᓂ ᐱᓕᕆᕝᕕᐅᑉ ᐃᓗᐊᓃᖃᑦᑕᖅᑐᑦ “ᐃᑉᐱᒋᔭᐅᖃᑕᐅᕙᑦ” ᒪᓕᒡᓗᒋᑦ ᑕᒪᒃᑯᐊ ᒪᓕᒐᐃᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ CESCC-ᒥ ᓄᓇᕗᒥ (CESCC 2010). ᑕᒪᒃᑯᐊ ᐱᓕᕆᕝᕕᖕᒥᖕᒌᖅᑐᑦ ᐃᓄᐃᓪᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐅᑯᐊᖑᓪᓗᑎᒃ: ᐃᓂᒃᓴᖃᕈᓐᓃᖅᑎᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ, ᓂᐱᖃᓗᐊᖅᑎᓪᓗᒍ ᐸᕝᓴᖅᑕᐅᓂᖕᒋᑦ, ᐃᖏᕐᕋᔾᔪᓂᖕᒋᓪᓗ ᐃᓄᐃᓪᓕᐅᕈᑎᖅᑎᑕᐅᓂᖕᒋᑦ, ᑐᖁᖅᓂᖕᒋᑦ ᐋᓐᓂᕐᓂᖕᒋᓪᓗ, ᐅᐸᒍᒪᓂᖕᒋᑦ, ᓱᕈᕐᓇᖅᑐᓄᑦ ᐅᐸᕐᑲᑦᑕᔭᕐᓂᖕᒋᑦ ᕿᑐᖕᒋᐅᖁᐊᖕᒋᓕᕐᓗᑎᒃ. ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᓂᐊᖅᑐᑦ ᐊᐅᓚᑕᐅᒍᑕᐅᓂᐊᖅᑐᓪᓗ ᐊᑲᐅᖏᓕᐅᕈᑎᖅᑕᐃᓕᕐᓂᓪᓗᒋᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᖅ, ᓂᐱᖃᓗᐊᖅᑐᒦᑦᑕᐃᓕᕐᓂᓪᓗᒋᓪᓗ, ᓯᑲᓗᐊᖅᑐᒥᓗ, ᐃᒪᒃᑰᖅᑐᓂᒃ ᐊᖅᑯᑎᖃᖅᑎᑎᓇᓯᐊᕐᓗᑎᒃ ᑲᒪᒋᔭᖃᖃᑦᑕᕐᓗᑎᓪᓗ ᐃᓚᒃᓴᕆᔭᐅᔪᓂᒃ ᐱᓕᕆᐊᖕᒋᓐᓄᑦ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᓄᑦ ᐆᒪᔪᖕᓄᑦ ᐅᐸᒃᑕᐅᑦᑕᐃᓕᕐᓂᓪᓗᒋᑦ ᓯᕗᖕᒧᑦ ᐊᒃᑯᖅᑕᐅᕐᑯᓇᒋᑦ, ᐊᑐᖅᑕᐅᓗᑎᓪᓗ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᓂ 10 ᐊᓪᕕᒃᓯᒪᓂᖓᓂ 20). ᐊᑐᖅᑕᐅᓗᑎᓪᓗ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᓂ 10 ᐊᓪᕕᒃᓯᒪᓂᖓᓂ 20) ᖃᓄᐃᓐᓂᐊᖕᒋᓐᓂᖃᖅᑕᐅᕙᑦ ᖃᓄᐃᓐᓂᐊᖕᒥᓐᓂᐊᖕᒋᓐᓂᓄᖃᖅᑕᕙᑦ ᐃᖏᕐᕋᔭᒃᐸᒃᑐᑦ ᑎᖕᒋᒥᐊᑦ.

ᑭᓪᓚᕕᐊᕐᔪᓚᐃᑦ

8-ᓂᑦ ᑕᓪᓕᒪᑦ ᑭᓪᓚᕕᐊᕐᔪᓚᐃᑦ ᐱᓕᕆᕝᕕᖕᒦᖅᑲᑕᐅᕙᑦ ᐊᒃᑐᖅᑕᐅᒋᐊᖃᖕᒋᑦᑐᑎᒃ ᐸᐸᑕᐅᒋᐊᖃᖅᑐᑎᒃ. ᑭᓪᓚᕕᐊᕐᔪᒃ ᒪᓐᓂᓕᐅᖅᐸᒃᑐᑦ ᐃᓐᓅᓯᒥ ᐊᒻᒪᓗ ᓄᓇᑐᐃᓐᓇᕐᒥ ᐅᒃᐱᕐᔪᐊᖅ ᒪᓐᓂᖃᖅᐸᒃᑐᖅ ᐊᒃᑐᖅᑕᐅᒋᐊᖃᖕᒋᑦᑐᑎᒃ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᑎᑎᖅᓯᒪᓂᕆᔭᖓᓂ 1 ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᖅᑎᑕᐅᔪᑦ ᐆᒪᔪᐃᑦ ᐱᖁᔭᖅᐊᖓᓂ. ᐱᖓᓱᒃᑲᓐᓂᑦ ᐃᓐᓅᓯᒥ ᒪᓐᓂᖃᖅᐸᒃᑐᑦ - ᓇᖅᑐᕋᓕᒃ, ᑭᓪᓚᕕᒃ ᐊᒻᒪᓗ ᑭᓪᓚᕕᐊᕐᔪᐃᑦ - “ᐃᑉᐱᒋᔭᐅᒋᐊᖃᖅᑐᑦ” ᓄᓇᕗᒥ ᑲᓇᑕᒥ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑕᐅᓂᖕᒋᓐᓄᑦ ᐸᐸᑕᐅᒋᐊᖃᕐᓂᖕᒋᑦ ᐊᖏᕈᑕᐅᓯᒪᒧᑦ ᒪᓕᒡᓗᒋᑦ *SARA*. ᓄᓇᒥ ᖃᐅᔨᓴᖅᓱᑕ ᑕᒪᒃᑯᓂᖓ ᑎᖕᒥᐊᓂᒃ ᓄᓇᒥ ᒪᓐᓂᓕᐅᖅᐸᒃᑐᓂᒃ ᑕᐃᒪᐃᑦᑐᓂᒃ ᑕᕝᕙᓂ ᐃᓂᒋᔭᐅᔫᒦᖅᑲᑦᑕᖕᒋᑦᑐᑎᒃ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔫᑦ: ᐃᓂᒃᓴᖃᕈᓐᓃᑐᐃᓐᓇᓇᕆᐊᖃᕐᓂᖕᒋᑦ, ᓂᐱᖃᓗᐊᖅᑐᒧᑦ ᐸᕝᓴᖅᑕᐅᑐᐃᓐᓇᓇᕆᐊᖃᕐᓂᖕᒋᑦ, ᐃᖏᕐᕋᔾᔪᓂᖕᒋᓐᓄᑦ ᐸᕝᓴᕈᑕᐅᔪᓐᓇᖅᑐᑦ, ᑐᖁᒐᔭᕐᓂᖕᒋᑦ ᐋᓐᓂᖅᔭᕐᓂᖕᒋᑦ, ᐅᐸᕐᑲᑦᑕᔭᕐᓂᖕᒋᓪᓗ ᓱᕈᕐᓄᑦ ᐅᐸᕐᑲᑦᑕᔭᕐᓂᖕᒋᑦ, ᕿᑐᖕᒋᐅᖕᒋᓂᖅᓴᐅᔪᑎᖃᓕᕐᓗᑎᒃ. ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᐅᓚᑦᓯᒍᑕᐅᓂᐊᖅᑐᓪᓗ ᐱᓕᕆᐊᒧᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᑯᖕᒋᑦᑐᒋᑦ, ᓂᐱᖃᓗᐊᖅᑐᒦᖅᑯᓇᒋᑦ, ᓯᑲᓗᐊᖅᑐᒦᖅᑯᓇᖕᒋᓪᓗ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒥᒃ ᐊᑐᖅᑲᑦᑕᕐᓂᐊᖅᐳᒍᑦ, ᐊᒃᑕᑯᓂᓪᓗ

ᐃᒋᑦᓯᕐᑲᑦᑕᕐᓗᑕ ᓱᕈᕐᓇᕐᑲᖕᑐᓂᒃᑯ ᑲᒪᒋᔭᕐᑲᑦᓯᐊᕐᑲᑦᑕᕐᓗᑕ ᐆᒪᔪᐃᑦ ᐅᐸᕐᑲᑦᑕᕐᑯᓇᒋᑦ ᑕᒪᒃᑯᓄᖕᒐ, ᐊᑐᓕᖕᑕᐅᓂᖕᒐᓗ ᐆᒪᔪᓕᕆᒍᑎᑦ ᕐᑲᐅᔨᓴᕐᓂᕐᒍᓪᓗ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖕᒐᓂ 20). ᐊᑐᓕᖅᑕᐅᓂᐊᖅᐳᑦ ᐆᒪᔪᓕᕆᒍᑎᑦ ᕐᑲᐅᔨᓴᕈᑎᓪᓗ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᑦ (ᑎᑎᖅᓯᒪᔪᑦ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖕᒐᓂ 20), ᕐᑲᓄᐃᓐᓂᐊᕋᓱᒋᔭᐅᖕᒋᐸᐳᑦ.

<u>ᑕᕆᐅᖑᖕᒋᑦᑐᖅ ᐃᒪᖅ ᐊᕙᑎᒥᐅᑕᖕᒋᓪᓗ</u>

ᓄᓇᐅᐸ ᕐᑳᖕᒐᓂ ᐃᒪᖅ

ᐊᑐᖅᑕᐅᓚᐅᖕᒋᓐᓂᐊᓂ ᐃᒪᕐᒥᒃ ᕐᑲᐅᔨᓴᕈᑎᑦ ᑖᒃᑯᓄᖕᒐ Goose Property LSA ᐊᕐᕿᒍᒥᑦ 2010 ᑎᑭᑦᓱᒍ 2013–ᒧᑦ ᐊᒻᒪᓗ ᑖᒃᑯᓄᖕᒐ George Property LSA–ᒧᑦ ᑕᒡᓚᖕᒐᑦ 2012–ᒥᑦ ᐊᒻᒪ 2013–ᒧᑦ. ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᕕᕐᑲᕐᓂᑦᑎᓐᓄᑦ ᐃᒪᕐᒥᒃ ᐊᑐᕐᓂᖅ, ᐊᐅᓚᑦᓯᓂᖅ ᐃᒪᕐᒥᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᑰᕐᑲᑦᑕᕐᓂᖅ. ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᓂᐊᖅᑐᑦ ᐊᐅᓚᑕᐅᒍᑕᐅᓂᐊᖅᑐᓪᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᕐᑲᖅᑕᐃᓕᒪᕐᑯᓪᓗᒍ ᐃᒪᕐᒥᒃ ᐊᑐᕐᓂᖅᐳᑦ ᑕᒪᒃᑯᐊ ᑲᒪᒋᔭᐅᑦᓯᐊᓇᐊᕐᑲᕐᓂᖕᒋᓐᓄᑦ ᐃᕐᑲᓗᐃᑦ ᐃᓂᖕᒋᑦ, ᑲᑎᒪᕐᑲᑎᒋᓚᐅᕐᓗᒋᑦ ᑕᕆᐅᕐᒥᐅᑕᓕᓴᒃᑯᑦ ᐃᕐᑲᓗᓕᓴᒃᑯᓪᓗ ᐊᐅᓚᓂᕐᒧᑦ ᕐᑲᓄᐃᓕᐅᕐᑯᓴᒍᑎᖕᒋᑦ. ᐋᖅᑭᒃᓱᕈᑕᐅᓂᐊᖅᑐᑦ ᑎᑎᕋᖅᓯᒪᕗᑦ ᑕᐃᑲᓂ ᐃᒪᕐᒥᒃ ᕐᑲᐅᔨᓴᓇᐊᕐᑲᕐᓂᖅ ᐊᐅᓚᑦᓯᒋᐊᕐᑲᕐᓂᕐᒍᓪᓗ ᐸᕐᓇᑕᐅᓯᒪᔪᑦ (ᑎᑎᖅᓯᔪᑦ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖕᒐᓂ 7) ᕐᑲᓄᐃᓐᓂᖕᒐᕋᓱᒋᔭᐅᖕᒋᐸᐳᑦ. ᐊᑲᐅᖕᒋᓕᐅᕈᑎᕐᑲᕐᓂᐊᖕᒋᐸᐳᒍᓪᓗ ᓄᓇᐃᑦ ᐊᕕᖕᓯᒪᓂᖕᒋᑦ ᑲᑎᖕᒐᓂᖕᒋᓐᓄᑦ ᐃᒪᓕᕆᓂᕐᒧᑦ ᐱᔾᔪᑎᕐᑲᖅᑐᑦ.

ᐃᒪᐅᐸ ᑕᓯᕐᒥᖕᓚᖅᑐᐸ ᕐᑲᓄᐃᓐᓂᖕᒐ ᓴᓗᒪᓂᖕᒐ

ᓱᕗᓂᐊᒍᑦ ᐃᒪᐅᐸ ᕐᑲᐅᔨᓴᖅᑕᐅᓯᒪᓂᖕᒐ ᕐᑲᓄᐃᓕᖕᒐᓂᖕᒐᓄᑦ ᑲᑎᑕᐅᓚᐅᖅᐳᑦ ᐃᒪᐃᑦ ᕐᑲᐅᔨᓴᖅᑕᐅᓂᖕᒋᑦ ᑖᒃᑯᓇᖕᒐᑦ George ᐊᒻᒪ Goose LSAs ᑕᐃᒪᖕᒐᓂᑦ 1994, ᕐᑲᐅᔨᓴᖅᑕᐅᓪᓗᐊᓚᐅᕆᓪᓗᑎᒃ 2010–ᒥᑦ 2013–ᒧᑦ. ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒧᑦ ᑕᒪᓐᓇ ᐃᒪᖅ ᑯᕕᕙᓪᓕᐊᔪᖅ, ᐃᒥᖅᑕᖅᐸᓪᓕᐊᓂᕐᓗ, ᑯᕕᕐᓗᒐᕐᓗ ᐊᒻᒪ ᕐᑲᖕᒐᔫᒃᑯᑦ ᕐᑲᐅᔨᓴᖅᑕᐅᓯᒪᐸᓗᑎᒃ: ᑕᒪᓐᓇ ᕐᑲᓄᐃᑑᓂᖕᒋᑦ ᕐᑲᐅᔨᓴᖅᑕᐅᓚᐅᖅᓱᑎᒃ ᐃᓚᕐᑲᐅᕐᓂᖕᒐᓄᑦ ᐅᑯᓂᖕᒐ: pH, TSS, nutrients, metals, hydrocarbons, BOD, chorine, ᐊᒻᒪ cyanide. ᐋᖅᑭᒍᑕᐅᒐᔭᖅᑐᑦ ᐊᐅᓚᒍᑕᐅᒐᔭᖅᑐᓪᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᕐᑲᓗᐊᖕᒋᕐᑯᓪᓗᒋᑦ ᐅᑯᐊᖑᕗᑦ: ᐊᖅᑯᑎᓕᐅᕈᑎᕐᑲᓯᐊᕐᓗᑎᒃ ᓄᓇᒥᖕᓚᖅᑐᓂᒃ ᐊᖅᑯᑎᓕᐅᕈᑕᐅᕙᒃᑐᓂᒃ ᐊᑐᕐᓗᑎᒃ ᐃᓂᒃᓴᓇᔭᐅᕐᑲᑦᑕᕋᔭᖅᑐᓂᒃᑯ, ᐊᑐᓕᖅᑎᑎᓂᖅ ᐋᖅᑭᒍᑕᐅᒐᔭᖅᑐᓂᒃ ᑕᒡᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ EMS ᒪᓕᒃᓱᒋᑦ. ᐊᑐᓕᖅᑕᐅᓗᑎᒃ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᒐᔭᖅᑐᓄᑦ ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᓇᔭᖅᑐᑦ ᐃᒪᖅ ᕐᑲᐅᔨᓴᖅᑕᐅᓂᖕᒐ ᐊᐅᓚᑕᐅᓂᖕᒐᓄᓪᓗ ᐸᕐᓇᒍᑎᑦ ᒪᓕᒃᓱᖕᒋᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 10, ᐊᒃᑐᖅᓯᒪᓂᖕᒐᓂ 7) ᐊᒻᒪᓗ ᐃᒪᕐᒥ ᐊᐅᓚᑦᓯᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᑦ (AEMP; ᑎᑎᖅᓯᒪᓂᖕᒐᓂ 10, ᐊᒃᑐᖅᓱᓂᖕᒐᓂ 19) ᐃᒪᖅ ᓴᓗᒪᒋᐊᕐᑲᕐᓂᖕᒐᓄᑦ ᕐᑲᓄᐃᖕᒋᓐᓂᐊᕋᓱᒋᔭᐅᕗᑦ. ᑕᐃᒪᓐᓇ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᒋᔭᐅᓂᐊᖕᒋᐸᐳᑦ ᓄᓇᐃᑦ ᕿᒡᓕᖕᒐᓂᒥᐅᑕᐃᑦ ᐃᒪᖅ ᓴᓗᒪᓂᐊᕐᓂᖕᒐᓄᑦ.

ᑕᓯᕐᒥᐅᑕᖅ ᐃᒪᖅ ᓴᓗᓪᖕᒋᓐᓂᕐᑲᕐᓂᖕᒐ

ᓱᕗᓂᐊᒍᑦ ᕐᑲᐅᔨᓴᕈᑕᐅᓯᒪᔪᑦ ᑕᓯᕐᒥᐅᑕᓂᒃ ᐃᒪᕐᒥᒃ ᓴᓗᒪᖕᒋᓐᓂᖕᒐᓄᑦ ᑲᑎᑕᐅᓯᒪᕗᑦ ᑕᒡᕙᓂ ᐱᓕᕆᕕᖕᓂ George ᐊᒻᒪ Goose LSAs ᑕᐃᒪᖕᒐᓂᑦ 2007–ᒥᑦ, ᕐᑲᐅᔨᓴᖅᑕᐅᖕᒋᓐᓇᐅᔭᖅᓯᓂᓗ 2010–ᒥᑦ 2013–ᒧᑦ. ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᖅ ᐱᓕᕆᕕᖕᒥᖕᓚᖅᑐᖅ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᖅ ᐃᒪᕐᒧᑦ ᑯᕕᓂᖕᒐᓄᑦ, ᐃᒥᖅᑕᕐᕕᐅᕐᑲᑦᑕᕐᓂᖕᒐᓄᓪᓗ, ᑕᒪᒃᑯᐊ ᑯᕕᔭᐅᒋᐊᕐᑲᖅᐸᒃᑐᑦ ᓴᓗᒪᑎᑕᐅᓇᓱᐊᖅᓱᑎᒃ, ᑕᑯᒃᓴᐅᓂᖕᒐᓗ ᕐᑳᖕᒐᑕᔩᒥᑦ ᕐᑲᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᓂ ᕐᑲᓄᑎᒋ ᐊᖕᒋᓂᖕᒐᓄᑦ, ᕐᑲᓄᐃᑦᑐᕐᑲᕐᓂᖕᒐᓄᓪᓗ ᓴᕕᕋᔭᒃᓴᓂᒃᑯ ᐊᓯᖕᒋᓐᓂᒃᑯ. ᐋᖅᑭᒍᑕᐅᒐᔭᖅᑐᑦ ᐊᐅᓚᑕᐅᓂᖕᒋᓐᓄᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᕐᑲᖅᑕᐃᓕᑎᑕᐅᕐᑯᓪᓗᒋᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᒪᓕᒃᓱᒋᑦ ᑕᒡᕙᖕᒐᑦ EMS–ᒥᑦ. ᐊᑐᓕᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑎᒃᓴᐃᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐃᒪᕐᑲᕐᕕᒃ ᕐᑲᓄᖅ ᕐᑲᐅᔨᓴᖅᑕᐅᓂᖕᒐᓄᑦ ᐊᐅᓚᑕᐅᓂᖕᒐᓄᓪᓗ ᐸᕐᓇᒃᓯᒪᖑᒍᑎᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ AEMP; ᑎᑎᕋᖅᓯᒪᓂᖕᒐᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖕᒐᓂ 19), ᕐᑲᓄᐃᖕᒋᓐᓂᐊᕋᓱᒋᔭᐅᕗᑦ. ᐊᑲᐅᖕᒋᓕᐅᕈᑎᕐᑲᕐᓂᐊᖕᒋᑦᓱᓂᓗ ᓄᓇᓂᒃ ᕐᑳᖕᒋᖅᓯᒪᒍᑕᐅᔪᓂᒃ ᐃᒪᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ.

ᑕᓯᕐᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ

ᓯᑯᓂᐊᓂ ᖃᐅᔨᓴᕈᑎᒃ ᐃᒪᕐᒥᒃ ᐃᖃᓗᙱᒃ/ᐃᒪᕐᒥᐅᑕᓂᒡᓗ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᔫᖅ ᖃᐅᔨᓴᕐᓂᖏᑦ ᑕᒡᕙᓂ Goose ᐊᒻᒪ George Property LSAs ᑕᒡᕙᖓᑦ 2010−ᒥᑦ 2013−ᒧᑦ. ᖃᐅᔨᓴᖅᓯᒪᔫᒍᑦ ᓇᓗᓇᐅᐃᖅᓯᓯᒪᓪᓗᑕᓗ 30 ᐅᖓᑖᓄᑦ ᑰᕆᓛᑦ ᑕᐃᑲᓂ ᑖᒃᑯᓇᓂ Goose Property LSA−ᒥ ᐊᒻᒪ ᐅᖓᑖᓄᑦ 20 ᑕᐃᑲᓂ George Property LSA−ᒥ. ᑕᒡᕙᓂᓗ ᐃᓂᒋᔭᐅᔪᒥ Goose LSA−ᒥ. ᐊᑲᐅᖏᓕᐅᕈᑎᒋᔭᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᓯᒪᔫᑦ ᒪᓕᒃᑲᒋᑦ ᑕᓯᕐᒥ ᐃᒪᕐᒥᒃ ᓴᓗᒪᒋᐊᖃᕐᓂᖏᑦ ᒪᓕᒃᑐᒋᑦ ᖃᐅᔨᓴᕈᑎᑦ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᖅᐳᑦ ᐃᒪᖅ ᐃᕿᖅᑐᕈᑕᐅᓪᓗᓂ ᐊᑐᖅᑕᐅᓕᓂᐅᓗᐊᓕᕐᓂᖓᓄᑦ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓗᐊᖃᑦᑕᓕᖅᓯᒪᓂᖓᓗ, ᐱᓕᕆᓂᖅ ᒪᑐᐃᖖᖅᑐᒥᒃ ᐅᔭᕋᖕᓂᐊᕐᓂᖅ, ᐃᒥᖅᑕᖃᑦᑕᕐᓂᖅ ᐃᓄᖕᓄᑦ ᐅᔭᕋᖕᓂᐊᕐᕖᖑᓪᓗ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᒍᑕᐅᓗᑎᒃ, ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᓯᐅᕈᑕᐅᓗᑎᒡᓗ. ᑰᒪᒫᒥᐅᑕᐃᑦ ᐃᓂᒃᓴᖃᕐᓃᑐᐃᓐᓇᓇᐊᖃᖅᐳᑦ ᓴᓇᓂᖏᓐᓄᑦ ᐅᔭᕋᖕᓂᐊᕐᕖᖑᒥ ᐱᖁᑎᕝᐊᓂᒃ. ᑕᐃᒪᓐᓇ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑎᑕᐅᑦᑕᐃᓕᖁᓪᓗᒋᑦ ᐃᖃᓗᐃᑦ ᑕᓯᕐᒥᐅᑕᐃᑦ/ᐃᒪᕐᒥᐅᑕᐃᓪᓗ ᓴᓇᔭᐅᓂᖓᓂ ᐃᓂᖃᖅᑕᐃᓕᖁᓪᓗᒋᑦ ᐃᒪᕐᒥ ᐃᖃᓗᖃᖅᕝᕕᐅᕝᕕ ᐊᕝᕙᓇᖏᐸᑦ. ᑕᒪᒃᑯᐊ ᐅᔭᕋᖕᓂᐊᖅᑕᐅᕝᓂᒃ ᐃᕿᖅᑐᖅᕝᒃ ᐊᒻᒪ ᐅᔭᕋᖕᓄᑦ ᓯᖁᐊᕆᔭᐅᖃᑦᑕᖅᑐᑦ ᐃᓂᒋᔭᐅᑦᑕᐃᓕᓇᓯᐊᖅᐳᑦ ᐊᒃᑐᖅᑕᐅᒋᐊᖃᖏᓪᓚᑕ ᐃᖃᓗᖃᖅᑐᑦ ᑕᓯᑦ ᐃᒪᐃᑦ. ᐋᖅᑭᒃᓯᓯᒪᓂᐊᖅᐳᑎᒡᓗ ᐊᐅᓚᔾᔨᔾᔨᐊᕋᓯᐊᕈᑎᖃᕐᓂᕐᒧᑦ ᐃᒪᓂᒃ ᖃᓄᑎᒋᐅᕝᓂᒃ ᐊᑐᖃᑦᑕᒻᒪᙱᕐᒥᒃ ᖃᐅᔨᓴᕈᑎᖃᕐᓗᑎᒃ ᑕᐃᒪᓐᓇᐃᓕᐅᖅᐳᑎᒃ ᐅᔮᕈᓯᒃᓯᒪᓪᓗᑎᒃ ᐃᖃᓗᐃᑦ ᑕᐃᑲᓂ ᑕᓯᕐᓂ Goose, Propeller, ᐊᒻᒪ Georgeᒥᓗ. ᑭᓯᐊᓂ ᐱᔮᖅᑯᑕᐅᖏᑦᑐᒃᑯᑦ ᐃᖃᓗᐃᑦ ᐃᓂᖏᑦ ᓱᕋᒃᑕᐅᖃᑦᑕᕐᓗᑎᒡᓗ (ᓲᕐᓗ ᐆᒃᑑᑎᒋᓗᒍ ᑕᐃᑲᓂ ᑕᓯᖅ Llama Lake ᒪᑐᐃᖖᖅᑐᒥᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᓂᖓᓄᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᕗᖅ) ᐋᖅᑭᒋᐊᖅᑕᐅᔪᓐᓇᕐᓂᐊᖅᑐᒃᓴᐅᓪᓗᓂ ᐃᖃᓗᐃᑦ ᓇᒨᖓᐅᒋᐊᖃᕐᓂᖏᓐᓄᑦ ᐋᖅᑭᒃᓯᒪᒍᔾᔭᐅᓕᕐᓗᑎᒃ ᐸᕐᓇᒃᓯᒪᒍᑎᖃᕐᓗᑎᒃ. ᑕᐃᒪᓐᓇ, ᑕᐃᒪᓐᓇ ᐊᑲᐅᖏᓕᐅᕐᓂᐊᕋᓯᒋᔭᐅᖏᑉᐳᑦ ᐃᖃᓗᐃᑦ ᑕᓯᕐᒥᐅᑕᐃᓪᓗ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᕋᓯᒋᔭᐅᖏᑉᐳᖅ ᑕᐃᒪᓐᓇᐃᓕᐅᕐᓂᐊᕐᓂᖏᓐᓄᑦ. ᑕᐃᒪᓐᓇ ᓄᓇᐅᑉ ᖄᖏᖅᓯᒪᖃᑦᑕᐅᑎᒧᑎᓄᑦ ᐃᓗᐃᓪᓕᐅᕈᑎᖃᕐᓂᐊᖏᑦᑐᖅ.

ᑕᓯᕐᒥᐅᑕᓂᒃ ᐃᖃᓗᖃᖅᑐᑦ ᓄᓇᓖᑦ

ᑕᒪᒃᑯᐊ ᑕᓯᕐᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᑕᒡᕙᓃᑦᑐᑦ Goose ᐊᒻᒪ George Property LSAs ᖃᐅᔨᒪᔭᐅᔫᑦ ᐅᑭᐅᑦᑲᖅᑐᒥᐅᑕᐅᓂᖏᓐᓄᑦ ᑕᓯᕐᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᐊᒻᒪ ᐃᓚᖏᑦ ᑕᕆᐅᕐᒥᐅᑕᐃᑦ ᐅᒥᐊᖅᔪᐊᖃᕝᕕᖓᒥ. ᓯᑯᓂᐊᒍᑦ ᖃᐅᔨᓴᓚᐅᖅᐳᑦ ᐊᕐᕌᒍᓂ 2010−ᒥᑦ 2013−ᒧᑦ ᑕᒡᕙᓂ ᐱᓕᕆᕝᕕᖕᒥ. ᑕᓯᕐᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᑲᓇᑕᐅᑉ ᐅᑭᐅᖅᑕᖅᑐᖓᓂᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᐱᑕᖃᕋᔭᒃᐳᑦ. ᐃᖃᓗᐃᑦ ᐊᒥᓲᓂᖅᓴᐅᓪᓗᑎᒃ ᑖᒪᓂ, ᑖᒃᑯᐊᓗ ᑲᕙᓯᓕᑦ, ᐊᓯᖏᓪᓗ ᐊᒻᒪ ᑲᓇᔪᐃᑦ ᐱᑕᖃᕆᓪᓗᑎᒃ ᐊᓯᖏᓪᓗ ᑕᒡᕙᓂ ᒪᕿᖕᓂ ᑕᓯᕐᓂ ᑕᐃᒪ ᑐᕐᑯᖅᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ ᑕᓯᖅ ᐃᒪᐃᔭᖅᑕᐅᖃᑦᑕᕐᓂᖓᓄᑦ ᐱᔾᔪᑎᖃᕐᓗᑎᒃ, ᐃᒥᖅᑕᕝᕕᐅᖃᑦᑕᕐᓂᖓᓄᓪᓗ ᐃᓄᖕᓄᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᓂᐊᕐᓗᑎᒃ ᐱᓕᕆᕝᕕᖕᒧᓪᓗ, ᓴᓇᔪᑕᐅᓂᕐᒧᓪᓗ ᐊᖅᑯᓯᐅᕈᑕᐅᓗᑎᒃ, ᓴᓇᓪᓗᑎᒡᓘ ᐱᓕᕆᕝᕕᖕᒥᒃ, ᐃᒥᖅᑕᖅᑕᐅᖃᑦᑕᖅᑐᖅ ᐃᓄᖕᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᕐᓗᑎᒃ ᐊᒻᒪᓗ ᐱᓕᕆᕝᕕᖕᒧᑦ ᐊᖅᑯᓯᐅᕐᓂᕐᒧᓪᓗ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᒃᓴᐅᓂᐊᕐᓗᓂ ᐊᒻᒪᓗ ᖄᖅᑕᕝᕕᐅᓗᓂ.

ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑕᐃᓕᖁᓪᓗᒋᑦ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᑲᕙᓯᓪᓗ ᓴᓇᔭᐅᓂᐊᖅᐳᑦ ᐱᖁᑎᑦ ᑕᓯᕐᒥᐅᑕᓂᒃ ᐃᖃᓗᖕᓄᑦ ᐃᓂᒋᔭᐅᔪᓂ ᓴᓇᑎᑕᐅᑦᑕᐃᓕᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐃᒪᐃᑦ ᐃᕿᖅᑐᖅᕝᑦ ᓯᖁᐊᕆᔭᐅᔪᓪᓗ ᐅᔭᖃᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᖏᑦᑐᓄᑦ ᐃᓕᔭᐅᓯᒪᔫᑦ ᑕᒪᒃᑯᓄᖓ ᑕᓯᖕᓄᑦ ᐊᒃᑯᖅᑕᐅᑦᑕᐃᓕᖁᔨᓪᓗᑕ. ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᐊᖅᐸᑕᓗ ᐃᒪᕐᒥᒃ ᓴᐳᔾᔭᐅᓯᒪᕐᑯᓪᓗᒋᑦ ᐃᖃᓗᐃᑦ Goose, Propeller, ᐊᒻᒪ George ᑕᓯᖕᓂ. ᐃᖃᓗᐃᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑎᑕᐅᑦᑕᐃᓕᒪᓂᐊᖅᐳᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᖃᕐᓗᑎᒃ (ᓲᕐᓗ, ᐊᑐᖏᓐᓂᖅ Llama Lake ᒪᑐᐃᖖᖅᑐᓂ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᓗᓂ). ᑕᐃᒪᓐᓇ ᐃᖃᓗᖃᕈᓐᓃᖅᐸᓪᓕᐊᓚᔾᔭᕐᓂᖓᓄᑦ ᐃᓱᒪᒋᔭᐅᓚᐅᖅᑐᑦ ᑲᕙᓯᓕᖕᓂᒃ ᐊᑐᖅᑕᐅᖏᓕᕐᓗᓂ ᑕᓯᖅ Llama Lake ᐊᒻᒪ ᑯᕙᕙᐅᖃᑦᑕᖅᑐᑦ ᐊᑲᖏᐅᓕᐅᕈᑎᖃᕐᓂᐊᖏᓐᓂᖅᑕᐅᓯᒪᔫᑦ. ᐊᑐᓕᖅᑎᑕᐅᓗᓂ ᐋᖅᑭᒃᓯᒪᒍᑎᒃᓴᐃᑦ ᑕᒡᕙᓂ ᐃᒪᖃᕝᕕᒃ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᕐᓂᖓᓄᑦ ᐊᐅᓚᑕᐅᓂᖓᓄᓪᓗ ᐸᕐᓇᐅᑎᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ (ᑎᑎᖅᓯᒪᓂᖏᑦ 10, ᐊᕙᒃᓯᒪᓂᖓᓂ 7) ᐊᒻᒪᓗ ᐃᒪᕐᒥᒃ ᐊᐅᓚᔨᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᑦ (AEMP; ᑎᑎᕋᖅᓯᒪᓂᖏᓐᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 19), ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑎᑕᐅᓂᐊᖏᓐᓂᕋᖅᑕᐅᔫᑦ ᐃᖃᓗᐃᑦ. ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᖁᖏᕈᑎᒋᓚᔭᖅᑕᖏᓐᓄᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑐᖃᓂᐊᖏᑉᐳᑦ ᐃᖃᓗᕐᓄᑦ ᑲᕙᓯᓕᖏᓐᓄᓗ.

ᑕᕆᐅᖅᒥᐅᑕᐃᑦ

ᑕᕆᐅᖅᒥᐅᑕᐃᑦ ᐃᒪᖅ ᓴᓗᒪᓂᖓᓄᑦ

ᓱᕗᓂᐊᒍᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖓ ᑕᕆᐅᖅᒥᐅᑕᖅ ᐃᒪᖅ ᑲᑎᑕᐅᓚᐅᖅᐳᑦ ᖃᐅᔨᓴᕿᑕᐅᓚᐅᖅᑐᑦ ᕿᖓᐅᒥ ᑕᐃᒪᖓᓂᑦ 2001–ᒥᑦ ᐊᒻᒪᓗ ᑖᓐᓇ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᒥ ᑕᐃᒪᖓᓂᑦ 2013–ᒧᑦ. xvsqoᐊᑲᐅᙱᓕᐅᕿᑕᐅᕙᓐᓇᕋᔭᖅᑐᑦ ᑕᒪᒃᑯᐊ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐊᒡᔭᖅᑕᐅᖃᑦᑕᖅᑐᓂᖔᖅᑐᑦ, ᐊᐅᓚᔾᔭᖅᑎᑎᓂᖅ ᐃᒪᖅᒥᐅᑕᓂᒃ ᓱᕿᒍᑕᐅᕙᓐᓇᖅᑐᓂᒃ ᑕᕆᐅᖅᒧᑦ ᐸᕐᓇᓂᖏᓐᓂ, ᓴᓇᓂᖏᓐᓂ ᓴᓗᒻᒪᖅᓴᐃᓂᖏᓐᓂᓗ ᐃᒪᐃᓂᐊᖅᓗᑐᒃ ᐅᔭᕋᓂᐊᖅᕝᕙᒥᓂᒃ, ᐃᒪᓕᖅᑭᓂᖏᓐᓄᑦᓗ, ᐊᖅᑯᓯᐅᖅᓂᖏᓐᓄᑦᓗ; ᖄᖅᑎᓇᖅᑲᑦᑕᖅᓂᖏᓐᓄᑦᓗ, ᐅᖅᓱᐊᓗᓐᓄᑦᓗ ᐅᖅᓴᒃᓴᕈᑎᓄᑦᓗ ᐊᒻᒪᓗ ᐊᓯᖏᓐᓂᒃ ᐱᓕᕆᐊᖅᑲᖅᓂᖏᓐᓄᑦ ᒪᑯᓂᖓ ᐊᐅᒃᓴᕋᐃᑦᑐᓕᕆᓂᖏᓐᓄᑦ ᐊᓯᖏ ᓂ;ᓗ ᐃᒋᐅᖅᑲᐃᓂᖏᓐᓂ. ᐋᖅᑭᒍᑎᒃᓴᐅᓇᔭᖅᑐᑦ ᐊᐅᓚᓂᖏᓐᓄᑦ ᐊᑐᓗᐊᖅᑕᐃᓕᒪᓂᖅᒧᑦ ᓱᑲᓗᐊᖅᑐᓂᒃ ᓂᐱᖃᓗᐊᖅᑐᓂᒡᓗ ᐅᒥᐊᕐᔪᐊᓂᒃ ᐃᒪᓐᓇ ᐱᓕᕆᐊᖅᑲᖅᓂᐊᖅᐸᑦ ᐅᒥᐊᕐᔪᐊᑦ ᐃᑎᓂᖅᓴᒃᑰᖅᑎᑕᐅᖃᑦᑕᖅᓗᑎᒃ, ᐃᑎᖅᓴᐃᑦ ᐊᑐᓗᐊᖅᑕᐃᓕᔭᐅᓗᑎᒃ ᐃᒪᖅᒥᒃ ᑎᑭᑎᕐᖃᑦᑕᖅᓂᖅ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᖓᓐᓄᑦ, ᐊᑐᖅᓗᑎᒃ ᐃᒪᖅᒥᒃ ᓱᑦᓗᓕᕐᓂᒃ ᐊᖅᑯᑎᓄᑦ ᐊᓯᖏᓐᓄᑦᓗ, ᒪᓕᒡᓗᑎᒡᓗ ᒪᓕᒃᑕᐅᕆᐊᖃᖅᑐᓂᒃ ᐃᒪᓕᕆᓂᖅᒧᑦ ᐃᒪᖅᓂᒃ ᑯᕙᑎᑎᓂᐊᖅᓗᑎᒃ ᒪᓕᒃᑕᐅᕆᐊᖃᖅᑐᓂ, ᐊᑐᕆᐊᖅᓗᑎᒃ ᓱᖅᓗᐊᒨᖓᐅᑕᐅᓂᐊᖅᑐᑦ ᐅᓯᔭᐅᓂᐊᖅᑐᑦ ᐊᒡᔭᖅᑕᐅᓂᐊᖅᑖᓗᐊᑐᖅᓂᖅᓗ ᐅᖅᓱᐊᓗᖓᓂᒃ, ᐊᒡᔭᖅᑐᐃᓂᖅᓗ ᖄᖅᑐᓕᕆᓂᖅᓗ ᐊᒻᒪᓗ ᐅᓗᕆᐊᓇᖅᓂᑦ ᐊᒡᖅᑐᐃᓂᖅ ᐸᔪᖅᑲᖅᑕᐃᓕᒪᑎᑎᓂᖅ ᐊᑐᖅᑕᐅᕙᐊᖅᑲᑦᑕᖅᓗᑎᒃ ᐃᑯᐊᓪᓚᒃᑎᑎᖅᑲᑦᑕᖅᓗᑎᒡᓗ. ᒪᓕᒡᓗᒋᑦ ᐋᖅᑭᒃᓯᒪᔪᑎᒃᓴᐃᑦ ᑖᒃᑯᓂ ᑎᑎᕋᖅᓯᒪᕙᑦ ᐸᖅᓇᐅᑕᐅᓯᒪᕙᓂ (AEMP; ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 19 ᒪᓕᒡᓗᒋᑦᓗ ᐃᒪᖅᒥᒃ ᖃᐅᔨᓴᕈᑎᑦ ᐊᐅᓚᔪᒍᑎᑦᓗ ᑎᑎᖅᓯᒪᕙᑦ 10-ᒥ ᐊᕙᒃᑐᖅᒪᓂᖓᓂ 7) ᖃᓄᐃᖕᓂᓐᓂᐊᕋᓱᒋᔭᐅᕝᕚᑦ ᖃᐅᔨᓴᖅᓯᒪᓂᖕᒋᑦ ᒪᓕᒃᓱᒋᑦ. ᖃᓄᐃᖕᓂᓐᓂᐊᖅᓂᕋᖅᑕᐅᑦᓗᑎᒡᓗ ᓄᓇᐅᑉ ᖄᖕᒋᖅᓯᒪᒍᑎᒃᓴᕆᐅᔭᖅᑕᖕᒋᑦ ᐱᔾᔪᑎᒋᑦᓗᒋᑦ.

ᐃᒪᖅᒦᑦᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖕᒋᑦ ᑲᑎᑕᐅᓚᐅᖅᐳᑦ ᑕᕆᐅᖅ ᖃᓄᐃᑦᑑᓂᖓᓄᑦ ᖃᐅᔨᓴᕈᑎᓂ ᕿᖓᐅᓯ ᑕᐃᑉᓯᒪᓂ 2001-ᒥ ᐊᒻᒪᓗ ᑖᓐᓇ LSA 2013–ᒥ. ᐊᑲᐅᙱᓕᐅᕈᑎᒋᔭᐅᕙᓐᓇᖅᑐᑦ ᐅᑯᐊᖑᓪᓗᑎᒃ ᐅᓯᓂᖅᒧᑦ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐊᒡᔭᖅᑐᐃᓂᖅᒧᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ, ᓱᓇᖅᑲᓕᖅᑎᑎᓂᖅ ᑕᕆᐅᒥᒃ ᐅᒥᐊᕐᔪᓕᕆᓗᓂ ᓴᓇᑎᓪᓗᒋᓪᓗ, ᓴᓗᒻᒪᖅᓴᐃᓕᖅᑎᓪᓗᒋᓪᓗ ᐱᓕᕆᕝᕕᖕᒥᒃ, ᐃᒪᖅ ᐱᐅᒍᓐᓃᖅᑕᐅᐅᕙᓐᓇᖅᓂᖓ, ᐅᖅᓱᐊᓗᖅᑲᕈᓐᓇᖅᓂᖓ, ᐅᖅᓯᖅᑎᕈᑎᓂᓪᓗ ᐊᓯᖏᓐᓗ ᐊᐅᒃᓴᕋᐃᑦᑐᓂᒃ. ᑕᒪᒃᑯᐊ ᐊᑲᐅᙱᓕᐅᕿᑕᐅᓂᐊᖅᑐᓄᑦ ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑕᐅᓂᐊᖅᑐᑦ ᐅᑯᐊᖑᓪᓗᑎᒃ:ᐃᒪᖅᒥᒃ ᓴᖑᑎᑎᓂᖅ ᐃᑎᖅᓴᒧᐊᖅᓯᒪᔪᓂᒃ ᐃᒪᖅᑲᐅᑎᖅᑲᖅᕙᖕᒧᖓᐅᔾᔮᖅᑲᑦᑕᓂ ᑕᒪᐅᖓᑐᐃᓐᓇᖅ ᑯᕙᔪᓂᒃ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᖕᒧᑦᓗ, ᒪᓕᒡᓗᒋᑦ ᑕᒪᒃᑯᐊ ᐃᒪᖅᒥᒃ ᑯᕙᔭᐅᖅᑲᑦᑕᖅᑐᓂᒃ ᖃᓄᖅ ᑲᒪᒋᔭᖃᕆᐊᓂᖅ ᒪᔫᒋᑦ, ᓱᖅᓗᐊᖅᑲᐧᐊᖅᓂᖅ, ᐊᒡᔭᖅᐃᖅᑲᑦᑕᖅᓂᖅ ᐊᑐᖅᑕᐅᓂᖕᒋᑦ ᐅᔮᖅᑐᖅᑕᐅᓗᑎᒃ ᐅᖅᓱᐊᓗᐃᑦ, ᐅᖅᓴᒃᓴᕈᑎᓗ, ᖄᖅᑕᖅᑐᕈᑎᓗ ᐅᓗᕆᐊᓇᖅᑐᓗ ᑐᖅᑯᓇᖅᑐᖅᑲᖅᑐᑦ ᐸᔪᖅᑎᑎᑕᐃᓕᓂᖅᓗ ᐊᒻᒪᓗ ᐃᑯᐊᓪᓚᒃᑎᑎᖅᑲᑦᑕᖅᓂᖅ. ᐊᑲᐅᙱᓕᐅᕈᑎᒋᔭᐅᕙᓐᓇᖅᑐᑦ ᑎᑎᕋᖅᓯᒪᕙᑦ ᑖᓐᓇ ᐃᒪᖅᒥᒃ ᐊᐅᓚᔪᓂᖅᒧᑦ ᐸᖅᓇᐅᑕᐅᓯᒪᕙᓂ (AEMP; ᑎᑎᖅᑕᐅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 19) ᐊᒻᒪᓗ ᐃᒪᖅᒥᒃ ᖃᐅᔨᓴᖅᓂᖅᒧᑦ ᐸᖅᓇᐅᑕᐅᓯᒪᙱᑦ ᐊᐅᓚᔪᒍᑕᐅᓂᐊᖅᑐᑦᓗ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 7), **ᖃᓄᐃᖕᓂᓐᓂᐊᖅᓂᕋᖅᑕᐅᓯᒪᕗᖅ** ᖃᓄᐃᓕᐅᕿᑕᐅᓂᐊᖅᑐᑦ. ᓄᓇᐅᑉ ᖄᖕᒋᖅᓯᒪᓂᕆᔭᖕᒋᓂᒃ ᓱᖅᑯᑎᒃᓴᕿᑕᐅᓂᐊᖕᒋᐸᑦᓗ

ᑕᕆᐅᖅᒥᐅᑕᐃᑦ ᐃᖅᑲᓗᐃᖅ ᐃᓂᒋᔭᖕᒋᑦᓗ

ᖃᐅᔨᓴᕿᑕᐅᓯᒪᔪᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᑕᕆᐅᒥ ᐃᓂᒋᔭᐅᕗᒃᑐᑦ ᑲᑎᑕᐅᓚᐅᖅᐳᑦ ᖃᐅᔨᓴᕿᑕᐅᓯᒪᔪᑦ ᕿᖓᐅᒥ ᑕᐃᒪᖓᓂᑦ 2001 ᑖᓐᓇ LSA ᐊᕿᒍᓂ 2012 ᐊᒻᒪ 2013. ᑕᒪᒃᑯᐊ ᐊᑲᐅᙱᓕᐅᕿᑕᐅᑐᐃᓐᓇᓇᐊᖅᑲᖅᑐᑦ ᒪᒋᔭᐅᓯᒪᕗᑦ ᑕᒪᒃᑯᐊ ᑕᕆᐅᖅ ᐃᒪᖅ ᖃᓄᐃᓕᖓᒋᐊᖅᑲᖅᓂᖓᓄᑦ ᖃᐅᔨᓴᕿᑕᐅᓯᒪᔪᑦ ᒪᓕᒡᓗᒋᑦ. ᐊᑲᐅᙱᓕᐅᕿᑕᐅᕙᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᕙᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ ᑕᕆᐅᒧᑦ ᐃᒪᖅᒧᑦ ᐃᖅᑲᓗᖕᓄᑦ/ᑕᕆᐅᖅᒥᑕᑕᓄᑦᓗ ᓴᓇᓂᖅ ᐅᒥᐊᕐᔪᐊᖅᑲᕝᕕᖕᒥᒃ (ᑐᓚᒃᑕᖅᕝᕕᓕᐅᖅᓂᖅ ᓂᐅᕋᐃᕝᕙᒃᓴᓕᐅᖅᓂᖅ). ᐊᑲᐅᙱᓕᐅᕿᑎᖅᑲᖅᑕᐃᓕᒪᒍᑕᐅᓂᐊᖅᑐᑦ ᑖᒃᕙᖓ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᖓᓄᑦ ᐃᖅᑲᓗᖅᑲᖅᓂᖓᓄᑦᓗ ᑕᕆᐅᒥ/ᐃᒪᖅᒥᐅᑕᓄᑦᓗ ᐃᓂᒋᔭᐅᕗᓄᑦ: ᐋᖅᑭᒃᓱᐃᓯᒪᕗᑦ ᐃᒪᖅ ᓱᕋᖅᑕᐃᓕᒪᒍᑎᒃᓴᖏᓐᓄᑦ ᐃᖅᑲᓗᖕᓂᒃ ᖃᓄᐃᓕᐅᕿᑎᖅᑲᓂᐊᖅᑲᓂᖅᒧᑦ ᐸᖅᓇᒃᓯᒪᒍᑎᑦ. ᖃᓄᐃᓐᓂᐊᖕᒋᓐᓂᕋᖅᑕᐅᓯᒪᕗᑦ

ᐃᖃᓗᐃᑦ ᑕᕆᐅᒥᐅᑕᐃᑦ ᑕᐃᒪᓐᓇ ᐱᓕᕆᕙᖃᕐᓂᐊᕐᓂᕐᔪᑦ ᐱᔾᔪᑎᖃᖅᑎᓪᓗᑦ. ᓱᕐᑯᑕᐅᓂᐊᕐᒋᑦᑐᑎᒡᓗ ᑕᒪᒃᑯᐊ ᓄᓇᒥᒃ ᖄᕐᒋᐅᑎᒍᑎᖃᖅᓯᒪᒐᓗᐊᖅᑎᓪᓗᒍ./

ᐃᒪᕐᒥᐅᑕᐃᑦ ᑕᕆᐅᒥ ᐃᖃᓗᐃᑦ

ᐱᓚᐅᖅᐳᑦ 19–ᓂᒃ ᐊᔾᔨᒌᖕᒋᑦᑐᓂᒃ ᐃᖃᓗᕐᑯᑎᒋᔭᐅᔪᓂᒃ ᑖᒃᑯᓂ ᖃᐅᔨᓴᖅᑐᑎᒃ ᐊᑯᓐᓂᖓᓂ 2001 ᐊᒻᒪ 2013, ᐅᕙᓘᓐᓃᑦ ᑕᐃᒪᓐᓇᐃᓐᓂᕋᐅᑎᖃᖅᓯᒪᕗᑦ, ᑕᕆᐅᒃᑯᑦ ᐃᓂᖃᕐᕕᐅᓂᐊᖅᑐᒥ. ᑕᒪᒃᑯᐊ ᐱᑕᕐᖃᓗᐊᕐᓂᖅᓴᐃᑦ ᐃᖃᓗᐃᑦ ᑖᓂᐅᑕᐃᑦ ᑲᓇᔪᐃᑦ, ᐊᓯᖏᓪᓗ ᑲᕙᓯᓕᑦ, ᐊᓯᖏᓪᓗ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᖃᓕᕋᓕᓪᓗ. ᑕᒪᒃᑯᐊ ᑕᒪᕐᒥᒃ ᐃᖃᓗᖏᑦ ᓄᖑᑉᐸᓪᓕᐊᓂᐊᖏᓐᓂᕋᖅᑕᐅᕗᑦ. ᐃᖃᓗᒃᐱᑦ ᐱᔭᐅᓚᐅᖏᑉᐳᑦ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ ᑖᕚᓂ, ᑭᓯᐊᓂ ᐱᑕᖃᕋᓱᒋᔭᐅᓪᓗᑎᒃ ᑖᓂ ᑕᑯᓚᐅᖅᑐᑎᒃ ᓱᕙᖃᕐᕕᖏᓐᓂ ᑰᖕᒥ ᑰᓛᓃᓗ ᑕᐃᑲᓂ ᑕᕆᐅᖓᓂ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᑐᐃᓐᓇᓚᐅᖅᐳᑦ ᑕᕆᐅᕐᒥᐅᑕᐃᑦ ᐃᖃᓗᐃᑦ ᐃᖃᓗᒃᐱᑦ ᑐᕐᑯᖁᑐᐃᓐᓇᕆᐊᖃᖅᑐᑎᒡᓗ ᐃᓚᖏᑦ ᓴᓇᓂᖏᓐᓄᑦ ᐃᒪᕐᒥ ᐊᒻᒪ ᖄᖅᑎᕆᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᕿᑐᖏᕈᖏᓐᓂᖅᓴᐅᑎᑎᒍᑎᒡᓗ ᓂᐱᖃᕐᓂᖓᓄᑦ ᐃᒫᓂ ᐃᖏᕐᕋᔾᔪᓂᖏᓐᓄᑦᓗ ᐅᒥᐊᕐᔪᐊᑦ ᑖᓂ. ᐋᖅᑭᒃᓱᕈᑕᐅᕙᓕᐊᒐᔭᖅᑐᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓕᕈᓐᓇᖅᑐᓄᑦ ᐃᒫᓂ ᖄᖅᑎᕆᖃᑦᑕᖏᓪᓗᑎᒃ, ᓱᒃᑲᓕᓴᓗᐊᖃᑦᑕᕐᑯᖏᓪᓗᒋᑦ ᐅᒥᐊᕐᔪᐊᑦ ᑕᐃᑰᓇ ᐃᖏᕐᕋᔭᖃᑦᑕᖅᑐᑦ. ᐊᑐᓕᖅᑎᑕᐅᓂᐊᕐᓂᖓ ᑖᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᓂ ᐃᒪᕐᒥᐅᑕᐃᑦ ᐊᐅᓚᑕᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑎᑦ (AEMP; ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 19), ᐃᖏᕋᔭᖕᓂᕐᔪᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᓂᒃ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 15), ᐊᒻᒪᓗ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒪᒋᐊᖃᕐᓂᖅ ᐸᕐᓇᐅᑎ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 18) ᖃᓄᐃᖏᓐᓂᐊᕐᓱᒋᔭᐅᓪᓗᑎᒃ ᐃᖃᓗᐃᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓂᐊᓂ. ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᐳᖅ ᐅᒥᐊᕐᔪᐊᓕᕆᕝᕕᖓ ᑕᐃᑲᓂ. ᖃᓄᐃᓐᓂᐊᕐᒥᓂᕋᖅᑕᐅᓯᒪᓪᓗᓂ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᕐᒋᑦᑐᑎᒡᓗ ᓄᓇᒥᒃ ᖄᕐᒋᐅᑎᓯᒪᔪᑕᐅᔪᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ.

ᒥᑎᖁ ᑎᕐᒥᐊᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ ᑕᕆᐅᒥ

ᑕᕆᐅᕐᒥᐅᑕᐃᑦ ᒥᑎᑦ ᑎᑎᕐᒥᐊᑦ ᑕᒪᒃᑯᐊ ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᐃᖏᕐᕋᔭᖃᑦᑕᖅᑐᑦ ᑎᕐᒥᐊᑦ ᖃᖓᑐᐃᓐᓇᒃᑯᑦ ᑕᕆᐅᕐᒦᖃᑦᑕᖅᑐᑦ, ᑕᒪᒃᑯᐊ ᕿᖓᓕᑦ ᒥᑎᑦ, ᐊᓯᖏᓪᓗ ᑎᕐᒥᐊᓪᓗ ᓕᕐᓕᑦ ᐊᒻᒪᓗ ᖁᒃᓯᐃᑦ, ᐊᓯᖏᓪᓗ ᒥᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ, ᐊᖅᑲᐅᒪᖃᑦᑕᖅᑐᑦ,ᐃᑦ ᒥᑎᑦ ᑎᕐᒥᐊᓪᓗ ᓴᐅᔾᔭᐅᐅᕗᑦ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᓐᓇᑕ ᒪᓕᒐᕐᒋᑎᒍᑦ ᖃᖅᓴᐅᓪᓗ ᓇᐅᔭᕐᔪᐊᓪᓗ. ᑕᒪᒃᑯᐊ ᑕᕆᐅᑉᒥᐅᑕ ᑎᕐᒥᐊᑦ ᐃᖏᕐᕋᔭᖃᑦᑕᖅᑐᑦ ᐱᕐᑯᔭᕐᔪᐊᖓᑦ ᐊᖏᕈᑦ (1994). ᐱᖓᓱᑦ ᑕᕆᐅᕐᒥᐅᑕᐃᑦ ᑎᕐᒥᐊᑦ "ᐃᒃᐱᒋᔭᐅᒋᐊᖃᕐᓂᕋᖅᑕᐅᕗᑦ" ᑲᓇᑕᒥ ᐅᓗᕆᐊᓇᖅᑐᒥᑦᑐᑦ ᐆᒪᔪᑦ ᐸᐸᑕᐅᒋᐊᖃᕐᓂᖏᓐᓗ ᑲᑎᒪᔨᑦ ᑳᖅᑭᒃᓯᒪᔭᖏᑦ ᒪᓕᒃᑐᒋᑦ (CESCC) ᓄᓇᕗᒥ: ᒥᑎᖅ ᕿᖓᓕᒃ, ᓇᐅᔭᔪᐊᖅ ᐊᒻᒪ ᑕᕿᔪᒥᒃ ᐸᒥᐅᓕᒃ ᒥᑎᖅ (CESCC 2010). ᖃᖓᑕᔫᒃᑯᑦ ᓄᓇᒃᑯᑦᓗ ᖃᐅᔨᓴᖅᑕᐅᑦᑐᑎᒃ ᐃᒪᕐᒥᐅᑕᐃᑦ ᐆᒪᔪᐃᑦ ᐊᑯᓐᓂᖓᓂ 2007 ᐊᒻᒪ 2013 ᒪᓐᓂᓕᐅᕐᕕᐅᑎᓪᓗᒍ (ᔫᓐ–ᒥ ᐊᒻᒪ ᔪᓚᐃᒥ) ᐊᒻᒪ ᐃᖏᕐᕋᔭᒃᑎᓪᓗᒋᑦ (ᐊᐅᒍᓯᒥ) ᐊᒻᒪ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓪᓗᑎᒃ ᑲᑎᓪᓗᒋᑦ 23 ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ ᑎᕐᒥᐊᑦ ᑖᕙᓂ ᕿᖓᐅᒥ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᐳᑦ ᐃᖏᕋᔭᒃᑎᓪᓗᒋᑦ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᔪᑦ ᐸᕝᕕᓴᖅᑕᐅᒐᔭᕐᓂᖏᓐᓄᑦ (ᓲᕐᓗ ᓂᐱᖃᓗᐊᕐᓂᖅ) ᐊᒻᒪ ᕿᑐᖏᕈᖏᓐᓂᖅᓴᐅᔪᓐᓇᕐᓂᖏᑦ. ᐋᖅᑭᒃᐸᓕᐊᒍᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᓕᕆᕝᕕᐅᔪᒥᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓴᖅᑐᑦ ᐸᕝᕕᓴᕈᓐᓇᐅᑕᐅᔪᑦ (ᓲᕐᓗ ᓂᐱᖃᓗᐊᕐᓂᖅ) ᐊᒻᒪ ᕿᑐᖏᕈᖏᓐᓂᖅᓴᐅᓕᕐᓗᑎᒃ. ᐃᒪᓐᓇ ᐋᖅᑭᒃᓯᒪᒍᑎᖃᕐᓂᐊᖅᐳᑦ: ᑕᕆᐅᕐᒥᐅᑕᐃᑦ ᑎᕐᒥᐊᑦ ᒥᑎᑦ ᐃᖏᕐᕋᔭᒡᕕᒋᖃᑦᑕᖅᑕᖏᑦ ᐸᕝᕕᓴᖅᑕᐅᖏᓪᓗᑎᒃ, ᐸᕝᕕᓴᓗᐊᖃᑦᑕᖅᑕᐅᓂᐊᖏᒻᒪᑕ ᐸᕐᓇᒃᐸᕐᒌᖅᓯᒪᔪᒃᑯᑦ ᐃᖏᕐᖃᕕᐅᖃᑦᑕᖏᓪᓗᑎᒡᓗ ᐊᖅᑯᑎᖏᑦ ᑎᕐᒥᐊᑦ ᐊᕙᓗᓕᖅᑐᐃᖏᓪᓗᑎᒃ ᐃᖏᕐᕋᕝᕕᒋᓂᐊᖅᑕᖏᓐᓂ ᓇᐅᒃᑯᑐᐃᓐᓇᖅ, ᐃᖏᕐᕋᔭᕝᕙᖃᖃᑦᑕᕐᓗᑎᒃ 650 m–ᓂᒃ ᐃᖏᕐᕋᔭᕐᕕᐅᑐᐊᖅᐸᑕ ᑎᕐᒥᐊᓄᑦ, ᐊᑐᖅᑕᐅᖃᑦᑕᖏᓪᓗᑎᒡᓗ. ᐊᑐᓕᖅᑕᐅᑎᓪᓗᒋᑦ ᐋᖅᑭᒃᐸᓕᐊᒍᑎᒃᓴᐃᑦ ᐆᒪᔪᐃᑦ ᖃᓄᐃᓕᐅᖅᑕᐅᓂᐊᕐᓂᖏᑦ ᐊᐅᓚᑕᐅᓂᕐᔪᓪᓗ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ (ᑎᑎᖅᓯᒪᔪᑦ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 20), ᖃᓄᐃᖏᓐᓂᐊᕐᓱᒋᔭᐅᖏᑉᐳᑦ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᕐᒋᑦᑐᑎᒡᓗ ᓄᓇᐅᑉ ᑭᒡᓕᖓ ᖄᕐᒋᖃᑦᑕᐅᑎᓯᒪᒃᐸᑦ.

ᓇᕿᑦ

ᖃᖓᑕᔫᒃᑯᑦ ᖃᐅᔨᓴᕈᑎᖃᖅᑐᑎᒃ ᐅᐱᖓᒥ ᒥᖅᑯᐃᔭᖃᑦᑕᖅᐳᑦ (ᕿᑎᐊᓂ ᒪᐃ ᕿᑎᐊᓄᑦ ᔪᓚᐃ) ᐊᑯᓐᓂᖓᓂ 2007 ᐊᒻᒪ 2013 ᑕᐃᑲᓂ ᑕᕆᐅᒥ ᐃᓂᒋᔭᐅᔪᑉ ᓴᓂᐊᓂ ᓇᕿᖅᑕᖃᖅᐳᖅ ᐊᒥᓱᓂᒃ ᖃᓯᒋᐊᖃᖅᑐᓂ. ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔪᓂ

ᖃᐅᔨᓯᒪᓪᓗᑕᓗ ᖃᓯᒋᐊᖅᑕᖃᐅᕐᓂᖓᓄᑦ ᕿᖓᐅᒥ, ᐃᓚᖏᓐᓂ ᐱᑕᖃᕐᓂᖅᓴᐅᓪᓗᑎᒃ, ᓂᒋᖅᐸᓯᖓᓂ ᐱᑕᖃᖏᓐᓂᖅᓴᐅᒐᓗᐊᖅᖢᓂ ᑭᖓᐅᑉ ᑕᒪᒃᑯᐊ ᐱᑕᖃᕐᓂᖅᓴᐅᓪᓗᑎᒃ ᐃᓐᓇᐃᑦ ᓇᑦᓯᑦ ᐊᒻᒪ 8-ᓂᑦ ᖁᓕᓄᑦ ᐱᓇᓱᐊᕈᓯᖃᖅᑐᓪᓗ ᓇᓂᔭᐅᖃᑕᐅᓚᐅᖅᖢᑎᒃ ᑕᐃᑲᓂ. ᖃᓯᒋᐊᑦ ᓯᑎᖏᑦ ᐅᐊᖕᓇᖓᓈᓐᓇᖅ ᓇᓂᔭᐅᓚᐅᖅᐳᑦ ᑕᐃᑲᓂ ᐱᓕᕆᕕᖓᓐᓂ ᓂᒋᐊᓂ RSA ᐅᕙᓘᓐᓃᑦ LSA. ᐃᓗᐃᓪᓕᐅᕈᑕᐅᓕᕈᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᖃᖅᑎᓪᓗᒍ ᑕᐃᑲᓂ ᐊᓯᔾᔨᖅᑕᐅᒐᔭᕐᓂᖏᑦ ᐃᓂᒋᔭᐅᖃᑦᑕᖅᑐᑦ (ᓲᕐᓗ: ᓂᐱᖃᓗᐊᕐᓂᖅ), ᑐᖁᔪᖃᕐᓂᖓ ᐋᓐᓂᖅᑐᖃᕐᓂᖓᓗ, ᓱᕈᕐᓇᖅᑐᓄᐊᕐᕿᔭᕐᓂᖏᑦ, ᐊᒻᒪ ᕿᑐᖏᐅᔪᐊᖏᓕᕐᓗᑎᒃ. ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐊᐅᔭᖅᑐᐃᖃᑦᑕᕐᓂᐊᖅᐳᑦ (ᐊᐅᒐᓯ 25-ᒥᑦ ᐊᒃᑐᐱᕆ 31-ᒧᑦ) ᑲᓯᒋᐊᑦ ᐱᑕᖃᖏᓐᓂᖅᓴᐅᓕᖀᖓᑕ ᐱᓕᕆᕕᐅᔪᓂ ᑕᕆᐅᒥ LSA ᐊᒻᒪ RSA ᖃᓄᐃᓗᐊᖏᓐᓂᐊᕐᓂᕋᖅᑕᐅᕗᑦ. ᑕᐃᑲᓂ ᐅᒥᐊᕐᔪᐊᓕᕆᕕᖕᒥ ᐱᓕᕆᔪᑦ ᑭᓯᐊᓂ ᑕᕆᐅᖅ ᐃᒪᖃᓕᖅᑎᓪᓗᒍ ᐱᓕᕆᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᐊᐅᔭᖅᑐᐃᓂᕐᒥᒃ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐊᒻᒪ ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᑎᓕᐅᖅᓯᒪᔪᒃᑰᖅᑕᕐᓂᐊᖅᖢᑎᒃ ᐊᐅᓚᓂᐊᖅᖢᓂ (ᑎᓯᐱᕆᒥᑦ ᒫᔾᔪᒧᑦ) ᑕᒪᒃᑯᐊ ᐅᓪᓗᐃᑦ ᒪᓕᒃᖢᑎᒃ ᓇᑦᓯᑦ ᖃᓄᐃᓕᐅᖏᓐᓂᑎᓴᖏᓐᓂᒃ ᑕᐃᑲᓂ LSA RSA (ᐅᕙᓘᓐᓃᑦ ᓂᒋᐊᓂ ᑭᖓᐅᑉ). ᐊᑲᐅᖏᓕᐅᕈᑕᐅᑦᑕᐃᓕᒪᒍᑎᑦ ᐅᑯᐊᖑᓂᐊᖅᖢᑎᒃ: ᓇᓗᓇᐃᔭᐃᓂᖅ ᐊᑐᕐᕕᖃᖅᑕᐃᓕᒪᓂᕐᓗ ᓯᑎᖏᓐᓂᒃ ᓇᑦᓯᑦ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᕐᓂᐊᖏᓐᓂᕋᖅᑕᐅᕗᑦ ᓇᑦᓯᑦ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒧᑦ.

<u>ᐃᓄᐃᑦ ᐊᕙᓗᒥᐅᑕᖏᓪᓗ</u>

ᐃᔅᓴᕐᓂᑕᖅᕕᑦ

ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᐊᖅᑐᖅᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᓕᕈᓐᓇᖃᔭᖅᑐᓂᒃ ᐱᓕᕆᕕᐅᔪᓂ (PDAs), ᐊᒻᒪ ᑕᒪᒃᑯᐊ ᐃᔅᓴᕐᓂᑕᐃᑦ ᑕᒫᓂ LSA ᐊᒻᒪ RSA ᐊᕐᕌᒍᓂ ᖃᐅᔨᓴᑕᐅᓚᐅᖅᓯᒪᓪᓗᑎᒃ 2001, 2002, 2004, 2007, 2010 ᐊᒻᒪ 2013-ᒧᑦ. ᐅᓂᒃᑳᒐᒃᓴᖃᖅᐳᑦ ᑐᑭᓯᒋᐊᕐᑯᑎᒃᓴᓂ ᐱᔭᐅᓚᐅᖅᓯᒪᓪᓗᑎᒃ 1970ᓂᑦ ᐊᒻᒪ 1990-ᓄᑦ. ᐱᓕᕆᕕᐅᓂ. ᐱᓕᕆᕕᐅᓂᐊᖅᑐᒥᒃ ᓴᓇᓂᖏᓐᓂ ᐸᕕᓴᖅᑕᐅᑐᐃᓐᓇᑎᐊᖅᑲᖅᐳᑦ ᐃᔅᓴᕐᓂᑕᐃᑦ. ᑕᒪᒃᑯᐊ ᓴᓇᔭᐅᔪᒃᓴᐃᑦ ᑎᑎᕋᐅᔭᖅᑕᐅᓕᖅᐸᑕ ᐃᓂᖏᓐᓂ ᓴᓇᑦᑕᐃᓕᓇᓱᐊᖅᑕᕐᓂᐊᖅᐳᑦ. ᐃᔅᓴᕐᓂᑕᖅᕕᒃ ᑎᑎᖅᑕᐅᓯᒪᖏᑉᐸᑕ ᓇᓂᔭᐅᑉᐸᑕᓗ ᓴᓇᑎᓪᓗᒋᑦ ᐃᓂᒋᓂᐊᖅᑕᒥᖕᓂᒃ, ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᐳᑦ ᐃᔅᓴᕐᓂᑕᑕᓕᕆᔨᒃᑯᖏᓐᓄᑦ ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᓐᓄᑦ, ᐃᓕᖅᑯᓯᑐᖃᓕᕆᔨᒃᑯᓐᓄᑦ ᑕᑕᑎᓚᓗᑎᒃ "ᓇᓂᓯᓯᒪᓂᖏᓐᓄᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᓯᒪᔪᑦ". ᑕᒪᒃᑯᐊ ᐃᔅᓴᕐᓂᑕᖅᕕᒃ ᑕᐃᒪᓐᓇ ᐊᐅᓚᑕᐅᓂᑎᓴᖏᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᐳᑦ ᖁᑖᓂ ᒪᓕᒃᑕᐅᒋᐊᖃᖅᑐᑦ ᒪᓕᒃᖢᒋᑦ. ᐊᒃᑯᖅᑕᐅᑦᑕᐃᓕᓗᑎᒃ ᐊᒻᒪ/ᐅᕙᓘᓐᓃᑦ ᐊᑐᖅᑎᑎᓗᑎᒃ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᓂᒃ ᐃᔅᓴᕐᓂᑕᐃᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᐊᒻᒪ ᖃᓄᐃᒍᑎᖃᕐᓂᐊᕐᓂᕋᖅᑕᐅᔪᑦ. ᒪᓕᒃᖢᒋᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑲᕐᓂᐊᕐᓂᕋᖅᑕᐅᔪᑦ. ᓇᓃᓐᓂᖅᒋᑦ ᐃᔅᓴᕐᓂᑕᖅᕕᐅᔪᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓂᐊᖏᑉᐳᑦ ᐃᔅᓴᕐᓂᑕᐃᑦ ᖃᓂᒌᖏᓐᓂᖏᓐᓄᑦ ᐱᔾᔪᑎᒋᓗᒍ ᐊᑲᐅᖏᓕᐅᕈᑎᑦᓴᖃᕐᓂᐊᖏᑉᐳᑦ ᐊᒻᒪ ᓄᓇᒧᑦ ᖄᖕᒪᒨᖅᑕᐅᑎᔪᖃᕐᓂᐊᖏᑦᑐᓂ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᖅᑲᕐᓂᐊᖏᑉᐳᑦ ᐃᔅᓴᕐᓂᑕᖅᕕᐅᔪᑦ ᖃᓂᒋᓗᐊᖏᒻᒪᒋᑦ ᐱᓕᕆᕕᐅᓂᐊᖅᑐᑦ. ᓄᓇᖓᓗ ᖄᖏᐅᑎᖃᑦᑕᐅᑎᓂᐊᖏᑦᑐᑎᒃ ᑕᐃᑲᓂ ᐱᓕᕆᕕᐅᔪᒥ VSEC ᐃᔅᓴᕐᓂᑕᖅᕕᒃ.

ᐃᓄᓕᕆᓂᖅ-ᑮᓇᐅᔭᓕᐅᕈᑕᕐᓂᖅ

ᖃᐅᔨᓴᕈᑎᖃᖅᓯᒪᓪᓗᑎᒃ ᐱᓕᕆᕕᐅᓂᐊᖅᑐᒥ ᐃᓄᓕᕆᓂᕐᒧᑦ-ᑮᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᐱᔾᔪᑎᖃᖅᐳᑦ ᑕᓪᓕᒪᓂᒃ ᑕᐃᑲᓂ VSECS: 1) ᐱᕙᓪᓕᐊᔪᓕᕆᓂᖅ2) ᐱᓕᕆᕕᒃᑖᖅᑎᑎᓂᖅ; 3) ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖅ; 4) ᐃᓕᓐᓂᐊᖅᑎᑎᓂᖅ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᖅ ᐱᓕᕆᐊᒃᓴᓂᒃ ᐊᒻᒪ 5) ᐋᓐᓂᐊᖅᑕᐃᓕᒪᑎᑎᓂᖅ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᑲᒪᓯᐊᕐᓂᖅ. ᑲᑎᓪᓗᒋᑦ ᖁᓕᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᒋᔭᐅᔪᓐᓇᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᐳᑦ, 7-ᓂᒃ ᐱᔾᔪᑎᖃᓚᐅᖅᖢᑎᒃ ᓄᓇᐃᑦ ᖄᖏᐅᑎᖃᑦᑕᐅᑎᒍᑎᒃᓴᖃᖏᑉᐳᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᐅᒐᔭᖅᑐᓂᒃ. ᐊᑲᐅᖏᓕᐅᕈᑎᑦᓴᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᐳᑦ ᖃᓄᐃᓕᒍᑕᐅᔪᓐᓇᖃᖅᓴᕐᓂᖏᓐᓄᑦ, ᖃᐅᔨᓴᖅᑕᐅᒍᑕᐅᓚᐅᖅᑐᑦ ᓄᓇᐅᑉ ᖄᖏᐅᑎᖃᑦᑕᐅᑎᓂᖏᓐᓂ ᐊᑲᐅᖏᓕᐅᕈᑎᒋᔭᐅᓇᔭᕐᓂᖏᓐᓄᑦ.

ᐱᕙᓪᓕᐊᔪᓕᕆᓂᖅ

ᕿᑎᕐᒥᐅᑦ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᐳᑦ, ᒐᕙᒪᒃᑯᓐᓂ ᐊᒥᓲᓂᖅᓴᐃᑦ ᐃᖅᑲᓇᐃᔭᖅᑐᑎᑦ, ᓇᖕᒥᓂᖅ ᐱᓕᕆᕕᖃᖅᑐᓂᓗ, ᓂᐅᕕᕐᕕᖃᖅᑐᓂᓪᓗ ᐊᒻᒪ ᐃᓄᐃᑦ ᐱᖅᑯᓯᑐᖃᖏᓐᓂᒃ ᐊᑐᖅᖢᑎᒃ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᐳᑦ.

ᑕᒪᒃᑯᐊ ᐱᕙᓪᓕᐊᑎᑎᖃᑦᑕᖅᑐᑦ ᐱᒻᒪᕆᐅᓂᕐᒋᓐᓂ ᐅᑯᐊᕐᒎᕗᑦ: ᒐᕙᒪᒃᑯᑦ, ᐋᓐᓂᐊᖅᑐᓕᕆᔨᒃᑯᑦ ᐃᓄᓕᕆᔨᒃᑯᑦ, ᐃᓕᓐᓂᐊᖅᑐᓕᕆᔨᒃᑯᑦ, ᓂᐅᕕᖅᑎᒃᑯᑦ, ᐃᒡᓗᕐᔪᐊᓕᐅᖅᑎᑦ, ᐃᖏᕐᕋᔪᓕᕆᔨᒃᑯᑦ, ᐳᓚᕋᖅᑐᓕᕆᔨᒃᑯᑦ, ᑎᑎᕋᐅᔭᖅᑎᑦ ᓴᓇᙱᐊᖅᑎᑦ, ᐅᔭᕋᕐᓂᐊᕐᕕᖕᒥ ᐱᓕᕆᔩᑦ ᐱᕙᓪᓕᐊᔪᓕᕆᔩᓪᓗ (ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᓐᓂᑦ ᓈᓴᖅᑕᐅᒍᑎᓃᖕᒌᖅᑐᑦ 2007). ᐱᔾᔨᕋᕐᓂᕐᒥᒃ ᐱᓕᕆᐊᕐᑲᖅᑐᑦ ᐊᒥᓲᓂᖅᓴᐅᓪᓗᑎᒃ ᕿᑎᕐᒥᐅᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᐳᑎᒃ ᐃᒻᒪᖃ 80% ᐱᓕᕆᓪᓗᑎᒃ. ᑕᒪᐃᑎᒍᑦ, ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᐸᓪᓕᐊᓂᐊᖅ, ᐱᓕᕆᕝᕙᓕᕐᓂᖏᓐᓂ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ ᑖᕙᓂ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᕐᕕᐅᓂᐊᖅᐳᑦ ᐃᒪᓐᓇᐃᓕᐅᕐᓂᖅᓴᐅᓗᑎᓪᓗ: ᓄᓇᓕᖕᓂᒥᐅᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑕᐅᓂᖅᓴᐅᓗᑎᒃ, ᑮᓇᐅᔭᓕᐅᕐᓂᖅᓴᐅᓕᕐᓗᑎᓪᓗ, ᑮᓇᐅᔭᓂᒃ ᐊᑐᕐᓂᖅᓴᐅᓕᕐᓗᑎᓪᓗ; ᐱᓕᕆᕝᕙᓕᖅᑎᓪᓗᒋᑦ ᑮᓇᐅᔭᐃᔭᕈᑕᐅᓂᐊᖅᑐᑦ (ᓄᓇᓕᖕᓂ, ᓄᓇᓕᕐᔪᐊᒥᓗ) ᐱᓕᕆᕝᕙᖃᕐᓗᑎᒃ ᕿᑎᕐᒥᐅᓂ ᓄᓇᕗᒥ, ᑮᓇᐅᔭᓕᐅᖅᑎᑎᕐᑲᑕᐅᓂᐊᕐᓗᑎᒃ ᐱᓕᕆᕝᕙᖅᑐᓂ ᐃᓚᐅᓗᑎᒃ, ᐊᒻᒪ ᓄᑖᓂ ᐱᓕᕆᕝᕕᓕᐅᑉᓗᑎᒃ ᕿᑎᕐᒥᐅᓂ ᓄᓇᓕᖕᓂ ᐱᑦᑲᓚᐅᖏᑦᑐᓂᒃ ᓴᖅᑭᑎᑎᓗᑎᒃ ᐱᓕᕆᕝᕕᖕᓂᒃ; ᐅᕙᓘᓐᓃᑦ ᐊᒻᒪᓗ ᐱᕙᓪᓕᐊᑎᑎᓗᑎᒃ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ, ᐃᓄᖕᓄᑦ ᓇᖕᒥᓂᕆᔭᐅᔪᒥᒃ ᓴᖅᑭᑎᑎᕙᓪᓕᐊᓂᖅ. ᑮᓇᐅᔭᓕᐅᕈᑎᖃᖅᑎᑎᕙᓪᓕᐊᓂᖅ, ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐊᒻᒪ ᖃᓄᐃᓕᐅᕈᑎᖃᕐᓂᖅ ᐊᑲᐅᔪᓂᒃ ᐱᓕᕆᕝᕙᖃᖅᑐᑦ ᐱᕈᖅᐸᓪᓕᐊᓂᖏᓐᓂ. ᐊᑲᐅᓂᐊᕐᓂᕋᖅᑕᐅᓚᐅᕐᒪᑦ, ᑕᐃᒪᓐᓇ ᖃᐅᔨᓴᖅᑕᐅᖃᑕᐅᓚᐅᖏᑉᐳᖅ ᓄᓇᐅᑉ ᖃᖏᐅᑎᒍᑎᖏᓐᓃᒐᔭᕐᓂᖏᓐᓄᑦ.

ᓇᖕᒥᓂᖅ ᐱᓕᕆᕝᕿᓴᐅᓇᔭᖅᑐᑦ

ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᑦ ᐱᓕᕆᔨᒋᔭᐅᕗᑦ ᑕᒫᓂ ᑮᓇᐃᔭᓕᐅᕈᑕᐅᓪᓗᑎᓪᓗ ᕿᑎᕐᒥᐅᓄᑦ ᓄᓇᓕᖕᓂᒥᐅᓄᑦ. ᒐᕙᒪᒃᑯᑦ ᐃᖅᑐᑲᓇᐃᔭᖅᑎᑎᕗᑦ ᑕᒡᕙᓂ ᓄᓇᓕᖕᓂᒥᐅᓂᑦ, ᑕᐃᒪᓐᓇ, ᓇᖕᒥᓂᖅ ᐱᓕᕆᕝᕙᖅᑐᑦ ᓴᖅᑮᔭᖅᑎᑕᐅᕗᑦ ᑕᐃᒪᓐᓇ ᐊᑐᓂ ᓄᓇᓕᖕᓂ. ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᖅ ᐱᕈᖅᐸᓪᓕᐊᖅᑎᑎᓂᐊᖅᐳᖅ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐃᓄᖕᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑕᓂᒡᓗ ᐱᓕᕆᕝᕕᖕᓂᒃ ᑳᓐᑐᕌᒃᑎᑕᐅᑉᑕᕐᑐᑎᓪᓗ ᐊᓯᖏᓪᓗ ᑳᓐᑐᕌᒃᑎᓄᑦ ᐱᓕᕆᑎᑕᐅᕙᓪᓗᑎᒃ, ᐱᓗᐊᖅᑐᒥᒃ ᐱᔾᔨᕋᐅᑎᕐᑲᕐᓂᕐᒍᑦ ᐱᓕᕆᐊᕐᑲᖅᑐᓂᒃ ᐱᕐᑯᑎᖃᖅᑎᑎᔾᔭᐅᓪᓗᑎᓪᓗ ᐃᑲᔪᖅᐳᑎᓪᓗ ᑮᓇᐃᔭᓕᐅᕈᑎᓄᑦ ᓂᐅᕝᕙᑦᑕᖅᐸᓪᓕᐊᕐᑯᓪᓗᒋᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ. ᐊᑭᑐᔪᓄᑦ ᐊᑐᒐᒃᓴᓂᒃ ᑮᓇᐅᔭᓕᐅᕈᓐᓇᖅᐸᓪᓕᐊᓂᐊᖅᐳᑦ (ᓲᕐᓗ ᐱᕈᖅᓴᐃᒍᑎᒃᓴᓂᒃ ᐊᖏᒡᓕᒋᐊᖅᑎᑕᐅᓂᐊᕐᓗᑎᒃ ᓇᖕᒥᓂᖅ ᐱᓕᕆᕝᕆᔭᐅᔪᑦ ᓄᑖᓂᓪᓗ ᐱᓕᕆᕝᕕᒃᑖᖅᑐᖃᕐᓂᖅ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ ᐱᓕᕆᓚᐅᖏᓐᓂᖏᓐᓂ). ᓄᓇᓕᖕᓂ ᐱᓕᕆᕝᕖᓐᓇᖅᓯᓂᐊᖅᐳᖅ ᑲᓐᑐᕋᒍᓐᓇᖅᑲᑦᑕᕐᓂᖅᑐᓂᒃ. ᐃᓄᐃᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓪᓗ ᐱᓕᕆᔨᖏᑦ ᓴᖅᑭᐸᓪᓕᐊᓂᖅᓴᐅᓂᐊᖅᐳᑦ ᐱᕙᓪᓕᐊᓂᖏᓐᓂ ᐱᓕᕆᕝᕙᒃ. ᐊᑲᐅᓂᐊᕐᓂᕋᖅᑕᐅᓯᒪᓪᓗᑎᓪᓗ ᑕᐃᒪᓐᓇ, ᖃᐅᔨᓴᖅᑕᐅᒃᑲᓐᓂᓚᐅᖏᑉᐳᑦ ᓄᓇᐅᑉ ᖃᖏᓯᒪᒍᑎᒃᓴᕆᓇᔭᖅᑕᖏᓐᓂᒃ ᐱᔪᑎᖃᖅᑐᑦ.

ᐃᖅᑲᓇᐃᔭᒐᒃᓴᐃᑦ

ᐃᖅᑲᓇᐃᔭiᕋᔭᖅᑐᑦ ᓇᓚᐅᑦᓵᕈᑕᐅᓚᐅᖅᐳᑦ ᕿᑎᕐᒥᐅᓂ ᓄᓇᓕᖕᓂ ᐃᒪᓐᓇᐃᒐᔭᕐᓂᖏᓐᓄᑦ 3,475, 2006–ᖑᑎᓪᓗᒍ. ᑖᒃᑯᓇᓂᙶᓐᓇᖅ ᓄᓇᓕᖕᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ 2,185–ᖑᓪᓗᑎᒃ, ᐃᓚᐅᔪᑦ ᐃᒪᓐᓇᑎᒋ ᐳᓴᓐᑎᖃᖅᐳᑎᒃ 62.9%. ᐃᒃᐱᒍᓱᒃᑎᑎᓂᐊᖅᐳᑎᒃ ᐱᓕᕆᔪᑦ VSEC–ᑯᓐᓂᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓗᑎᒃ ᐃᒪᓐᓇ: ᐃᓕᓐᓂᐊᖅᑎᑎᓗᑎᒃ, ᐃᖅᑲᓇᐃᔭᖅᑎᑖᕐᓗᑎᒃ ᐱᓯᒪᐃᓐᓇᕋᓱᕐᓗᑎᓪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᑖᕆᔭᒥᖕᓂᒃ ᐱᓕᕆᑎᑎᓂᖅᓴᓗᑎᒃ ᐃᓄᖕᓂᒃ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐸᕐᓇᐅᑎᖃᕐᓗᑎᓪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᒋᔭᒥᖕᓂᒃ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 28). ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᖃᕐᓂᐊᕐᓂᖏᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᒃᓴᓂᒃ ᐸᕐᓇᒍᑎᖃᕐᓂᖅ (ᑎᑎᖅᓯᒪᓂᖓ 10, ᐊᕕᒃᓯᒪᓂᖓᓂ 28). ᐸᕐᓇᐅᑎᑦ ᐱᕙᓪᓕᐊᒍᑕᐅᓂᐊᖅᐳᑦ ᐃᒪᓐᓇ: ᐸᕐᓇᐅᑎᖃᕐᓂᖅ ᐃᖅᑲᓇᐃᔭᖅᑎᒃᓴᓂᒃ, ᐸᕐᓇᒃᓯᒪᓂᖅ ᑭᒃᑯᓐᓂᒃ ᐱᓕᕆᑎᑎᓂᖅᓴᐅᓂᐊᕐᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᓂᒃ, ᐃᖅᑲᓇᐃᔭᖅᑎᓪᓗ ᐱᕙᓪᓕᐊᓂᕐᑲᖅᑎᑕᐅᓯᐊᕆᐊᕐᑲᕐᓂᖏᓐᓄᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᖃᖅᐳᑎᒃ. ᐃᓄᖕᓂᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᐊᖅᐳᑦ ᐃᖅᑲᓇᐃᔭᖏᑦᑐᓪᓗ ᐊᒥ ᓲᖏᓐᓂᖅᓴᐅᓕᖅᑎᑕᐅᓗᑎᒃ. ᑐᓴᖅᑎᑎᓂᐊᖅᐳᑎᓪᓗ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐱᓕᕆᕝᕙᖅᑐᓂᒃ, ᑲᑐᔾᔨᖃᑎᒌᓂᓪᓗ, ᐊᒻᒪ Hᐊᓪᓚᒃᑯᓐᓂᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑖᕈᓯᒥᖕᓂᒃ ᐊᑐᓕᖅᑎᑕᐅᓚᐅᖏᓐᓂᐊᓂ ᓴᓇᓂᖅ ᐊᐅᓚᒋᓯᓂᕐᒧ ᑕᐃᒪᓐᓇ ᐱᓕᕆᑎᑎᓂᐊᖅᐳᑎᒃ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ.

ᑕᒪᐃᑎᒍᑦ, ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖅ ᑮᓇᐃᔭᓕᐅᕈᑎᖃᕐᓂᕐᓗ ᐱᓕᕆᑎᑕᐅᓗᓂ ᐃᑲᔪᕐᓂᖃᕐᓂᐊᖅᐳᑦ ᐃᓅᓯᖃᑦᓯᐊᖅᐸᓪᓕᐊᕐᑯᓪᓗᒋᑦ ᕿᑎᕐᒥᐅᑦ ᖃᑕᙳᑎᒌᑦ. ᐱᓕᕆᐊᒃᓴᖅᑖᖅᐸᓪᓕᐊᖏᓐᓇᕐᓂᕐᓗᑎᒃᓗ, ᐱᓗᐊᖅᑐᒥᒃ ᐊᔪᖏᓴᖅᑕᐅᓗᑎᒃ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᓗᑎᒃ ᕿᑎᕐᒥᐅᑦ. ᐃᖅᑲᓇᐃᔭᖏᓐᓂᖅᓴᐃᓪᓗ ᐊᒥᒌᖏᓐᓂᖅᓴᐅᕙᓪᓕᐊᓂᐊᖅᐳᑦ, ᐱᕈᖅᐸᓪᓕᐊᑎᑎᓗᑎᒡᓗ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓂᒃ, ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒥᓗ ᐊᔪᖏᓕᖅᐸᓪᓕᐊᕐᑯᓪᓗᒋᑦ ᐱᓕᕆᕙᒃᑕᖃᓕᕐᓂᕐᒥᒃᐸᑦ ᑕᐃᒪᐃᑦᑐᓂᒃ. ᑮᓇᐃᔭᓕᐊᖏᑦ ᐊᔪᕈᖅᑕᐅᕙᓪᓕᐊᓗᑎᒃᓗ, ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓂᐊᖏᓐᓂᖅᓴᖅᑕᐅᓯᒪᓪᓗᑎᒃᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᑕᐅᕙᓪᓕᐊᓂᖏᓐᓄᑦ. ᐱᓕᕆᓕᖅᐸᑕ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ ᐱᓕᕆᐊᒃᓴᓂᒃ ᐊᖅᓵᕐᓯᓚᖅᑦᑕᐅᑎᒍᓐᓇᖅᓂᖏᓐᓄᑦ. ᕿᑎᕐᒥᐅᑦ ᐱᓕᕆᐊᒃᓴᖃᓴᓗᐊᖅᓗᑎᒃ ᑕᐃᒪᓐᓇ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᐱᓕᕆᓪᓚᕆᐊᖃᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ. ᑭᓯᐊᓂ, ᐊᒥᒌᓂᖅᓴᐃᑦ ᕿᑎᕐᒥᐅᑕᐃᑦ ᐊᓯᖏᓐᓂ ᐱᓕᕆᔪᑦ ᐱᓕᕆᐊᒃᓴᖅᑖᕋᓯᐊᕐᓂᖅᓇᐊᕐᓂᖏᓐᓄᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᓴᖅᑭᓐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᖅ. ᑕᐃᒪ ᖃᓄᐃᖏᔾᔭᑕᐅᓂᐊᖏᑦᑐᖅ ᖃᓄᑐᐃᓐᓇᖅ.

ᐃᖅᑲᓇᐃᔭᖅᑎᕐᓯᓕᖅᐸᑕ ᐱᓕᕆᑎᑎᓕᖅᐸᑕᓗ ᐊᑲᐅᖏᓕᐅᕈᑎᖃᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ ᐊᓯᔾᔨᖅᑕᐅᓗᑎᒃ ᓄᓇᓕᖕᓂ ᓵᓚᒃᓴᐅᑎᖅᑦᑕᐅᑎᒍᑎᑦ ᐃᖅᑲᓇᐃᔭᕐᓂᕐᒧᑦ ᐊᖅᓵᕐᓯᓚᐅᑎᑐᐃᓐᓇᕆᐊᖃᕐᓂᖏᓐᓄᑦ. ᑕᐃᒪ ᐱᓕᕆᐊᕆᔭᐅᔪᖅ ᒪᓕᒡᓗᒍ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᒫᓐᓇ ᕿᑎᕐᒥᐅᓂ ᐃᖅᑲᓇᐃᔮᒥᖕᓂᒃ ᐊᓯᔾᔩᓗᑎᒃ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᐃᖅᑲᓇᐃᔭᕆᐊᕐᓂᖅᓴᐅᑐᐊᕐᓂᖅᓂᖏᓐᓄᑦ. ᑭᓯᐊᓂ, ᐊᒥᒌᓂᖅᓴᐃᑦ ᕿᑎᕐᒥᐅᑦ ᐊᓯᐊᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᐃᖅᑲᓇᐃᔭᖅᑕᒥᖕᓂᒃ ᕿᒪᐃᖏᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ ᐃᖅᑲᓇᐃᔭᖅᑕᒥᖕᓂᒃ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᐃᖅᑲᓇᐃᔭᕆᐊᕐᓗᑎᒃ. ᓄᓇᓕᖕᓂᒥᐅᑦ ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᑦ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᓪᓗ.** ᖃᐅᔨᓴᓚᐅᖅᐳᑦ ᑕᒪᒃᑯᐊᓗ ᐱᓕᕆᐊᒃᓴᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᐅᓪᓗᑎᒃ ᐃᓄᐃᓪᓗ ᖃᓄᐃᓕᐅᖅᑎᖃᑦᑕᖅᓂᖏᓪᓗ ᕿᑎᕐᒥᐅᓂ ᓄᓇᕐᔪᐊᒥᓗ ᐃᓄᓕᕆᓂᕐᒧᑦ-ᑮᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᖃᐅᔨᓴᕈᑎᖃᖅᓗᑎᒃ ᒫᓐᓇ ᓄᓇᓕᖕᓂᒥᐅᓂᒃ ᐱᔾᔪᑎᖃᖅᓗᑎᒃ. ᐊᓯᔾᔨᖅᑕᐅᓂᕐᓂᖏᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᕙᒃᑐᑦ ᓵᓚᒃᓴᐅᑎᖅᑦᑕᐅᑎᒐᔭᖅᓂᖏᓐᓄᑦ ᐱᓕᕆᐊᒃᓴᓄᑦ ᑕᐃᒪᓐᓇᐃᓐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᖅ **ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓗᐊᕐᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᓪᓗ.** ᐊᑲᐅᖏᓕᕈᑎᖃᓂᐊᕋᓱᒋᔭᐅᖏᑉᐳᓪᓗ ᓄᓇ ᖄᖏᖅᓯᒪᖃᑦᑕᐅᑎᓂᖓ ᐱᔾᔪᑎᖏᓪᓗᒍ.

ᐃᓕᓐᓂᐊᕐᓂᖅ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᖅ

ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓕᕈᓐᓇᖅᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᒧᑦ ᐃᓕᓐᓂᐊᕐᓂᖅ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᖅ ᐊᑐᖅᑕᐅᒍᒪᕗᑦ ᐊᓯᔾᔨᖅᑕᐅᕐᑯᓪᓗᒋᑦ ᖃᓄᖅ ᐃᓯᒪᖃᑦᑕᕐᓂᖏᑦ ᒪᒃᑯᒃᑐᑦ ᐃᓕᓐᓂᐊᕐᓂᕐᒧᑦ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᓂᕐᒧᓪᓗ. Sabina ᐱᓕᕆᖅᑎᖃᕈᒪᕗᑦ ᒐᕙᒪᒃᑯᓐᓂᒃ ᓄᓇᓕᖕᓂ, ᐃᓕᓐᓂᐊᖅᑐᓕᕆᔩᒃᑯᓐᓂᒡᓗ, ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑎᒌᒃᑯᖏᓐᓂᒡᓗ, ᐊᓯᖏᓐᓂᒡᓗ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᓂᒃ ᐃᓕᓐᓂᐊᖅᑎᑎᕕᖃᕈᓐᓇᓕᕐᑯᓪᓗᒋᑦ ᐅᕙᓗᓐᓃᑦ ᓴᖅᑭᑎᑎᓗᑎᒃ ᐅᔭᕋᓐᓂᐊᕐᕕᖕᒥ ᐱᓕᕆᒋᐅᖅᓴᓂᕐᒧᑦ ᐃᓕᓐᓂᐊᕐᕕᖕᒥᒃ ᓄᓇᖓᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓯᓚᑦᑐᖅᓴᕐᕕᖓᓂ. ᐅᖃᐅᓯᕆᔭᐅᓯᒪᒃᑲᓐᓂᖅᓴᓂ ᓄᓇᓕᖕᓂᒥᐅᑦ ᐃᓚᐅᕆᐊᖃᕐᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᒥ (ᑎᑎᖅᓯᒪᓂᖓ 10 ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 26). ᐱᓕᕆᓂᐊᖅᓗᑎᒃ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᕙᒃᓴᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᑦ, ᓇᓗᓇᐃᔭᖅᑕᐃᓯᒪᓪᓗᑎᒃ ᐃᖅᑲᓇᐃᔭᖅᑎᒃᓴᐃᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᓂᖏᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 28), ᐅᖃᐅᓯᖃᖅᐳᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᐊᖃᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᕕᖕᒥ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖏᓐᓄᑦ ᓄᓇᓕᖕᓂᒥᐅᑕᐃᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᓗᑎᒃᓗ ᐱᓕᕆᖅᑎᒋᔭᐅᕆᐊᖃᕐᓂᕐᒧᑦ, ᐃᑲᔪᖅᑕᐅᓗᑎᒃ ᓄᓇᓕᖕᓂ ᐱᓕᕆᖃᑕᐅᓂᕐᒧᑦ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᕐᒧᓪᓗ, ᐱᓕᕆᕕᐅᑉ ᐃᓗᐊᓂ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᖃᑦᑕᖅᑐᑎᒃ ᐱᓕᕆᒋᐅᖅᓴᓂᖏᑦ; ᐃᖅᑲᓇᐃᔭᒋᐅᖅᓴᓂᖏᓪᓗ ᐃᓄᐃᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖏᑦ ᐃᓕᓐᓂᐊᖅᑎᑎᓂᖏᓪᓗ ᑲᒪᔨᖃᖅᑐᑎᒃ ᐊᑐᓂ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᓄᓇᑦ ᐱᓕᕆᐊᒍᑦ, ᑖᒃᑯᐊ ᐃᓚᐅᖅᑲᖃᓗᐊᖅᓗᑎᒃ ᕿᖓᐅᑦ ᐅᒥᖕᒪᖅᑰᖅᑐEach of the ᐊᒻᒪ ᒪᒃᑯᒃᑐᑦ ᐃᓕᓐᓂᐊᖅᑎᑕᐅᖃᑦᑕᖅᑐᑎᒃ. ᑕᒪᐃᑎᒍᑦ, ᐊᓯᔾᔨᖅᑕᐅᓂᕐᓂᖏᑦ ᐃᓕᓐᓂᐊᕐᓂᖏᑦ ᐊᓯᔾᔨᕈᑕᐅᓂᐊᖅᐳᑦ ᒪᒃᑯᒃᑐᓂᒃ ᐃᓕᓐᓂᐊᕈᒪᒐᔭᖅᓂᖏᓐᓄᑦ ᐱᓕᕆᐊᒃᓴᖅᑖᖅᓂᐊᖅᑐᑎᒃ. ᐊᑲᐅᖏᓕᐅᕈᑎᖃᓂᐊᖏᓐᓂᖏᓐᓄᑦ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒧᑦ ᐊᒻᒪ ᓄᓇᐅᑉ ᖄᖏᐅᑎᒍᑎᖏᑦ ᐱᑕᖃᕐᓂᐊᕋᓱᒋᔭᐅᖏᑦᑐᑎᒃ ᐊᑲᐅᖏᓕᐅᕈᑎᒃᓴᐃᑦ.

ᐋᓐᓂᐊᖃᕐᓇᖅᑎᑦᑐᓕᕆᓂᖅ ᓄᓇᓕᖕᓂ ᐋᖅᑭᒃᓯᒪᔭᐅᖅᑎᑎᓂᖅ

ᓄᓇᕗᒥ ᓇᒡᒍᐊᕐᓗᖕᒋᓐᓂᖅᓴᐅᖅᑕᑦᑕᕐᒪᑕ, ᐊᒻᒪ ᐊᐅᒃᑯᑦ ᐱᑕᕐᓯᓯᒪᖕᒋᓐᓂᖅᓴᐅᕙᒃᓱᑎᒡᓗ, ᐊᒻᒪ, ᐊᓂᖅᓵᖅᑐᕐᓂᖕᒋᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᖕᒋᓐᓂᖅᓴᐅᓪᓗᑎᒡᓗ ᐊᐅᖕᒋᑦ ᖁᑦᓯᓐᓂᖅᓴᐅᓪᓗᑎᒡᓗ ᓴᓂᐊᒍᑦ ᑕᒪᒃᑯᐊ ᑲᓇᑕᒥᐅᑕᐅᖃᑎᖕᒋᑦ. ᕿᓯᐊᓂ, ᐊᒥᓱᑦ ᓄᓇᕗᒥᐅᑦ ᖁᐃᓂᕚᓪᓚᕈᐅᖅᑕᑦᑕᖅᐳᑦ, ᑲᓐᑐᖅᑲᓂᖅᓴᐅᖅᑕᑦᑕᖅᓱᑎᒡᓗ (512.1 100,000−ᓂᑦ) ᐆᒃᑑᑎᕆᓪᓗᒍ ᑲᓇᑕᒥᐅᑦ ᑕᐃᒪᓐᓇᐃᖅᑕᑦᑕᕐᒪᑕ (404.9 100,000−ᓂᑦ). ᖃᓄᐃᑦᑑᓂᖕᒋᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ ᐋᓐᓂᐊᖃᕐᓇᖅᑎᑦᑐᓕᕆᔾᔭᐅᓂᖕᒋᓐᓄᑦ ᐅᓂᒃᑳᖅᑕᐅᓯᒪᓗᑦ ᒪᓕᒡᓗᒋᑦ ᑖᒃᑯᓇᓂ ᖃᐅᔨᓴᕐᑕᐅᓯᒪᔪᓂ, ᐊᓐᓂᐊᖅᑲᖅᑐᖅᑲᓗᐊᓚᐅᖕᒋᑉᐳᖅ ᕿᑎᕐᒥᐅᓂ ᓄᓇᓕᖕᓂ. ᐱᓕᕆᐊᕆᔭᐅᔪᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ ᐋᓐᓂᐊᖅᑐᓕᕆᔪᑎᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕐᓂᐊᖅᐳᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᖕᒋᓪᓗᑎᒡᓗ ᐅᑯᐊ ᐃᓚᒋᔭᐅᓗᑎᒃ: ᐊᓯᔾᔨᕐᓗᑎᒃ ᐃᓅᓯᖕᒋᑦ ᑕᒪᒃᑯᐊ ᐱᓕᕆᖅᑕᐅᔪᑦ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ; ᑮᓇᐅᔭᓂᒃ ᐊᑐᕐᓂᖕᒋᑦ ᐊᓯᔾᔨᕐᓗᑎᒃ; ᐃᓕᕐᑯᓯᕆᕙᒃᑕᖕᒋᓪᓗ ᐊᓯᔾᔨᕐᓗᑎᒃ ᐃᒡᓗᒥᓂ ᖃᓄᐃᓕᐅᕐᑕᑦᑕᕐᓂᕆᔭᖕᒋᑦ. ᑮᓇᐅᔭᓕᐅᕐᑕᑦᑕᓕᖅᑎᓪᓗᒋᑦ, ᐊᐅᓚᑦᓯᐊᕐᓂᕐᒍᑦ ᑮᓇᐅᔭᓂᒃ ᐊᑐᑦᓯᐊᕐᓂᕐᒍᑦ, ᐊᒻᒪ ᐱᓕᕆᓗᓂ ᑮᓇᐅᔭᓕᐅᕐᓗᓂᓗ ᖃᓄᐃᓕᐅᕆᐊᕐᑕᕐᓂᖅ ᐃᓕᓐᓂᐊᕈᑕᐅᓂᐊᖅᐳᑦ. ᐃᓄᐃᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ ᐱᓕᕆᑎᑕᐅᓂᖅᓴᐅᒐᓯᐊᕐᓂᐊᖅᐳᑦ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ (ᓱᕐᓗ, ᐊᑐᕐᓗᒋᑦ EFAP, ᑮᓇᐅᔭᓕᕆᓂᕐᒧᑦᓗ ᖃᐅᔨᒪᑎᕐᑕᕐᓂᖅ ᐃᑲᔪᖅᑕᐅᓂᖅ) ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᒪᓕᒡᓗᒋᑦ ᑕᕝᕙᓂ ᐃᖅᑲᓇᐃᔭᖅᑎᕐᑕᕐᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᒍᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕙᒃᑐᖅᓯᒪᓂᖓᓂ 28). ᐃᓕᓐᓂᐊᖅᑎᑕᐅᓂᐊᖅᐳᑦ ᐃᓄᐃᑦ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ

ᑕᒪᒃᑯᐊ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔪᑦ ᒪᓕᒡᓗᒋᑦ ᑕᒪᕐᒥᒃ ᐊᑲᐅᔪᓪᓗ ᐊᑲᐅᖕᒋᑦᑐᓪᓗ ᓴᖅᑭᓯᒪᓂᐊᖅᐳᑦ.

ᐊᓯᔾᔨᖅᓯᒪᓂᐊᓕᖅᐳᑎᒡᓗ ᐃᓄᑐᐃᓐᓇᐃᑦ ᖃᑕᖓᑎᕌᑦ ᑮᓇᐅᔭᓂᒃ ᐊᑐᖅᑕᑦᑕᕆᓯᖕᒋᑦ. ᐃᓄᐃᑦ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᑮᓇᐅᔭᓕᐅᕆᑎᒥᖕᓂᒃ ᐊᑐᕐᓂᖕᒋᑦ ᓱᕙᓕᑭᐊᓄᑦ (ᓱᕐᓗ ᒪᑭᑦᑕᕐᓂᕐᒧᑦ ᑮᓇᐅᔭᓂᒃ ᓇᓚᐅᑦᓵᕆᑎᕐᑕᕐᓂᕐᒧᑦ, ᐊᖑᔮᕐᓇᖅᑐᓄᑦ, ᐊᒻᒪ ᐃᒥᐊᓗᖕᓄᑦ) ᐊᒻᒪ ᐊᑲᐅᖕᒋᑦᑐᓂᒃ ᐃᓅᓯᕐᑕᕐᓂᖅ, ᐊᑲᐅᖕᒋᓕᐅᕆᑕᐅᓂᐊᖅᐳᑦ ᖃᐅᔨᓴᕆᑕᐅᓯᒪᔪᑦ ᒪᓕᒡᓗᒋᑦ. ᕿᓯᐊᓂ, ᑮᓇᐅᔭᒥᖕᓂᒃ ᐊᑐᖅᐸᑕ ᐱᕙᓪᓕᐊᓂᕐᑕᕆᒪᓪᓗᑎᒃ ᐃᓅᓯᕐᒥᖕᓂᒃ (ᓱᕐᓗ ᐃᒡᓗᖕᒋᑦ ᐱᐅᓴᖅᑕᐅᓗᑎᒃ, ᓂᕿᑦᑲᓯᐊᕐᓗᑎᒡᓗ) ᐊᒻᒪ ᐊᓯᖕᒋᓐᓂᒃ ᐊᑲᐅᔪᓂᒃ ᓴᖅᑮᔭᖅᑐᕐᑲᒃᑲᓐᓂᖅᓱᓂ ᐱᓕᕆᔾᔪᑎᒡᓗ ᐅᔾᔨᖕᓂᐊᕐᕕᖕᒥ ᐋᓐᓂᐊᖃᕐᓇᖅᑎᑦᑐᒦᓐᓂᖅᓴᐅᓂᐊᖅᐳᑦ. ᑕᒪᐃᑎᒍᑦ, ᑕᒪᒃᑯᐊ ᐃᓅᓯᖕᒋᓐᓄᑦ ᐊᓯᔾᔨᕈᑕᐅᓂᐊᖅᑐᑦ ᑮᓇᐅᔭᓂᒃ ᐊᑐᕐᓂᖅᓴᐅᓕᕐᓂᖕᒋᓐᓄᑦ ᐃᓚᒌᑦ, ᐊᑲᐅᖕᒋᓕᐅᕈᑎᓪᓗ ᐊᓯᖕᒋᑦ ᒪᓕᒡᓗᒋᑦ **ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕐᓂᐊᕋᓱᒋᔭᐅᖕᒋᑉᐳᑦ.** ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᐳᑦ ᐃᓚᐅᓪᓗᑎᒃ ᑕᒪᒃᑯᐊ ᐱᓕᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᐃᓄᐃᑦ ᖃᓄᐃᓕᐅᖅᑕᐅᓂᖕᒋᑦ ᕿᑎᕐᒥᐅᓂ ᓄᓇᑦᓯᐊᒥᓗ ᐃᓅᓯᕐᒧᑦ-ᑮᓇᐅᔭᓕᐅᕈᑎᓄᓪᓗ ᐃᑉᐱᒍᓱᖅᑕᐅᓂᐊᖅᑐᑦ ᐱᓕᕆᕝᕕᒃ ᐱᔾᔪᑎᒋᓪᓗᒍ ᒦᓐᓇ ᐃᓄᐃᑦ ᖃᓄᐃᓐᓂᖕᒋᓐᓄᑦ. **ᖃᓄᐃᓗᐊᖕᒋᓐᓂᐊᕐᓂᕋᖅᑕᐅᓯᒪᕗᖅ.** ᓄᓇᐃᑦ ᖄᖕᒋᐅᑎᖅᑕᑦᑕᐅᑎᓂᐊᕐᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓴᕈᑎᖃᓚᐅᕆᕗᑦ. ᐋᓐᓂᐊᖃᕐᓇᖅᑎᑦᑐᓕᕆᓂᕐᒧᑦᓗ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ ᐊᒃᑐᖅᑕᐅᓂᖅᓴᐅᓂᐊᖅᐳᑎᒡᓗ ᓄᓇᓕᐊᓛᖑᓂᖅᓴᐃᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᓇᓕᖕᓂ. ᑕᒪᕐᒥᒃ ᖃᓄᐃᓗᐊᕐᓂᐊᖕᒋᑉᐳᑦ ᕿᑎᕐᒥᐅᑦ ᒥᓚᑰᓂᒥᐅᑕᐃᑦ. ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖃᓚᐅᖅᐳᑦ ᓄᓇᐃᑦ ᖄᖕᒋᖅᑕᐅᑎᒍᑎᖕᒋᓐᓂᒃ ᐋᓐᓂᐊᖅᑐᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᐊᓂᖓᓄᑦ ᓄᓇᑦᓯᐊᒥ ᐱᓕᕆᔪᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᔭᐅᑕᓕᐊᖅᑕᖅᓂᐊᕐᓂᖕᒋᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ. ᓄᓇᐃᑦ ᖄᖕᒋᖅᑕᐅᑎᓂᖕᒋᓐᓄᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕐᓂᐊᖕᒋᑉᐳᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᔭᐅᓂᖕᒋᑦ ᓄᓇᑦᓯᐊᒥᐅᑦ ᖃᖕᒐᑦᔮᖅᑕᖃᐃᓐᓇᖅᓂᖕᒐᓄᑦ ᐱᓕᕆᕝᕕᖕᒥ ᐊᒻᒪ ᐋᓐᓂᐊᖅᑐᓕᕆᔭᐅᕙᓐᓇᖅᐳᑎᒃ ᐱᓕᕆᕝᕕᖕᒪ. ᑕᒪᒃᑯᐊ ᑕᐃᑲᓂ ᐃᖅᑲᓇᐃᔭᖅᑎᑦ ᐊᑐᐃᓐᓇᕐᓂᐊᕋᓗᐊᖅᐳᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᔾᔪᑎᒥᖕᓂᒃ ᓄᓇᒥᖕᓂᑦ ᐋᓐᓂᐊᖅᑐᓕᕆᔭᐅᕙᓐᓇᓂᖕᒐᓄᑦ ᐱᓕᕆᕝᕕᖕᒥᖕᓂᓗ ᑕᐃᒪᓐᓇ ᐱᕆᐊᖅᑕᐅᔪᖅ.

ᓄᓇᒥᒃ ᐊᑐᕐᓂᖅ

ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᓄᓇᒥᒃ ᐊᑐᕐᓂᕐᒧᑦ ᒪᕐᕉᖕᓂᒃ ᐱᓕᕆᕝᕕᖕᓂ VSECS: 1) ᐃᓄᖕᓄᑦ ᓄᓇᒋᔭᐅᔪᑐᖅᑲᐅᖕᒋᑦᑐᑦ ᓄᓇᒥᐅᑕᓂᒡᓗ ᐊᑐᕐᓂ, ᐊᒻᒪ 2) ᓂᕿᓕᐅᕐᕕᐅᖅᑕᑦᑕᖅᑐᓂ ᓄᓇᒥᒃ ᐊᑐᕐᓂᖅ. ᑲᑎᓪᓗᒋᑦ ᐱᖓᓱᑉ ᐊᑲᐅᓕᐅᕈᑎᒋᔭᐅᑐᐃᓐᓇᓇᕆᐊᖅᑲᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᐳᑦ ᐊᑐᓂ ᑕᕝᕙᓂ VSEC−ᒥ, ᑲᑎᓪᓗᒋᑦ 6−ᓂᒃ ᐃᒃᐱᒍᓱᒍᑎᖅᑲᕐᓇᖅᓗᑎᒃ. ᐊᑲᐅᖕᒋᓕᐅᕈᑎᒃᓴᐃᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᕐᒪᑕ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᓱᑎᒡᓗ ᖃᓄᑎᒋ ᐊᑲᐅᖕᒋᓕᐅᕈᑕᐅᔪᓐᓇᓴᓂᖕᒋᓐᓄᑦ.

ᐃᓄᐃᑦ ᓄᓇᑐᖃᕆᐊᕐᑕᕐᑦ ᐊᑐᖅᑕᐅᓂᕐᑦ ᓄᓇᒥᐅᑕᕐᒋᓪᓗ

ᐱᓕᕆᕕᖃᖅᑐᓄᑦ ᓄᓇᐃᑦ ᐊᑐᖅᑕᐅᓂᕐᑦ ᐊᑐᖅᑕᐅᓗᐊᕐᓂᖅᓴᐅᕙᑦ ᐊᖑᓇᓱᐊᖅᑎᑎᔾᓄᑦ ᐊᕐᒋᔪᓂᒃ, ᐳᓚᕋᖅᑐᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᐊᖃᖅᑐᑦ, ᐅᔭᕋᕐᓂᕐᒧᑦ ᕿᓂᕐᓂᕐᒧᓪᓗ, ᐃᕐᑭᕋᖃᑦᑕᖅᑐᓕᕆᓂᕐᒧᓪᓗ ᐅᓯᖃᑦᑕᕐᓂᕐᒧᓪᓗ. ᐱᓕᕆᕕᐅᔪᖅ ᐊᒃᑐᐊᓂᖃᕈᓐᓇᖅᐳᖅ ᐃᓄᐃᑦ ᐊᑐᖃᑦᑕᕐᒋᑕᑐᖃᕐᒋᑦ ᓄᓇᐃᑦ ᓄᓇᒥᐅᑕᐃᓪᓗ ᓄᓇᒥ ᐳᓚᕋᖅᑐᓕᕆᖃᑦᑕᕈᓐᓇᖅᓗᑎᒃ, ᐊᓯᔾᔨᑐᐃᓐᓇᕆᐊᖃᕐᒪᑦ ᓄᓇᐅᑉ ᖃᓄᐃᑦᑑᓂᖓ ᓄᓇᒥᐅᑕᕐᒋᓪᓗ ᓄᓇᒥᐅᑕᐃᓪᓗ ᐊᒥᖑᕐᒋᓐᓂᖅᓴᐅᓕᕐᓗᑎᒃ. ᐱᓗᐊᖅᑐᒥᒃ, ᐊᑕᐅᓯᕐᒥᒃ ᐳᓚᕋᖅᑐᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔪᖃᕐᒪᑦ ᕿᖓᐅᒥ ᐊᐅᓪᓛᖅᓯᒪᕕᒃᑕᕐᖃᕐᒪᑦ ᐊᑎᖃᖅᓱᓂ Bathurst Inlet Lodge, ᐊᑐᖃᑦᑕᖅᓱᑎᑉᓗ ᓄᓇᒥᒃ ᑕᐃᑲᓂ ᐅᒥᐊᕐᔪᐊᓕᕆᕕᖕᒥ (MLA) ᑕᐃᑲᓂ ᓄᓇᐅᑉ ᐊᑐᖅᑕᐅᔪᑉ ᓴᓂᐊᓂ ᑕᐃᒍᖅᑕᐅᔪᒥ LSA, ᐊᒻᒪ ᐊᓯᖕᒋᓪᓗ ᑖᒃᑯᓂ ᐊᑐᖅᑕᐅᔪᑦ ᑕᐃᒍᖅᑕᐅᔪᓂ RSA, ᐊᐅᔮᒃᑯᑦ. ᐃᓕᕐᑯᓯᕐᑲᑦᓯᐊᖅᐳᑦ ᐊᐅᓚᓂᕐᒋᑦ ᐊᔾᔨᕐᒋᑦᑐᓂᒃ ᐋᖅᑭᒃᓯᒪᙱᑎᒃᓴᖅᑲᖅᓱᑎᑉᓗ ᐊᑲᐅᕐᒋᓕᐅᕈᑎᖃᖅᑕᐃᓕᒪᑎᑎᓂᕐᒧᑦ, ᐊᑐᑦᓯᐊᕋᓱᐊᖅᓱᑎᑉᓗ ᐃᓄᖕᓄᑦ ᓄᓇᐃᑦ ᐊᑐᖅᑕᐅᔪᑐᖃᐅᕐᒋᑦᑐᑦ ᓄᓇᒥᐅᑕᕐᒋᓪᓗ. ᑕᒪᒃᑯᐊ ᐊᐅᓚᑦᓯᓂᕐᒧᑦ ᐊᒻᒪ ᐋᖅᑭᒍᑎᒃᓴᖃᕐᓂᕐᒧᑦ ᐱᔾᔪᑎᒋᔭᐅᔪᑦ ᓇᓂᔭᐅᔪᓐᓇᖅᐳᑦ ᐱᓕᕆᕕᒃ ᐃᓗᐊᓂ ᑎᑎᕋᖅᑕᐅᓯᒪᓪᓗᑎᒃ, ᐊᒻᒪ ᐊᓯᕐᒋᑦ ᐃᑲᔪᖅᑕᐅᒍᑎᒃᓴᐃᑦ ᐋᖅᑭᒃᓱᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓚᐅᖅᓱᑎᒃ. ᑕᒪᒃᑯᐊ ᐆᒪᔪᓂᒃ ᐱᓕᕆᐊᖃᕐᓂᖅ ᐋᖅᑭᐅᒪᑎᑎᓂᕐᓗ ᖃᐅᔨᓴᕐᓂᕐᒧᓪᓗ ᐸᕐᓇᒃᓯᒪᔪᑕᐅᔪᑦ (ᑎᑎᖅᓯᒪᓂᖓ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 20) ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᑐᓪᓗ ᓂᐱᖃᓗᐊᕐᓂᕐᒧᑦ ᐊᓂᖅᖠᖅᑐᕐᕕᕐᒋᖃᑦᑕᖅᑕᕐᑎᓐᓄᓪᓗ ᓇᓂᔭᐅᔪᓐᓇᖅᐳᑦ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᑐᓂ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒪᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 18) ᐊᒻᒪ ᐊᓂᖅᖠᖅᑐᕐᕕᕙᑦ ᖃᓄᐃᓕᖓᓂᖓ ᓴᓗᒪᓂᖓᓄᑦ ᖃᐅᔨᓴᕈᑎᑦ ᐊᐅᓚᑦᓯᒍᑎᓪᓗ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 17). **ᐊᑲᐅᕐᒋᓕᐅᕈᑎᖃᕐᓂᐊᕋᓱᒋᔭᐅᓗᐊᕐᒋᑉᐳᑦ**. ᖃᐅᔨᓴᓚᐅᖅᐳᑦ ᐊᑲᐅᕐᒋᓕᐅᕈᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᓂᒃ ᐱᓕᕆᕕᖕᒥ ᐃᓄᓪᓗ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᕿᑎᕐᒥᐅᓂ ᑕᒪᒃᑯᐊ ᓄᓇᐃᑦ ᐊᑐᖅᑕᐅᓂᕐᒋᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᐊᓯᖕᒋᓐᓂᒡᓗ ᓄᓇᓂᒃ ᐊᑐᕐᓂᕐᒋᓐᓄᑦ. ᑕᒪᐃᑎᒍᑦ **ᐊᑲᐅᕐᒋᓕᐅᕈᑎᖃᕐᓂᐊᕐᒋᓐᓂᕋᖅᑕᐅᕙᑦ**. ᐱᓕᕆᓂᕐᒋᓐᓄᑦ ᑖᒪᓂ ᐃᓄᐃᑦ ᓄᓇᑐᖃᕆᐊᕐᑕᕐᒋᓐᓂ ᓄᓇᐅᑉ ᑮᓪᓕᖓ ᖄᕐᒋᐅᑎᖃᑦᑕᐅᑎᕐᒋᑉᐳᖅ ᓄᓇᕙᑖᖃᐅᓯᒪᔪᕐᓗ ᐊᒻᒪ ᑕᐃᒪᓐᓇ ᐊᑲᐅᕐᒋᓕᐅᕈᑎᖃᖅᑐᖃᕐᓂᐊᕐᒋᑉᐳᖅ.

ᓄᓇᒥᐅᑕᓂᒃ ᐊᖑᓇᓱᐊᖃᑦᑕᖅᓱᑎᒃ ᑮᓇᐅᔭᓕᐅᕈᑎᖃᕐᓂᕐᒋᑦ ᓄᓇᓗ ᐊᑐᖅᑕᐅᓂᖓ

ᐃᓄᐃᑦ ᐃᓕᕐᑯᓯᑐᖃᕐᒋᓪᓗ ᐃᓅᓯᕐᒋᓪᓗ ᐊᒃᑐᐊᓯᐊᖅᐳᑦ ᓄᓇᒧᑦ. ᐃᓄᐃᑦ ᕿᑎᕐᒥᐅᑕᐃᑦ ᐊᑐᐃᓐᓇᖅᓯᒪᕐᒪᑕ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᕐᒋᓐᓂᒃ, ᐅᑭᐅᓐᓃᑦ ᖃᐅᔨᒪᔭᒥᕐᓂᒃ ᓄᓇᒥ ᐊᕙᑎᒥᐅᑕᒥᓗ. ᓂᕿᒃᓴᖅᓯᐅᖅᓱᓂ ᐃᓅᓇᓱᐊᕐᓂᖅ ᓄᓇᒥᒃ ᐊᑐᕐᓗᓂ ᐊᖑᓇᓱᐊᕐᓗᓂ, ᐃᖃᓗᒃᓯᐅᕐᓗᓂ, ᒥᕿᑦᐊᕐᓗᓂ, ᑲᑎᖅᓱᐃᓗᓂᓗ ᓂᕿᒃᓴᓂᒃ, ᐊᑐᖅᑕᐅᖃᑦᑕᖅᐳᑦ ᑕᒪᕐᒥᒃ ᑕᒪᒃᑯᐊ ᑖᒥᓃᑦᑐᑦ RSA–ᒥ. ᓂᕿᒃᓴᖅᓯᐅᕐᓂᖅ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᓂᐊᖅᓱᓂ ᐊᑐᕐᓂᕐᓗ ᓄᓇᒥᒃ ᐃᒪᓐᓇᐃᒍᑕᐅᕙᑦ: ᐊᓯᔾᔨᕈᑕᐅᓪᓗᑎᒃ ᓄᓇᒧᑦ ᐊᐅᓪᓚᕐᓂᐅᖃᑦᑕᖅᑐᒥᒃ ᓄᓇᒥᐅᑕᓂᑉᓗ; ᐊᓯᔾᔨᖅᑕᐅᓂᖓ ᓄᓇᒥ ᐊᕙᑎᒥᐅᑕᕐᒋᓪᓗ ᐊᑐᖅᑕᐅᓂᕐᒋᓐᓄᑦ; ᐊᒻᒪ ᓄᓇᒥᐅᑕᐃᑦ ᖃᓄᐃᓐᓂᕐᒋᑦ ᖃᑦᓯᐅᓂᕐᒋᓪᓗ ᐊᓯᔾᔨᕐᓂᕐᒋᑦ. ᐊᐅᓚᑕᐅᒍᑎᒃᓴᐃᑦ ᐋᖅᑭᒃᐸᓪᓕᐊᒍᑎᒃᓴᐃᓪᓗ ᐱᑕᖃᖅᐳᑦ ᑕᒪᒃᑯᓄᖓ ᐊᖑᓇᓱᐊᖃᑦᑕᕐᓂᕐᒧᑦ ᓂᕿᒃᓴᖅᓯᐅᖃᑦᑕᕐᓂᕐᒧᑦ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᓂᐊᕐᓗᓂ, ᐱᓕᕆᕕᐅᓂᐊᖅᑐᖅ ᖃᓄᖅ ᓴᓇᔭᐅᓯᒪᓂᖓ, ᐊᑲᐅᖏᓐᓂᒃ ᐊᐅᓚᓯᒍᑎᖃᕐᓂᖅ, ᖃᐅᔨᓴᖃᑦᑕᕐᓗᒋᓪᓗ ᐊᑐᖅᑕᐅᔪᑦ. ᑕᐃᒪᓐᓇᓗ ᐅᔭᕋᕐᓂᐊᕐᕕᖕᒥ ᐱᓕᕆᔪᑦ ᓄᖅᑲᖓᓂᕐᒥᖕᓂ ᐊᖑᓇᓱᐊᖃᑦᑕᕐᓂᐊᖅᐳᑦ ᓂᕿᒃᓴᖅᓯᐅᕐᓗᑎᒃ, ᐊᒡᔭᖅᑕᐅᖃᑦᑕᕐᓗᑎᑉᓗ ᖃᕐᒐᑕᔫᒃᑯᑦ ᐱᓕᕆᔭᖅᑐᖅᑐᑦ ᐊᕐᒋᕋᐅᓚᐅᐱᓪᓚᒃᑐᓪᓗ, ᐃᑲᔪᖅᑕᐅᓯᒪᓗᑎᒃ ᓄᓇᒥᒃ ᐊᑐᖅᑐᑦ ᐊᒻᒪᓗ ᐱᕙᓪᓕᐊᑎᑎᔪᑦ ᓄᓇᓂᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ. ᐋᖅᑭᒃᓯᒪᒍᑕᐅᓇᔭᖅᑐᑦ ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᕙᑦ ᐱᔾᔪᑎᖃᕐᓂᕐᒋᓐᓄᑦ ᐆᒪᔪᓂᒃ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᓪᓗ ᐸᕐᓇᐅᑎᑦ ᒪᓕᒃᓗᒋᑦ (ᑎᑎᖅᓯᒪᔪᑦ 10, ᐊᕕᒃᓯᒪᓂᖓᓂ 20), ᐊᒻᒪ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒪᑎᑎᓂᖅ ᐊᓂᖅᖠᖅᑐᕐᕕᖃᑦᓯᐊᕐᓂᖅ ᓇᓂᔭᐅᔪᓐᓇᖅᐳᑦ ᖃᐅᔨᓴᕈᑕᐅᓯᒪᔪᑦ ᓂᐱᖃᓗᐊᖅᑕᐃᓕᒪᒍᑎᒃᓴᐃᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᓂᕐᒋᓐᓂ (ᑎᑎᖅᓯᒪᔪᑦ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 18) ᐊᒻᒪ ᐊᓂᖅᖠᖅᑐᕐᕕᒃᐳᑦ ᓴᓗᒪᓂᖓᓄᑦ ᖃᐅᔨᓴᕈᑎᑦ ᐸᕐᓇᐅᑎᑦ (ᑎᑎᖅᓯᒪᓂᖓᓂ 10, ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ 17). ᑐᓴᐅᒪᖃᑦᑕᐅᑎᖃᖃᑎᒋᕙᑦ ᓄᓇᓕᖕᓂᒥᐅᑦ ᑲᑎᒪᑎᑕᐅᖃᑦᑕᕐᓱᑎᒃ ᑲᑎᒪᖃᑎᒋᕙᒃᓱᒋᓪᓗ ᐃᖃᓗᒃᑑᔨᐊᒥᐅ ᕐᑯᕐᓗᖅᑐᒥᐅᓪᓗ ᑲᑎᒪᔩᑦᓗ ᑲᑎᒪᔩᕐᒋᓪᓗ (CAGs). ᑐᓴᖅᑎᑕᐅᓂᐊᕆᕙᒍᑦ ᐅᔭᕋᕐᓂᐊᕐᕕᖕᒥ ᐃᖅᑲᓇᐃᔭᖅᑎᓂᑦ, ᓄᓇᓕᕐᓂ ᐊᑐᖃᑕᐅᖃᑦᑕᖅᑐᓂᑉᓗ, ᐊᒻᒪᓗ ᑲᑎᒪᔩᕐᒋᓐᓂᑦ ᓄᓇᓕ ᐅᔭᕋᕐᓂᐊᕐᕕᐅᓪᓗ ᐊᖑᓇᓱᐊᖅᑐᓕᕆᔩᒃᑯᑦ ᑲᑎᒪᔩᕐᒋᓐᓂᓪᓗ Hᐊᒻᓚᒃᑯᓐᓂᑦ ᑐᓴᖅᑎᑎᕙᓪᓕᐊᖃᑦᑕᖃᑦᑯᓪᓗᑕ ᐋᖅᑭᕆᐊᖅᓯᖃᑦᑕᖃᑦᑕᓗ

ᐊᐅᓚᓂᕐᒧᑦ ᐊᑐᖅᑕᑦᑎᓐᓂᒃ. ᑕᒪᐃᑎᒍᑦ ᐱᓕᕆᕕᐅᔪᒥ ᐊᖑᓇᓱᐊᓂᕐᑐ ᓂᕿᒃᓴᖅᓯᐅᕐᑐᓂ ᓄᓇᒥᒃ ᐊᑐᕐᓂᕐᑐ **ᖃᓄᐃᖏᓐᓂᐊᕐᓯᒋᔭᐅᓯᒪᕗᑦ**. ᐊᒻᒪ, ᐊᑐᕐᓂᖅᓴᐅᑐᐃᓐᓇᙵᕐᑲᖅᐳᑦ ᓂᕿᒃᓴᖅᓯᐅᕐᓂᖅᓴᐅᕐᑲᑦᑕᓕᕐᑐᑎᒃ ᐃᓄᐃᑦ ᐱᓕᕆᔪᑦ ᑕᐃᑲᓂ ᐅᔭᕐᖓᓂᐊᕐᕕᖓ ᓄᖅᑲᖓᑎᑕᐅᓕᕚᖓᒥᒃ. ᖃᐅᔨᓴᕈᑎᕐᑲᓚᐅᖅᐳᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᐱᓕᕆᕕᖓ ᐃᓄᖕᓄᓪᓗ ᖃᓄᐃᓕᐅᕈᑕᐅᓂᖏᓐᓄᑦ **ᖃᓄᐃᖏᓐᓂᐊᕐᓯᒋᔭᐅᓯᒪᕗᑦ**. ᕿᑎᕐᒥᐅᑦ ᓄᓇᒥᒃ ᐊᑐᕐᑲᑦᑕᖅᑐᑦ ᐅᕐᑲᓚᐅᖏᕙᑦ ᐱᓕᕆᕕᐅᔪᒧᑦ ᐊᖑᓇᓱᐊᕐᑲᑦᑕᕋᔭᕐᓂᕐᒥᖕᓄᑦ. ᑕᒫᓇ ᐱᔾᔪᑎᒋᓪᓗᒍ, ᓄᓇᒥ ᐊᖑᓇᓱᐊᕐᑲᑦᑕᕐᑐᓂ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᕐᓂᐊᖏᕙᑦ.

ᐃᓄᐃᑦ ᓂᕿᑐᕐᑲᖏᑦ

ᐃᓄᐃᑦ ᓂᕿᑐᕐᑲᖏᑦ ᐆᒪᔪᐃᑦ, ᐱᕈᖅᑐᑦ ᐊᓯᖏᓪᓗ ᓄᓇᒥᖖᖅᑐᑦ ᐊᑐᖅᑕᐅᔭᕗᑎᒃ ᓂᕿᒃᓴᕆᔭᐅᕙᑎᒃ ᐃᓄᖕᓄᑦ ᐃᓗᐊᖅᓴᐅᑎᔭᐅᓪᓗᑎᓪᓗ ᐊᖑᓇᓱᐊᖅᑕᐅᕙᒃᑐᑦ, ᐃᖃᓗᒃᑕᐅᕙᒃᑐᑦ ᑲᑎᖅᓱᖅᑕᐅᕙᒃᑐᓪᓗ (ᑲᓇᑕᒥ ᐋᓂᐊᕐᑲᕐᓇᖏᑦᑐᓕᕆᔨᒃᑯᑦ 2010). ᓱᕈᕐᓇᖅᑐᕐᑲᑐᐃᓐᓇᕆᐊᕐᑲᕐᓂᖅᓚᓄᑦ ᐃᓱᒫᓗᒍᑎᕐᑲᓚᐅᖅᐳᑦ ᐃᓄᐃᑦ ᓂᕿᖏᓐᓃᑦᑐᓂᒃ (COPCs) ᐱᓕᕆᕙᕐᑲᕐᓂᖅᓚᓂ ᑕᐃᑲᓂ. ᑕᒃᑯᐊ ᓱᕈᕐᓇᐅᑐᐃᓐᓇᕆᐊᕐᑲᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᐳᑦ ᐋᖅᑭᒃᑕᐅᒍᑎᒃᓴᕐᑲᓚᐅᖅᓱᑎᓪᓗ. ᓴᕙᕋᔭᒃᓴᕐᑲᖅᐸᕆᖅᐳᖅ ᐃᓄᐃᑦ ᓂᕿᖏᓐᓂ ᐆᒪᔪᓂ, ᐃᓛᓐᓂᒃᑯᑦ ᐅᖓᒑᓄᐊᖅᐸᒃᓱᑎᒃ ᓈᒻᒪᖕᓂᕆᔭᖏᑦ (ᐱᓗᐊᖅᑐᒥ ᐃᐸᔪᒥ), ᑕᐃᒪᓐᓇ ᓄᓇᒥ ᐊᐅᓚᔪᕐᑲᐃᓐᓇᕐᑲᑦᑕᕐᓂᖅᓚᓄᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ. ᐅᔭᕋᖕᓂᐊᕐᕕᐅᓂᐊᖅᑐᑦ ᓴᕙᕋᔭᕐᑲᕐᓂᐊᕐᒪᑦ ᓴᕙᕋᔭᕐᑲᖅᐸᓪᓚᐊᑎᑎᓂᐊᖅᓱᓂᓗ ᓄᓇᒥᒃ ᐊᕙᑎᒥᐅᑕᓂᓪᓗ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᓱᑎᓪᓗ ᓴᕙᕋᔭᐃᑦ ᓇᓪᓚᐊᖏᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᕐᓂᖅᐹᖑᓇᔭᕐᓂᖏᓐᓄᑦ ᐃᓄᐃᑦ ᓂᕿᖏᓐᓄᑦ. ᐋᖅᑭᒃᓱᖅᐸᓪᓚᐊᒍᑎᒃᓴᐃᑦ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᒐᔭᖅᑐᓄᑦ ᐱᑕᕐᑲᕐᓂᐊᖅᐳᑦ ᐊᕙᑎᒥᐅᑕᐃᑦ ᑲᒪᒋᔭᐅᓯᐊᕈᓐᓇᖅᓯᓪᓗᒋᑦ (ᐊᓂᖅᓵᖅᑐᕐᕕᕗᑦ, ᐃᒪᕗᑦ, ᓄᓇᒥᐅᑕᐃᑦ, ᐃᑉᔪᐃᑦ, ᐊᒻᒪᓗ ᐱᕈᖅᑐᐃᑦ) ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᓂᕿᑐᕐᑲᖏᑦ (ᐃᖃᓗᐃᑦ ᐆᒪᔪᐃᓪᓗ ᐊᓯᖏᑦ). ᑕᒃᑯᐊ ᑎᑎᕋᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᑎᑎᖅᓯᒪᓂᖓᓂ 4 (ᐊᓂᖅᓵᖅᑐᕐᕕᖕᒥ ᐊᕙᑎᒥᐅᑕᐃᑦ), ᑎᑎᖅᓯᒪᓂᖓᓂ 5 (ᐱᕈᖅᑐᑦ ᓄᓇᒥᐅᑕᐃᑦ), ᑎᑎᖅᓯᒪᓂᖓᓂ 6 (ᑕᓯᕐᒥᐅᑕᐃᑦ), ᑎᑎᖅᓯᒪᓂᖓᓂ 7 (ᑕᕆᐅᕐᒥᐅᑕᐃᑦ) ᐊᒻᒪ ᑎᑎᖅᓯᒪᓂᖓᓂ 10 (ᐊᐅᓚᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᑦ).

ᓯᕗᓂᐊᒍᑦ ᐱᓕᕆᓚᐅᖏᓐᓂᖏᓐᓂ ᐅᔭᕋᖕᓂᐊᖅᑎᑦ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᑐᑦ ᒪᓕᒃᓱᒋᑦ ᐃᓄᐃᑦ ᓂᕿᑐᕐᑲᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᑎᓪᓗᒋᑦ ᑕᒃᑯᐊ ᓂᕆᔭᐅᕐᑲᑦᑕᕐᑐᑎᒃ ᑖᒥᓂ ᐱᓕᕆᕕᐅᒃ ᓴᓂᐊᓃᑦᑐᑦ ᐋᓂᐊᓕᕈᑕᐅᓇᔭᖏᑉᐳᑦ ᓱᕈᕐᓇᖅᑐᕐᑲᑐᐃᓐᓇᕆᐊᕐᑲᖅᑐᓂ COPC ᐱᑕᕐᑲᓚᐅᖏᑉᐳᖅ ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓇᔭᖅᑐᓂᒃ ᐃᓄᖕᓄᑦ, ᐊᓯᔾ; ᓂᐊᖏᑦᑐᑎᓪᓗ ᓂᕿᑦ ᖃᓄᐃᓐᓂᖏᑦ ᓂᕆᔭᐅᕐᑲᑦᑕᖅᑐᑦ ᐃᓄᖕᓄᑦ ᐆᒪᔪᐃᑦ. ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓇᔭᖅᑐᑦᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖏᑉᐳᑦ ᐋᓂᐊᓕᕈᑕᐅᔫᒃᓴᖅᑕᕐᑲᖏᑦᑐᓂᓗ ᓂᕿᓂᖑᖅᑐᓂᒃ ᐱᓕᕆᕖᒥᓪᓗ. ᑕᐃᒪᓐᓇ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᕐᓂᐊᖏᓐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕈᑎᖅᓯᒪᕗᑦ.

<u>ᐱᓕᕆᕖᒥ-ᐱᔾᔪᑎᕐᑲᖅᑐᑦ ᐊᒃᑯᐃᓂᐊᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕈᑎᓂ ᐃᓯᓚᓂᖏᑦ</u>

ᖃᐅᔨᓴᕈᑎᕐᑲᓚᐅᖅᓱᑎᒃ ᑕᒪᑐᒥᖓ ᖃᐅᔨᒍᑎᕐᑲᓚᐅᖅᐳᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᖅᑐᕐᑲᕐᓂᐊᖏᓐᓂᖓᓄᑦ ᐊᖏᔪᓂᒃ, ᓄᓇᓕᖕᓄᑐᐊᖅ ᐃᒃᐱᒋᔭᐅᓂᖅᓴᐅᓂᐊᕋᑐᐊᖅᑐᓂ ᐱᓕᕆᕕᔪᓂ ᕿᓚᒥ ᑕᐃᒪᓐᓇ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᓕᕈᓐᓇᖅᑐᑎᒃ ᐋᖅᑭᒃᓱᖅᑕᐅᓂᐊᖅᑐᑎᓪᓗ. ᐊᑲᐅᔾᔪᒃᑯᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓚᐅᖅᐳᑦ ᑖᒃᑯᓂ VSEC–ᓂ ᐱᕋᓪᓚᐊᔪᓚᕆᓂᖅ, ᓇᖕᒥᓂᖅ ᐱᓕᕆᕙᕐᑲᖅᑎᑎᓂᖅ, ᐃᖅᑲᓇᐃᔭᖅᑎᑎᓂᖅ ᐃᓚᓐᓂᐊᖅᑎᑎᓂᖅ ᐱᓕᕆᐊᒃᓴᒧᑦ ᐃᓚᓐᓂᐊᖅᑎᑎᓂᖅ.

ᑕᐃᒪᓐᓇ, ᐱᓕᕆᕕᐅᓂᐊᖅᑐᖅ ᐊᑲᐅᖏᓕᐅᖅᑎᑎᓂᐊᕐᓂᖓ, ᐊᓂᖅᓵᖅᑐᕐᕕᐸᑎᓐᓂᒃ, ᐱᕈᖅᑐᓂᒃ, ᑕᓯᕐᒥᐅᑕᓂᒃ, ᑕᕆᐅᕐᒥᐅᑕᓂᒃ ᐃᓄᖕᓄᑦ ᐱᔾᔪᑎᕐᑲᖅᑐᓂᒃ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᓱᑎᒃ **ᖃᓄᐃᓗᐊᖏᓐᓂᐊᕐᓂᖓᓄᑦ**.

<u>ᐃᒃᐱᒍᓱᒍᑕᐅᓂᐊᖅᑐᓂᒃ ᖃᐅᔨᓴᕈᑕᐅᓚᐅᖅᑐᑦ ᐃᓯᓚᓐᓂᖏᑦ</u>

ᐊᑲᐅᖏᓕᐅᕈᑕᐅᓕᕈᓐᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᕈᑎᕐᑲᓚᐅᖅᐳᑦ ᐊᑐᓂ ᑖᒃᑯᓇᓂ VECᒥ ᐅᕝᕘᓐᓃᑦ VSEC–ᒥ ᖃᐅᔨᔭᐅᓯᒪᓂᖓᓄᑦ. ᖃᓄᐃᖏᓂᐊᕐᓂᕋᖅᑕᐅᓯᒪᕗᑦ ᐱᓕᕆᐊᒧᑦ ᐊᑲᐅᖏᓕᐅᕈᑎᕐᑲᕐᓂᐊᖏᑦᑐᑎᒃ (ᑕᑯᒋᐊᕐᑐᒋᑦ ᐊᕙᒃᓯᒪᓂᖓᓂ 6 ᑎᑎᕋᖅᓯᒪᔪᑦ ᑖᒃᑯᓂ ᓯᕗᓪᓕᕐᓂ ᑎᑎᕋᖅᓯᒪᔪᓂ), ᑭᓯᐊᓂ ᑕᒪᕐᒥᒃ ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᓚᐅᖏᒻᒪᑕ.

ᖃᐅᔨᓴᕈᑎᖃᓚᐅᖅᓱᑎᒃ ᖃᐅᔨᓚᐅᖅᐳᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᑕᖃᕐᓂᐊᖕᒋᓐᓂᖕᖑᓄᑦ. ᖃᐅᔨᒍᑎᖃᓚᐅᖅᓱᑎᒡᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᒋᔭᐅᓇᔭᖅᑐᑦ ᐊᒥᓲᓗᐊᖕᒋᓐᓂᖕᒋᓐᓄᑦ, ᓄᓇᓕᖕᒍᓪᓗ ᐊᑕᐅᓯᓗᐊᒍᑦ ᑐᕌᖅᓱᑎᒃ, ᐋᖅᑭᒃᑕᔪᓐᓇᖅᓱᑎᒡᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖕᒋᑦ ᕿᓚᒥᒡᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕋᔭᖅᓱᑎᒃ ᐋᖅᑭᒃᑕᐅᓗᑎᒃ. ᖃᓄᐃᖕᒋᓐᓂᐊᕐᓂᕋᖅᑕᐅᓯᒪᓪᓗᑎᒡᓗ ᓄᓇᐃᓪᓗ ᖄᖕᒋᖃᑦᑕᐅᑎᖕᒋᑦ ᐱᑕᖃᖕᒋᑦᓱᑎᒃ.

ᑕᐃᒪᓐᓇ, ᑕᒪᐃᑎᒍᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᒥᒃ ᖃᐅᔨᓴᖅᓯᒪᓪᓗᑎᒃ ᑕᐃᑦᓯᒪᓂᑐᖃ, ᒫᓐᓇ ᓯᕗᓂᒃᓴᐅᓂᐊᖅᑐᒧᓪᓗ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ **ᖃᓄᐃᓗᐊᕐᓂᐊᖕᒋᑉᐳᑦ** ᐊᑲᐅᖕᒋᓕᐅᕆᑕᐅᔪᓐᓇᖅᑐᑦ.

<u>ᓄᓇᐃᑦ ᖄᖕᒐᒎᖃᑦᑕᐅᑎᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓴᕆᑕᐅᓚᐅᖅᑐᑦ ᐃᓯᓕᓐᓂᖕᒋᑦ</u>

ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖕᒋᑦ ᐅᖃᐅᓯᕆᓯᒪᔭᖕᒋᑦ ᖁᓕᒋᔭᐅᓪᓗᓂ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᖅ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐃᓚᐅᑎᑕᐅᒋᐊᖃᕐᓂᖕᒋᑦ ᑕᒪᒃᑯᐊ ᓄᓇᒥ ᖄᖕᒋᐅᑎᖃᑦᑕᐅᑎᓯᒪᔪᑦ ᐃᓱᐃᓪᓕᐅᕈᑎᒋᔭᐅᑐᐃᓐᓇᕆᐊᖃᕐᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓴᖃᑦᑕᕆᐊᖃᕐᓂᖅ. ᐅᖃᖅᓯᒪᖕᒪᑦ ᐃᒪᓐᓇ “ᐊᔪᕐᓇᖕᒋᑉᐸᑦ ᐊᑐᕐᓂᐊᖅᐸᓪᓗ, ᖃᐅᔨᓴᕈᑕᐅᔪᑦ ᐊᕙᑎᒥᐅᑕᓄᑦ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᖅᑎᑎᓪᓚᔭᕐᓂᕐᒧᑦ ᐱᑕᖃᕆᐊᖃᖅᐳᑦ ᓄᓇᒥ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᐃᓅᓯᓕᕆᓂᕐᒧᓪᓗ-ᑮᓇᐅᔭᓕᐅᕐᓂᕐᒧᓪᓗ ᓄᓇᐃᑦ ᖄᖕᒋᖃᑦᑕᐅᑎᓯᒪᓂᖕᒋᑦ ᐊᑲᐅᖕᒋᓕᐅᕆᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ.” ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕐᓂᐊᖕᒋᓐᓂᕋᖅᑕᐅᕗᑦ. ᑕᒃᑯᐊ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᑦ ᓄᓇᐅᑉ ᖄᖕᒋᐅᑎᖃᑦᑕᐅᑎᓯᒪᓂᖕᖑᓄᑦ ᐱᔾᔪᑎᖃᓚᐅᖅᐳᑦ ᐋᖅᑭᒃᓱᖅᑕᐅᔪᒃᓴᐅᓪᓗᑎᒡᓗ. ᑕᒡᕙᓂ ᑕᒪᒃᑯᐊ ᐊᑲᐅᓃᕆᑕᐅᓇᔭᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖕᒋᑉᐳᑦ.

ᓄᓇᒧᑦ ᖄᖕᒋᖅᓯᒪᖃᑦᑕᐅᑎᒍᑎᑦ ᐅᖃᐅᓯᕆᔭᐅᓚᐅᖅᐳᖅ ᖃᐅᔨᓴᕈᑎᓂ ᐋᖅᑭᒃᓯᒪᒍᑎᒋᓂᐊᖅᑕᖕᒋᓪᓗ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᕐᓂᐊᕋᓱᒋᔭᐅᖕᒋᑉᐸᓪᓗ.

ᑕᐃᒪᓐᓇ, ᐱᓕᕆᐊᖅ ᐊᑲᐅᖕᒋᓕᐅᕈᑎᖃᖅᑎᑎᓂᐊᖕᒋᓚᖅ ᓄᓇᐅᑉ ᖄᖕᒋᖅᓯᒪᖃᑦᑕᐅᑎᒍᑎᖕᒋᓐᓂᒃ ᐊᑲᐅᖕᒋᓕᐅᖅᑎᑎᓂᐊᖕᒋᑦᑐᓂᓗ ᐊᓂᖅᓵᖅᑐᕐᓂᐅᔪᒥᒃ, ᐱᕈᖅᑐᓂᒃ, ᑕᓯᕐᓂᒃ, ᑕᕆᐅᓂᒃ ᐃᓗᖕᓂᓪᓗ.

Atanguyat Onipkangit

Una Hanningayomi Kuungani Havaghak (una Havagiyaoyok) toghiotaohimayok gold-nik uyagaktakvioyomavloni havagiyaoyomayok nanminigiyaat ukkua attikaktot Sabina Gold & Silver Corp. (Sabina) eloani haffuma Oatani Kitikmeotni Aviktoghimaningata Nunavut.

Una Havagiyaoyok ilaliotihimayok hapkununga pingahunot ihomagiloaktaitnun havaghagiyaitnot paaktaotiyonik okioni apkohioktaoviokataklotik hapkunani: una Goose-mi havagiyaoyok, una George-mi Havagiyaoyok, tatvaniloTagiokmi Laydown Kaningani takunaktok una hinnigahugo hamna kivamuyok tahamunga kivatani Kilohiktop. Sabina-kut hanaighihimaliktot haffuminga Avatilikinikut Kanogiliyokaknikat Parnaiyaotighanik naonaiyaotigivlugit hapkua etogahoakutigivlugit avatilikinikut uvalu inolikinikut alangokpaliatjutighait pitjutigivlugo hamna Havagiyaoyok hamna malikatjutiginahoaklogit hapkua Nunavumi Nunatakutaita Angekutat uvalu ukkua Nunavumi Kanogiliyoakakhimanikat Ihivgioktiovlotik Katimayiita Malikakiyait hamna Hainnaiyaotaovaktot hapkununga Avatilikinikut Kanogiliyokaknikat Parnaiyaotighanik tatvani Hanningayomi Kuungani Havaghak (NIRB File No. 12MN036; NIRB 2013).

Sabina-kut tonighimayot hannayomavlotik uyagaghiokvikmik kayangnaitpiaktomik, avatilikinikut namatiaktomik, uvalu ikkayotaoyungnaktomik tamaitnun kitonot ilaokataoyonot. Sabina-kut pinahoakniaktot nakoatoklotik monagitiagaloaklogit hapkua inuit anniaktailitjutighait uvalu manigak monagitiagahoaklugolo hapkua manighiotighat pivalianikut ihomagilogit. Hamna Havagiyaoyok hatkitiniaktok hapkuninga ihagiagiyaoloaktonik ilihaotighanik uvalu havaghanik oktogomayonot, tatvalo amigaikpaliotaoniaktok ikkayotighaitnik hapkununga togaghimayonik inuknun Kitikmeotni aviktoghimaningani uvalu Nunavummiunot tamatikloget. Maniktoghotik Naonaiyaotigiyait hapkua enektaohimayot Aktopa 2013-mi, nakuatot naonaiyaotaohimayok hamna pivaliatjutighaitnik uvalu maniliokutighaitnik tatvani Hanningayomi Havagiyaoyok.

<u>Uyagaghiovikhami Parnaiyaotaoyok</u>

Una uyagaghiovikhsmi parnaiyaotaoyok naonaipkutikaktok etkokahoaklogo 10-nik okionik havakvioloni aolaniaktok uyagaghiokvioloni taima kaoyimayaoligami ublomimut, uyagaktakvighait hapkua kititjugit emagalok 15.0 million tonnes-nik akyaktaokataklotik tatvunga ataohikmot hikomivighanitnun uyagaghiokhimayait tatvani Goose-mi Havakvigiyatni. Huli nalvakhiokhimakniaktot hamna aolahimakutighanik haffuma Havagiyaoyop uyagaghiokhimakvighaitnik. Taimainiakat angiklivaliatjutigha haffuma significant Havagiyaoyok pityotaoyagiakakniaktok hamna huli Avatilikinikut Naonaiyaotighata aolatjutigha.

Una Havagiyaoyok ilaliotihimayok hapkununga uyagaktakvighaitnun ihomayigaoyok hapkua: Umwelt, Llama uvalu Main tatvani Goose-mi Havagiyaoyomi; Lone Cow Pond North (LCP North), Locale 1, uvalu Locale 2 tatvani George-mi Havagiyaoyomi. Aipagukaikpat omiakut akyaktaotighait enektaoniaktot atoklogit hapkua Tagiokut omitjat engayangat atoklogit, uvalu hapkua okiomi hilokut apkohioktait atoktaoniaktot hapkua paktakviolotik hapkununga havakvioyonot.

Hapkua uyagaktaktait havagiyaoniaktot atoklogit hapkua angaomayok nunap kangani uyagaghiovot uvalu nunap iloani atogaovaktot tatvanga ahalotikut akyaktaklogit tatvunga uyagaktaktaitnik ehoaghakvigiyatnun tatvani Goose-mi Havagiyaoyomi tatvani uyakat hikoptiklogit havagiyaoniaktot. Uyagaktaktait tatvanga tamaitnik Goose-mi uvalu George-mi Havagiyaoyoni ehoaghaktaoniaktot tatvani ataohikmi havakvigayatni tatvalu hapkua ekaktoghat atoktaolaitot totkoktaoniaktot kaffioyoni ehoaghaktaohimayoni totkokvighaitni kangani nunami uvalunin nanikpani totkokvioyoni tapkunani havakvioyoni. Hapkua koviogakvioyot tatvanga uyagaktakvioyomit totkoktaoniaktot tatvani ataohikmot Koviogakvioyomot hanikpaniitomi kanigiyani haffuma uyagaktakvioyop.

Havagiyaoyop Eliitkohigha

Hamna Havagiyaoyok tatvani Hanningayomi aolaganginakniaktok ema 29-nik (havagilugit Havakvikmi Hanaiyaknik tatvunga Omiktikutighainiklo). Tatva hamna nigiokiyaoliktot hapkua havaghat Havakvighami hannaiyakpalialotik aolakutigomik tatvani 2014-mi malikalugo taima malgoknik ukkionik igluliopalialotik takulugo una (Naonaipkuta 1).

Hamna Aolaninga Havagiyaoniaktup nigiogiyaoyok emakak 8-nik 10-nut okionik, naonaighimalikmata hapkua uyakat nalvaktaohimalikhutik. Sabina-kut huli nalvaghioghimaakniaktot uyagaghioghimaaklotik tahamani kaningani uvalu huli nalvaffiaknigomik hamna angaomaninga etotat imakak 10-nik okionik kangiffaklugo.

Hamna gold uyagaktakniaktaat aolaginagalaitok nunguniaktok ilihimayaat, tatva kakukugalok hamna uyagaghiokvioyok omiktaoniaktok naonaitok haliktaovalikloni pektaokpiakloni. Hamna havgiyaoloni, nigiogiyaoyok aolahimaakniaktok emakak 10-nik okionik havagiyaovakloni, Etoptoklogit hapkua igluutait, tatvalo otiktinahoaklugo hamna nuna iglukakvigihimayaat taimanitot halumaktigahoaklugo avatilikitjutinot ihoiyaotaongitangani. Tatva omighimalikat, kimilgoktaokatainakniaktok namigihimagomavlugo hamna nuna uyagaktakviohimayok ihoiyaotikangitangani huangayunik uvalu iliitkohitoka naovalianigiaghanik.

Naonaiyaota 1. Havagiyaoniaktot

Havakhait	Enekvikhat	Okiot (Havaginiaktait)
Uyagakyakvikhap Hainaiyaotait	2 okiok	2014-2016
Iglukpiuktot	2 okiok	2016-2017
Aolatjutikhat	10 okiot	2017-2026
Haligaknia Omiktiknialo	10 okiot	2027-2037
Omiktaohimalikat Kimilgokninga	5 okiot	2038-2043

Tatva hamna Havagiyaoyok havagiyaohimaaktitlgo, Sabina-kut kinnighiahimaakniaktot ayungitonik havaktoghanik tatvani uyagaghiokvikmi nakuatot kayagitiaklotik tatvalo hivuliotinahoaklogit hapkua okioktaktokmiot havagomayot.

Himaotighait

Himaotighait tatvani Havagiyaoniaktomi naonaiyaktaohimaliktot malikavlugit hapkua havagiyait: kagitaoyakutighaita naonaiyaotait; akiliktotaoniaktot; kangogiliyokaknikat hapkunani avatilikinikut; uvalu ehoaghaotighait hapkuninga haligaotighaitnik omiktaohimalikat uyagaghiokvik. Okaotaohimayot katimakatigivlugit nunaliitni uvalu kavamatkut katimakatigihimangmatjuk ihomakhutaohimayot hinaotighait naonaiyaotaita ubalu naonaiyaihimakutighait, unalo naonaiyaotaoniaktok ilaliotilugo nunaliit namaginiakatjuk uvalu naliak namagikmatjuk, emakak namakiyaoningit ehoakutighat hapkununga inulikinikut – pivalianikhakut ikayotighaitnik.

Malgok ukkua himaotighait naonaiyaktaohimaliktok. Una hvulikpak naonaipkutat hapkuninga alatkinik oktotighanik tatvani Havagiyaoniaktomi hapkua ihomagiloaghugit, oktotigilugo hamna nunaap kangani uyagaghiokvighak tatvaonganit iloagot nunaap uyagaghioknik. Hapkua ihomakhutaohimalikata pitjutaoniaktot angetkiyanot himaotighaitnun, hapkua aipangit himaotighaginiaktait ihomaghutaoniakmiyot ehoaghivaliotighait tatvani havakvioniaktomi. Hapkua himaotighait ihomaghutaohimaakniaktot naliaknot ihomagiyaoloaktonot tatvalo naliak nakunighaokpata naonaiyaotait oktotigiloakniaktat ihoakutighak. Hamna hannavioyok havagiyaoloalikat hapkua himaotighait ehoaghaktaohimakniaktait tatvalo himaotaoloaktot ehoatkiyaonikata tatvani Havagiyaoyomi parnaiyaotaitni.

Pivaliatjutighait uvalu Aolatjutighaita Pinahoakutighait

Una Havagiyaoyok ihomagiyaat angiyomik inulikinikut uvalu pivalianikut ikkayotaoloakniaktot. Hamna ugaghiokvioniaktok hannayaongitpat, hapua ihomagiyaoyot pitjutighait uvalu ihomagiyait ikkayohiakutighat piyaoyungnangitot. Hamna kititlugo GDP ikkayotighak etoktaohimayok ema $600 million talaniaktok iglulioktaovalianiaktitlugo tatvani havakvioniaktomi. Una Havagiyaoyok atkonaotaoniaktok taksiliokutighanik maniliokviginiaktaat ematot $53 million tatlamik ukkua kavamatokatkut kavamatokatkunot uvalu tatva $44 million tala aviktoklogo hapkununga nunatlanot uvalu aviktoghimayoni kavamakaktonot nanilikak Kanatami hapkua iglulioghimaktitlugit. Una Havagiyaoyok naonaitok ikkayotaoloakniaktot Nunavumionot uvalu huli maniliokutaoniaktok emakak ematot $97 million talanik Nunavut tugaklogit tatvani malgokni okioni atokniaktoni. Hamna iglulioknik ekokhimayaat havagiyaoloni emailingayoyakloni 6,250-nik havaktikaklotik okkioni havaghimaaktitloget havagiaghimayot naktitlikak Kanatamin.

Kititluget hapkua Kanatami GDP-git atonaotainiaktot tatvanga Havagiyaoyomit nigiogiyaoyot ematot $2,857 million talaoloni avatkokmata hapkua 10-nik okioknik havaghimaktitlugit hapkua uyagaghioktit. Kititloget hapkua taksiliokutait tatvani aolahimaaktitlugit havagiyait etkomayat ematot $519 million talaghaotiighat, maniliokutiginiaktat $263 talanik ukkua kavamatokatkut uvalu $255 talanik ukkua nunalaat/aviktoghimayoni taksilioknikut manikhagilugo. Una Havagiyaoyok pitjutoniaktok atkonaotaoloakloni hamani Nunavumi uvalu ikkayotaoloakloni ematot $532 million talanik GDP-nik ikkayohiaktitilotik Nunavumionik hamna Aolatjutigha havagiyaohimaaktitlugo. Una havagiyaoyok ekokhimayaat havagiyaoloni emailingayoyakloni 28,000-nik havaktikaklotik okkioni havaghimaaktitloget havagiaghimayot naktitlikak Kanatamin kangiknigomitko 10-nik okionik.

Hamna inukangitomi manikami havakvioniaktitlugo, tatvalo ungahiktomit tamayanik akyaktakvioloni tatvalo hamani Okioktaktomi hila onnaitpiaktitlugo okiomi ayoknaotaoniaktogaloit hapkua tatvani Havagiyaoyomi, taimatot ajikohiongitmatjuk ahinni kaplonaat nunaitni Kanatami Havakvigiyaitni. Taimaitmat, una Havagiyaoyok nigiogiyakaktot hapkuninga akkitoyonik gold=nik uyagaghiokhimayaitnik nalvaguyaohimayonik ublumimut ihomagivlugitlo tatva hapkua gold-nik akkitoghimatitloget taimatot akkitokhimalikamta kaffinik okionik. Tatva katakpalialiknikata hapkua gold akkiit uvalu akkitokpalianikata hapkua havaktot manikhagiyakhait, iglukpiukutighatlo uvalu tamayaotait ikpiginiaktait ukkua Sabina-kut ayokhaotigilugo igluliokiamingni uvalu aolapkagahoaklugo Havagiyaoyok.

Ingilgatjutighait

Hapkua ihomagiyaoyot oktotighait tatvani inukangitomi havakvioyomi okiogalok ingilgatjutiginiaktat ayaktaotigiloget tingmiaktut, malgok ukkua hikokangititlugo omiakut ingilgayaat tatvunga Kilohiktomut uvalu okiomi apkohioklotik apkohioknik paktakviolotik hapkununga Pingahunot Havakvioniaktunot. Tatvalo okiogalok tamaat mitakvikaklotik hapkunani Goose-mi uvalu George-mi Havagiyaoyungni tatvataok tatvaniTagiokmi Laydown Area-mi tatvani Kilohiktomi milvikakniaktot hikomi okiongotitlugo, uvalu tingiaktot kayalikmik aoyami. Havagiakataktot tatvunga Goose-mi Havagiyaoyomot havagiyaoniaktot tingmiakut akyaktaokataklotik nanminikaktonit. George-mi Havagiyaoyok havaktighait tingmiakukatakniaktot tatvanga Goose-mi Havagiyaoyomit mikiyokut tingmiakut. Tatja aolahimaktonik atokhuget hapkua halikaptat naliaknot nalvaghioktot tingmitjutigikataktait aolalimaitot havagihimakmatjuk ukkua Sabina-kut havagivlugit nalvakhioklotik uvalu avatilikinikut kimilgogiaktokatakhutik hamna uyagaghiokvikhak igluliokviotitlugo uvalu aolayaohimaaktitlugo.

Tatvaetkomayaoyok ema 80%-mik hamna aoyami omiat tamayanik akyaktakniaktot hapkunanga Belledune, New Brunswick, ammigaitkiyait tatvangaaklotik Hay River, Nunatiamit. Tamayat akyaktaoniaktot tatvanga Belledune-mit mikkitkiyakut omiakmik atokatakniaktot. Ohokyoat akyaktaokatakniaktot hapkununga omitjat okhokyoakakvikaktonot uvalu tatvangat tiktiktainagomik emakmi toghoakut poptalaktonik nunamot ohokyoakakviknun koviogaktaoniaktot tatvaniTagiokmi Laydown Area-mi. Tamayat tatvangaktot originating Hay River-mit akyaktaokatakniaktot akyaktaotikut omiakut kuuktigokataklotik Mackenzie River-kut Kingaok kangiklugo Kilohiktomut Oatanit tikitlotik. Hapkua tigikataktot aolaktitaokataktotlo tamayat ohokyoakhait tatvunga paagiaktokvioloni akyaktaokatakniaktot tatvungaTagiokmi Laydown Area-mut otakivioloni ohiyakviokataklo ohiliktokviokataklonilo akyaktaokataktoghanik Havagiyaoyunot hikkukut apkohiokhimayokut uvalunin otakiokvigilugo naliaknik omitjanik otimmot akyaktoghanik.

Ukkua Malgok apkohioktaoniaktok tatvunga tikiotiloni Hanningayomi Havagiyaoyok. Una Goose-miTagiokmi Laydown Area-milo Okiomi Apkohioktat ematot 160 km takitigiyok. Una Goose-mi George-milo Okiomi Apkohioktat kipingayok apkot tikiotiyok tatvanga George-mit paakutiloni hapkununga Goose-mutTagiokmi Laydown Area-mut huli Okiomi Apkohioktanot tatva 20 km takkitigiyok. Onataok takkitiyaoyok 220 km takkitigiyok Okiomi Apkohiokhimayomot, Tatva ingilgayakaliklotik tatvanga Havagiyaoyomit tavunga Tibbitt-mut Tahikyoamotlo tatva hamna ihomakhutaovaliayok. Nunakut ingilgannik avatinnoktaotighait havakvioyonot ingilgayagiakakniaktot tamaat okiogalok aoyamilo aghalotikut ingilgakvikhak apkohioktaoloni. Hapkua ingilgayangit apkohiokvighaita paakutikataktot ekatoni, nalokut emaiktikataktonik kugaoyakut. Hapkua naloit hannavioniaktot pingahunik amigaikniakata talimangoklogit mikiyonik tummikaliokniaktot, ilangi kokloakvilioktaolotik emmap aolavighaitnik.

Taimaitmat ahokhaknakinga hamna inukangitok havagiyaoniaktup tatva ihomagiyaoloaktot hapkua anniaktailitjutighat uvalu kayangyaipkutighat, ilaliotiloget hapkua hannatjutighat uvalu tamayaotait aolatjutaitlo. Hannatjutait hapkua aolayaotiagiakaktot uvalu hapkua kayangaipkutighat malikayaotiagiakaktot nalaktaotiaklotik tatva kanogiliyokaknikat ahinnit ikayokighanik pinahoakluni kainginalaitungmat. Tatva taimaitmat tatvani havakvioyomi hapkua havakaktot opalunaktitlugo uvalu monakhikakvioyot nigiokiyaoniaktot opalonaikhimainaklotik.

Havagiyaoyomi Tamaghait Aolatjutighaitlo

Tapkunani Goose-mi Havagiyaoyok, George-mi Havagiyaoyok uvaluTagiokmi Laydown Area-mi ilikoaktonik aolatjutikakniaktot iglutaitlo tamayaotaitlo, hinniktakvit, atanikakvit,alatkinik tamayat totkomaviat, ohokyoaktoktonik ingnikutit koliktotit, tamayakakviit, emmakakviit uvalu halomaitokakviita igluutait.

Una Goose-mi Havagiyaoyok havakvioloakniaktok hapkunani Havagiyaoyoni uyagaktaktaitnik ehoaghaikvikakloni, pingahunik nunaap kangani uyagaghiokvikakloni, ataohikmik nunaap iloagot uyagaghiokvikakloni, tatvalu una iglukpakakvik inukagungnaktok ema 700-nik havagiaghimayonik igluliolikata uvalu 350-nik havagiaghimayoni havakviohimaaktitlugo. Una ohokyoakakvikhak tatamaniaktot ohokyoakakviit namayomik ataokhikmi okiomik ohokyoat totkomayaolotik hitamani angiyokjuani 10-million litre-nik (ML) ilaliotilugo una ataohik 5-ML ohokyoakakvik. Tatvalo totkomavikakniaktot hapkua okomaitigiyot 20,000 tonnes-nik hapkua kagaktaotit totkomavighaitnik.

Una George-mi Havagiyaoyok tunngayok tahamani 60 km Hivuggani haffuma Goose-mi Havagiyaoyok tatvalo pingayonik nunaap kangani uyagaghiokvikakniaktok. Kihiani, pihimayakangitok tatvani uyagaktaktaita hikomtikvighatnik uvalu hapkua uyagaktangit mikitiyaoniaktot. Taimaitmat hapkua tamayaotait iglukpiokvighait akkitovalalaitot. Una havagiyaoyok iglukpakakvighak inukagungnaktok 300-nik havaktonik iglukpioktonik uvalu 150-nik Aolatjutaohimaaktitlugo. Una ohokyoakakvighak hanayaoniaktok pingahunik hapkuninga 5-ML ohokyoakakviknik uvalu totkomavioniaktok hapkuninga 100 tonnes-nik hoangayonik haviktaliknik.

UnaTagiokmi Laydown Area-mi tatvani Kilohiktomi tahamaniitok kanningani 130 km hivogani-NW haffuma Goose-mi Uyagaghiokvighatni. Una totkomavioniaktok hapkuninga hannatjutaitnik, tamayaoyaitnik,ohokyoanik uvalu ihoakutighaitnik hapkua igluliokt ot uvalu aolatjutighaitnik tatvani Havagiyaoyomi. UnaTagiokmi Laydown Area-mi pikakniaktok malgoknik omitjat tolaktakvighainik, haffumingalo ahivaktaokataktomik tolaktakvighamik, ohiyakvighamik, totkomavighamik uvalu hannavikakloti. Una ohokyoakakvik emiktaokatakniaktot hapkua hitamat 10-ML ohokyoakakvioyot uvalu ataohikmik 5-ML ohokyoakakvik. Tatvataok kayangnaikahoaklugo una totkomavioniaktok hapkuninga 20,000 tonnes-nik kagaktaotinik. Una iglukpakakvik inukagungnaktok ematot 100 havaktonik iglukpioktitlugit uvalu 50-nik Aolahimaaktitlugit.

Ikkaktaoyonik Uyakanik uvalu Koviogakvighaita Monagitjutighait

Una Koviogakviokatakniaktop nayugagha tahamaniniaktok Hivugani-NW tahaffuma Uyagaktaktaita Hikoptigikviata. Hamna piyungnakniaktok koviogakvioloni hapkuninga halomailgonik tatvanga uyagaktakvioyonik hamna uyagaktakviohimaaktitlugo hapkuningalo upingami mannigak aoktokpatiatitlugo uvalu nipaliktitlugo kokloakvioyoni. Hamna kokloakvioniaktok uvalu attakninga illioghaktaoniaktok haffuminga hakugiktomik himmaktailitjutighani (HDPE) kangagot himiktoktaoloni kalliktokpaloktomik tatvanga himatjangitangani koviyokaknikat tatvanga ohokyoakakvikmit.

Goose-mi Havagiyaoyomi atokniaktaot ukkua malgok ikkakokvighak uyagaktaghimayaitnik atoktaongitonik totkomavighaitnik uvalu tatvani George-mi Havagiyaoyomi atokniaktaot ukkua malgok ikkakokvighak uyagaktaghimayaitnik atoktaongitonik totkomavighaitnik hapkua hannayaoniaktot kayangnangitangita hoangayunik uvalu hoangangitonik halomailgonik koviogakviolotik. Una uyagagiokvighak angmaomainaktitlugo, tatva kititlugit ematot 133,000 kilotonnes-nik (kt) tatvanga uyagaghiokvioyomit halomailgot koviokaktaoniaktot, ilaliotilugit hapkua avatkohimayot. Tatvanganin, Goose-mit koviogakvioniaktot emaotot 60,000 kt-nik hapkuninga hoangayonik halomailgonik uvalu 51,000 kt-nik kayangnangitonik hoangangitonik halomailgonik uvalu tatvani George-mi kokloakvioniaktok ematot 7,000 kt-nik hoangangitonik halomailgonik koviogakviolotik uvalu ematot 8,000 kt-nik kayangnangitonik hoangangitonik halomailgonik. Hapkua ikkagoktaohimayot uvalu omiktaohimayot halomailgot Aolagotaoniaktot haliktaokataktotik taima hamna aolayaohimaaktitlugo, tatva havagiyaolotik himiktoktaoniaktot hapkua hoangayot kayangnaktot oliktoktaolotik hapkuninga kayangnangitonik kaliktokpaloktonik taimatot ilaliotiniakmata hapkunnga hikmikhamot kikomayomot nunaap atani.

Atoktaoyughat Uyagakakvioyot uvalu Uyagaghioktaohimayot

Sabina-kut hananiaktot hapkuninga atoktaoyughanik uyagakakvioyonik uvalu/uvalunin uyagaghioktaohimayot ammiakoinik tatvani Goose-mi ogaghiokvikmi tatva hapkua atoktaoniaktot hikoptiktaohimayot uvalu katighokloget atogaoyoghat okkiogalok atoktaoyughanik apkohiokutigiluget, totkokvighaliokvigiloget, mitakvioyop taghivaliatjutighanik uvalu atokvigikatakloget igluliokutighanot uvalu hannatjutighaitnun. Hapkua nunaap kangani uyagaghiokvioyot huli hannaighimainakniaktait uyagaktaghimayaitnik uvalu katighoktaohimayonik pihimainakniaktot atoktaoyoghanik. Tatvani George-mi uvaluTagiokmi Laydown Area-milo, hapkua mikitkiyanik katighoktaohimayonik uyagakvighanik parnaighimaniaktot hannatjutighanik hapkuninga iglukpiolikata. Taimatot atokpalalaitot apkohiokutighanik hapkua uyakat apkohiokutighat atoktaogomik.

Nalvaghioknik uvalu Uyagaghioknik

Hamna gold nalvangovaktok haviktalikni taimaniknitani uyakatokaoyoni tahamanitot nanilikak Kanatami kaiktoitni. Tatva hamna kiplikninga hapkua uyakat naonaitot ema 5%-mik. Ahianik haviktakangitok hamna uyagak maniliokutaoyughanik. Hamna gold nalvanguyaoyok tahamaninak ahiani pikangitok taimatot, ilani takughaokatangitkaloaklotik takunaktot igginakhogit. Hapkua uyagaghioktaoyungnaktot uyakat illipkayaoyot tatvani Hanningayoni Havagiyaoyomi kititlogit ematoyok 14,990 kt tatvani 5.85 g/t kipliktonik gold-nik ematot 2,464 Koz.

Hapkua uyagaktaktait tamaitni nunaap kangani uyagaghiokvioyoni (Goose-mi Umwelt-mi, Llama-mi uvalu Goose Main-mi; George-mi Locale 1-mi, Locale 2-mi uvalu LCP North-mi) haliktaoniaktot atoklotik oblumi aolatjutaoyonik ohiliktokataklogit ahalotinot akyaktaotinot oyagaghiokvioyot atokpagaitnik. Tamaita hapkua 6-nit uyagaghiokvighat natkangit kangikniaktait hapkua kiklikhait atani haffuma nunaap kangani oyagaktakvioyot tatvalo kikigha haffuma nunaap kangani uyagaktakvighap natkanga emaitniaktok 200 m atani haffuma nunaap kangata. Unainak Umwelt-mi uyagaghiokvikhak kiklighata avatkutjutigha naonaiyaktaohimaliktok maniliokutaoloakniaktok uvalu iloagut nunaap uyagaghioknik aolagotiniaktat tatvanga 175 m tatvunga 650 m atagut nunaap.

Uyagaktaktait tatvanga Goose-mi uyagaghiokviatnin kingighiyaolotik totkoktaoniaktot ematot kiklikaklugit 1 million tonnes-nik hapkuninga nakunighaoyonik uyakanik uvalu kiklikaklugit hapkuninga 3 million tonnes-nik nakuvaktonik uyakanik. Uyagaktaktait tatvanga George-mit uyagaktaktaitnin totkoktaoniaktot tatvani George-mi totkomaviatni. Una akyaktaokataktok uyakanik hikoptigotaat mighiyakniaktait hapkua uyagaktakhimayait tatvanga totkoktaoniaktot (kiklikaklotik 500,000 tonnes-nik) tatvaniniaktot ohiyaoyoghat tatvunga transport Goose-mi Havagiyaoyomut okiomi apkutikalikat akyaktaoyangita.

Tatva naonyaiyaihimagamik nalvaghimaliktot kaffinik atkonaknahugivlugit hapkua kinnikvigiyatik tahamani kaningani haffuma Havagiyaoyop. Sabina-kut huli naonaiyaihimaakniaktot hapkunani kinniktamingni tatvani uyagaghiokvighak hannayaohimaaktitlugo uvalu aolavalianiaktitlugo emakak haffuma uyagaghiovighap kikligha avatkunnahoaklugo tatja ihomagiyat. Hapkua nalvaghimayait uyagaghioktaoniagungnakhiyot kaningani iglukpakakviliioktaolotik ikkitonik kanningani haffuma uyagaktakvioloakniaktatnit tatvani Goose-mi taimatot atoktaoloakniakmata hapkua aolatjutait ihoakutaitlo.

Uyagaktaktainik Ehoaghaotait

Hamna havagiyaohimaaktitlugo, tamaita uyagaktatait ehoaghaktaoniaktot atoklugit hapkua piyominakningit uvalu ihivgiotiaklugit. Haffuma uyagaktaktaita hannavit kiklighait tatva 5,000 tonnes-nik ataohikmi obluani. Pingahuniaktot hapkua illikoaktot hannavighait uyakanik: uyakanik hikoplikviat; namagiyaoyot uyakat totkokvighat uvalu ajikotanik mikitkiyanik hikoplighimayonik uyakanik illiogakvighat; uvalu una atoktaoloakniaktok hannavighak uyakanik hikoplikvighak. Hamna hannavighak hikoptikvighak (taimaniknitanik uyakanik) hikoptikakvik, natkanit uyagaktaknik, uyakanik onaktomik hoangayomik atokloni hikoptiknik uvalu gold-nik hikoplikhimayonik kataghimayonik katighoinik. Gold-nik aoktokhimayonik kaimalogiktonik hannaniaktot tatvani hannavikmi aolagakat hamna 300,000 ounces-nik pikatakniaktot ataohikmi okiomi. Tatva enekata tatvanga hannavikmin tingiakut aolaktitaokatakniaktot huli havagiyaoffaktughat ahini.

Avatilikinikut Monagitjutighait

Sabina-kut Avatilikinikut Monagitjutighaita Aolatjutighait titigaghimayot tatvani Mapigak 10-mi, titigaghimayot hapkuninga havagiyaoyoghanik hapkuninga Avatilikinikut uvalu inulikinikut-pivalianikut kimilgokataotighaita havaghanik ehoaghaktaokatakniaktot hamna aolahimaaktitlugo Havagiyaoyok. Hamna Aolatjutighat pitjutaoyok hapkuninga parnaiyaotighanik havaktot monaghitjutighaitnik, Hapkua kayangaipkutighaita maligaghat uvalu pivaliatjutighaitnik. Hamna havaginahoaklugo, hapkua illikuaktot monagitjutighaita parnaiyaotait ehoaghaktaohimaliktot ihomagivlugit tamaita ukkua nanminikaktot havagiyait uvalu pitjutikaktotlo hapkuninga naonaitiaghimayonik malgalikinikut oktotighait uvalu kimilgokutighaitnik ehoaghaktaokataktoghanik hamna aolagaktitlugo Havagiyaoyok taimatot ahivagahoakluget uvalunin hiamangitangita hapkua ihoilotaoniaktot. Hamna Aolatjutighat huli naonaipkutikakniaktok hapkuninga malikayaonginakniaktaitnik aolatjutighanik naonaiyatiaghimayonik maligalikinikut malikayaoyoghanik tatvani Havagiyaoyomi, uvalu hapkua malikayaoyoghat ehoaghaktaohimaliktot haffuma Havagiyaoniaktup ataniktotighainik uvalu hapkuninga malikayaoyughanik pitjutaoyonik hapkuninga malikanik, maligaghanik uvalu laisikhaktagotighait malikayaoyagiakaktitlugit. Tamaita tatvani Havagiyaoyomi havaktigiyait uvalu nanminikaktot malikatiagiakaktot hapkuninga ataniktoiyot parnaiyaotaitnik. Hapkua onipkalioktait uvalu titigaghimayait hapkua ataniktoiyot parnaiyaotaitni, manilikitjutaita ihivgiokutait, uvalu aolatjutait atanioyot ihivgiokutait uvalu ehoaghaotighait tamaita naonaiyaghimayot tatvani Avatilikinikut Atanioyot Aolatjutaitni. Una Avatilinikut Atanioyot Aolatjutat ehoakutaoniaktok kioyagiakakata hapkuninga kimilgokutaoyonik kilamioklotik taima hiamangitangita uvalunin piktaoyangita hapkua ihoilotaoniaktot manikami uvalu inulikinikut-pivalianighakut pitjutaoyot.

<u>Emakmik Monaghinik</u>

Hamna atoktaoloakniaktok emaap aolatjutigha otiktaotikakloni halomaktikvikaklonilo tatvanga koviogakvioyomit. Hamna otikaota papaotikakniaktok tatvani Koviogakviata nayogani una koviogakvikakniaktot uvalu onnaktokvikakloni uvalu oliktoghimayonik nunaap kangakuktonik tohoakakloni. Huli ilaliotikatakniaktat emakmik nakkit emagiktomik ammigakaikpat hamna otiktaktok.

Tatvalotaok, emakiktomik piyagiakakniaktot emiktotighaitnik hapkua emakakvioyot inuit atogaghaitnik uvalu hannavioyot atogaghaitnik tatvani Goose-mi Havagiyaoyomi, George-mi Havagiyaoyomi, uvaluTagiokmi Laydown Area-mi. Ukkua Goose-mi uvalu George-mi havakviatni emiktakatakniaktot tatvanga Goose-mi uvalu George-mi tattitnit, illikut. Huli amikakniaknikata emakmik tatvanga emiktainagiakaktot Propeller-mi Tahikmit tatvani Goose-mi Havagiyaoyomi uvalu tatvanga Fold-mi Tahikmit tatvani George-mi Havagiyaoyomi. Emmap papaotikaknighaitnin elikut emiktakvikakniaktot tamaitni havakvioyoni. Ilaliotilugit, una emagikhaotighak papaotighak hannayaoniaktok tatvani Tagiokmi Laydown Area-mi.

Hamna manigak tamaitni hapkunani havakvioyoni nakilokak emaiktihimayonik, hangunayonminik kukaoyakakhutik. kihiani, tamaita ihomaghutaoyok hamna havakvioyonot emiktaotighaita monagitjutighait emaiyaklogit hapkunani uyagaghiokvioyoni ihoiyaotaongitangani. Tatvani Goose-mi uyagaghiokvioloaktomi piyagiakakniaktot mikiyoni kukaoyani emaiyaklogit uvalu parnaiyaghimayayot tatvani Goose-mi mitakvighata ilaliotiyaoyughami emaiyagomayat una kukaoyak kokloaktok tatvani ilaliotiniaktatni. Tamakmik ukkua kukaoyak kukloaktok tatvunga Goose-mi Tattimot uvalu hamna emmanga aolalaitok, kihiani hamna aolaninga haffuma kukloakviata tatvunga tatimot alangukungnaktok.

Havagiyaoyagiakaktitlugit hapkua uyagaktakvighait, ilanga uvalunin tammat emaiyagiakakniaktot hapkua tattit. Tatvani Goose-mi Havagiyaoyomi, Llama-mi Tatimi emaiyaktaoyagiakakniaktok pinahoaklugit tatvani Llama-mi uyagaktakvighait. Tatvani George-mi Havagiyaoyomi, ilanga emaiyaktaoyagiakaktok hanalotik kokloakvighanik tatvani malgokni ikkatoni tattini, Lytle-mi Tahikmi uvalu Occurrence Tahikmi, piyagiakakniaktot emaiyaklogik hannayaoyangani ukkua nunaap kangani uyagaghiokvighak tatvani Locale 1-mi Locale 2-mi illkut. Hapkua kokloakvighat hannayaoniaktot himmiktoklogit hiamangitangita tatvunga tattinot. Hamna emaiyaotighak parnaiyaotighat ehoaghaktaoniaktok malikani angiktaohimalikat hanaliktinagit hapkuninga himmiktotighaitnik tapkunani Lytle-mi uvalu Occurrence-mi tattini.

Tamaitni 6-sini nunaap kangani uyagaktakvioniaktoni nunaap attain kikkomainakniakmat taimatot nunaap attagot emak annialaitnahogiyaoyok. Emaokangninga aoktungninganit apputip uvalu aoyami nipaligangat papaktaoniaktok tahikaknot. Emaiyaknik nunaap iloagut uyagaktakvioyonit piyaoniaktot atoklotik hapkuninga emakmi kivihimayonik uvalu kangakuktonik papaotinik nanilikak havakvioyoni, papakataklogit tohoanik atoklotik. Tatvani Goose-mi Havagiyaoyomi, tamaat hamna emak hiamaghimayok papaktaoniaktok tatvunga Koviogakvioyomot uval tatvani George-mi Havagiyaoyomi, hiamaghimayok emak tohaktutjutaoniaktok hapkununga emalikiyunot tatvani havakvioyomi.

Ikakokvioyot

Hapua ikaktaohimayot havagiyaoniaktot tatvani ikakokvioyoni tamaitni uyagaktakvitni. Hapkua ikaktaohimayot mighilaktaoniaktot, atoktaoffakniaktot uvalunin halomaktiktaoniaktot atoktaoffaktoghat. Tapkunani Goose-mi uvalu George-mi Nanminigiyaitni atokniaktait hapkua ikaktokvioyot kayangaitonik ikakatakvigiligit. Hapkua allat ikaktaohimayot kayangaitomik totkoktaoniaktot akyaktaokataktoghat ahinot namagiyaoyonot halomaktaokataktoghat atoktaoffakniakata uvalunin ikaktaoyoghat. Tamaitni iglukpakakvikni pikakniaktot ikolativighanik hapkuninga kayangaitonik uvalu ikolayungnaktonik ikaktaohimayonik uvalu totkomavikaklotik kayangnaktonik ikaktaohimayonik. Hapkua annakviknit uvalu halomailgok emmak tatvanga iglukpakakvioyonit uvalu hannavioyonit halomaktaoniaktot hapkunani halomailgonik emaknik halomaktikvioyoni (Ingilgayomik kaivitomik ihoakut). Halumaktaohimayot annakviitnin milokakhimayot koviogaktaoniaktot nammot ihoaghaktaohimayomut manikamot koviogakvighaitnon, tatvunga Koviokakvikhamot, uvalunin halomailgonik emmaknik koviogakviatnun. Hamna halomailgok koviogaktaotitlugo toghoakut ingilganiaktok hapkua katingalaitotik ihoiyaotaolaitot nunaap iloanitaknik hikmiknik kikomayonik.

Omiktiginik uvalu Halligaknik

Sabina-kut havagiloakniaktat hamna haligaklotik halumaktiginikut havaghat hamani uyagaghiokvioyok aolahimaaktitlugo. Hapkua igluliоghimayait ittuptiktaolotik ahivaktaoniaktot atoktaohiokata. Havagitiakahoaklugit hapkua hoangayunik tokunaktonik pitakangitangani omiktiktaotitlugit hapkua uyagaghiokviohimayot ihomagiloaktait havaginahoaklugit. Hapkua ilaliotilugit havagiyaoyonot poktoklugit uyagaghiokvikmit ikakoktaohimayot (kayangaktonik tokunaktonik pikaktot uyakat ikkaktaoyot uvalu koviogaktaohimayot) hapkualo kayangnangitot uyakat pikahiotilugit uvalu emakmik emiktoklogit hapkua nunaap kangani uyagaghiokviohimayot. Tatva emiktokpalangitangita hapkua angmaomayot nunaap kangani uyagaghiokviohimayot tatatitaokatakniaktot tattiniit emakmik pikangitanani hapkuninga huangayunik kayangnaktonik tokunaktonik uvalu anniangitangita havivaloit. Hamna uyagaghiokviop omiktigotigha nigiogiyaoyok havagiyaoloni 10-nik okionik uvalu havagiyaoloni pingnahonik havagilugit malikalugit talimat okionik avatkulogitlonit omikhimalikat kimilgokataklugo.

- Havaghak 1 – Nalogik malgok okiok havagihimaaklugo hamna haligaklugo pinnighaotighat uvalu emmiktoghimaklugit hapkua nunaap kangani uyagaghiokviohimayot emmiktoghimaklugit tatiit emaotaitnik.
- Havaghak 2 – Tikitiklugo 7-nik okionik huli emiktoghimaaklugit hapkua nunaap kangani uyagaghiokviohimayot Goose-mi havakvioyomi.
- Havaghak 3 – Tatva kingolikpakmik emaiyaktaoniaktot atoligiakat okiongani 10.

Hannaioyot-maligagiyait atoklugit notangoktikutait nunamik havagiyaoniaktot omiktiklugit hapkua kihingoktaohimayot pingahot Havakvioyot. Kayangaktot tamayaotait katighoktaoniaktot ahini ikaktaoyoghat ilaliotilugit hapkua kayangnaktot ahalotit ihoakutait uvalu hannatjutaoyot,hapkua ohokyoakakviit, angutikakviit uvalu kinniktotait. Tamayaotait kayangnaktokangitot ikkaktaoniaktot tatvani nunaap kangani angmaomayomi uvalunin ikkakokvioyomi haoyaolotik uyakat ikkakhimayot totkomaviatni. Hapkua iglutait itoptiktaolotik ikkaktaoniaktot tatvunga haoyaoyoghamot ikkakokvikmot. Emmap kokloakviit ahivaktaoniaktot apkotinit uvalu hapkua kukkat ingilgayangit otiktitaolotik, Kihiani hapkua apkutait aolayaolaitot. Hannatjutait uvalu tammayait tatvaniTagiokmi Laydown Area-mi ikkaktaoniaktot tatvani havakvioyomi malikalugit hapkua haligaktigotaita maligait. Uyakat katikhoktaohimayot hannatjutait hapkuninga totkokviliokutaitnik atoktaoniaktot hannatjutigilugit ikakokvighamik tatvaniTagiokmi Laydown Area-mi.

Inuit Nalaktitlugit Katimapkainik

Inuit nalaktitlugit katimapkainik uvalu ilaovaliatitinik maligaotitlugo piyagiakakmata ilaoni Nunavumi, una hannayioyot malikatiakmatjuklo, tatvalo pionighaotitlugo ukkua timioyot tonighimatjutigiyat. Hamna aolagotigitiagiakakmat angmaomatiaknik, pitiakutinik, uvalu ikkayokatigitiakutighait pikatigitiakloget hapkua nunaliit uvalu nanminikaktot pihimainaktat, uvalu huli pihimaganginakniaktat hivoliotjukahoakhuget ukkua Sabina-kut. Sabina-kut huli iliitagihimayaat hapkua alanganingit Inuit iliitkohitokait uvalu taimatot aghukutiginakniaktat hapkua pikatigikatagahoagomavlugit nunaliit iliitkohiktotaitnik uvalu pitiakatiginahoakloget. Ukkua Nanminikaktot huli tonighihimayot okakatigihimagomavluget hapkua nunaliit uvalu angmaomainaktot kanok oktotaoyomayonik kanok hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighat ihoaghivaligungnakatjuk.

Sabina-kut hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighaita ammihuyot hapkua havagiyomayait. Elaliotihimayot hapkua tonighimatjutighait iliitkohiktotaitnun uvalu pitkohinnot, uvalu atokpagaiknik nunaliit hapkuninga oktokpagaitnik uvalu ehoaghaotigivagaiknik. Hapkua ilaliotihimayot inuit nalaktitluget katimanik, katimanik pikatigivluget hapkua ilaliotihimayot katimayiit uvalu nanminikaktot (oktotigiluget, Hamalatkut, HTO-kut, inolgamiit), katimakatigiluget hapkua nunaliitni katimayiit Ekaluktutiami uvalu Kugluktumi, Havagiyaoyonot manikami polagiakataknik, kitonot tohaktitjutaokataktot (oktotigilugit, kagitaoyakut naonaipkutaoyot uvalu Twitter/kagitaoyakut titigaknik/kagitaoyakukutit), una Havakvioyomi tohaktitjutighak, allat makpigat tohaktitjutit, aolakutiluni Ekaluktutiami havakvighamik, nunaliitnin havaktikakloni uvalu nanminikaktoniklo ilaliotilugo una Ekaluktutiami Nunaliitni Tohaktitilikiyioyok, aghokutigilugo hamna Inuit Kaoyimayaktokangitnik naonaiyainik pikatigiluget ukkua Kitikmeot Inuit Katuyikatigit, aghokutigilugo hapkua allatkit inulikinikut/avatilikinikut naonaiyaotighat, hamna hivonighami aivatjutighat haffuminga Inuit Kanogiliyokaknikat Ikkayohiakutighaita Angekutighat pikatigilugit ukkua Kitikmeot Inuit Katuyikatigit, allat pitjutaovaktot nunaliit ilaovaliatjutait (oktotigiluget, nalaotikuknik, hannayioyot havaghanik kungiaktitinik, allatkinik-iliitkohioyonik ilihainik, uvalu nunaliitni tohaktititjutinik), uvalu nunaliitnik aittoktoinnik.

Sabina-kut aolakutihimayaat hamna hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighat havagivlugo tatvani June 2012-mi. tatvanganin, amihoiktaghutik katimakataghimayot pikatigivluget hapkua Havagiyaoyomi illaliotihimayot pikatigivlugit. Hapkua katimatitluget katimatjutait titigaghimayot ammihoiktaktitluget katimapkaititluget Sabina-kut hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighata havagiyaotitluget, uvalu hamna pitjutaohimaliktok ematot hamna Inuit nalaktitluget katimatjutaita katighoktaohimaliktot kagitaoyakut pihimalighotik ematot 150 avatkutuget allatkit okaotaohimayot. Hamna kagiyaoyakut katighoktaohimayok naonaiyaktaohimaliktok naonaikhuget hapkua okaotaoloaktot uvalu ihomalotigiloaktait hapkua nunaliit uvalu katimayioyot. Hapkua naonaipkutikagungnaktot ematot pingahunik ihomaghutaoloaktonik: nunaliit ikkayohiakutighait uvalu ilaovaliatjutighait, havaghakhioknik uvalu ilihaknik, uvalu avatilikinikut monaghinik uvalu kimilgokataknik.

Sabina-kut pihimayot uvalu huli pihimakatiginiaktait havakatigiluget ukkua Kitikmeot Inuit Katuyikatigit, ukkua monaghiyioloaktot Inuit Timigiyaovlotik piyungnaotikaghutik uvalu monagiyakakhotik haffuminga Havagiyaoyop ilanganik. Kitikmeotni Aviktoghimayuni nunaliit huli ihomagiloaktait ukkua Sabina-kut hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighat. Hapkua nunaliit naonaiyaktaohimaliktot atoghugit hapkua allatkiit katimatjutait uvalu ilaovaliatjutait havagiyaotitluget hapkunanga Sabina-kut tamaitni nunaliitni. Hapkua naonaiyaotait ihomaghutaohimayot atoghugit kanok kannitkiyaonginga naliak nunaliit tatvunga Havagiyaoyomot, Kanoklo emakak ikpigiyakakniakmangata haffumanga Havagiyaoyomit-pitjutikaktitlugit inulikinikut-pivalianikut uvalu avatilikinikut ikpigiyaitnik, uvalu kanok ahiagot pitjutikakata tatvunga Havagiyaoyomot. Tatva kaffioyot hapkua Nunatiami Nunakakakhimayot timigiyait pihimaliktot (uvalunin pikataoniaktot) illaokataolotik tatvunga Havagiyaoyomot. Hapkua ilaokataokataliktot tohaktitaokataghutik katimakataovlotik hivolikigiyait uvalu kivgaktoiyot hapkuninga timigiyaoyot.

Hapkua tohaktitjutait atoghugit hapkua Inuit nalaktitluget katimaningit uvalu ilaovaliatjutighait ihomaghutaohimayot hapkuninga parnaiyainikut uvalu titigaoyaknikut haffuminga Havagiyaoyop kaffinik havaghanik ihomaghutaovlotik ilaliotivlugit hapkua naonaipkutighani kagitaoyakut katighoghutik, kanogiliyokaktinago etokhainik, naonaiyatiakutighanik, uvalu pivaliatjutighaitnik hapkua maligalikinikut uvalu kimilgokutighaitnik. Pionighaoyok hamna, tamaita ihomagiyaoloaktot uvalu ihomalotaoyotlo naonaiyaghimayagiakaktait hapkua nunaliit okaotaotakhimaliktitlugit havagihimaliktait ukkua Sabina-kut tatvani DEIS-mi atoghugit hapkua allatkit parnaiyaotaohimayot, maligait, uvalu tonighimatjutait. Hamna Inuit nalaktitluget katimanighat uvalu ilaovaliatjutighat hatkiktiniakmingmata notanik tohaktitjutighanik ihomaghutaoyughanik hamna Havagiyaoyok hivumovaliatitlugo. Oktotigilugo, Sabina-kut Nunaliitnun Elaovaliatjutighaita Parnaiyaotait (takulugo Makpigak 10) tonighimatjutigiyait ukkua nanminikaktot katimakatigikatakomavlogit uvalu ilaovaliatjutighaitnik nunaliitnun hamna Havagiyaoyop pivaliatjutighaitnik uvalu aolatjutighaitnik. Taimataok, tonighihimayot titigakumavlugit hapkua kioyomavlogit hapkua nunaliit kiotjutait, oktokuyait uvalu ihomalotikagiaknikata. Sabina-kut taima huli ehoaghagungnaktat hamna Nunaliitni Elaovaliatjutighaita Parnaiyaotat piyagiakakat taimatot aolangitangita ihomagiyait uvalu ehoakutighait.

<u>Kavamatkut Elaovaliatjutighait</u>

Hamna pitjutaoyot ukkua Sabina-kut kavamatkunik ilaovaliatkovlugit tohaktitikatagomavloget hapkua kavamatkuni havaktigiyait ehoaghaotighaita parnaiyaotighaitnik naonaitiaghimayonik Hehoaghaotighaita parnaiyaotighaitnik ikkayotaoniaktonik hapkuninga havagiyaoniaktonik. Sabina-kut huli tohaktitaihimakpaktot hapkuninga Havagiyaoyop kiklikhaitnik uvalu atkonaotigiyamingnik kavamatkunot, taimatot naonaitomik parnaighimatiangiangita havagiyaghamingnik uvalu opalungaighimayangita ilaovaliatjutighamingnik hapkuninga avatilinikut naonaiyaotighanik. Ublumimut, hapkua piyomayait ukkua Sabina-kut kavamatkut ilaovaliatjutighait pitjutigivalugit hapkua:

- Ehoaghailoni avatingnot tohaktitaitjutighanik taima okpigitjutilotik uvalu havakatigitiagahoaklotik;
- Tohaktitikataklonik kavamatkut havaktigiyaitnik hapkuninga Havagiyaoyonik kingovaghimaitomik, iggaktoghimaitomik, uvalu angmaomaloni ikayogahoakloget hapkua kavamatkut havaktigiyait hapkuninga ihivgiokutighaitnik; uvalu
- Tohakvigikatakloget uvalu kangikhigivigiloget hapkua kavamatkuni havaktiit taimatot ikayotaoniakmata Sabina-kunik kiotjutighaitnik uvalu ehoaghaotighaitnik parnaiyagahoaklotik.

Sabina-kut pikatigekataghimaliktot hapkuninga kavamatokakunik kaffiktaghutik haffuminga Havagiyaoyop mighakut, ilaliotivlugit hapkua Kanatami Okioktaktomilo Pivalianikut Katimayiit (okoavalaat, Okioktaktomi Havagiyaoyonik Monaghiyioyot Havakvioyot), Takiokmiotalikiyiit Katatami, Nunakakaktolikiyiit uvalu Okioktaktomi Pivalialikiyioyot Kanatami, Avatilikiyiit Kanatami, Ohokyoalikiyiit Kanatami, uvalu Ingilgayolikiyiit Kanatami. Sabina-kut nigiogikataktait ukkua Okioktaktomi Havagiyaoyonik Monaghiyioyot Havakvioyot ikayoktigiyomavlugit tohaktitaitjutighanik, ehoaghaikatiginahoakluget naliaknik kavamatokatkuniit havaktitnik ilaokataktoghanik katimanikut uvalu ahianik pitjutaoyonik havakvioyoniklo opaotikataktughanik.

Ukkua Nunavut Katamatkut ilaokataktot hapkuninga, uvalu ayungitamingnik okaotjikataghutik pikataovlotik, hapkuninga avatilikinikut naonaiyaititlugit uvalu ihivgiokhititluget toghioktaoyonik uyagaghiokvighanik Nunavumi. Sabina-kut huli havakatigihimakniaktait ukkua Nunavut Kavamatkut havaktigiyaat hapkuninga kavamatkut ilaovaliatjutighaita havagiyaitnik kihiani huli pikatigiluget naonaitiaghimayonik havakvioyonik piyagiakakata (oktotigiluget, hapkua pikataoyomayot inulikinikut-pivalianikut uvalu angotighalikinikut). Ukkua Nunatiami Kavamatkut ilaokatakniaktot pitjutigiloakluget naonaiyainikut tittiknilioktaohimayonik uvalu hamna halomaigok hiamakpalialitjutaitnik haffuma Havagiyaoyop.

Sabina-kut atoghimaliktot hapkuninga alatkinik kavamatkut ilaovaliatjutighanik uvalu akhukutigiyait ehoaktunik okpiknaktonik pikataovaliayomavlutik ihomagitiagomavluget. Hivonighitjutighat uvalu katimakatigiikatakhutik pikatigikataktait hapkua aviktoghimayoni uvalu atanikakvioyoni havaktot alatkiit kavamatkuni havakvioyot. Hapkua katimatjutait ilaliotikataktait alatkiik amiyot inuit pikataoyomayot (ihoaghitinahoakhuget), alatkiit pikataoyomayonik.

Sabina-kut ilitagihimayaat hapkua ihagiagiyaoyot katimakatigiyomavloget kavamatkut ilaovaliatjutighaita havagiyaitnik. Hapkua naonaitiaghimayot Havagiyaoyomayop pitjutaitnik titigaghakviokataktait togaktitaokatakniaktot tatvuna Nunavumi Kanogiliyokaknikat Ihivgioghiyiovlotik Katimayiitnun uvalu hapkua ilaliotiniaktot kitonot inuknun takuyomayunot takopkaktinagiakakniaktait, taima malikalogit hapkua aolatjutait.

Inuit Kaoyimayatokangit

Inuit Kaoyimayatokangit (TK) naonaipkutaoyok hamna ematot “katighokhimayot hapkua kaoyimayangit, atokpagait, okpigiyaitlo, alangukpalianingit iliitkohitokait uvalu atoktaonginaghotik taimangakalok katangotimingnit iliitikataghotik iliitkohitokaknik” (NIRB 2007). TK naonaiyaotait pitjutaoyot naonaiyaotaovlotik onipkaktot titigaghimavloget hapkua alatkiit onipkangit angoniaknikut, ekaloghioknikut, angoniakviit uvalu aolakpakviit nanilikak. Tatvalo pitjutaovaktot naonaitonik tohaktitjutinik hapkuninga nunaliitni avatilikitjutaitnik, inulikinikut-pivalianikut aolatjutait, inulikinikut-iliitkohilikinikut aolatjutait uvalu hannatjutait, okpiomatjutaitnik, piyonaotaitnik uvalu ahiagot pitjutigiyaitnik. Sabina-kut iliitagihimayait hapkua iliitkohitoktaitnik Inuit Kaoyimayatokaitnik uvalu ihomagitiaktaitnik nunaliitni atotaitnik avatilikinikut naonaiyaotaitnik hapkuninga toghiotaoyonik havagiyaoyomayonik. Taimaitmat, Sabina-kut aghokutigiyaat ilaliotiyomavloget hapkua nunaliit hapkununga Inuit Kaoyimayatokangit tatvunga Havagiyaoyop parnaiyaotaitnun uvalu titigaoyaktaitnun. Hapkua naonaitiaghimayot kanok hamna Inuit Kaoyimayatokangit ilaliotihimangiakmangat tatvunga DEIS-mut onipkagiyaohimayot hapkunani Naonaipkut 3.1-1 (Makpigak 3) – Atohiit hapkua Inuit Kaoyimayatokangit tatvani Sabina-kut Enekhimaitot Avatilikinikut Kanogiliyokaknikat Onipkangitni pitjutigivlugo una Hanningayomi Havagiyaoyok, tatvalo titigaghimayot naonaitiaghimavloget hapkunani makpigangitni haffuma DEIS-gita.

Sabina-kut pihimaliktot, uvalunin pinahoaktat, atokloget talimat ihomagiloaktait Inuit Kaoayimayatokangit: una Naonaiyaotit Inuit Kaoyimayatokangitnik Havagiyaoyok (NTKP) katighokhimayot kagiyaoyamot onipkangit pitjutigivlugo una Havagiyaoyok, allatkinik-onipkanik Inuit Kaoyimayatokangitigot katimatjutait, una onipkangat hapkuninga aolahimaktonik uvalu inuknun takuyaghaoyonik Nunatiami Inuit Kaoyimayatokangita mighakut, hapkua enekhimayot inuit nalaktitloget katimatjutait uvalu ilaovaliatjutaita havagiyait, uvalu ahiagot pitjutaoyot (oktotigilugo, nunalikinikut katimatjutait). Taimatotaok, Inuit Kaoyimayatokangit iliitohiit ikkayotaoloaktot hapkuninga Sabina-kut ihomaliokutaitnik hamna Havagiyaoyok pitjutigivluget uvalu ilaliotihimaliktat hapkununga titigaoyaktainun ukkua Nanminikaktot tamaitnik Havagiyaoyop ataniktotait ihomagivlugit. Sabina-kut ikayokatigiliktat ukkua Kitikmeot Inuit Katuyikatigit ukkua malgok ihomagiyaotiaktok pitjutigivluget Inuit Kaoyimayatokangit naonaiyaotigivluget – parnaiyaotait hapkuninga NTKP kagitaoyakut katighoktaohimayot onipkangit uvalu aolatjutighait hapkua alatkiit onipkangit Inuit Kaoyimayatokangitnik katimatjutait. Hamna ikkayokatigeknik pitjutigivlugo hamna Inuit Kaoyimayatokangitnik Angekutat attilioktaohimaliktat ukkua Sabina-kut uvalu Kitikmeot Inuit Katukyikatigit tatvani May 2012-mi. Tatva hamna attilioghimalikmatjuk ukkua Sabina-kut pinagialakiyaat hapkua Inuit Kaoyimayatokangit nanminigiyat ukkua Kitikmeot Inuit Katuyikatigit NTKP-tikut kagiyaoyami katighokhimayot. Una angikutaohimayok huli naonaipkutaoyok hapkuninga malikayaghaitnik pitjutigivlugit ukkua Sabina-kut atotighait hapkuning Inuit Kaoyimayatokangitnik.

Sabina-kut ihomagiyait hapkua Inuit Kaoyimayatokangit ajikutaknigaivlogit hapkununga tamaitnun kaplunaat naonaiyaotaita tohaktitjutaitnik katikhoktaohimayonik atoktaghait haffuma Havagiyaoyop. Oktotigilugo, hamna Inuit Kaoyimayatokangit ilaliotihimayot hapkununga allatkinot avatilikinikut uvalu inulikinikut-pivalianikut naonaiyaotaitnun katighoktaohimayonot hamna Havagiyaoyok pitjutigivlugo. Hamna tohaktitjutaoyok ikkayotaoloaktok ilaliotinahoakluget hapkua kaplonat naonaipkutait uvalu inulikinikut-pivalianikut tohaktitjutaitnik, pitjutaovlonilo notanik uvalu hapkuninga nipiliokhimaitonik huli tohaktitjutighanik, uvalu/uvalunin pitjutaoloni himaotighanik ihomakhutighanik uvalu/uvalunin tohaktitjutighanik ihomakhutaonginagiakaktonik. Hapua pitjutait hapkuninga NTKP-mi onipkami (oktotigilugo, KIA-kut 2012) ilaliotihimavloget atoktaohimayot ihomagivluget uvalu ehoaghakhugo hamna hivolik VEC/VSEC titigak pitjutaoyok haffuminga Havagiyaoyomik. Hamna enekhimaitok titigak hapkuninga VECs/VSECs okaotaohimayot tamaitnun Nunaliitni okaotjiyioyot katimayioyonot tatvani Novaipa 2012 tatvanilo inuit nalaktitloget katimatitluget tamaitni Kitikmeot nunaliitni tatvani Appu 2013-mi ihivgioktagait uvalu kioyaghait. Taimaitmat hamna Inuit Kaoyimayatokangit ilaliotivalialikmat tatvunga Sabina-kut hivulitnun kagiyaoyakut katighotaitnun uvalu kanogiliyokaktingnago etokniakutaitnun/ihoiyaotaonikata naonaiyaotaita havagiyaitnun, Sabina-kut kingolikpak naonaitiaghimayot ihomaghotait tatva atoghogit hapkua Inuit Kaoyimayatokangit. Naonaiyatiaghimayot hapkua naonaipkutait uvalu ihomaghotait ilaliotihimayot tohaktitjutighaitnun hapkununga Kitikmeotni nunaliitnun uvalu tamaitnun nunaliini okaotjiyiovlotek katimayiitnun tatvani Novaipa 2013-mi ihivgioktaghait uvalu kioyaghait.

Kingolikpamik, hamna Inuit Kaoyimayatokangit ikkayotaoloaktot tohaktitjutigivluget hapkuninga havagiyaoyonik ehoaghaotighaitnik uvalu kimilgokutighaitnik haffuma Havagiyaoyop. Inuit ihomalotigiyait okaotaohimayot (oktotigilugo, Inuit nalaktitlugit katimangmata uvalu ilaokataovaliatitluget) okaotaovaliatitluget hamna kanogiliyokaknikat ihoiyaotaoniaknikata angotighanot (ihomalotaoloakhutek tuktut) uvalu allat avatilikinikut uvalu inulikinikut-pivalianikut havagiyaghait. Ehoaghaotighait uvalu monagetjutighaita parnaiyaotighait taima ihoaghaktaohimaliktot hapkua kaffioyot VECs uvalu VSECs pitjutaoniaknahugiyaovlotek hapkuninga kayogiliyokaknikat ihoakutighait haffuma Havagiyaoyop hapkununga Inuit ihomalotigiyaitnun. Hamna Inuit Kaoyimayatokangit atoktaoniakmiyok kimilgokutaitnun hapkuninga Havaiyaoyomi ihoilotaoniaktonik. Tatvainaongitok hamna Inuit Kaoyimayatokangit ikkayotaovloni naonaiyaotaoyonot hapkuninga hivunighami kangogiliyokaknikat naonaiyaotaitnun, kihianilo nunaliitni hamna Inuit Kaoyimayatokangit ikkyotaoniaktok notanot kimilgokutaoniaktonot uvalu tohaktitjutighanot hamna Havagiyaotok hivomovalialikat. Hamna hivunighami katighionik uvalu atoknik hapkuninga Inuit Kaoyimayatokangitnik ilaliotihimaliktat kaffioyonot atanguyat parnaiyaotighaitnun haffuminga Havagiyaoniaktop. Oktotigilugo, Sabina-kut Nunaliitni Ilaovaliatjutighaita Parnaiyaotigait tonighihimayot hapkuninga inuit nalaktitluget katimatjutighaitnik uvalu ilaovaliatjutighaitnik hamna Havagiyaoyok havagiyaohimaktitlugo. Taimataok, Hapkua aolatjutighait ehoaghaktaoniaktot titigaktaoyoghat uvalu kiotjutighat hapkununga nunaliit kiotjutighaitnun, oktokuyaitnun uvalu kanok ihomalotigiyaitnun.

Ihomagiyaotiaktot Ihoakutighait

Hapkua ihomakhutaoyot atogaghat Ihomagiyaotiaktot Avatilikinikut Ehoakutighat (VECs) uvalu Ihomagiyaotiaktot Inulikinikut-pivalianikut Ehoakutighat (VSECs) ilaliotihimayot Sabina-kut hivonikhotik inuit nalaktitlugit katimatjutighanik, hapkua atotait Inuit Kaoyimayatokangitnik (TK), maligalikinikut katimatjutighat uvalu maligalikinikut ihomakhotaoyoghat, uvalu pigiaktitaohimayot tatvai NIRB-kut EIS-gata maligaitni (NIRB 2013). Una *Inuit Kaoyimayatokangitnik havagiyait ukkua Sabina-kut Gold & Silver Corp., Hannigayok, Havagiyaoyok, Naonaiyaotit Inuit Kaoyimayatokangitnik Havagiyaoyop Onipkangit* (KIA 2012) aghokutaovloni katimatjutaohimayok hapkuninga Inuit Kaoyimayatokangitnik tohaktitiyomavlotik. Atoghugit hapkua naonaipkutit, hapkua VEC-nit uvalu VSEC-git hapkualo Ihomagiyaohimayot Titigaghimayot naonaiyaktaohimayot:

Hilami Avatilikitjutit (Makpigak 4)

- VECs: Hilap Kanogininga, Koinginakninga uvalu Hayokninga
- Ihomagiyaoyot Titigaghimayot: Hilap Kanogininga uvalu Hilalikitjutait

Mannikap Avatilikininga (Makpigak 5)

- VECs: Naotiangit uvalu Nunaap Kanokininga, Tuktuit, Aghait, Omingmait, Kalviit uvalu Mitkolgiit, Tingmiat Huugatjat, Kilgaviit
- Ihomagiyaoyot Titigaghimayot: Nunalikinik, Hikmiit, manikak uvalu nunaap atanniitot

Emmagiktot Avatilikininga (Makpigak 6)

- VECs: Emak Kolikotighak, Emmap Halomaninga, Hunavaluit Halomaninga, Ekaluit/Emmakmiotaat, Ekalukakningit
- Ihomagiyaoyot Titigaghimayot: Manikami Emmak, Limnology uvalu Bathymetry

Tagiokmiotanik Avatilikinik Environment (Makpigak 7)

- VECs: Emmap Halummaninga, Hunavaluit Halomaninga, Ekaluit/Emmakmiotat Nayogait, Ekalukakningat, Tagiokmiotat Tingmiat/Mitkiit, Nattiit
- Ihomagiyaoyot Titigaghimayot: Tagiop Kanokinninga

Inulikinikut Avatilikinik (Makpigak 8)

- VECs: Inniitoliit, Inulikinikut-Pivalianikut,Nunalikinik, Nikainaktoknik
- Ihomagiyaoyot Titigaghimayot: Ingilgaknitalikinik, Inulikinikit Anniaktailinik uvalu Avatilikinikut Kayangnaitolikinikut Naonaiyainik.

Tamaita VECs-git uvalu VSECs-git naonaiyaktaohimayot atoghugit hapua initoningit uvalu nunalikinikut naonaipkutait. Initoningit, hapkua ihoilotaoniagahugiyait naonaiyaktaohimayot iloani haffuma Nunaliit Naonaiyakviata kanningani (LSA) unalo angitkiya Aviktoghimayoni Naonaiyakviata kanningani (RSA). Nunalikinikut ihoilotaoniagahugiyaoyot hapkua ihomaghotaovlotik havagiyaotitlugit Havakvighami Parnaiyainik, Iglioknik, Aolatjutait, Haligaklotik Pinnighainik uvalu Omiktiginek, uvalu Enekhimalikat-Omiktaohimalikat Havagiyaoyok havagiyaghait. Naonaitot maligaghak ihomagiyaoyogaloak hamna naonaiyaktaotitlugo, ilaliotiloget naliak ihoaktut kavamatokakut uvalu aviktoghimayoni piyomayait/maligait.

Hapkua okaotaoniaktot onipkat nainaghimayot aolayonik avatilikitjutit, hivoliit Havagiyaoyomi havagiyaoyot hapkua nigiogiyaoyot ilaliotiyungnaktot hapkununga VECs-gitnot uvalu VSEC-gitnot, ehoaghaotighaita oktaotait, ihoilotaoyonik naonaiyaotit, tatvalo oktotaoyungnakata, hiamaghimayonik halumailgonik naonaiyaotait tamaitni hapkunani VEC uvalu VSEC. Tohaktitjutighat piyagiakakata EIS Avatilinikut maligaitnit hapkua Ihomagiyaoyot Titigakhimayot pakitaoyungnaktot tatvani naonaiyatiaghimayoni Makpigakni.

Hilalikinikut Avatilikinik

Hilap Kanogilinga

Hamna hilap kanogilinga tavani RSA-gani akoktaohimangitiaktok pitjutigivlugo haffuma Havagiyaoyop nayoga inukangititlugo uvalu pikangitmat, uvalu hamna iliitkohia, hapkualo inukakningita hilap naonaiyaotait. Hapkua huliyokakutait tatvani Havagiyaoyomi pitjutaoyungnaktot naovaliatjutaolotek hapkuninga hiamatjakpaliayonik hilami halomaiyaotaolotek (CACs) uvalu pitjutaoyungnaktot hiogamik tingilgalaktonik uvalu hapkuninga hoangayonik hiamaotivalialotik. Ehoaghainik uvalu monaghinikut havagiyaoyot parnaikutaohimayot ikkilivaligahoakloget uvalu ahivakpalianahoakloget pitjutaoyungnaktot ihoilotaovalialotek hilap kanogilinganianik hapkua ilaliotihimayot: kolikutit oktaotait, oktaotait ikkililakutighait ohokyoaktokpalangitangita, hamna atokninga emmaknik uvalunin hiokat tingingalakpalangitangita aktokpagait naptohitjutait apkutaita hitingitonik hiogaogitot uvalunin hapkunanga akyaktaohimayot tammyaotait uvalu hannatjutait tatvani uyakanik hikoptikutaitnit uvalu atokpagait hapkua annianingit aolatjutaitnit hapkunanga kinnipayunik halomaktigotit, poktoktoivioyot, uvalu himiktailitjutit. Hamna nigiogiyaotitlugo havagiyaovalianiaktok, hamna naonaipkutat naonaiyaotaita etoghimayaat hapkua anniatjutait tatva SO_2, CO, uvalu hiokap hiamakpaliatjutighait avatkulaitnahugiyaoyot hapkua piyomayait/maligaitlo tamaitni havakvioyoni uvalu hamna NO_2, $PM_{2.5}$ uvalu hamna hoangayonik annianinga ammigiyaoyot ilaoni haffuma Havagiyaoyomi Hannavioyoni (PDAs). Ukkua kihingoktaoyok malgok hilamik kanogininganik kimilgokutaoyok (TSP uvalu PM_{10}) naonaipkutikaktok avatkohimayok hilatanik haffuma PDA, uvalu taimatot aolalaitot hapkua kihingoghimayot ihoilotaovalangitot hamna ehoaghaktaohimalikat. Kihiani, kanoginiakat hamna nigiogiyaoyok ehoaghaotighait hapkua oktaotaita tatvani Hilap Kanogininganik Kimilgokutait uvalu Monagitjutaita Parnaiyaotaitni (Makpigak 10, Titigak 17), Hamna naonaiyatiaghimataat hapkuninga tingilgakahimayonik ihoilotaoyonik hilap kanogininganik etoktaohimayok ematot **Ihomalotaongitok**. Pihimayakangitot nigiogiyaoyonik katighoghimayonik halumailgonik uvalunin tittikniliognimayoni ihoilotaoyonik haffuma hilap kanogininganik.

Koinginakningit uvalu Hayuninganik

Hamna aolayok koinginakninga uvalu hayokningata avatilikinik atoktaohimangitok ihoilotaongitot hapkua kanningani havakvioyot koinginakningit uvalu hayoktitinnik. Igluliokn ik uvalu aolakutivalianik tatvani Havagiyaoyomi naonaitok tohaknakniaktot hapkua koinginakningit uvalu hayoktitinik hapkuninga igluliokutinik hannatjutaitnit, akyaktaktonik ahalotinik, kagaktaotinik uvalu ahalotik uvalu tingmiat ingilgainaktitluget. Ehoaghaotighait uvalu monagitjutighaita oktaotaita parnaiyaotait mighilakutighait uvalunin ahivakpaliatjutighat ihoilotaoniaknahugiyaoyot hapkua koinginakningit uvalu hayokninga ilaliotihimayot hapkua: Nalunaipkaklugit hapkua ahalotik ihoaktonik huppoktaotikagiakaktot koinginaitonik, pipkaktailinahoaklogit hapkua koinginaktonik havagiyaoyot hapkuninga kaggaktaotinik uvalu tingmitjat kangataktaililogit uvalu mikatakunagit humungagaikpat ublukhiotait, uvalu iglutaitni koinginaktot kokukutait uvalunin nivyakataktot. Tatva hapkua koinginakningit havaktot havaloalikangata tatvani havakvikmi ataotikut naonaipkutikaktot koinginaitkiyaoyot hapkunanga amigaitonit inuknit okamayonik (inuknit), okamiluktot (inuknit), avilokhitigiyut (inuknit) koinginakhivalagangata tohagoikningit (inuknit). Ajikutait, nigiogiyaongitot hunanik pinighaotinik uvalu itoptiginik iglunik (inuknit) hapkuninga Havagiyaoyomi hunamit nivyaktitiyot uvalunin hayoktitiyot. Kihiani, hunanik nivyaktitiyot naonaitot koinginatkiyaogamik koingitonaktot hapkuninga angotighakakvioyonik (angotighat) uvalu koingitkonakningit (angotighat) hapkunani allatkitni naonaiyaktaohimayoni nivyakvioyoni hapkunani igluliokvioyoni uvalu hannavioyoni, kakaktavioyoni, aghalotit hanguvigiyaitni uvalu tingmiat tikikataktot. Ilaliotiluget, koinginakningit uyagaghiokvioyomi igluhioktot uvalu havakhimaaktot koinginatkiyaoyot hiniktitloget (inuknit) tatvani toghiotaohimayomi havagiyaoniaktomi Goose-mi iglukakvikmi. Taimaitmat, pingahut ihomagiyaoyot koingitkunaknahugiyaoyot halumaktitaotaghimalikata hiniknaitot (inuknit), angotikhakakvitnik tamainik (angotighat) koingitkonak (angotikhat). Ihoilotaoyot hapkuninga nivyaktonik tatvani Havagiyaoyomi angotighat pitjutigivlugit ilaliotihimayot tatvani manikami angotighakakningitni titigaghimayoni (Makpigak 5, Titikat 5-10). Hamna itkoniaghimayat ihoilotaoyok tatvani Havagiyaoyomi koinginakningitnik uvalu hayokningitnik (hiniktitluget inuit koingetkonakningit) kihingoktaohimayot tatvani Havagiyaoyomi, koingitkunaktot itkoktaohimayot emaotot hinningnaitonik ikitkiyanik 5 dBA, hamna otikungnaktok hamna havagiyaohimaaktitlugo tatvani Havagiyaoyomi. Katimatjutaohimayot hapkua ehoghaotigaita naonaipkutighait titigaghimayot tatvanu Koingitnaknikut Mighivaliotighaita Parnaiyaotaitni (Makpigak 10, Titigak 18),hamna naonaipkutigiyat haffuminga koinginaknikut ihoilotat etkokaohimayok ematot Ihoilotaongitiaktok koinginakninga uvalu hayokninganin tatvanga havakvioyomit ahinungaoyonik titikniata hilatanotlonit.

Manikami Avatilikitjutait

Naotiat uvalu Piniktonik Nunamiotat

Manikami avatilikinikut nunaotanik uvalu takunaitonik naotianik naonaiyaihimayot uvani 2012-mi eloani haffuma 134,370 ha naotianik uvalu manikami anotighanik LSA. Kititaohimayot hapkua 890-nik naotianik naonaiyaihimayot hamna manikami avatilikinikut nunaoyaliokhimangmata uvalu alangayunik naotianik naonaiyaihimangmata eloani haffuna LSA uvalu RSA. Hapkua naonaiyaghimayot naotiat hiamaghimayot amigaitot tahamani kangingani. Igluliolikata tatvani Havagiyaoyomi tamainiagahugiyaoyot hapkuninga naotianik uvalu piniktonik nunamiotanik. Hamna ehoaghainik uvaHamna ehoaghainik uvalu ihoiyaotaovalangitangita uvalu monagitjutighaita ehoaghaotighait hapkua mighilakutighait ihoilotaoniaktot Havagiyaoyomi ilaliotihimayot: mighilagahoaklugo hamna the Havagiyaoyomi havagiyomayait, atokataklotik okiomi apkuhioktaoyonik, uvalu ikiliyagahoaklugo hamna tingilgalaktok hiogak ayungnangitpat. Tahamna ihoilotaoniakat naonaiyaktaongmat, ihomagiyaoyok tatva hamna tamaat PDA tamaiyaoniagahugitaoyok. Kihianioyok taotughugo, hamna nuna naotiakakninga/pinniktonik nunaotikaktok tamaivalianinga taimaitpalahimaitok hamna kingolikpak havagiloakniaktat tatvungainak ataniakmat Havagiyaoyomot. Katimatjutigihimayait hapkua ihoaghaotihat titigaghimayot tatvani Hilap Nakuningata Kimilgokutaitnik uvalu Monagitjutighaitnik Parnaiyaotait (Makpigak 10, Titigak 17) uvalu una Havakvioyop Emakakvitnik Kimilgokutait uvalu Monagitjutighaita Parnaiyaotait (Makpigak 10, Titigak 7), Hamna naonaiyaotat hapkuninga ihoilotiginiaktaitnik haffuma naotiat uvalu piniktot nunamiotat ihomagiyaoyok tatva **Ihoilotaolaitot**. Una halomailgonik naonaiyainik havagiyaohimangmat hapkunani manikami RSA, tatva hamna naonaipkuta halomailgok ihoiyaotaoniakninga (naotianik tamainik) etkoktaoyok tatva **Ihoilotaolaitot**. Tatva titiknilioktaohimayonik pitjutikangitot hapkua ihoilotaoniagahugiyaoyot.

Tuktuit

Pingahuyot hapkua alatkingoyot tuktuit tikikataktot uvalu tahamunakataktot kanilgoakut haffuma RSA. Kangataktaotikut kunguhiaktaotilighugit naonaiyainik naonaiyaktaohimayot ukkua Kilohiktomiotak tuktut nayogakaktot oatani haffuma manikap RSA kihiani nogioktagangata, uvalu ukkua Kamanikyoami tuktutait(hapkua taiyaokataghimayugaloit Ahiak-miotat) tikikataktot tahamunga manikamot RSA, takunaghilikpaktot aoyaohoilikangat okioghalihaliktitlugo. Naonaiyaotait tingmiakut naonaiyaktaohimangmata tatvani akungani 2001-mi uvalu 2010-milo uvalu atokataghugit hapkua inuitoghiokutait piksaliotit tatvani RSA-gani uvalu kaningani uvalu oatani haffuma RSA-gani naonaipkutagiyait kungohiaktuliktoghugit hapkua ikkitot ilangit tuktut. Hamna okiomi nayogaat Kiklingoyakmiotat Tuktuit naonaitot avatkutpagat hamna tagiokmi RSA-ga titiknia okiotoagangat. Ukkua Kiklingoyakmiotat tuktuit tatvani *SARA-kuni titigaktaohimalikait ihomalotaoloaghutik ikkilivalianigaktaovlotik* hapkuataok Kilgohiktokmiotat tuktutait uvalu ukkua Kamanikyoakmiotat tuktutait naonaiyaghimangitait ukkua COSEWIC-kut. Imakak Havagiyaoyomi ihoilotaoyungnaktot hapkua havagiyait hapkuninga: angutighakakningit tamaivalianingit, havagiyaoyop koinginakninga, ihoilotat haffuminga ingilgayangitnik, kanok tokutjutigihimayait uvalu annikvigihimayait, kanoklikak tokutaoningit, nagiakningit, akoakningit tokunaktunik, uvalu ikkilivalianingit ekniokto t.Ihoaghivaliatjutighait uvalu monaghitjutighaita ihoaghaotighait ahivakpaliatjutighait uvalunin mighivaliatjutighait hapkuninga ihoilotaoniaktonik ilaliotilugo hamna Havagiyaoyop havagiyait, koinginaktonik kimilgokataknik, kayomiktonik kimilgokutait, hamna atokninga okiomi apkuhiokhimayot, kovioknik monaghinik uvalu kayangnaktonik kimilgokatanik taima angotighat nagiakatangitangita koviknik taima aktotingitangita hoangayonik kayangnaktonik, uvalu ihoaghaotighaitnik hapkua Angutighanik Ihoaghaotighat uvalu Monagitjutighaita Parnaiyaoyait (Makpigak 10, Titigak 20). Elaliotihimayot hapkua ihoaghaotighat titigaghimayot tatvani Angotighat Ehoaghaotighait uvalu Kimilgokataotighaita Parnaiyaotaitni

(Makpigak 10, Titigak 20), Hamna naonaiyaotat hapkuninga ihoilotaoniaktonik hapkuninga tuktunik etkoktaohimayok tatva **Ihoilotaolaitot**.

Hamna ihoilotaoniaktonik naonaiyaotaohimayok pitjutigivluget hapkua tuktut nogioktagangata uvalu aoyami nayokpagaitni hapkua killohiktomi tuktut tatvalo auyami okiomilo nayokpagait hapkua Kamanikyoakmiot tuktutaita, uvalu ilaliotihimayait nunnat Nunavumi uvalu Nunatiami. Tatva titigaghimayok tatvani EIS maligaitni (NIRB 2013), Uma Ministaoyup Nunakakaktolikiyiit uvalu Okiokaktomi Pivalialilikiyiita Kanatami ihomagitiaktait hapkua Killohiktokmiot tuktutait pionighaoyot tahamani aviktoghimayoni uvalu naonaiyaikoihimayok ihoilotiginiaktaitnik hapkua tuktut (titigakhimaya ubluani Desaipa 17, 2012). Taima ikayoktaoniaknikat hamna ihoilotaoyonik naonaiyaotaoniaktok tuktunik, tatva tamatkikahoakloget (RSF) naonaiyaotighat hapkuninga Killohiktomi tuktut nogioktagangata uvalu aoyami nayugaitnik. Katimayioyot hapkuninga ihoaghaotighaitnik ihoilotaoyonik titigaghimayoni tatvani Angotighanik Ihoaghaitjutighat uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20) tatvalo etkogahoakhuget ajikutaitnik ihoaghaotighaitnik hivonighami Havagiyaoniaktoni, hamna naonaiyaotaohimayok hapkuninga ihoilotaoniaktaitnik hapkua tuktut tatva **Ihoilotaolaitot**. Hamna ihoilotaoyonik naonaiyaotaoyot takiyonik titikniliokhimayonik ilaliotilugo ilanga haffuma Nunatiap tamakmik ukkua ihomagivlugek Killohiktomi uvalu Kamanikyoami tuktutait. Taimaitmat, hamna immakak titiniliokhimayonik ihoilotaoniaktonik naonaipkutait etkomayaoyot **Ihoilotaolaitot.**

Ahait

Napaktoilgomi-manikami amigaitilangit hapkua aghait tatva kanatap kavamaita titigaghimaliktait hapkua angotighat ematot “Ihomalotaoloaktot Ikilivaliangmata ” (SARA; COSEWIC 2012) uvalu titigaktaohimaliktot ematot Ikilivaliayot Nunavumi (CESCC 2010). Hininakhoget-napaliokhoget titigakhoget aoktakhogetlo DNA-nik naonaiyaktaohimangmata tatvani 2012-mi naonaiyaihimayot ematot 61-nik aghanik tahamani RSA-gani uvalu huli ilaliotihimayait 62-nik aghaitnik iliitogiyaohimayot tahamani ajikutani angitigiyani naonaiyakviohimayop oatani haffuma naonaiyakvioyop RSA. Immakak Havagiyaoyomi-ihoilotiginiagahogiyaoyot ilaliotiloget hapkua Havagiyaoyomi havangit ihoilotaoyungnaktot naonaipkutit: Angotikakvitnik tamainik, ihoilotaoyot koinginakningit (oktotigilugit, ahivaivalianingit hapkunanga nayugaitnit), ihoiyaotinikatjuk ingilgayangitnit, Kanok tokotaohimangmangat uvalu anniktaohimangmangat, pinahoangitoget tokutaohimayot, nagiakhimayot, akoaghihimayot tokunaktonik, uvalu ikilivalianingit eknioktot. Okiomi apkuhiokhimayot pitjutaongitot naonaiyaotaitnun hapkua aghait appitanilikpangmata hinnikhutik hapkua apkuhioligangata uvalu atoktaoligangata. Ihoaghaotighait uvalu monagitjutighaita oktotighait ihoaghaktaoniaktot ahivagahoakloget uvalunin ikililagahuakluget hapkua ihoilotaoniaktot ilaliotilugo hamna Havagiyaoyomi havagiyait, nipikpalat koinginaktot, atokataktait okiomi apkotit, ikkakokvioyot uvalu tokonaktot hiamangitangita angotighanot, uvalu hamna ihoaghaotighait hapkuninga Angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20). Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Angotighat Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), hamna naotaipkutat hapkuninga ihoilotaoyonik aghaitnik etkomayaoyok ematot **Ihoilotaongitot**.

Una ihoilotaoyonik naonaiyaotaohimayok pitjutigivlugo una Haputiliokhimavlugo hamna Havagiyaoyop tamayaotata hilatani atokhotik haffuminga anginighaoyomik hangovikhaitnik hapkua aghait tahamani hilatani haffuma Hanningayomi Havagiyaoyomi. Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitnik (Makpigak 10, Titigak 20) uvalu ihomagivluget ajikutaitnik oktaotighaitnik hivunighami Havagiyaoyoghat, hamna naonaiyaotaohimayok ihoilotaoniaktonik hapkununga aghaitnik emaitok **Ihomalotaongitok**. Hapkua ihoilotaoniaktonik naonaiyaotit takitigiyot titikniit ilaliotihimayot ilanga Nunatiami aghait nayogait anginighaonahogiyaoyok hamna aghait hanguvigiyait tahamani eloani Havagiyaoyomi. Taimaitmat, hamna emakak titiknilioktaohimayomi ihoilotaoyot havagiyaoyot uvalu **Ihoilotaolaitot.**

Umingmait

Tingmiakut naonaiyaihimayot akkungani 2001-min 2010-mut eliitogihimayat tatva umingmait takunakataktot nakilgokni haffuma havagiyaoyop RSA. Umingmait takughaokataktot attinuangitni hapkua mayokat, oatani Kingaop uvalu malgoktaok ammihoakyoit kanilgoanikataktot Havagiyaoyop, ataohiktaok hivgogata kivatani haffuma George-mi Havagiyaoyop kaniloani tatvataok huli kanilgoani haffuma Goose-mi Havagiyaoyop Kanilgoani. Immakak Havagiyaoyomi-ihoilotiginiagahogiyaoyot ilaliotiloget hapkua Havagiyaoyomi havangit ihoilotaoyungnaktot naonaipkutit: Nigginiakvitnik tamainik, ihoilotaoyot koinginakningit (oktotigilugit, ahivaivalianingit hapkunanga nayugaitnit), ihoiyaotinikatjuk ingilgayangitnit, Kanok tokotaohimangmangat uvalu anniktaohimangmangat, pinahoangitoget tokutaohimayot, nagiakhimayot, akoaghihimayot tokunaktonik, uvalu ikilivalianingit eknioktot. Ihoaghaotighait uvalu monagitjutighaita oktotighait ihoaghaktaoniaktot ahivagahoakloget uvalunin ikililagahuakluget hapkua ihoilotaoniaktot ilaliotilugo hamna Havagiyaoyomi havagiyait, nipikpalat koinginaktot, kayomiktomik ingilgayot, atokataktait okiomi apkotit, ikkakokvioyot uvalu tokonaktot hiamangitangita angotighanot, uvalu hamna ihoaghaotighait hapkuninga Angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20). Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Angotighat Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), hamna naotaipkutat hapkuninga ihoilotaoyonik hapkuninga umingmaitnik etkomayaoyok ematot **Ihoilotaongitot**.

Taima ikayoktaoniaknikat hamna ihoilotaoyonik naonaiyaotaoniaktok umingmaknik, tatva tamatkikahoakloget (RSF) naonaiyaotighat hapkuninga Killohiktomi tuktut nogioktagangata uvalu aoyami nayugaitnik. Katimayioyot hapkuninga ihoaghaotighaitnik ihoilotaoyonik titigaghimayoni tatvani Angotighanik Ihoaghaitjutighat uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20) tatvalo etkogahoakhuget ajikutaitnik ihoaghaotighaitnik hivonighami Havagiyaoniaktoni, hamna naonaiyaotaohimayok hapkuninga ihoilotaoniaktaitnik hapkua umingmait tatva **Ihoilotaolaitot**. Hamna ihoilotaoyonik naonaiyaotaoyot takiyonik titikniliokhimayonik ilaliotilugo ilanga haffuma Nunatiap tamakmik ukkua ihomagivlugek Killohiktomi uvalu Kamanikyoami tuktutait. Taimaitmat, hamna immakak tituniliokhimayonik ihoilotaoniaktonik naonaipkutait etkomayaoyot **Ihoilotaolaitot.**

Una ihoilotaoniaknahogiyaoyonik naonaiyaotaoyok umingmaknik atoghugo hamna kaimalogektok hanguvighat ihatani haffuma Havagiyaoyop naonaiyaotigiyat una takinighaoyok titikniliokhimaya kungohiaktaolighimayop umingmaop tahamani oatani Kitikmeotni aviktoghimayoni. Katimayioyot hapkuninga ihoaghaitjutaitnik hapkua ihoilotaoniaktonik titigaghimayot tatvani Angotighanik Ihoaghaotighait uvalu Kimilgokutaita Parnaiyaotaitni (Makpigak 10, Titigak 20) uvalu ihomagivluget hapkua oktotighait hivonighami Havagiyaoniaktot, hamna naonaiyaotigiyat hapkuninga ihoilotaoyonik umingmaknik ihomagiyat **Ihoilotaolaitot**. Hapkua ihoilotaoniaktonik naonaiyaotaoyot takiyonik titikniliokhimayonik ilaliotilugo hamna ilanga Nunatiami umingmaotait tatva nigiogiyaoyok ilaliotiniaktok hamna takinighaoyok titiknilioktaohimayok ongahiktomot umingmait ingilgayungnaktot tahamani Havagiyaoyomi. Taimaitmat, hamna ihomagiyaoyok titiknilioktaohimayop avatani naonaiyaktaohimayot tatvani ihoilotaoyot naonaiyaotaitni tatva ihomagiyaoyot **Ihomalotaongitot**.

Kalviit uvalu Mitkolgit Angotighat

Kalviit uvalu hapkua amakot tiliyaohimayot naonyaiyaktaoyughat milkolgit angotighat DEIS-gani. Kalviit uvalu amakot Nunavumi nanilikak naonaiyaktaohimayot ematot “Ikkilihimangitot (CESCC 2010), Kihiani hapkua kalviit kavamatokatkut titigaghimaliktat ematot hapkuagok “Ihomalotaoloaktot” (COSEWIC 2003). Hinningnaghuget-ihivgiokhuget napaliokhuget DNA naonaiyaktaohimayot hapkua kalviit tatvani 2012-mi naonaiyaihimayot kititoget hapkua 12-guyot kalviit eloani 1,692 km^2 kaningani akkunanilo ukkua Goose-mi uvalu George-mi Nanminigiyaita. Naonaiyakviohimayok hamna elanga nayogait hapkua kalviit ema ongahiktigikataktot tatvanga recorded 89 km^2 tatvunga 264 km^2, ingilganingit ema 162 km^2. Hapkua amakut mighakut, tingmiatkut naonaiyaivlutik hittinik akungani 2007-min tatvunga 2013-mut iliitogihimayait 8-guyot atoktaohimaaktot amakut hittiit kangilgoani haffuma havagiyaoyop RSA, tatva talimat hapkua hittiit atoktaohimakhotik ivvaviokataktot. Immakak Havagiyaoyomi-ihoilotiginiagahogiyaoyot ilaliotiloget hapkua Havagiyaoyomi havangit ihoilotaoyungnaktot naonaipkutit: Angotikakvitni niginiakviit tamainik, ihoilotaoyot koinginakningit, ahivaivalianingit hapkunanga nayugaitnit, ihoiyaotinikatjuk ingilgayangitnit, Kanok tokotaohimangmangat uvalu anniktaohimangmangat, pinahoangitoget tokutaohimayot, nagiakhimayot, akoaghihimayot tokunaktonik, uvalu ikilivalianingit eknioktot. Ihoaghaotighait uvalu monagitjutighaita oktotighait ihoaghaktaoniaktot ahivagahoakloget uvalunin ikililagahuakluget hapkua ihoilotaoniaktot ilaliotilugo hamna Havagiyaoyomi havagiyait, nipikpalat koinginaktot, atokataktait okiomi apkotit, ikkakokvioyot uvalu tokonaktot hiamangitangita angotighanot, uvalu hamna ihoaghaotighait hapkuninga Angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20). Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Angotighat Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), hamna naotaipkutat hapkuninga ihoilotaoyonik ammakut etkomayaoyok ematot **Ihoilotaongitot**.

Ihomagiyaoyot hapkua ihoilotaoniaktonik naonaiyaotait atoghugit ingilganingit ongahiktonot hapkua kalviit uvalu amakut kanilgomikataktot tatvanga havakvioyomit. Hapkua kalviit tahamani ajikutagiyait hapkuninga RSA, kihiani una ilaliotihimayok emnak tatvangakniaknahogitaoyok Tibbitt-mit tatvunga Tahikyoamot Okiomi Apkohioktaohimayomot. Hapku ammakut, hamna kanilgoa atogaonginaktok aoyami tuktuitnit tikikataktonit Killohoktomit uvalu Kamanitoamit hapkua ammakut malikatagingmagit hapkua tuktuit, nikigigamiko kanitagangata tatvanga Havakvioyomit. Katimayioyot ihoaghaikataktot hapkuninga ihoilotaoyonik titigaghimayonik hapkuninga Angotighanik Ihoaghaitjutinik uvalu Kimilgokataotighaita Parnaiyaotaitnik (Makpigak 10, Titigak 20) ihomagivlugit ajikutait oktotighait hivonighami Havagiyaoniaktoni, hapkua naonaiyaotaohimayot ihoilotaoyonik naonaipkutait kalviitnik uvalu angotighanik mitkuliknik ihomagiyaoyot **Ihoilotaolaitot**. Kaliviit hapkua kanilgomioyot tatvanga Havagiyaoyomit pillainahogiyaoyot opaotilotik tatvunga Nunatiap elanganot, taima hamna titikniliokhimayot naonaipkutait kalviit atoktaongitot. Hamna ihoilotaoyonik naonaiyaotaoyot takiyonik titikniliokhimayonik nayogait hapkua amakut ilaliotilugo ilanga haffuma Nunatiap. Hapkua ihoilotaoniaktonik naonaiyaotit takitigiyot titikniit ilaliotihimayot ilanga Nunatiami amakut nayogait anginighaonahogiyaoyok hamna amakut hanguvigiyait tahamani eloani Havagiyaoyomi. Taimaitmat, hamna emakak titiknilioktaohimayomi ihoilotaoyot havagiyaoyot uvalu ihomagiyaoyot **Ihoilotaolaitot.**

Otikataktot Tingmitjat Hogaat

Otikataktot tingmiat hogaat oploitlo monagiyaoyot hapkunanga kavamatokatot Oktikataktot Tingmitjat *Hogaat Maligaitnik* (1994) tatvanilo *Nunavumi Angotighat Maligaitnik* (2003), pitailiyaoyot ahikoktigilogit tingmitjat oplotaitnik mannikaktitloget, uvalu pitailiyaoyot eghitagilogit hapkua ammihoakjuit oktikataktot tingmitjat hogatjat. Hapkua oktikataktot tingmitjat hogaat alatkiit titigaghimangitot tatvani RSA-mi hapkua hogaatjat ihomalotaongitot tatvani kanatami Hogatjat Ikilivaliayoni Malikakmi (SARA 2002). Kihiani, hapkua pingahot emakmiotat hogaat uvalu 10-guyot nunamiotat hogaat otikataktot tatvunga RSA-mut titigaghimaliktot ematot ‘Ammiknaghiyot’ titigaktaohimalikhotik tatvani CESCC-mi naonaipkutaovlotik Nunavumi (CESCC 2010). Immakak Havagiyaoyomi-ihoilotiginiagahogiyaoyot ilaliotiloget hapkua Havagiyaoyomi havangit ihoilotaoyungnaktot naonaipkutit: Angotikakvitni niginiakviit tamainik, ihoilotaoyot koinginakningit, ihoiyaotiniakatjuk ingilgayangitnit, Kanok tokotaohimangmangat uvalu anniktaohimangmangat, pinahoangitoget tokutaohimayot, nagiakhimayot, akoaghihimayot tokunaktonik, uvalu ikilivalianingit eknioktot. Ihoaghaotighait uvalu monagitjutighaita oktotighait ihoaghaktaoniaktot ahivagahoakloget uvalunin ikililagahuakluget hapkua ihoilotaoniaktot ilaliotilugo hamna Havagiyaoyomi havagiyait, nipikpalat koinginaktot,kayomiktonik ingilgatjutinik hokaighimaloget, atokataktait okiomi apkotit, ikkakokvioyot uvalu tokonaktot hiamangitangita angotighanot, uvalu hamna ihoaghaotighait hapkuninga Angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20). Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Angotighat Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), hamna naotaipkutat hapkuninga ihoilotaoyonik Tikikataktonik Tingmitjanik Hogaanik etkomayaoyok ematot **Ihoilotaongitot**. Hapkua nigiogiyaongitot ihoilotaolotik uvalunin titikniliokhimayot pitjutaongitot hapkununga tikikataktonot tingmitjanot hogaatnot.

Kivgaviit

Talimat hapkunanga 8-goyonit allatkiktonit kivgaviitnin titigakhimayot tatvani omayot of the eight RSA-gani hogatjat hapkua ihomalotaovlotik. Hapkua emnaitni ivvakataktot kivgaviit uvalu hapkua manikami ivvakataktot okpiit titigaghimayot tatvani Ihomalotaoyoni uvani Naonaipkutani 1-mi tatvani kavamatokatkut Omayonik Kayagiyaoliktonik Malikami (Kanatami Kavamatkut 2013). Pingahot huli Emnaitni ivvakataktot hogatjat - Tingmiakpait, mikitkiyat kivgaviit, hapkualo kalaat – titigaktaohimaliktot ematot “Ihomalotaoloaktot” Nunavumi hapkunanga Kanatami Nungotpaliayonik Omayonik Ammighiyovlotik Katimayiitnin *SARA* (CESCC 2010). Manikami naonaiyaitjutait hapkuninga nunamiotanik kivgaviitnik tahamanighiokatangitot eloani hapkua angotighat RSA-gani. Immakak Havagiyaoyomi-ihoilotiginiagahogiyaoyot ilaliotiloget hapkua Havagiyaoyomi havangit ihoilotaoyungnaktot naonaipkutit: Angotikakvitni niginiakviit tamainik, ihoilotaoyot koinginakningit, ihoiyaotinikatjuk ingilgayangitnit, Kanok tokotaohimangmangat uvalu anniktaohimangmangat, pinahoangitoget tokutaohimayot, nagiakhimayot, akoaghihimayot tokunaktonik, uvalu ikilivalianingit eknioktot. Ihoaghaotighait uvalu monagitjutighaita oktotighait ihoaghaktaoniaktot ahivagahoakloget uvalunin ikililagahuakluget hapkua ihoilotaoniaktot ilaliotilugo hamna Havagiyaoyomi havagiyait, nipikpalat koinginaktot, atokataktait okiomi apkotit, ikkakokvioyot uvalu tokonaktot hiamangitangita angotighanot, uvalu hamna ihoaghaotighait hapkuninga Angotighanik Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20). Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Angotighat Ihoaghaotighaitnik uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), hamna naotaipkutat hapkuninga ihoilotaoyonik Kivgaviitnik etkomayaoyok ematot **Ihoilotaongitot**. Hapkua nigiogiyaongitot ihoilotaolotik uvalunin titikniliokhimayot pitjutaongitot hapkununga tikikataktonot kivgaviit hogaatnot.

<u>Emmagiktoni Avatilikinikut</u>

Kanani Emmakmik Kullikutit

Naonaipkutait emmakmik Kullikutit katitaohimayot kagitaoyamot hatkiomaliktot haffuma Goose-mi Havagiyaoyomi LSA tatvanga 2010-mit 2013-mut uvalu tatvanga George-mit Havagiyaoyomi LSA tatvanga 2012-min 2013-mut. Emakak Havagiyaoyomi ihoilotaoniaktot ilaliotiloget hapkua emmap atokninga, iglukpakakvitni emmak monagivlugo havagiyaoninga, uvalu okiomi apkohioknik. Ehoaghaotigait uvalu monagitjutighaita oktotighait ehoaghaktaoniaktot ahivagahoakloget uvalunin ekilivaligahoakloget hapkua ihoilotaoniaktot ilaliotiloget: Titigaoyanik illavikniaknikata emmakmik atokningita Makpiganit hapkununga atogaoyot emmap ingilganinganik monaginahoakloget hapkua ekalukakningit, malikaloget ukkua DFO-kut maligaitnik okkiomi emmap atokningitnik, emmap ingilganinga toghoakut hapkununga emmakakvioyonot, uvalu malikaloget hapkua okiomi apkohiokutait uvalu monagitjutaita DFO-kut aolatjutita naonaipkutait. Katimayioyot hapkuninga ihoaghaotighaitnik hapkua ihoilotaoyot titigaghimayot tatvani Iglukpakakviatni Emmaotaita Kimilgokutighaita uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7), hamna naotaipkutat hapkuninga ihoilotaoyonik Emmakmik Kulliktotaitnik etkomayaoyok ematot **Ihoilotaongitot**. Hapkua nigiogiyaongitot ihoilotaolotik uvalunin titikniliokhimayot pitjutaongitot hapkununga tikikataktonot emmap Kullikutighaitnik.

Emmagiktoni Kanogininga

Naonaipkutait emmakmik Kullikutit katitaohimayot tatvanga George-min Goose-minlo LSAs tatvanganin 1994-min, havagiyaohimakhotik emmakmik kimilgokivlutek tatvanganin extensive 2010-min 2013-mut.

Ihomagiyaoyot hapkua Havagiyaoyomi- ihoilotaoniaktot ilaliotiluget opingami aoktokpalianinga, emaikpalianingit pannikpialialigangat, halomailgok emak kokloakninga, and hilap kanogivalianinga: pH, TSS, niginiakutit, havivaloit, hydrocarbons BOD, chorine, uvalu cyanide. Hapkua ihoaghaotighait uvalu monagetjutighaita oktotighait piyaktaotighait uvalunin ikivaliotighaita hapkua ihoilotaoniaktot ilaliotiluget hapkua: Havagiyaoyomi titigaoyakhimayonik hapkua ihoakutighat apkohioktonot uvalu tunngavighaitnik, uvalu ihoaghaitighait ilaliotihimayot tatvani EMS. Katimayioyot hapkuninga ihoaghaotighanik oktotighanik tatvani Iglukpakakvioyomi Emmaotaita Kimilgokutaitnik uvalu Monagitjutighaita Parnaiyaoyaitnik (Makpigak 10, Titigak 7) uvalu hamna Emmalikinikut Ihoaghaotingita Monagitjutighaita Parnaiyaotait (AEMP; Makpigak 10, Titigak 19), Haffuma naonaipkuta halomailgonik haffuma Emmagiktoni naonaiyaotaitnit ihomagiyaoyok tatva **Ihomalotaongitok**. Hapkua nigiogiyaongitot ihoilotaolotik uvalunin titikniliokhimayot pitjutaongitot hapkununga Emmagiktoni kanogininganik.

Emmagiktoni Hunnavaloit Ilaliotihimayot

Naonaiyaktaohimayot Emmagiktoni hunnavaloit ilaliotihimaningit katighoktaohimayot kagitaoyakut tatvanga George-mit uvalu Goose-mitlo LSA-gitnit tatvanganin 2007-min, havagiyaoloaghimavlotek tatvanganin 2010-min 2013-mut. Ihomagiyaoyot Havagiyaoyomit-ihoilotaoniaknahogeyaoyot ilaliotiloget hapkua Havagiyaoyomi havagiyaoyot naonaiyaktaohimayot hapkua aoktokpaliatitlugo kokloakninga, emmaiktitpalianingit, halomailgop emmap koviogakninga, uvalu hilap kanogininganit: halumailgot hunnavaloknit, niginiakutaoyot uvalu omayovaluit mikiyot, havivaloit, himikhimayaitnin halomailgot. Hapkua ihoaghaotighait uvalu monagetjutighaita oktotighait piyaktaotighait uvalunin ikivaliotighaita hapkua ihoilotaoniaktot ilaliotiluget hapkua: hugolaipkutikaklotik uvalu ehoaghaotighait hapkua iglukpakakviatni ihoakutait titigaghimayot tatvani EMS-gitni. Katimayioyot hapkuninga ihoaghaotighanik oktotighanik tatvani Iglukpakakvioyomi Emmaotaita Kimilgokutaitnik uvalu Monagitjutighaita Parnaiyaoyaitnik (Makpigak 10, Titigak 7) uvalu hamna Emmalikinikut Ihoaghaotingita Monagitjutighaita Parnaiyaotait (AEMP; Makpigak 10, Titigak 19), Haffuma naonaipkuta halomailgonik haffuma Emmagiktoni Hunnavaloit Ilaliotihimayot ihomagiyaoyok tatva **Ihomalotaongitok**, uvalu hamna Emmakmiotanik Monagitjutighaita Parnaiyaoyait (AEMP; Makpigak 10, Titigak 19), Hapkua nigiogiyaongitot ihoilotaolotik uvalunin titikniliokhimayot pitjutaongitot hapkununga Emmagiktoni Hunnavaloit ilaliotihimayot.

Emmagiktoni Ekaluit/Emmakmiotat Niginiakviit

Ayoknaktonik naonaiyaotait hapkuningaEmmagiktoni ekaluit/emmakmiotat nigiakviit havagiyaohimayot tatvani Goose-mi uvalu George-milo Havagiyaoyop LSA-gitni tatvanganin 201-min 2013-min. Avatkomayot hapkua 30-goyot kukaoyat naonaiyaktaohimayot tatvan Havagiyaoyomi LSA-gani, uvalu avatkomayot hapkua 20-goyot tatvani George-mi Havagiyaoyomi LSA-giti. Tatvani Goose-mi LSA-gani, tatva iliitkohigiyait hapkua ayoghaotait ekaluit ingilganingit tatvani kukaoyami akungani haffuma Pond A uvalu Giraffe Lake (tatvanitmat uvalu Koviokakvioyop nayoga) tatvanilo kukaoyap akunanitomi uma Umwelt Lake uvalu Goose Lake. Ihomagiyaoyot hapkua ihoilotaoyungnaktot okaotaohimaliktot ilaliotivluget Emmagiktomingakhimayot uvalu hunnavaloitnik ilaliotihimayot naonaiyaktaohimangmata. Havagiyaoyomi havagiyait ihomagiyaoyot ihoilotaoyungnaktot hapkuninga Emmagiktoni ekalutaitnik/emakmiotat niginiakviitnik ilaliotiloget hapkua tamaivalianik omayonik hamna tahik emaiyaktaovalialikat, hannayaovaliatitluget hapkua angmaomayot nunaap kangani uyagaghiokvighat, emmiktakvioyot inuknun uvaku hunanot atogaoyoghanik, uvalu okiomi apkuhioknik. Kukaoyani niginiakvioyot tamaiyaoniagahogiyaoyot hamna uyagaghiokvighak hannayaolikat. Hamna ihomagiyaoloaktat ehoaghaotighak hiamaktailinahoakloget hapkua halumailgot hamunga Emmagiktomi ekalukaknigitnut/emakmiotat niginiakviitnot ukkua Havakvioyop pitailiniaktat hannavigitailiIoget hapkua ekalukakniget ayoknangitpat. Hapkua Koviogakvighait uvalu uyakat ikkatoghat aghini hannayaoniaktot hannikpani hapkua ekalukakniita emmakakniit. Tatvataok huli ihoaghaotighat aolagotiyomavlugo hamna angiyok emmakakvighait taima monagitiagiangita hapkua ekaluit nayugait hapkunani Goose-mi, Propeller-mi, uvalu George-mi tattini. Hamna kihiani tamaiyomangitkaloakhugo ekaluit niginiakvigivagat (oktotigivlugo, tamaininga tatvani Llama-mi tahik una angmaomayok uyagaghiokvighaoniakmat tatvani Llama-mi) ehoaghivaliktaoniakmat havagilugo ekaloiyagomavlugo parnaiyaotigiyat. Taimaitmat tatva, hamna ihoiyaotaolaitnahugiyaoyok hapkunani VEC Emmagiktomi ekalukaknioyuni/emmakmiotat niginiakviitni. Tatva Havagiyaoyomi halomailgonik hiamaktitaolainahugiyaongmata, ahinot hiamaktitaolaitot hapkununga allatnot Havagiyaoniaktunot. Taimatot hapkua ihoilotaoniaktot uvalunin tingilgalaktonik hiamajaktoghanik pikaknahugiyaongitot.

Emmagiktoni Ekalukakningit

Hapkua Emmagiktoni Ekalukakningit hapkunani Goose-mi uvalu George-mi Havagiyaoyokni LSAs-git naonaipkutaoyok hapkuninga Okiokaktomi Emmagiktoni iliitkohitokaitnik uvalu ilaliotihimayot hapkua Emmagiktoniit hitovaliayot uvalu mayokpaliayot ekaluit tagioganit haffuma Tagiokmi laydown Area. Hapkua hivolikpangit naonaiyaghimayait tatvanganin 2010-min tatvunga 2013-mut eloani haffuma LSAs-ganin. Hapkua Emmagiktoni ekalukakningit taimainginaktot ajikutagiyaitli ahini tahioyoni uvalu kukiktoni nunani tahamani Kanatap Okioktaktungani. Hapkua ekaluit ehuut amigaitkiyaoyot, amigaitotaok hapkua kapihiliit, Arctic Grayling, kanayoit, uvalu hapkua Ninespine Stickleback. Hapkua allatkit ekaluit nalvanguyaohimayot tatvanu eloani havagiyaoyop kangingani hiokjuktoit uvalu tahikmiotat anaghiit. Ekalukpiknik takungitot tapkunani Goose-mi uvaluin George-milunin LSAs, tahamanitokaghimayungnahiyogaloiot kanilgoani Emmagiktoni RSAs.

Ihomagiyaoyot emakak hapkua Havagiyaoyoni-ihoiyaotaoyungnaktot hapkunani effects VEC Emmagiktoni ekalukaknioyoni ukkua ihomagiyaoloaktat malgoknin ekalokakloaktonit Emmagiktoni uvalunin mayoktot uvalunin hitoyot ekaluit tatvani havagiyaoyok kaningani LSAs, hapkua ehuut uvalu Arctic Grayling. Hamna ihomagiyaoloaktok tatvani havagiyaoyoni ihoilotaoniagahugiyaoyot tokokaknikata uvalunin ikkilivalianingit tattit emaiyaktaovaliatitlugit, apkuhioktitlugit okiokmi apkutighanik, igluliokpaliatitluget tatvani iglukpakakvighami, emmaiyaktaovaliatitlugit inuit atoktaghaitnik uvalu atogaoyughanik okiomi apkohiokutighanik, uvalu atoktitluget hapkuninga kakaktaotinik. Una ihomagiyaoloaktok ihoaghaotighaitnik oktotighaat tatva aktoktailinahoakloget hapkua nayogait ehuut uvalu Arctic Grayling tatva hamna Havagiyaoniakyop iglukpakakvigha nayokvighait kanganipkaktailinahoakluget hapkunanga Emmagiktoni ekalukakniita niginiakvigiyaitni ayoknangitpat. Hamna koviogakvighat halomailgonik uvalu uyakat atungitot ekaktaoyoghat totkomaviit hannikpaniitot aktomangitangita ekalukaknioyonit. Tatvataok huli ihoaghaotighaita oktotighat aolagotinahoaktugo hamna ilavighimalogit attoktailinahoaklugo hamna emmiktakvioyok hamna ihomagivlugo monaginahoakluget hapkua ekalukpiakjuit nayogagiyait aklivaliatitluget hapkunani Goose-mi, Propeller-mi, uvalu George-mi tattini. Elani ayoknakpakmat tamaivakhuni hapkunani Emmagiktoni ekaluknik (oktotigilugo, ekaluiyaknik tatvani Llama Lake-mi pitjutaoniakmat una Llama-mi angmaomayok nunaap kangani uyagaghiokvighak) huli ihoaghaktaoyungnaktok atoklugo hamna Etkokahoakluget hapkua Ekalukakningita Parnaiyaotighat. Hamna naonaitok hapkuninga ihoilotaoniagahugiyaoyok ikkilivalianahugiyaolotik hapkuninga Arctic Grayling ekaluitnik tatva tamainiaktitluget tatvanga Llama Lake-mit uvalu hapkua tahamani toghoat kokloakvioniaktot ihomagiyaoyot tatva **Ihomalotaongitot.** Hapkua katimayiit hapkuninga ihoakhaitjutighanik titigaghimayoni tatvani Iglukpakakvioyoni Emmakakviita Kimilgokutaita uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7) uvalu tatvani Emmakmiotaknik Ihoilotaoniaktonik Monagitjutighaita Parnaiyaotaitni (AEMP; Makpigak 10, Titigak 19), tatva halomailgonik ihoilotigalaitnahugiyaoyot hapkua ehuut. Tatvalo ihoilotikalaitnahugiyaoyot hapkua Arctic Grayling uvalu Ehuutnik ekalukakniitnik.

<u>Tagiokmi Avatilikinik</u>

Tagiomi Emalikinikut Kanokininga

Hivoliit naonaiyaotait Tagiokmi emalikinikut kanokininga katighoktaohimayot tatvani Tagiokmi RSA-gani Killohiktomi tatvanganin 2001-mi uvalu eloani haffuma LSA-gangata tatvani 2013-mi. Ihomagiyaoyot

Havagiyaoyomit ihoilotaoniagahugiyaoyot ilaliotiluget hapkua omitjat ingilganingit; halomailgot hiamakpalianingit uyagaghiokvighanik hanavaliatitluget, iglukpiokpaliatitluget, uvalu omiktaokpata havagivaliatjutighaitnik; havakvioniaktot emap kokloakninget; okiomi apkuhioktitluget; kakaktaotit atoktaotitluget; ohokyoat, kinniktoit, uvalu hapkua katighokhimayot kuuknik himiktikutit (PAHs); halomailgot annakviitnin koviokaktaohimayot; uvalu tingilgalaktot hiokkak. Ihoaghaotighait uvalu monagitjutighaita oktotighait havagiyaoniaktot ahivakahoakutighait uvalu ekilivaliotighait hapkua ihoilotaoniakahugiyaoyot hapkua ilaliotiluget: hokkaikpaligahoakluget omitjat ingilganingit uvalu ingilgapkagahoakluget omitjat ingilganingat emmap ettinigot, happutihiokhuget hapkua emmap kokloakningit kotilgonot tatvalo kokloakviliokloget tatvunga hannayaohimayonot kokloakvighaitnik tattinot tatvani Marine Laydown Area-mi, atoklotik hapkuninga avogivaktaitnik hiokamik apkohiolikangata uvalu tunngavilioligangata, malikaluget hapkua maligait hapkununga halomailgonik emmaknik koviogakvitnin, uvalu atogahoakluget hapkua nakunighaoyot atanguyat ihomagiyait hapkununga totkokvighanik, aknaktaotinot, ohokyoakakvighaitnun, kakaktaotinot, uvalu kayangnaktonik havagiyaitnik uvalu hapkununga hiamaktailitjutighaitnik hiokat uvalu ikkolativighaitnik. Hapkua katimayiit hapkuninga ihoakhaitjutighanik titigaghimayoni tatvani Emmakmiotatnik Ihoilutaoniaktonik Kimilgokutaita uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7) uvalu tatvani Emmakmiotaknik Ihoilotaoniaktonik Monagitjutighaita Parnaiyaotaitni (AEMP; Makpigak 10, Titigak 19), tatva halomailgonik ihoilotigalaitnahugiyaoyot (AEMP; Makpigak 10, Titigak 19) uvalu tatvani Iglukpakakvioyoni Emmakakviita Kimilgokutaitnik uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7), Tatva naonaiyaotaoyok hamna halomailgok Tagiokmi emmap kanokiningani **Ihomalotaongitok**. Nigiogiyaongitot hapkua ihoilotaolotik uvalunin tingilgalaklotik hiamakpalialotek tahamunga Tagiokmi emmap kanokilinganot.

Tagiokmi Halomailgokakningit

Halomailgokakningitnik naonaiyaotait katighoktaohimayot tatvani Tagiokmi RSA-gani Killohiktomi tatvanganin 2001 uvalu havagiloakhuget eloani haffuma LSA-gani uvani 2013-mi. Havagiyaoyomit ihoilotaoniagahugiyaoyot ilaliotiluget hapkua omitjat ingilganingit; halomailgot hiamakpalianingit uyagaghiokvighanik hanavaliatitluget, iglukpiokpaliatitluget, uvalu omiktaokpata havagivaliatjutighaitnik; havakvioniaktot emap kokloakninget; okiomi apkuhioktitluget; kakaktaotit atoktaotitluget; ohokyoat, kinniktoit, uvalu hapkua katighokhimayot kuuknik himiktikutit (PAHs); halomailgot annakviitnin koviokaktaohimayot; uvalu tingilgalaktot hiokkak. Ihoaghaotighait uvalu monagitjutighaita oktotighait havagiyaoniaktot ahivakahoakutighait uvalu ekilivaliotighait hapkua ihoilotaoniakahugiyaoyot hapkua ilaliotiluget: hokkaikpaligahoakluget omitjat ingilganingit uvalu ingilgapkagahoakluget omitjat ingilganingat emmap ettinigot, happutihiokhuget hapkua emmap kokloakningit kotilgonot tatvalo kokloakviliokloget tatvunga hannayaohimayonot kokloakvighaitnik tattinot tatvani Marine Laydown Area-mi, atoklotik hapkuninga avogivaktaitnik hiokamik apkohiolikangata uvalu tunngavilioligangata, malikaluget hapkua maligait hapkununga halomailgonik emmaknik koviogakvitnin, uvalu atogahoakluget hapkua nakunighaoyot atanguyat ihomagiyait hapkununga totkokvighanik, aknaktaotinot, ohokyoakakvighaitnun, kakaktaotinot, uvalu kayangnaktonik havagiyaitnik uvalu hapkununga hiamaktailitjutighaitnik hiokat uvalu ikkolativighaitnik. Hapkua katimayiit hapkuninga ihoakhaitjutighanik titigaghimayoni tatvani Emmakmiotatnik Ihoilutaoniaktonik Kimilgokutaita uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7) uvalu tatvani Emmakmiotaknik Ihoilotaoniaktonik Monagitjutighaita Parnaiyaotaitni (AEMP; Makpigak 10, Titigak 19), tatva halomailgonik ihoilotigalaitnahugiyaoyot (AEMP; Makpigak 10, Titigak 19) uvalu tatvani Iglukpakakvioyoni Emmakakviita Kimilgokutaitnik uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 7), Tatva naonaiyaotaoyok hamna halomailgok Tagiokmi halomailgokaningit **Ihomalotaongitok**. Nigiogiyaongitot hapkua ihoilotaolotik uvalunin tingilgalaklotik hiamakpalialotek tahamunga Tagiokmi halmailgokakningit.

Tagiokmi Ekaluit Fish/Emakmiotat Niginiakviit

Hivolikpat naonaiyaotait hapkunani Tagiokmi niginiakviitni katighoktaohimayot tatvani RSA-gani haffuma Killohiktomi tatvanganin 2001-mi uvalu tatvani LSA-gani uvani 2012-mi uvalu 2013-mi. Ihomagiyhaoyot ihoilotaovalangitot ehoaghaktaohimayot ilaliotihimavloget haffuma Tagiokmi emmap kanokilinani uvalu halomailgot kanokilinganingita naonaiyaotaitni. Havagiyaoyomi havagiyait ihoilotaoniagahugiyaoyot hapkununga Tagiokmi ekaluitnun/emakmiotat niginiakviitnik ilaliotihimayot tatvani emmakakviita hannavighaitni una Marine Laydown Area-mi tammayakakviitni (emmakakviita hannaviatni haffuma omitjat tolaktakvighani uvalu nunamot tunmigakhani). Hapua ihoaghaotighat nigiogiyaoyot ihoakutaolotik hapkuninga ihomagiyaoyonik ihoilotaoniagahugiyaoyonik hapkuninga Tagiokmi ekaluknik/emakmiotanik niginiakviitnik: ihoakutighait eliogaktaoniaktot ahivaknahoakloget uvalunin ikkilivaligahoakluget hapkua ihoilotaoniaktot hapkununga emmap kanokininganot uvalu halomailgonik kanokinikanik, uvalu emakak atokninga haffuminga Etkogahoaklugo Tagiokmiotat ihoaghaotighaita Parnaiyaotat. Taimaitmat, hamna hiamatjakninga halomailgonik nigiogiyaongitok tatvani VEC-gata Tagiokmi ekaluitnik/emakmiotat niginiakviitnun. Tatva halomailgot uvalunin tingilgalaktot halomailgot ayokhaotikalaitnahogiyaoyot.

Tagiomi Ekalukakningit

Tatva 19-guyonik allatkinik ekalukhimayot tatvani naonaiyaihimangmata akungani 2001-mi uvalu 2013-mi, uvalunin ekalukniakhimayait, tatvanga Tagiokani haffuma LSA-gata. Hapkua ammigaitkiyaoyot ekalughimayait Kanayoit, innagayok uvalu allatkit ekalukpiakyoniot. Hapkua allatkiit ekaluganoit naonaiyaktaohimayot ihomagiyaonitot ekilivaliayot uvalunin tammakpaliayot. Hapkua ekalukpiit piyaohimangitot hapkua naonaiyaktaotitluget, kihiani tahamaninginaknahugiyaoyot LSA-gani tahamna kukaoyakakmat ekalukpit nayogakingmatjuk tatvani Tagiokmi RSA-gani. Ihomagiyaoyot hapkua Havagiyaoyomi ihoilotaoniagahugiyaoyot ihomagiloaghuget hapkua Ekalukpiit uvalu ilaliotiluget hapkua tokkunaotiginiagahugeyaoyot hapkunanga emmakmi havagiyaoniaktot uvalu kakaktaghimaktitluget, tatvalo emakmiotat amegaikpalianingit hiamakpata emmakmi kakaktaktitluget, uvalu emmap attanin koinginaktot nivyaghimatitluget omitjat avatinot ingilgahimaaktitluget. Ihoaghaotighaita oktotighat uvalunin ikkilivaliotighait hapkua ihoilotaoniagahugiyaoyot hapkua ilaliotiluget ikkilivaligahuakluget hapkua emmap attani havagiyaoyot, piikpiakloget hapkua emmap atani kakaktaknik, uvalu malikanik ehoaghitiluget hapkua omitjat ingilganighaitnik kayomiitomik tatvuna ingilayangagot haffuma RSA-gata. Katimayiit hapkuninga ihoaghaitjutighaitnik tatvani Emmakmiotanot Ihoilotaoniaktonik Monagitjutighaita Parnaiyaotaitni (AEMP; Makpigak 10, Titigak 19), tatvalo Omitjat Parnaiyaotaitni (Makpigak 10, Titigak 15), and the Koinginaktot Nivyaktitpaliangitangita Parnaiyaotaitni (Makpigak 10, Titigak 18), hamna naonaiyaotat hapkuninga hiamaghimayonik halomailgonik Tagiokmi ekalukakningitni tatva naonaiyaotaotitluget hapkua Ekalukpiit ihomagiyaoyot tatva **ihomalotaongitot**. Tatva ihomagiyaoyok tatva halomaitgonik hiamakpalianinga naonaiyaktaohimayok haffuma Tagiokmi RSA-gani. Hamna hiamakpalianinga hapkua koinginaktot ihomagiyaoyot tatvani **Ihomalotaongitot**. Tatvalo ahinnot hiamaktokalaitmata hapkuninga ihoilotaoniaktugiyaoyonik.

Tagiokmiotat Hoggat/Tagiokmiotat Tingmitjat

Tagiokmiotat hoggat uvalu tagiokmiotat tingmitjat ilaliotihimayot hapkua tikkikataktot allatkit tingmitjat tahamungakataktot Tagiokmi kanninganot okiogalok hila kanogilingagaloaktitlugo uvalu naonaiyaktaovlotik hapkua allatkit hoggatjat ilaliotiluget kingalgit, scoters, ollut negliviitlo kangoitlo uvalu kokyoit, povyakpaktot mitkiit ahangit, tulliit, kakhaot uvalu naoyat. Tagiokmiotat Hoggat Tagiokmiotat Tingmitjat tatvalo ivvatitluget obluit monagiyaoyot tatvani kavamatokatkut Tikkikataktonik Tingmitjat Nayoghaitlo Maligaitni (1994). Hapkua pingahuyot Tagiokmiotat Hoggat Tagiokmiotat Tingmitjat allatkit titigaghimaliktait ematot “Ammiknaghiyot” tapkunani Kanatami Tammakpalianingitnik Omayonik Katimayiitnit (CESCC) ihomagivluget hapkua Nunavummiutat: Huukloktuiy, naoyat allangayot, uvalu hapkua ahangiit (CESCC 2010). Tingmiakut uvalu nunakut naonaiyaihimangmata tahamani Tagiokmi omayotnik RSA akungani 200-mi uvalu 2013-mi ivvatitluget

(June-mi July-milo) tatva;p ihhaliktitluget (Aggasimi) naonaiyaihimayot kititluget hapkua 23-goyut allatkitnik hoggatjanik tatvani Tagiokmi RSA tatvani Killohiktomi ihhatitluget. Ihomagiyaoyot tatva Havagiyaoyomi ihoilotaoniagahugiyaoyot ilaliotiloget koingetkutiginahugiyaoyot effects (oktotigiloget, nipikpalat) uvalu ekkilivaliagahugitaoningit eknioktot. Ihoaghaotighaita oktotighat ahivakahoakloget uvalunin ikkilivaligahoakluget hapkua ihoilotaoniagahugiyaoyot: Naonaiyatiakloget uvalu aktoktailinahoakluget hapkua attoloaktait ingilgayangit ehoakhailotik hapkuninga tingmiat kulaotakvighaitnik ingilgavighaitniklo akoangitangita tingmitjat hoggatjatlo ihhatitluget nayogait, naonaitiaghimaloget hapkua kollaotakvighait ematot 650 m kangagoakloget hapkua kaoyimayaoyot ihhakakvioyot. Katimayiit ihoaghaiyot hapkuninga titigaghimayonik tatvani Angotighaniik Ihoaghaitjutighait uvalu Monagitjutighaitniklo Parnaiyaotait (Makpigak 10, Titigak 20), una naonaiyaotait hapkuninga hiamayaghimayonik ihoilotaoyonik ihomagiyat tatva **Ihomalotaongitok**. Tatvalo ahinnot hiamaktokalaitmata hapkuninga ihoilotaoniaktugiyaoyonik.

Nattit

Tingmiakut naonaiyaihimangmata opingaghami nattiit mitkoiyaliktitluget (kittikaliktitlugo-May akkuningani July kittikanot) akkuningani 2007-mi 2013-mut tatvani Tagiokmi RSA-gani naonaiyagahoakhuget amegaitilangit uvalu nanikatakmangata nattit. Tatva naonaiyaktaohimangmata hapkua nattikakningit tahamani kangikhoani Kingaokmi, tatva hapkua nattit nayogagiyait naonaitot tatamavloni hamna kangighok, kihiani hamna hivogani haffuma RSA-gata hivogani Kingaop tahamani ikkitkiyaoyot nattit hapkua enekniit uvalu nattiahanoit naonaiyaktaohimayot. Nattit agluit apputip atani nayogait nalvanguyaohimayot tunnuani RSA-gata naonaiyaihimatitluget; nattit agluit naonaiyaktaongitot hivogani hapkua RSA-gani uvalunin tatvani LSA-ni. Ihomagiyaoyot tatvani Havagiyaoyop ihoilotaoniaknahogeyaoyot ilaliotiluget hapkua nayogaita niginiakviit, koinginakningit (oktotigiloget, nipikpalait), kanok tokotjutaohimayot uvalu annikutaohimayot, pinahoaghimaitomik tokotjutaohimayot, aktokningit tokonaktonik halomailgonik, tatvalo ikkilivaliotait ekniokatakningitnik. Tarva omitjat ingilganingit aolakatakniaktot kihiani hikoigaikpat aoyaotitlugo tahamani Havagiyaoyomi (Aggasimi 25 tatvunga Aktopa 31) taimaititlugo nattikakninga tahamani Tagiokmi LSA uvalu RSA nigiogiyaoyok tatva nattikatiangitnahugiyaoyok. Hapkua havagiyaoyot tatvani Marine Laydown Area-mi nigiogiysoyot hikukangititlugo omiaktoknaktitlugoli havagiyaoniaktot uvalu okiomi hapkua okiokmi apkohiokhimalikata ingilgavighaitnik (Desaipa akuningani Masimot). Hapkuali havagiyaoniaktot nattikagoighimalaktitlugo tahamna LSA-gani uvalunin hivugani RSA-gata (hivogani Kingaop). Ehoaghaotighat oktotighait ahivagahoakluget uvalunin ikkilivaligahoakluget hapkua ihoilyaotaoniagahugiyaoyot ilaliotiluget: naonaiyakloget uvalu pitailinahoakloget hapkua nattit agluit kakipkaviit apputip atanni. Una Havagiyaoyok ihomagiyaongitok tatva ihoilotaoniakloni hapkununga nattitnot uvalu hiamatjinga halomailgot tahamunga tikkitniagahogiyaongitok.

Inulikinikut Avatilikitjutighait

Engilgaknitat Eniitokliit

Kangahanoak tatvani iglukpiovioniaktomi naonaiyaihimangmata eloani haffuma Havagiyaoniaktomi Hannavikhaitniklo Iglukpioklotik (PDAs), hapkuningalo enitokliitnik LSA-gani uvalu RSA-gani hapkua okiot attoktitluget 2001, 2002, 2004, 2007, 2010-mi akkuningani 2013-mut. Elangit hapkua engilgaknitanik tohaktitjutighakaktot tatvanga RSA-ganit hatkiomayok taimanganin 1970-nit akkuningani 1990-nut. Hamna iglukpiokviokpat Havagiyaoyok ihomagiyaoyok tatva ihoiyaotaoniagahugiyaoyok hapkuninga engilgaknitanik ennitokliitnik. Tatva ihomagiyaoloaktok hamna ihoaghaotighat tatvani havakvioniaktomi ema aktoktailinnahoakloget hapkua eniitokliit havaktonit tatvani Havagiyaoyomi. kihiani, ayoknatoakat aktoktailinahoakluget, tatva ihoaghaotighait hapkua eniitokliit havagiyaoniaktot hamna iglukpiokvigiyaoliktinnago. Hapkuataok engilgaknitat eniitokliit naonaiyaktaohimangitot iliitkogiyaohimanikata iglukpioliktitluget, havakviohimaaktitlugo, uvalu omiktaonialiktitlugo hamna naonaiyaktaoniaktok ukkua Havagiyaoyomi eniitoklilikiyigiyaitnit, titigaktaolotik, uvalu onipkagiyaoniaktot tatvunga Nunavut Kavamat-nut Havakviatnun ukkua Eliitkohilikiyiit uvalu Engilgaknitalikiyiit atoklugo hamna “Akoaghinikomik Havagiyagiakaktait.” Hapkua eniitokliit akkuaktaohimayot havagiyaoniaktot monagiyaolotik uvalu ihoaghaktaolotik ajikohioktaolotik hapkua ilihimaliktatik eniitokliit okaotaohimayot. Tatva aktoktaohimangitpata uvalu/uvalunin ihoaghaotighaitnik ihoaghitiyaohimangikata, havagiyaoyop kihingoktaoningit hapkunani ilihimayaoyoni eniitoliitni ihomagiyaoyot tatva **Ihomalotaongitot**. Hapkuali angetilangit nayogaitlo eniitokliit tatva hiamaktokalaitogiyaoyok halomailgonik uvalu tingilgalakluni halomailgok hapkununga tatvanga Havagiyaoyomit hapkununga VSEC engilgaknitat eniitokliitnun.

Inulikinikut-pivalianikut

Hapkua naonaiyaotait hapkuninga ihoilotaoniaknahugiyaoyonik tatvani Havagiyaoyomi inulikinikut-pivalianikut pitjutikaktot talimanik VSECS: 1) pivalialikinikut; 2) nanminiktakutighanik; 3) havaghanik; 4) ilikhaknikut uvalu ilihakpaliotighanik; uvalu 5) anniaktailitjutighanik uvalu nunaliitni innutiagotighaitnik. Tatva kititluget hapkua 10-guyot ihoilotaoniagahugiyaoyot naonaiyaktaohimayot, ehoaghitihimayait 7-nik ihoaghaotighanik, malgoknik ihoilotaoniagahugiyaoyonik, uvalu ataohikmik tamakmik ihoakutaoloni uvalu ihoilotaoloni. Nakuatot ihoakutighat naonaiyaktaohimayugaluit kihiani kimilgoktaohimangitot ihoilotaoniakata uvalunin ihomagiyaongitot ihoilotaolotik uvalunin hiamaktikutaolotik ihoilotigiyaoniaktonik. Ihoilotaoniagahugiyaoyot huli naonaiyaotaohimayot ihoiyaotaolotik, taima ilaliotihimayot tatvunga ihoilotaoyonot uvalu hiamaktigitjutighaitnik ihoiyaotinot naonaiyaotaovlotik.

Pivalialikinikut

Hamna Kitikmeotni Aviktoghimaninga avugektonik pivaliatjutikaktok, havagiyaoloakhutik hapkua kavamatkuni havagiyaoyot, nanminikaktotlo pivaliatjutikakhutik, uvalu hapkuninga iliitkohiktotaitnik havagiyakakhutik. Eliitagiyaohimayot hapkua pivaliatjutaoyot ihomagiyaoloaktot ilaliotihimayot: kavamatkuni atanikakvit, anniaktailinikut havagiyaoyot uvalu inulikinikut, ilihaktolikinikut, niovavioyot, iglulioknik, ingilgalikinikut, polaktolikinikut, hanaoyaknikut uvalu mighoknikut, auvalu uyagaghioknikut nalvakhioknik uvalu pivalialikinik (Naonaiyaiyiit Kanatami 2007). Hapkua kavamatkuni havagiyaoyot havagiyaoloaktot hamani Kitikmeotni maniliokutaoloakhutik, havagiyaovlotik hapkununga 80%-nik havaktikakhotik. katitluget, amegaikpalikniagahugiyaoyok hamna pivaliatjutigiyaghait hamna Havagiyaoyok aolakutigiakat uvalu hapkua naonaipkutaoniaktot: amegaikpalikniaktot nunaliitnin havaktot,manighakviokataliktotik, tatvalo niovgotigikataliklugo hamna manighagiyatik; Havagiyaoyomit-akkiliktotait (nunaliitni, aviktoghimayoni) hapkua nanminikaktot tahamanititluget Kitikmeotni uvalu nanilikak Nunavumi, taima amegaikpalikniaktot ikkayotighait manilikinikut hapkua nanminikaktot; ilaliotivalialuget hapkua notaat nanminiktaktait uvalunin angiklivalikata hapkua nanminikaktot eloani Kitikmeotni Aviktoghimayoni havakaktot hapkuninga nioviaghanik uvalunin ikkayotighanik hivoagot piyaohimangitonik; uvalu/uvalunin pivalianahoakluget hapkua, uvalunin ilaliotinahoakloget maniliokutighait, Inuit-nanminiktaghimayait. Aghivaligahoaklugo hamna pivaliatjutaoyoghak, allatkiknik, uvalu havagiyaotiakningit nigiogiyaoyot nakokutaoniagahugiyaoyot hapkuninga VSEC pivaliatjutigiyaitnik. Taima hamna kihingoktaoninga ihoakutaoloni atkunaotaoniagahugiyaoyok, hamna ihoilotaoniaknahugininga havagiyaongitmat ihoilotaoningit uvalu hiamaotiyaoniakningalo naonaiyaktaohimangitok.

Nanminikakutighat

Ukkua Nunavut Kavamatkut tigomiakloaktat hamna nanminiktakutighak uvalu aghokutaoloaktok hapkuninga pivaliatjutighaitnik hapkua Kitikmeotni nunaliit. Kavamatkuni havagiyaoyot uvalu olasikataknik maniliokutigiloaktat hapkua inuit tatva taima,otiktaotioyoyaghuni, ikkayotaongmiyok hapkuninga nanminikaktonik tamaitni nunaliitni. Havagiyaoyomi havangit nigiogiyaoyot hapkua angiklivaliotighait uvalu naovaliatjutighait hapkua Inuit uvalu okioktaktomi nanminikaktot ilaliotiluget:

kanoginingit nanminikaktot oktotighait uvalu ilaliotihimayot nanminikaktot oktotighait, ihomagiloakhuget hapkua niovgotaokataktot ihoakutighanik uvalu ikkayotighanik hapkunanga nunaliitni nanminikaktoniit; uvalu ikkayotaoniakmata havaktot manighagiyaghaitnun, manighakamanighakataligomik niovgotighakalikniakmata nunaliitni inuit havakalikpaliagomik. Hamna nigiogiyaoyok amegaikpaligotighait nunaliitni nanminiktagotighait ilikut tatva nigiogiyaongmiyok hatkitigiluni akkitonunik maniliokutighanik expected (oktotigilugo., naovaliatjutaoloni ilavaliotighanik nanminigiyaoynik uvalunin aolatjutiyoghanik notanik nanminiktakutighanik) hamna nigiokiyaovaliatitlugo Havagiyaoyoniaktok. Nunaliitni nanminikaktot hatkiktitaoniaktot oktotighainik nanminigiyait oktokataoyomanikata Havagiyaoyomi havaghanik, monagiyaoyonik tatvani Havagiyaoyoni hapkuninga ihoaghaitjutaoyonik uvalu monagiyaoyonik oktotaitnik hapkua oktotaoniakmata ikkayotighait hapkua nanminikaktot havaghaitnik uvalu nunaliitni niovgotaokatakniakmata uvalu ikkayotighanik pitjutaolotik. Hamna allangokpalianinga uvalu to the growth uvalu allatkinik Inuit uvalu okiokatomi nanminikaktot nigiogiyaoyot nakokutaolotik hapkuninga VSEC nanminikaktot oktotighaitnik. Hamna ihoilotaoniaknahugininga havagiyaongitmat ihoilotaoningit uvalu hiamaotiyaoniakningalo naonaiyaktaohimangitok.

Havakhait

Hamna ihomagiyaoyok havaktighakhioknik eloani hapkua Kitikmeotni nunaliitni emailingaok 3,475 uvani 2006-mi. Hapkua havakaktot hapkunani nunaliitni nahaotait emailingayot 2,185 havaghimayot, tatva naonaipkutaoyot havaktot emailingayok naonaipkutait 62.9%. Hamna Havagiyaoyok nigiogiyaoyok allangutaoloni haffuminga VSEC havagiyaita pitjutigiluget: 1) allangutait havaghanik uvalu manighagikataktaitnik havaktot; 2) alangotait hapkua havaghakhioktot; uvalu 3) allangutait okokomayot nunaliitni havaghakhioktot. Ihoaghaotighat uvalu monagitjutighaita oktotighait ihomagiyaoyot hapkuninga ilihakpaligotighhanik, havaktighakhioknikut, uvalu havaktihimaakutighaitnik ehoaghaktaohimaliktot ilavaligomavloget hapkua nunaliitni Inuit tatvani Havagiyaoyomi havagomayot tatva naonaiyaghimayot tatvani Havaktolikinikut Parnaiyaotaitni (Makpigak 10, Titigak 28). Hapkua parnaiyaotait oktotighait tatvani Havagiyaoyomi havaghakhioknikut ilaliotihimayot: Havaktonik pitiakutighaita Parnaiyaotat; una Kitonik Havaktikagomaloakningita Parnaiyaotait; Havaktot Elihakpalikutighaita Parnaiyaotat; uvalu ukkua Havaktigiyaita Himaotigekataotighaita Parnaiyaotat. Hamna ihomagiloakhugo havaktighakhioknik Inuinnaknek havagomayonik nigiogiyaoloaktok ematot ikkilivaliatjutaoniakmat amegaitonik havangitonik. Una Havagiyaoyok tohaktitikatakniakmatjuk hapkua nunaliitni nanminikaktonik, timigiyaoyonik, uvalu hamalatkunik hapkuning havaktighakhiokutaita maligagiyaitnik hivoniani haffuma ihoaghaotighaitnik hapkuninga Igluliokutighanik uvalu Aolatjutighaitnik uvalu ihoakhaikataoyomaniaktot ikkilivaliotighaitnik hapkua ihoilotaokataktonik amegalikangata nunaliitni havaghakhioktonik.

Ihomagiyaoloaktot hapkua, havaghakatoagangata uvalu manighakatagangata tatvanga Havagiyaoyomit ikkayotaoloaktot uvalu ihomagiyaoloakhutik tatva ikkayotaoloakniaktot nalunangitok inuhikatiakutiginiaktat hapkua havaktot uvalu katanguyait hamani Kitikmeot nunaliitni. Tatva Havagiyaoyomi havakaknik uvalu manighakataknik nigiogiyaoyok amegaikpaliotaoniaktok havakaktonik, ihomagiyaoloakhutik hapkua ayungitot uvalu havaktutokaoyot Kitikmeotni havaktot. Amegaikpalikhimalikata hapkua havaktot ikkilivalioktaoniakmata havakangitonik, akunaotaovalialonilo pivaliatjutaoyonik, uvalu pivaliatjutaoniakmingmata aviktoghimayonit havaktighakhiokutighaitnik ikkayotaoniakmata hivonighami Havagiyaoniaktonik. Allangtigotaitnik hapkua manighagikataktainik uvalu havaktot amegaikpalianiakmata, tatvataok alangoktikutait hapkuninga amegaikpaliotaitnik havaktughanik, nigiogiyaongmiyot nakkukutaolotik hapkuninga VSEC-mi havaktonik.

Tatva tatvani Havagiyaoyomi havaktot uvalu manighakataktot ihoilotaoyungnakmiyot ematot nunaliitni havalingoyonot. Taimaitmat, una Havagiyaoyok ihomagiyaoyok tatva hapkua inuit tatva havakaktot hamani Kitikmeotni Aviktoghimayoni kimmaiyungnakmiyot havagiyamingnik havagiaktokomavlotik uyagaghiokvioyomi. Kihianiongmat, amehoyot hapkua Kitikmeotni inuit havakaktot ahini nigiogiyaongitot ihinnaklugit hapkua havagiyatik havaghakhiokumanikmut tatvani Havagiyaoyomik. Hamna ihoilotaoniakat **Ihomalotaongitok**. Hamna ihoilotaoniagahugiyaoyonik naonaiyaktaohimayok ilaliotivluget hapkua Havakvioniaktot uvalu inuit holilokagotait tahamani Kitikmeotni uvalu Nunatiami tatva ihomagiyaoyot hapka ihoilotaoniagahugiyaoyot ilangit inulikinikut-pivalialikinikut attayot tatvani RSA-gani hapkua ikpigiyaoniakmata hapkununga nunaliitni nunakaktonot. Hamna angiklihoilotaoniagahugiyaoyop ‘allangoktigoktaitnik hapkua nunaliitni havaghakhioktot’ nigiogiyaoyok ihoilotaovalalaitnahugiyaoyok tatvalo **Ihomalotaongitok**. Tatva hamna ihoilotaoniaknahugingitaat havagiyaongitmat ihoilotaoningit uvalu hiamaotiyaoniakningalo naonaiyaktaohimangitok.

Elihaknik uvalu Elihakpalikutighat

Hapkua tamaita nunaliit naonaiyakviohimayot, kihingokhugik ukkua Kingaok uvalu Umingmaktok, hatkiomainaktot hapkua ilihaotighait hapkua ilihalihaktonoit,sikokpaliktot ilihakviit, uvalu angayoghiitnik ilihakviitnik. Hapkua sikokutait hatkiktitaohimayot hapkua ilihaotighait oktoinagialakivluget angayokhiit ilihakviatni inniktigotighaitnik (uvalunin ajikotanik) tatvani angilgaomalotik nunamingni. Hapkua ihoilotaongitogaloit kihiani aktomatitaoniiakukmata tatvunga Havagiyaoyomot ilihaknikut uvalu ilihakpalikinikut tatvalo alangoktikutait pitjutigiluget hapkua ilihaknikut uvalu ilihakpalikinikut aghokutaovalianginakniakmata, uvalu alangoktigotait hapkua inolgamiit ihomagiyait uvalu ikpigiyait hapkua ilihaknikut uvalu ilihakpalikutinot. Sabina-kut nigioktot ikkayokigiyomavluget hapkua nunaliitni kavamaoyot, ilihaknikut, Inuit timigiyait, uvalu hapkua allat ukkua uyagaghioktit ikkayotigiyait enekhitiyangita notamik Kitikmeotni uyagaghioknikut ilihakvighamik uvalunin huli ilaliotinahoaklugit hapkua uyagaghiokvikmi havaghanik ilihaktitilotik tatvani NAC-kut ilihakpalikviatni. Huli okaotaohimaaktok nunaliitni ikayotighak una Nunaliit Ikkayotighaita Parnaiyaotaitni (Makpigak 10, Titigak 26). Una Havaktigiyaitnik Havagiyaitnik Elihakpaliotighaita Parnaiyaotat, una naonaiyaotaohimayok tatvani Havaktolikiyiita Parnaiyaotat (Makpigak 10, Titigak 28), naonaipkutaoyok havagiyaoyoghak ehoaghakpaligahoaklugo hamna ikkayohiakutighat tatvanga Havagiyaoyomi havaghanik hapkunanu nunliitni ehoakhainahoaklotik parnaiyaotighanik ikayokatigekahoaklotik; ikkayokahoaklotik nunaliit ikayotighaitnik uvalu elihakpaliotighaitnik; ehoaghailotik havakvigiyaitni elihakpaliotighanik uvalu havaghanik elihaktitilotik; ehoakhailotik havaktighamik hapkuninga Inuit Havakhakhioktolikiyi uvalu Elihaktolikiyioyok; ilaliotilugit hapkua inolgamiit okaotjikatakloget havaghanik. Ihomagiyaoloaktot tatva, alangoktikutighait ilihaknikut uvalu ilihakpaliotighanik, tatvalo allangotighaitnik inolgamiit ihomakhotaitnik ilihaknikut uvalu ilihakpaliotighanik, taima ihomagiyaoyot nakoatot ikkayotaoniaktot. Tatva hamna ihoilotaoniaknahugingitaat havagiyaongitmat ihoilotaoningit uvalu hiamaotiyaoniakningalo naonaiyaktaohimangitok.

Anniaktailitjutighat uvalu Nunaliit Innutiakutighait

Nunavummiut atoghimayot ikkitkiyaovakhotik haonikloktot, aungitnik sukakpalagatik, evyahungukatangitot, uvalu aungitlo takkaini kayomikpalaghotik amegaitkiyaovlotik Kanatamioniit. Kihiani, amegaikiyaoliktot Nunavummiut okomaitpalaghutik povalavalaktot, uvalu amegaitkiyaovaklotek anniakutikalikpaktot kasanik (512.1 per 100,000) ikkitkiyaovlotik hapkua Kanatamiotat (404.9 per 100,000). Kanoklikak nunaliitni innutiagotait, tatva titigaghimayot tatvani AANDC-kut nunaliit innutiakutighaita naonaipkutaitni, tatva ikkitkiyaovlotik hamani Kitikmeotni nunaliitni. Hapkua ihoilotaoniaknahogiyaoningit tatvani Havagiyaoyomi Anniaktailinikut uvalu nunaliitni innutiakutait0 (CWB) nigiogiyaoyot tatva namagiyaovlotik ihoilotaovlotiklo uvalu hapkua ilaliotihimayot: tatva allanguktikutait innuhikmingnik hapkua havakaliktot tatvani Havagiyaoyomi; allangektikutait ellikut uvalu katangotaita niovgotikaligangata; tatvalo allangektigotait hapkua katangotegit/iglomiokategit innutjuhiit. Havalokakghotik manighiolokaktituget, tatvalo manighagiyatik monagitiagahoakhoget, uvalu monagitiakhotik inmingnik havakaligamik ihomaghotialiktot uvalu innuhikatiakpaliktot. Hapkua elingaiyakpaligotaovlotik tatva havaghimakutigiliktait Havagiyaoyomi taima hapkua nunaliit ilaliotivluget amegaikpaligomayait Inuit havaktot (oktotigiluget, EFAP, manighagiyaitnik monagitjutighaitnik okaotjikaliklotik) tatvani naonaiyakhimayot Havaktolikiyiita Parnaiyaotaitni (Makpigak 10, Titigak 28).

Una Havagiyaoyok nigiokiyaoyot amegaikpaliktititjutighaitnik hapkua innuhikatiakutaitnik havaktot tatvani Havagiyaoyomi-pitjutaotitluget havagiyaoyot, taimatot hapkua kihingokhimayait nakoatot nakokutaoniakmata hapkuninga VSEC-gitni Anniaktailitjutighait uvalu CWB-gitnik.

Tamakmik nakokutaolotik uvalu ihoilotaolotik ihomagiyaoyot hapkua Anniaktailitjutighait uvalu CWB-gita allangokpalialikmata ellikot uvalu katangotaita niovgotikhakaligamik. Emakak nunaliitnin inuit havakhaniktitaonigomik tatvani Havagiyaoyomi manighagikataktatik hunnaongitonot (oktotigiloget, piannainaklotik, higakloknot, tatvalo emikhikataliklotik) tatvalo atokpaliktotik nakungetonik innuhikhaongitonik, hamna taima ihoilotaoniaktok tatvani CWB-gani. Kihiani, manighagekataktatik atokpakomiku ilingaiyaotighamingnek (oktotigilugo, ilingaiyaotighaitnot iglumot,nikkitakutighanot) pikataologet hapkua allatkit akkugotaoyot pitjutaoyot tatvani Havagiyaoyomi havagiyat nakoatot ihoakutiginiakmatjuk tatvani CWB-gani. Ihomagiyaoyok, hamna kihingotaohimayok ihoilotaoniagahogiyaoyok ellikut uvalu katangotaitalo niovgotikhakalikamik, tatvalo ihoilotaoniagahogiyaoyot hapkua allangoktigotait katangotigiit uvalu iglomiokatigiit innuhiit, tatva ihomagiyaoyot **Ihomalotaongitot.** Una naovalianingata naonaiyaotaohimayok ilaliotivloget hapkua Havakvioyot uvalu inuit holilokakutait tahamani Kitikmeotni uvalu Nunatiami ihomagiyaoyot ihoilotaoniagahugiyaoyot hapkuninga inulikinikut-pivalianilikinikut tatvani RSA-mi ajikotagiyaitli hapkua nunakatigiyatik tatvani nunaliitni. Tatva hapkua ihoilotaoniagahogiyaoyok tatvani **Ihomalotaongitot**. Tatvalo hamna hamna hiamangninga tittiknilioghimayaita ahianot naonaiyaktaohimangmiyok. Hamna ihoilotaoniagahogiyaoyok tatvani Havagiyaoyomi hapkuninga Anniaktailitjutighanik uvalu CWB-ganik nigiogiyaoyot tatva ajikutaginaktaitlo hapkua mikinighaoyot okioktaktomi nunaliit. Tamakmik hapkua ihoilotaoniagahogiyaoyot mikkitkiyaoniagahogiyaoyot nunaliitnin hilataniitonin Kitikmeotni Aviktoghimayoni. Tatva ihomaghotaoloaghimayok hamna ihoilotaoniagahugiyaoyok titikniliokhimayaita pitjutigiyaitnik anniaktailinikut aolatjutaitnik tatvani Nunatiami taimatot hamna Havagiyaoyomi nigiogiyait monakhikakvioyonik. Tatva ukkua Havagiyaoyok nigiogiyaongitot hapkuninga titikniliokutaoyonik ihoilotaoniaktonik hapkuninga anniaktailitjutighaita aolatjutaitnik tatvani Nunatiami tatva tingmitjat tikkikatainakmata uvalu aolakkatainakmata tatvanga Havagiyaoyomit tatvalo malikainakmata hapkuninga monakhikakviitnik tatvani Havagiyaoyomi iglukpakakviatni. Hapkua havaktot tatvani Havagiyaoyomi nigiogiyaoyot huli attoghimagahoakloget hapkua monakhikakviit angilgakvigiyamingni nunaliitni uvalu taima atoinakniaktatlo hamna monakhikakvik tatvani Havagiyaoyomi monakhiliakagiagaingomik.

Nunanik Atokatakninga

Hamna naonaiyaotaoyok hapkuninga ihoilotaoniagahugiyaoniaktonik tatvani Havagiyaoyomi tatva nunalikinikut nunanik atokatkninga ihomakhutaoyok malgok VSECS: 1) iliikohiktotaongitonik nunanik uvalu nalvakhiokvigiluget atokatkningit; uvalu 2) angonahoaknikut manikhiotigiluget uvalu nunanik atokatakningit. Tatva kititlogit hapkuna pingahor ikpingnaktot naonaiyaktaohimayot naonaipkutigivluget ukkua tamaita VSEC, taimaitmat tatva kittitluget hapkua 6-sioyot kihingoktaoniagahugiyaoyot ihoilotaoniagahugiyaoyot. Huli ihoilotaoniagahugiyaoyonik naonaiffakhimayot naonaiyagomavloget ihoilotaoniagiakhaita.

Iliitkohiktotaongitot Nunakutait uvalu Nalvakhiokvigiloget Atoktait

Hapkua manikhiotaoyot nunnat atogaoyot pitjutaoloaktot gaittiktaovlotik akkiliktoivlotik anguniaktonik, polakatalikinikut attogaoyot, uyagaghioktot nalvakhiovigiyait, tahapkualo ingilgayolikinikut uvalu omiitjat attogagiyait. Tatvatoangoyok ilaliotiyaoniagahugiyaoyok ukkua Havagiyaoyomi havakviat uvalu una Iliitkohiktotaongitot Nunakutait uvalu Nalvakhiokvigiloget Atoktait ihomagiyaoyot hapkununga polakatalikinikut atogaoniakahugiyaoyot ikpigiyakakniaknayogiyaoyot hapkunanga: alangoktiginingita hapkua atoktaoningita nunaat uvalu nungolaitolikinikut atoktaoyot; alangokpialianingakut hapkua hilami manikami avatilikitjutait; uvalu allangoktikutighait hapkua atkunaotighait uvalu avikotighainik hapkuninga nalvaghiokvighaitnik. Ihomagiloaghugit, tatva ataohinaokmat una nanminikaktok, una

Kingaokmi Polaktakviat, ilihimayaovloni ilani atoktaonginakhoni tahamani kanigiyatni haffuma Marine Laydown Area (MLA) eloani haffuma nunanik atoktaoyomit LSA, tatvalo hapkua allat nunaat eloani haffuma RSA, auyaotitlugo. Hapkua amihoyot atogaoloaktot monagitjutait uvalu ihoaghaotighait ehoaghitihimayait hapkua ihoakutaoyot ihoiyaotaovalakunagit hapkua atoktaoyot tatva Havagiyaoyomi, taimaititlugo akunaotigiyomavluget hapkua ikkayotaoniaktot maniliokutaoyoghat hapkua pitjutaongmata iliitkohiktotaongitmata nunakutait uvalu nalvakhiokvigiloget atoktait. Hamna monagitjutighait uvalu ihoaghaotighaita oktotighat pikataoyungnaktot tamaitni hannaohimayoni uma Havagiyaoyop aolatjutiginiaktaitni, tatvalo hapkunani naonaitiaghimayot ilaliotihimayait oktotaoyoghat ehoaghaktaohimayot ihagiagiyaoyot naonaiyaktaohimangmata. Hapkua ihoaghaotighat naonaiyaktaohimangmiyot ilaliotihimangmata naonaitiaghimavlotik tatvunga angotighanot tatvani Angotighanik Ihoaghaotighat uvalu Kimilgokutighaita Parnaiyaotaitni (Makpigak 10, Titigak 20), uvalu ihoaghaotighait hapkununga koinginaktonot uvalu hilami kanokininganik pitjutaoyot tatvani Nipigektonik Koinginaikpaliotighaita Parnaiyaotaitni (Makpigak 10, Titigak 18) uvalu tatvani Hilami Kanokiningata Kimilgokutait uvalu Monagitjutighaita Parnaiyaotaitni (Makpigak 10, Titigak 17). Hamna ihoilotaoniagahugiyaoyok naonaiyaghimayat **Ihomalotaongitok.** Hamna kihingoktaoninga naonaiyaktaohimangmat ilaliotivloget Havagiyaoyot uvalu inuit havagiyait tahamani oatani Kitikmeot tatva ihomagiyaongmata ihoilotaoniagahugiyaoyot eloani haffuma nunnat atogaoyoni RSA-gani tatva taima ajikutaginaktait hapkua tatja nunanik atogaoyonik havagiyaovlotik. Tatva tamaita ihomagivluget, hamna ihoilotaoninga naonaiyaktaohimangmat tatva **Ihomalotaongitok.** Hamna kiningotaohimayok ihoilotaoniagahugiyaoyok tatvani Havagiyaoyomi Iliitkohiktotaongitot Nunakutait Atoktaoyot avatkotiyoitot tahapkunani titiknilioghimayaita hapkua Nunavumi Nunatagihimayaitnik (NSA) uvalu tatva taimaitmat, pitjutaoyungnangitot titikniliokhimayot ihoilotiginiaktaitnun.

Angonahoaknikut Manikhiotigiluget uvalu Nunanik atokatakningit

Hamna Inuit iliitkohitokangit uvalu innuhigiyait tatva taimangagalok aktomatiaktok nunamot. Hapkua Inoinait Kitikmeotat tatva atokhimangitnaktait hamna Inuit Kaoyimayatokangit, uvalunin kaoyimatiakningit hapkua nunaat uvalu avatilikinikutlo. Annaomanahoakutigivlugo hamna nuna atokpaktaktokangit angoniakvigivlugo, ekalukhiokvigivlugo, nanigiaktokvigivlugo uvalu paaktaotivlotik katighokvigivakhugo hamna tamaat nuna atoinaghutjuk RSA. Angonahoakutigivlugo hamna nuna manighiokutigivaliktat tatva taimatot hamna nunnanik atoktaoninga kanok ihoiyaotaovaliayok hapkunanga: alangokpalianingitnit atoktaoningata nunanik uvalu nalvaghiokvigivaliavlogit hapkua nunaat; alangokpalianingitlo atotaita hapkua nunnat iliitkohitoktait; uvalu alangokpalianingit hapkua amegaitilangit uvalu atoktaoningita avatilikitjutinik. Tatva taimatot ehoaghaihimayot kaffinik monagitjutighaitnik uvalu ihoaghaotighaita oktotighaitnik hapkua ihoaghaotigiyomavlogit hapkuninga angoniaknikut manighiotaotitlugo hamna nuna, ilaliotiloget hapkua Havagiyaoyomi, kanok nakunighaoyonik monagitjutighaita oktotighaitnik, uvalu kimilokutighaitnik. Angonahoakvigivlugit hamna nuna atokninga ihomagiyaoniaktok hamna ehoakhihimalugo havaktot himaotigekataotilotik tatvani Havagiyaoyop havakviatni, tatvalo ikkayogahoaklogit hapkua nunanik atokataktot uvalu atokatakluget hapkua nunanik kaoyimayaitnik. Hamna ihoaghaotighat naonaiyaktaohimaliktok tatva hamna atangmat tatvunga angotighanot tatvani Angotighanik Ihoaghaotighat uvalu Kimilgokutighaita Parnaiyaotait (Makpigak 10, Titigak 20), uvalu tatva ihoaghaotighat hapkununga nipigiktonot uvalu hilami kanokininganik hamna ilaliotihimayok tatvani Koinginaktonik Koinginaikpaliotighaita Parnaiyaotaitni (Makpigak 10, Titigak 18) tatvanilo Hilami Kanokininganik Kimilgokutaita Parnaiyaotaitni (Makpigak 10, Titigak 17). Tatva tohaktitikataknik avatingnot pikatigivlogit hapkua nunakaktot inuit uvalu nunaliit pitjutaokatakniaktot katimakatigikataklogit uvalu katimakatigikataklogitlo ukkua Ekaluktutiami uvalu Kugluktumi Nunaliitni Okaotjiyiovlotik Katimayiit (CAGs). Kiotjutighanik piyaoniaktot hapkunanga uyagaghiokvikmi havaktonit, nunaliitni nunaotaitnik atokataktonit, hapkunanga nunaliitni Angoniaktiita Katimayiitnin uvalu Hamalatkunit, hapkunangatlo Nunaliitni Okaotjiyiovlotik Katimayiitnin CAGs tatva taima tohaktitaikatakniakmata avatinot tohagakhanik taimatot ihoaghaikatigikataklotik ihoaknighaoniakmat piyagiakakata.

Nikkainaktotait

Nikkainaktotait hapkunanga angotighanit, naotianitlo atoinaktaitni inuit nikigivlogit uvalunin havaotigivlogit tatva angotigivakhugit angunahoakhutik,ekalukhiokhutik, uvalunin katighiovlotik naotianik (Anniaktailikiyiit Kanatami 2010). Tatva hapkua kaffioyot Halomailgokakningit Ihomalotaoniagahugiyaoyot (COPCs) takughaovalianahugiyaoyot hapkunani nikkainaktotaitni LSA tatvani aolayaohimaaktitlugo una Havagiyaoyok. Hapkua ihomalutaoniagahugiyaoyot halomailgot naonaiyaktaohimangmata uvalu hapkua ihoilotaoniagahugiyaoyot iliitogiyaoyot atoghugit ukkua ihoaghaotighat uvalu monagitjutighaita parnaiyaotait. Hapkua havivaloitli aolaganginaktot nikkainaktotaitni LSA, ilani hapkua havivaloit avatkutpagait namagiyaoningit (tahamanivalak nunami), tatva taima hilap iliitkohitokagingmatjuk aolaninga. Hamna taimaitmat una tokhiktotaoyok Havagiyaoyok haviknik uyagakatvioniakmat uvalu hapkua haviktakakmata avatilikiyaitni allangutaoyungnaktok tatvani Havagiyaoyop havagiyaitni, hapkua haviktalgit pitjutaohimayot amegaitningit naonaiyagomavlogit ihoilotaoniaknikata hapkuninga nikkainaktotaitnik. Tatva aghokutaolotik ihoaghitjutighaitnik uvalu monagitjutighaitniklo oktotighait ehoaghaktaoniaktot tatv ikkilivaligahoaklogit uvalunin ahivagahoaklogit hapkua ihoilotaoniaktot hapkununga avatilikitjutaitnun (hila, emmak, halomailgok, nuna, uvalu naotiat,) hapkualo nikkainaktotait (ekaluit uvalu angotighat). Hapkua naonaitiaghimayot tatvani Makpigak 4 (Hilalikinikut Avatilikinik), Makpigak 5 (Manikami Avatilikinik), Makpigak 6 (Emmagiktonik Avatilikinik), Makpigak 7 (Tagiokmi Avatilikinik), uvalu Makpigak 10 (Atanguyaita Parnaiyaotait).

Naonaipkutagivlugit hapkuninga nikkainaktotaitnik kimilgokutaita naonaiyaotait, nikkainaktokloni LSA tatva naonaiyaotait atoghugit tatva kayagiyakagiakangitot anniakutikangitmata hapkua nikkainait hapkunani COPCs inuknun nikkainaktoktunot hapkua naonaiyaotit atoghugit. Naonaipkutagivlugit hapkua nikigingningit uvalu amegaitilangita ihoilotaonginit naonaiyaotaongmata, hamna nikkiningit hapkua nikkainaktotait nigiogiyaongitot tatva allangokpalalaitmata kayangningit. Tatva taimaitmat, inuit kanoginingit nikitotutitlugit nikkainaknik tahamangat nikkainaktotaitnik LSA tatva nigiogiyaongitot allangotighait tatvanganin naonaiyaotigiyaitnit. Taima ihoilotaoniagahugiyaoyot naonaiyaktaohimangmata tatva anniakutaoniaktonik inuknun nikkainaktoktonik nigiogiyaongitiaktot hapkua havagiyaohimaaktitlugit tatvani Havagiyaoyomit uvalunin tammayaotaitnin tatvani Havagiyaoyomi. Tatva taimatot nigiogiyaongitot hapkua ihoiyaotaoniakningita tatvani Havagiyaoyomi, tatva ihoilotaoniagahugiyaongitot uvalunin titikniliogihimayait aktoktaolaitot.

Havagiyaoyomi-Ihoilotaitnik Naonaiyaotaita Enektitkutait

Naonaiyaotait hapkuninga Havagiyaoyomi-Ihoilotaitnik Naonaiyaotaita iliitogihimayait hapkua ihomalotaongitot. Tamaita naonaiyaotait ihoilotaoniaktonik ihomagiyait tatva mikitovlotik ikkituvalaaktot, himiktaohimavlotik hiamangitangita ahinot, otiktitaoyungnaktot uvalunin hivitungitot tatva hamna ihoaghaotighat uvalu monagitjutighaita oktotighat ehoaghaktaohimalikata. Ajikohiokhugitlo iliitkohigiyagaloangitnik ihoaghaotighat ihomagiyaoyugaloit hapkuninga naonaiyaotaitni. Nakoanakhimayot hapkua ihoaghaotighait naonaiyaghimayot tatvani VSECs-gita pivaliatjutaitnik, nanminiktakutighainik, havaghakhiokutighaitnik, uvalu ilihaotighaitnik uvalu ilihakpalikutighaitnik.

Taimaitmat tatva hamna tamatiomalugo kanogininga tatvani Havagiyaoyomi hapkuninga hilalikinikut, mannikamiotanik, Emmagiktoni, Tagiokmi, uvalu inuit iliitkohiktotaitnik tatva ihomaghutaohimayot ematot **Ihomalotaongitot**.

Amegaikpaliotiginiaktaitnik Naonaiyaotaitnik Enektikutait

Ihomagiyait hapkua amegaikpaliotiginiaktaitnik naonaiyaotait havagiyaohimayot tatvani tamaitni ukkua VEC-gani uvalunin VSEC-gani naonaiyaghimanikata tatvani Havagiyaoyomi-havagiyaoyomik ihoilotaonikat. Pihimayakangitot hapkuninga Havagiyaoyomi havagiyaoyomik ihoilotikaktomik (takulugo una Titigak 6 uvani Atoktaoloaktomi Makpigami), kihiani tamaita hapkua ihomalotaoloangitot Havagiyaoyomi-havagiyaoyot ihoilotaonikata naonaiyaktaohimangitot.

Naonaiyaotait hapkuninga Havagiyaoyomi-Ihoilotaitnik Naonaiyaotaita iliitogihimayait hapkua ihomalotaongitot, kihiani pikangitot hapkuninga ihoilotaoniagahugiyaoyonik. Tamaita naonaiyaotait ihoilotaoniaktonik ihomagiyait tatva mikitovlotik ikkituvalaaktot, himiktaohimavlotik hiamangitangita ahinot, otiktitaoyungnaktot uvalunin hivitungitot tatva hamna ihoaghaotighat uvalu monagitjutighaita oktotighat ehoaghaktaohimalikata. Nakoanakhimayot hapkua ihoaghaotighait ilaliotihimangitait hapkununga ihoilotaoniagahugiyaoyonot uvalunin titikniliokta ohimayot naonaipkutaitnun.

Taimaitmat tatva hamna tamatiomalugo kanogininga tatvani Havagiyaoyomi tatva ihoaghaikatiginahoakluget hapkua allat kingoani, ublomi atoktaoyoni uvalunin kakugunoak hivonighami hapkua Havagiyaoniaktot hapkuninga hilalikitjutinik, mannikami, tagiokmi, uvalu inuit huliyokagotaitnik tatva ihomagiyaoyot Ihomalotaongitot

Titiknilioknikut Naonaiyaotaita Enektigotai

Ataohik una ukkua NIRB-kut hapkua 10-gungmata ikkitiyaoyot EIS-ni maligakiyait tatva ilaliotiyagiakakmata hapkuninga titiknilioknikut kanogiliyokaknikat naonaiyaotaitnik. Hamna maligagiyat titigaghimangmat tatva “emaitmat ihoakutaokpat, hamna EIS ilaliotihimayagiakaktok tamaitnik ihoilotaoniagahugiyaoyonik hapkuninga avatilikinikut uvalunin inulikinikut-pivalialikinikut titikniliokutaoniaktonik.” Tatva ihoilotaoniagahugiyaoyonik pihimayakangitot tatvani Havagiyaoyomi. Kihiani, tamaita hapkua ihoilotaoniagahugiyaoyot ihomalotaongitot hapkua titikniliokutaoyonik naonaiyaotait. Hapkua nakoatokutaoyot ihoakutait ilaliotihimangitait tatvunga titikniliokutaita naonaiyaotaitnun.

Hamna titikniliokutaitnik ihoilotaoniagahugiyaoninga okaotaohimayogaloak ilaliotihimavloget tatvunga kihingotaohimayonik naonaiyaotaitnun, tatva ihomalotaoniaktonik ihoilotaoyonik nigiogiyakangitot.

Taimaitmat, hamna Havagiyaoyok nigiogiyaongitok tatva ihoilotaoloni hapkununga titikniliokutaoyonik hapkuninga hilalikinikut, mannikami havagiyaonik tagiokmi, uvalu inuit holilokagotaitnun.

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Glossary

English Term	Translated Inuktitut Term	Translated Inuinnaqtun Term	English Definition	Inuktitut Definition	Inuinnaqtun Definition
Active layer	ᐊᐅᓚᓂᖅᑲᖅᑐᖅ ᓄᓇᐅᑉ ᖃᖓ	Auktuqtaqtuq nuna	The top layer of the ground subject to annual thawing and freezing in areas underlain by permafrost.	ᖃᖓ ᓄᓇᐅᑉ ᐊᕿᔪᑕᒫᑦ ᐊᐅᖅᑲᑕᖅᑐᖅ ᕿᐊᖅᑲᑕᖅᑐᖅ ᖃᖓᓂ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᕿᐊᖑᓂᕆᔭᖓᓂᒃ.	Tamna qalliq nuna maniqami pilaqtuq ukiuqtamaat auktuqtaqnia qiqitaqnialu nunat ataagut qiqumainaqtuq.
Adaptive management	ᓈᒻᒪᒃᓯᓕᕈᓐᓇᖅᓂᖅᒧᑦ ᐊᐅᓚᑦᑎᓂᖅ	Ihuaqhiyaqnit aulatyuhit	A systematic approach for learning from management actions and continually improving practices.	ᐊᐅᓚᑦᑎᔾᔨᑎᕆᔭᐅᔪᖅ ᐃᓕᓐᑦᑎᓂᖅᒧᑦ ᐊᐅᓚᑦᑎᖅᑲᑦᑕᖅᓂᖅᒥᒃ ᐊᒻᒪᓗ ᑲᔪᓯᓂᖅᑲᖅᑐᒥᒃ ᐱᐅᓯᕚᓪᓕᐊᓂᖅᒥᒃ ᐊᑐᖅᑲᑦᑕᖅᓗᓂ	Havagutit pityuhit ilittaqvigini aulaniqnut hugiaqnit nakuuhivalianginaqhugit pitquhiit.
Air quality standards	ᐊᓂᖅᑎᕈᑎᕈᑎᐅᑉ ᖃᓄᐃᓐᓂᖏᔾᔭᖓᓄᑦ ᐊᑐᒐᒃᓴᓕᐊᖑᔪ	ᑐᕌᒐᑦ ᐊᓂᖅᖠᖅᑕᐅᔪᒥᒃ ᓱᕈᖅᓇᖅᑐᓕᖓᓂ ᐊᕙᑎᒥᓪᓚᖅᑐᖅ ᓴᖅᑭᑕᐅᔪᖅ ᐊᑯᓂᐅᔪᒧᑦ ᓴᐳᔾᔨᓂᐊᖅᓗᓂ ᐃᓄᓕᒫᑦ ᖃᓄᐃᖕᖏᑦᑎᐊᖅᓂᐊᖅᓂᖅᒧᑦ ᐊᒻᒪ ᐊᕙᑎᒥ.	Aniqhaktugaq qanugitnia atuqtauvaknit	Objectives for maximum concentrations air contaminants in the atmosphere developed to ensure long-term protection of public health and the environment.	Pinaguaqnit anginiqpamik katihimanit aniqhaktugaq halumaitnit hilami pivaliayunit atuqpiagahuaqni hivituyumut hapuhimanit inungnut aaniaqtailinit avatigiyauyuqlu.
Ambient air quality	ᐊᓂᖅᑎᕈᑎᐅᑉ ᖃᓄᐃᓐᓂᖓ	Qanimi aniqhaktugaq qanugitnia	The outdoor air quality at a particular site.	ᓯᓚᒥ ᐊᓂᖅᑎᕈᑎᐅᑉ ᖃᓄᐃᓐᓂᖓ ᓇᓗᓇᐃᖅᓯᒪᔪᒥ ᐃᓂᒥᒃ.	Tamna hilami aniqhaktugaq qanugitnia taihimayuni inaitni.
Ammonium nitrate (AN)	ᐅᔭᕋᓐᓂᐊᖅᑕᐅᔪᕕᓂᖅᓂ ᓯᑎᔪᕆᑦ ᐲᔭᖅᑕᐅᔪᕕᓂᑦ	Ammonium nitrate (AN)	Chemical compound used as an oxidizing agent in ANFO (ammonium nitrate - fuel oil) explosives.	ᐃᓚᒃᓴᖅ ᐊᑐᖅᑕᐅᕚᒃᑐᖅ ᓯᖅᑲᓕᔾᔪᑕᐅᓪᓗᓂ ᐅᔭᕋᓐᓂᐊᖅᑐᐅᔪᕕᓂᖅᓂ ANFO–ᓃᓰᓂᒃ (ᐲᔭᖅᑕᐅᔪᕕᓂᑦ – ᐅᖅᓱᐊᓗᒃ) ᖃᖅᑕᖅᑐᑦ.	Avugiyauttaqtuq hunaunia atqutauyuq aniqhaktugaliqtut avuyuq tapkunani ANFO (ammonium nitrate - uqhuqyuaq) qaqtautit.
ANFO	ᐲᔭᖅᑕᐅᔪᕕᓂᒃ ᐅᔭᕋᓐᓂᐊᖅᕕᓂ ᓯᖅᑲᓕᔾᑕᐅᔾᔪᑕᐅᓱᑦ ᐅᖅᓱᐊᓗᒃ	ANFO	Ammonium nitrate/fuel oil explosive.	ᐲᔭᖅᑕᐅᔪᕕᓂᑦ ᓯᖅᑲᓕᔾᔪᑎ/ᐅᖅᓱᐊᓗᒃ ᖃᖅᑕᖅᑐᖅ.	Ammonium nitrate /uqhuqyuaq qaqtaut.

English Term	Translated Inuktitut Term	Translated Inuinnaqtun Term	English Definition	Inuktitut Definition	Inuinnaqtun Definition
Backfill	ᓴᐅᓯᔾᔪᑎ	Kivviuttaq	To refill an excavated area.	ᓴᐅᔭᐅᓂᖅ ᓴᒡᒐᖅᑕᐅᔪᕕᓂᕐᒥᒃ.	Ilullitqikhaqnia iluttugauyuq nuna.
Banded iron formation (BIF)	ᐅᔭᖅᑳᑦ ᓴᕕᕋᔭᒃᓴᖃᖅᑐᑦ	Titiqtauyuq havik tuhagakhaq (BIF)	Almost exclusively a Precambrian sedimentary unit consisting of repeated, thin layers (a few millimeters to a few centimeters in thickness) of silver to black iron oxides, alternating with bands of iron-poor shales and cherts, of similar thickness.	ᐅᔭᖅᑳᑐᖃᕐᓂ ᐃᓚᖃᖅᑐᖅ ᓴᖅᑭᖓᒐᒐᔪᒃᓘᑎᒃ, ᑐᐊᑦᑐᓂᒃ (ᒥᓕᒦᑕᒐᔫᓂᒃ ᓴᓐᑕᒦᑕᓂᒃ ᑐᕐᕈᓂᓕᑦ) ᓴᕕᕋᔭᓂᒃ ᕿᕐᓂᖅᑐᓄᑦᑐ ᓴᕕᕋᔭᓂᒃ ᐃᓚᒃᓴᑦ, ᖁᓕᕕᓕᖅᓯᒪᔪᑦ ᐅᔭᖅᑳᓂ ᓴᕕᕋᔭᒃᓴᖃᖅᑐᓂᒃ ᐅᔭᖅᑳᑦᑎᐊᕙᐅᖏᑦᑐᓂᒃ ᐊᒻᒪᓗ ᕿᓪᓕᖅᑐᓕᖕᓂ, ᐅᔭᐸᓗᖏᓐᓂ ᑐᕈᓂᓖᑦ.	Kihimituapyauyuq Qaiqtuq uyagak piqaqtuq atutqikhainaqnia, hattut qaligiktaqni (ikittut milimiitat tikitlugu ikittut santimiitat ipyunia) tamna silver talvunga qiqnagiktuq haviqaqnit, kipuktaqtut taqhaqaqninuaqnut haviknik uyaqat quqhuqtatlu, taimattauq ipyuninik.
Basal cryopeg	ᖁᐊᖅᓯᒪᖏᑦᑐᑦ ᓄᓇᐅᑉ ᐃᓗᐊᓂ	Basal cryopeg-nga	Layer of unfrozen ground that freezes and thaws between the lower portion of the permafrost and the unfrozen ground below.	ᐃᑭᐊᖓᓂ ᓄᓇᐅᑉ ᖁᐊᖃᑦᑕᖅᑐᑦ ᒫᖑᖃᑦᑕᖅᑐᑦ ᐊᑖᓂ ᓄᓇᐅᑉ ᖁᐊᖅᓯᒪᓂᕆᔭᖓᓂᒃ ᐊᒻᒪᓗ ᖁᐊᖅᓯᒪᖏᓂᕐᒥ ᓄᓇᐅᑉ ᐊᑖᓂ.	Qaligiknia qiqumaittuq nuna qiqivaktuq auktuqpakhunilu akungani ataani ilanga qiqumaitnaqniq qiqulailguqlu nunap ataani.
Before-After/Control-Impact (BACI)	ᓯᕗᓂᐊᓂ–ᑭᖑᓂᐊᓂ/ ᐊᒃᑐᕐᓂᖃᖅᑎᑦᑎᓂᕐᒧ ᐊᐅᓚᑦᑎᔪᓐᓇᕐᓂᖅ	Hivuagut-Kinguagut/Munaginia-Aktuaniq (BACI)	An experimental design that consists of potential effects sites (impact sites) and reference sites (control sites) both measured during “before” and “after” periods.	ᐆᒃᑑᕋᖅᑕᐅᓯᒪᔪᖅ ᐋᖅᑭᒃᓱᖅᑕᐅᓯᒪᓂᖅ ᐃᓚᖃᖅᑐᖅ ᐊᒃᑐᐊᓂᖃᑐᐃᓐᓇᕆᐊᖃᕐᓂᕐᒧᑦ ᐃᓂᓂᒃ (ᐊᒃᑐᖅᑕᐅᓯᒪᓂᖃᖅᑐᑦ) ᐊᒻᒪᓗ ᖃᐅᔭᐅᕕᒃᓴᖅ (ᐊᐅᓚᑕᐅᓂᓕᑦ ᐃᓃᑦ) ᐆᒃᑐᕋᖅᑕᐅᓯᒪᔪᑦ “ᓯᕗᓂᐊᓂ” ᐊᒻᒪᓗ “ᑭᖑᓂᐊᓂ”.	Uutugutauyuq hanatyuhikhaq ilalik atulat aktuanit inait (aktuanit inai) taiyauyutlu inai (munagiyat inai) tamatkiknik uuktugat atuqtitlugu “hivuagut” tamnalu “kinguagut” pivigiyai.

English Term	Translated Inuktitut Term	Translated Inuinnaqtun Term	English Definition	Inuktitut Definition	Inuinnaqtun Definition
Best management practices	ᐱᐅᓂᖅᐹᓂ ᐊᐅᓚᑦᑎᔾᔪᑎᑦ	Nakuuniqpanik aulatyuhit pitquhiit	A standard way of doing things that has been developed over time based on consistently superior results to those achieved by other means. A method of quality assurance that fosters continuous improvement.	ᐊᑐᒐᒃᓴᓕᐊᒍᓯᒪᔪᖅ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᑦ ᓴᖅᑭᑕᐅᓯᒪᕗᑦ ᑐᙵᓂᖃᖅᑐᓂᒃ ᐱᐅᓂᖅᐹᖑᔪᓂᒃ ᐊᓂᒍᐃᔾᔪᑕᐅᔪᓂᒃ ᐱᔭᐅᕙᒃᑐᑦ ᐊᑑᑎᓂ ᐊᓯᐊᒍᑦ. ᐊᑐᖅᑕᐅᔾᔪᑎᑦ ᐱᐅᓂᖅᐹᖑᓂᐊᕐᓗᑎᒃ ᐱᐅᓯᕙᓪᓕᐊᔾᔪᑕᐅᓪᓗᑎᒃ.	Atuqtauvaktut pityuhit tahapkuat pivaliatitauyut akuni piplugit atuinaliqninut nakuuniqhanik qanugitnit tahapkuat pitaqnit ahiitigut piplugit. Pityuhiq nakunia atuqpiaguta tapkuat kayuhinaqnit nakuuhivalianit.
Borrow area	ᓴᓪᓚᕐᕕᐅᑉᕕᒃ	Iluttuqtiqnia nuna	An excavation used to source materials for use in construction.	ᓴᓪᓚᕐᓂᖅ ᐊᑑᑎᖃᖅᑐᒃᓴᓂ ᓴᓇᔭᐅᓂᕐᒧ ᐊᑐᖅᑕᐅᕙᒃᑐᑦ.	Iluttuqtiqniq atuqtauyuq pitaqninut hunat atuqtakhat hananiqmun.
BP	ᒫᓐᓇᐅᔪᕐᒥ ᑭᖑᓂᐊᓂ	BP-nga	Pertaining to archaeology, before present. A term used to refer to the antiquity of archaeological materials or cultures. Generally, BP is recorded in relation to 1950.	ᑐᕌᖓᔪᖅ ᐃᑦᑕᕐᓂᓴᓕᕆᓂᕐᒥ, ᒫᓐᓇᐅᔪᕐᒥ ᑭᖑᓂᐊᓂ. ᑕᐃᒎᓯᖅ ᐊᑐᖅᑕᐅᕙᒃᑐᖅ ᐃᑦᑕᕐᓂᑕᐅᔪᓂ ᐃᑦᑕᕐᓂᑕᓂᙱᖅᑐᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᕿᐱᕐᑮᔭᓂ. ᑕᒪᐃᓐᓅᖓᔪᓂ, ᒫᓐᓇᐅᔪᕐᒥ ᑭᖑᓂᐊᓂ ᑎᑎᖅᑕᐅᕙᒃᑐᑦ ᑐᕌᖓᔪᓄᑦ 1950–ᑐᖃᓂ.	Piplugit inituqlituqat, hivuagut piniahaqnit tatya. Taiguhiq atuqtauyuq utuqauninut inituqlituqat hunat ilitquhiitluniit. Atuqpakniqhaq, BP-nga titiqtauyuq piplugu tamna 1950.
Campsite	ᑕᖕᒫᕐᕕᕕᓂᖅ	Hiniktaqvik	An archaeological site which has cultural features that suggest habitation and/or the presence of cultural material that suggest a variety of activities.	ᐃᑦᑕᓂᑕᓕᕆᕕᒃ ᐱᖅᑯᓯᑐᖃᓂ ᐱᑕᖃᖅᑐᖅ ᓇᔪᕐᕕᐅᔪᕕᓂᕐᓂ ᐊᒻᒪᓗ/ᐅᕝᕙᓘᓐᓃᑦ ᐱᖁᓯᑐᖃᓂ ᐊᑐᖅᑕᐅᕙᓚᐅᖅᑐᓂᒃ ᖃᓄᐃᑦᑐᕈᓘᔭᕐᓂ ᖃᓄᐃᓕᐅᕐᓂᖃᖅᑐᓂᒃ.	Inituqliqaqvik inaa tamna ilitquhiqnut piqaqtuq nayuqtauhimanianut tamnalu/tamnaluniit piqaqnia ilitquhiqnut hunat pihimavakhimania allatqinik huliniit.

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Canadian Council of Ministers of the Environment (CCME)	ᑲᓇᑕᒥᐅᑦ ᑲᑎᒪᔨᖏᑦ ᒥᓂᔅᑕᓄᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ	Kanatamiuni Katimayit Minihitauyunut Avatiliqtit (CCME-kut)	CCME is comprised of the environment ministers from the federal, provincial, and territorial governments. These 14 ministers normally meet at least once a year to discuss national environmental priorities and determine work to be carried out under the auspices of CCME. The Council seeks to achieve positive environmental results, focusing on issues that are national in scope and that require collective attention by a number of governments.	ᑲᓇᑕᒥᐅᑦ ᑲᑎᒪᔨᖏᑦ ᒥᓂᔅᑕᓄᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐃᓚᕐᑲᖅᑐᑦ ᐊᕙᑎᒥ ᒥᓂᔅᑕᐅᔪᓂ ᒐᕙᒪᑐᕐᑲᕐᓂ, ᐊᕕᒃᑐᖅᓯᒪᓂᐅᔪᓂᒃ, ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥ ᒐᕙᒪᖏᓐᓂᒃ. ᑖᒃᑯᐊ 14-ᖑᔪᑦ ᒥᓂᔅᑕᐃᑦ ᑲᑎᕐᑲᑎᒌᒃᐸᒃᑐᑦ ᐊᑕᐃᓯᐊᖅᓱᑎᒃ ᐊᖀᒨᑉ ᐃᓱᐊᓂ ᐅᕐᑲᐅᓯᕐᓂᐊᕐᓱᑎᒃ ᑲᓇᑕᓕᒫᒥ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᕗᓪᓕᐅᔾᔭᐅᔭᒃᓴᓂ ᐊᒻᒪᓗ ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᐱᓕᕆᐊᒃᓴᓂ ᐊᑖᒍᑦ ᐃᑲᔪᖅᑐᐃᓂᕐᒥᒃ ᑲᓇᑕᒥᐅᑦ ᑲᑎᒪᔨᖏᑦ ᒥᓂᔅᑕᓄᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ. ᑲᑎᒪᔨᑦ ᕐᑭᓂᖅᐸᒃᑐᑦ ᐱᐅᔪᓂ ᐊᕙᑎᓕᕆᔾᔪᑎᓂᒃ, ᑕᐅᑐᓪᓗᐊᕐᓂᕐᑲᖅᓱᑎᒃ ᐃᓱᒫᓘᑕᐅᔪᓂᒃ ᑲᓇᑕᓕᒫᒥ ᑕᐅᑐᒃᑕᐅᔪᓂ ᐊᒻᒪᓗ ᐱᑕᕐᑲᓇᐊᕐᑲᕐᓗᓂ ᐊᑕᐅᑦᑎᒃᑯᑦ ᐅᔾᔨᕈᓱᖕᓂᕐᒥᒃ ᐊᒥᓱᓄᑦ ᒐᕙᒪᐅᔪᓂᒃ.	CCME-kut ilalgit tapkuat avatiliqutinut minihitauyut tapkunanga kavamatiqatkut, nunaqyuaqtat, nunatagauyutlu kavamaitnit. Tahapkuat 14 minihitauyut katimavakniqhat atauhiqhugu ukiumi uqauhigininut nunaqyuaqmi avatiliqutit hiviliutyaqnit naunaigahuaqhugitlu havat piyakhat atuqhugit tapkuat pihimanit tapkuat CCME-kut. Tapkuat Katimayit qiniqtut pitaqninik nakuuyumik avatiliqutit qanugitnit, pinahuaqhugit pityutauyut pihimayut nunaqyuamun ihumagiyaunit piyalgitlu katitlugit piyaunahuaqnit qaphiuninut kavamauyunit.
Carbon monoxide (CO)	ᐊᐅᖕᒐᑦᑐᖅ ᐳᔪᖅ	Carbon monoxide puyuq tuqunaqtuq (CO)	A colorless, odourless gas emitted from combustion processes. It can cause harmful health effects by reducing oxygen delivery to the body's organs and tissues.	ᑲᓚᕐᑲᖖᒋᑦᑐᖅ, ᑎᐱᕐᑲᖖᒋᑦᑐᖅ ᒑᓯᐅᓪᓗᓂ ᐃᑯᐊᓪᓚᒃᑐᒥᖖᒑᖅᑐᖅ. ᐱᔾᔪᑕᐅᕙᒃᑐᖅ ᑎᒥᒧᑦ ᓈᒻᒪᖖᒋᓕᕈᑕᐅᓗᓂ ᐊᓂᖅᓵᑕᐅᔪᖅ ᒥᑭᓪᓕᒋᐊᖅᑕᐅᓪᓗᓂ ᑎᒥᐅᑉ ᐃᓗᓕᖕᒐᓄᑦ ᐅᕕᓂᖕᒧᓪᓗ.	Taqhaittuq, tipaittuq kaasi aniayuq ikualaniuyunit pityuhiqnit. Tamna huguilaq aaniaqtailiniqmun aktuanit mikhivaligutaupluni aniqhaktugaqnik atuqtauninik timiuyumun uumatyutainut uvinikmutlu.
Cat-train	ᐃᑯᒪᓕᒃ ᐅᓂᐊᕈᑦ	Pualgitilgit-uiguligiknit	A crawler tractor pulling a train of sleighs across snow or ice.	ᐅᓂᐊᖅᓯᔾᔪᑦ ᐊᒥᓱᓂᒃ ᐊᐳᒻᒥ ᓯᑯᒥᓪᓘᓐᓃᑦ.	Akhaluaquqtuyuq pualgitilik kalittuq uiguligiktihimayunik aalianik aputip qangagut hikukkutluniit.

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Closed talik (isolated talik)	ᓄᓇ ᖁᐊᕈᓐᓇᖖᒋᑦᑐᖅ (ᐃᓛᒃᑰᖅᑐᖅ ᖁᐊᕈᓐᓇᕐᒋᑦᑐᖅ)	Talihimayuq auktuqtarniq (ilikkuqtuq auktuqtarniq)	Talik that is encased in permafrost in all directions (laterally, above, and below).	ᖁᐊᕈᓐᓇᖖᒋᑦᑐᖅ ᐃᓗᐊᓃᑦᑐᖅ ᓄᓇᐅᑉ ᖁᐊᖅᓯᒪᓂᕆᔭᕐᖓᓂᒃ ᓇᒧᓗᒃᑖᓂ ᑐᕌᕈᑎᓕᒃ (ᓇᓪᓚᖕᒐᔪᒥᒃ, ᖄᖕᒐᓂ, ᐊᒻᒪᓗ ᐊᑖᓂ).	Auktuqtarniq tamna talihimayuq qiqumainaqnirmin tamaitnit avataanit (hanimun, qulaanit, ataanitlu).
Coarse fragments	ᐊᖕᒋᔫᑎᓂᒃ ᓯᖁᓪᓗᖅᓯᒪᔪᑦ	Hiqumaquqtuyut ahiqut	Mineral rock fragments found in the soil: gravel (2 - 64 mm), cobbles (65-250 mm) and boulders (> 250 mm).	ᐅᔭᕋᖕᓂᐊᒐᒃᓴᑦ ᐅᔭᖅᑲᑦ ᓯᖁᓪᓗᒐᐃᑦ ᐃᐸᔪᒥ: ᓯᐅᕋᕐᒥ (2–64 ᒥᓚᒦᑕᕐ), ᐅᔭᖅᑲᑦ (65-250 ᒥᓚᒥᑕᕐ) ᐊᒻᒪ ᐅᔭᕋᕐᔪᐊᑦ (ᒥᑭᓐᓂᖅᓴᑦ 250-ᒥᓕᒦᑕᓂᒃ).	Havikhat uyaqat hiqumakut naniyauyut nunami: tuapaliami (2 – 64 mm), uyagaliat (65 – 250 mm) tamnalu uyagaluit (angitqiyai 250 mm).
Community Advisory Group (CAG)	ᓄᓇᓕᖕᒥ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᑦ	Nunaliuyut Uqautyiyit Ilagiit (CAG-kut)	Comprised of individuals associated with local Hunter and Trapper Organizations (HTOs), the Kitikmeot Heritage Society, Hamlet Councils, as well as local Elders and youth.	ᐃᓚᖃᖅᑐᑦ ᐃᓄᑉᓂ ᐊᒃᑐᐊᓂᓕᖕᓂ ᓄᓇᓕᐅᑉ ᐊᖑᓇᓱᒃᑎᓕᕆᔨᒃᑯᖕᒋᓐᓂᒃ, ᖁᑎᕐᒥᐅᑦ ᐃᑦᑕᕐᓂᑕᓕᕆᓂᕐᒧᑦ ᑲᑐᔾᔨᖃᑎᒌᖕᒋᓐᓂ, Hᐋᒻᒪᓚᒃᑯᓐᓂ ᑲᑎᒪᔨᓂ, ᐊᒻᒪᑦᑕᐅᖅ ᓄᓇᓕᖕᒥ ᐃᓐᓇᕆᔭᐅᔪᓂᒃ ᐊᒻᒪᓗ ᒪᒃᑯᒃᑐᖕᒋᓐᓂ.	Ilalgit inungnik piqatauyut tapkununga Angutikhaligiyit Timigiyat (HTO-kut), tapkuat Kitikmeot Piqutituqaligiyit Katimayit, Hamlatkut Katimayit, tapkualuttauq Inutqutyat inuuhuktutlu.
Community Well-being (CWB)	ᓄᓇᓕᖕᒥ ᖃᓄᐃᙱᑦᑎᐊᕐᓂᖅ	Nunaliuyuni Inuuhigikniq (CWB-ngi)	A broad concept that approximates the overall wellness of quality of life in communities based on the complex interactions between existing social, economic, and cultural conditions.	ᐅᖃᐅᓯᖅ ᑐᑭᖃᖅᑐᖅ ᑐᕌᕈᑕᐅᔪᓂ ᑕᒪᐃᓐᓄᑦ ᖃᓄᐃᙱᑦᑎᐊᕐᓂᕐᒥᒃ ᐃᓅᓯᕐᒥ ᓄᓇᓕᖕᓂ ᑐᙵᓂᖃᕐᓗᓂ ᐊᒥᓱᓂᒃ ᑲᑎᖃᑎᖃᕈᓘᔭᕐᓂᕐᒥᒃ ᐃᓅᖃᑎᒌᒃᑐᓂᒃ, ᑮᓇᐅᔾᔭᓴᐅᑎᓕᕆᓂᕐᒥ, ᐊᒻᒪᓗ ᐱᖁᓯᑎᒍᑦ ᖃᓄᐃᓕᖕᒐᓂᖏᑦ.	Attaqtuyuq ihumagiyaunia tamaitnut inuuhigikniq qanugitnianut inuuniq nunaliuyuni piplugu amihunut hulittaqnit tahapkuat inuliqutit, kiinauyaliugutit, ilitquhiitlu qanugitnit.
Contact water	ᐊᒃᑐᖅᑕᐅᓂᓕᒃ ᐃᒪᖅ	Aktuayauyuq imaq	Water that has come into contact with mine components, such as waste rock storage areas or open pits.	ᐃᒪᖅ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᖅ ᐅᔭᕋᖕᓂᐊᖅᑕᐅᔪᓂᒃ, ᓲᖅᓗ ᐊᑦᑕᑯᓂ ᐅᔭᖅᑲᓂ ᑐᖅᑯᖅᑕᐅᕕᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᓴᒡᒐᕕᐅᔪᓂᒃ.	Imaq aktuahimayuq uyagakhiuqvikmun ilagiyainut, tahapkuatut iqakut uyagait tutqumaviit angmaumayutluniit iluttuqhimayut.

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Contaminant of potential concern (COPC)	ᓱᕈᕐᓇᖅᑐᖅ ᐃᓱᒫᓗᑎᒃᓴᐅᑐᐃᓐᓇᓂᐊᓕᒃ	Halumaittut ihumalugiyaulat (COPC-ngi)	Chemical substances identified through a screening process that may have the potential to cause adverse effects in receptors.	ᐃᓚᒃᓴᐃᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᒃᑯᑦ ᐅᓗᓂᐊᓇᕈᑕᐅᑐᐃᓐᓇᓂᐊᓕᖓᓂ ᐊᒃᑐᖅᑕᐅᓂᕐᓗᖃᕐᓗᓂ.	Avugiyauyut hunat naunaiqtauyut atuqhugit naunaiyautit pityuhit pilaqtut pityutaunit ihuittumik aktuanit pivigiyainut.
Criteria Air Contaminants (CACs)	ᓱᕈᕐᓇᖅᑐᓖᑦ ᐊᓂᖅᓵᖅᑕᐅᔪᒥ ᐱᐅᔪᓐᓃᕐᓂᖃᕐᓗᓂ	Maligait Aniqhaktugat halumailguit (CAC-ngit)	A group of pollutants which cause air issues such as smog and acid rain. CACs include the following pollutants; sulphur oxides (SOx), nitrogen oxides (NOx), various size fractions of particulate matter (PM), volatile organic compounds (VOC), carbon monoxide (CO), and ammonia (NH_3).	ᐊᒥᓱᑦ ᓱᕈᕐᓇᖅᑐᓖᑦ ᓯᓚᒥ ᐃᓱᒫᓘᑕᐅᔪᓕᐅᕈᑕᐅᕙᒃᑐᑦ ᓲᕐᓗ ᐳᔪᕐᓗᒃ ᐊᒻᒪ ᐆᑕᕐᓇᖅᑐᓕᖕᒥ ᒪᕐᑯᒃ. ᓱᕈᕐᓇᖅᑐᓖᑦ ᐊᖅᓵᖅᑕᐅᔪᒥ ᐱᐅᔪᓐᓃᕐᓂᖃᕐᓗᓂ ᐃᓚᖃᖅᑐᖅ ᓱᕈᕐᓇᖅᑐᓂᒃ ᐅᑯᓂᖓ; ᓲᓪᕗ ᐋᒃᓴᐃᑦ, ᓇᐃᑐᔾᔨᓐ ᐋᒃᓴᐃᑦ, ᐊᔾᔨᒌᙱᑦᑑᑎᓂ ᖁᐱᓯᒪᓂᓖᑦ ᓂᐅᖅᑕᐅᔪᓐᓇᖅᑐᓂᒃ, ᓄᓇᓂᙳᖅᓯᒪᔪᓂᒃ ᓂᐅᖅᑕᐅᔪᓐᓇᑐᑦ, ᐳᔪᖅ ᑐᕐᑯᓐᓇᖅᑐᑦ, ᐊᒻᒪᓗ ᐳᑖᒃ ᑎᐱᖃᒻᒪᓂᒃᑐᖅ.	Ilagit halumaitgut tahapkuat pityutauyut tahapkuatut puttiuhimanit huguilatlu nipaluit, CAC-ngit ilalgit tahapkuninga halumailgunik; huguilat oxides (SOx), nitrogen oxides (NOx), allatqit aktilangi avikhimanit ilagiyainut hunat (PM), hivuganalat hunat ilagiyait (VOC), carbon monoxide (CO), ammonialu (NH_3).
Crusher	ᓯᖃᓕᔾᔪᑦ	Hiquptigut	A machine found in a mill used to reduce the particle size of rock.	ᓯᖃᓕᔾᔪᑦ ᓯᖃᓕᕝᕕᖕᒥ ᐊᑐᖅᑕᐅᕙᒃᑕᖅ ᒥᑭᒡᓕᔾᔪᑕᐅᓪᓗᓂ ᐊᖏᓂᓕᔾᔭᖓᑕ ᐅᔭᕋᐅᑉ.	Hnalgut naniyauyuq havikhaliuqvikmi atuqtauyuq mikhigiaqninut hunat aktilanginut uyagannuit
Cryopeg	ᓄᓇ ᖁᐊᖃᑦᑕᕐᓂᖓ ᐊᐅᖃᑦᑕᕐᓂᖓ	Auktuqtaqniq	An extent of ground that freezes and thaws.	ᓄᓇᒥ ᖁᐊᖃᑦᑕᖅᑐᖅ ᐊᐅᒃᐸᒡᓗᓂᓗ.	Ilagiya maniqap qiqiyaqtuq auktuqtaqhunilu.

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Cumulative effect	ᑲᑎᒪᐅᖅᑐᑦ ᐊᒃᑐᖅᑕᐅᓂᖅ	Katitlugit aktuanit	Refers to an effect that is a result of a project-related effect acting in combination with effects from other projects or activities. The interaction could be of a longer time period (past and future projects or activities) or a larger spatial scale (home range of a wildlife species).	ᑐᕌᖓᔪᖅ ᐊᒃᑐᖅᑕᐅᔪᓂᒃ ᐱᓕᕆᐊᕐᒥᙵᖅᑐᓂᒃ ᐊᒃᑐᖅᓂᖅᑲᕐᑐᓂ ᐊᑕᐅᑦᑎᒃᑯᑦ ᐊᑐᖅᑕᐅᓯᒪᔪᓂᒃ ᐊᓯᖏᓐᓂᒃ ᐱᓕᕆᐊᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ. ᐊᒃᑐᖅᑕᐅᓯᒪᓂᖅ ᐊᑯᓂᐅᔪᒨᖅᑐᓂᒃ (ᑭᖑᓂᕐᒥ ᐊᒻᒪ ᓯᕗᓂᕐᒥ ᐱᓕᕆᐊᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ) ᐅᕝᕙᓘᓐᓃᑦ ᐊᖏᓂᖅᓴᒥᒃ ᐊᑯᓂᐅᑎᒋᓂᓚᖏᓂ ᐃᓛᒃᑯᖅᑐᓂᒃ (ᐆᒪᔪᑦ ᓇᔪᕐᕕᒋᔭᖏᓐᓄᑦ).	Tugangayut aktuaniqnut piplugit havanguyuq-tunganani aktuanit huliyut ilagikninut tahapkuat aktuanit ahiinit havanguyunit huliniitluniit. Tapkuat piqatigiknit hivituniahaulat pivigiyat (qangiqtaqtut hivunikhamilu havanguyut huliniitluniit) angitqiyatluniit attaqtuninut aktilat (angilgagiyat tikitpagait angutikhat allatqit).
Cut and Fill Mining (MCF)	ᐲᔭᐃᓂᖅ ᐃᓗᓪᓚᖅᑐᐃᓗᓂᓗ ᐅᔭᕋᖕᓂᐊᕐᓂᖅ	Kipluqnia Kivviuhiqnialu Uyagakhiuqvik (MCF)	An underground mining method involving backfilling of voids as excavation advances.	ᐊᑖᒍ ᓄᓇᒥ ᐅᔭᕋᖕᓂᐊᕐᓂᖅ ᐃᓚᖃᖅᑐᖅ ᓴᐅᓯᓂᕐᒥᒃ ᐃᓗᓕᖃᕿᓐᓃᖅᑐᓂᒃ ᓴᓪᓚᖅᐸᓪᓚᐊᓂᖃᖅᑎᓪᓗᒍ.	Nunap iluani uyagakhiuqniq pityuhiq ilalik kivviuhiqtuiniqmik huilguliqtut amuqhaiviuninut pivalianit.
Cyanidation	ᐃᒪᕈᖅᑎᑦᑎᓂᖅ ᒎᓗᒥᒃ	Cyanide-liqtuiniq	A technique for extracting gold by converting gold to a water soluble complex using cyanide.	ᐲᔭᐃᕙᓪᓚᐊᓂᖅ ᒎᓗᒥᒃ ᐃᒪᙳᖅᑎᑕᐅᓗᓂ ᐊᑐᕐᓗᑎᒃ ᐊᒃᑎᔾᔪᑎᒥᒃ ᓯᑎᔪᓂᒃ.	Pityuhiq piiyaqninut guulit pinguqtittugit guulit imaqmun kinaulallaqnit pityuhit atuqhugit cyanide.
Cyanide	ᓴᐃᔭᓇᐃᑦ	Cyanide	A group of chemical compounds containing the cyano (Carbon-Nitrogen) group.	ᐃᓚᒃᓴᑦ ᐃᓗᓕᓕᑦ ᐊᐅᒃᑎᔾᔪᑎᒥᒃ ᓴᐃᔭᓅᒥᒃ (ᑳᐃᓐ–ᓇᐃᑐᕐᔨᓐ) ᐃᓚᒌᔭᐅᔪᓂᒃ.	Ilagit avugiyauvaktut paniqtut piqaqtut taphuminga cyano (Carbon-Nitrogen) ilagit.

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dBA	ᓂᐱᖅᑯᖅᑐᓂᕐᒧᑦ ᓇᓗᓇᐃᔭᐅᑦ	dBA	Sound levels measured with an A-weighted filter, which is within a response frequency range for humans and animals, between 1 kHz to 4 kHz (1,000 to 4,000 vibrations per second). The A-weighting scale follows the average human hearing response and enables comparison of the intensity of noise with different frequency characteristics.	ᓂᐱᖅᑯᖅᑐᓂᖅ ᐆᒃᑐᕋᖅᑕᐅᔪᖅ ᓂᐱᑮᓕᓕᐊᕈᑎᒥᒃ ᐊᑐᖅᓱᑎᒃ, ᓂᐱ ᑐᓵᔭᐅᔪᓐᓇᖅᑐᖅ ᐃᓄᖕᒧᑦ ᓂᕐᔪᑎᓄᑦᓗ, 1 kHz 4 kHz-ᒧᑦ ᑎᑭᐅᑎᔪᒥᒃ (1,000 ᑎᑭᐅᑎᓗᒍ 4,000 ᐊᐅᓚᔾᔭᐅᔪᓂ ᓴᑲᓂ ᐊᑯᓚᐃᑦᑐᓂᒃ). A–ᒥ ᐆᒃᑐᕋᐅᑎᖓᓂ ᒪᓕᒃᐳᖅ ᐃᓄᑐᐃᓐᓇᐅᑉ ᑐᓵᖓᓂ ᐊᒻᒪᓗ ᑕᐅᑐᙳᐊᕈᑕᐅᓗᓂ ᖃᓄᑎᒋ ᓂᐱᖃᖅᑎᒋᖕᒪᖔᑦ ᐊᓯᖏᓐᓄᑦ ᓂᐱᖅᑯᖅᑐᓂᕐᓄᑦ.	Nipitunit uuktugaqtauyut tapkununga A-uqumaipkutat halumaigipkutat, tapkuat iluanitytut hugiagutit akulaititnit piplugit inungnut angutikhanutlu, akungani 1 kHz tikitlugu 4 kHz (1,000 tikitlugu 4,000 hayuknit atauhiq sakitsini tikliknia). Tamna A-uqumaipkutaq uuktuta maliktuq tapkuat atuqtauvakniqhat inungnut tuhatyuhit hugiaqnit pilagutauyutlu hutqikninik akhuqnit nipitunit tahapkununga allatqit nipitutiginit qanugitni.
Decline	ᐃᓯᕐᕕᒃ	Mikhigiaqnit	Pertaining to a mine, a tunnel used to access an underground mine.	ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒨᖓᔪᖅ, ᓄᓇᒧᑦ ᐃᓯᕐᕕᒃ ᓄᓇᐅᑉ ᐊᑖᓅᕐᕕᐅᕙᒃᑐᖅ.	Piplugit uyagakhiuqvik, apquhiugaq nunap iluagut atuqtauyuq tikittaqnia nunap ataani uyagakhiuqvik.
Deposit	ᐅᔭᕋᖕᓂᐊᒐᒃᓴᓕᒃ	Piqarniq	Mineral or aggregate of minerals from which a valuable constituent, gold in the current Project, can be profitably mined.	ᐅᔭᕋᖕᓂᐊᒐᒃᓴᑦ ᐅᑦᕙᓘᓐᓃᑦ ᑲᑎᓯᒪᐅᖅᑐᑦ ᐅᔭᕋᖕᓂᐊᒐᒃᓴᑦ ᐊᑭᑐᓂᖃᖅᑐᑦ, ᒎᓗ ᑕᐃᑲᙵᑦ ᒫᓇᐅᔪᖅ ᐱᓕᕆᐊᕐᒥ, ᐹᓇᐅᔭᓕᐅᕈᑕᐅᑦᑎᐊᕈᓐᓇᖅᑐ ᐅᔭᕋᖕᓂᐊᖅᑕᐅᓗᓂ.	Piplugit uyagakhiuqniq tahapkuatluniit havikhat tahapkunanga pinnagiyaunit piqagutauyut, guulit taphumani tatya Havanguyuq, maniliugutauttialaqnit uyagakhiuqni.
Desalination	ᑕᕆᐅᖏᖅᑕᐅᓂᖅ	Tagiungiyainiq	The process of reducing the salinity of water.	ᐲᔭᐅᓂᖅ ᑕᕆᐅᕐᒥᒃ ᐃᒪᕐᒦᑦᑐᓂᒃ.	Pityuhiq mikhigiaqninik tagiuqaqnia immap.

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Dewater	ᐃᒪᐃᔭᐃᓂᖅ	Imaiyainiq	The act of removing water from a large water body or the ground.	ᐃᒪᐃᔭᐃᓂᖅ ᐊᖏᔪᑲᓪᓚᖏᒥ ᐃᒪᕐᒥ ᐅᕝᕙᓘᓐᓃᑦ ᓄᓇᒥ.	Pinia ahivaqtiginiq imaqmik tahamanga angiyumit imaqaqniuyumit maniqamitluniit.
Ecosystem	ᐆᒪᔪᑦ ᓇᔪᕐᕕᖓᑦ	Uumatyutit	A spatially defined system including all biological organisms and abiotic environment, interacting as a functional unit.	ᑐᑭᓯᓚᐊᖅᑕᐅᓯᒪᔪᖅ ᐃᓚᕐᑲᖅᑐᖅ ᕐᑯᐱᕐᕈᓂᒃ ᐅᒪᔪᕐᑲᕐᕕᐅᔪᓂᒡᓗ, ᓇᔪᕐᑲᑎᒌᒃᓲᑎᒃ.	Tamna attaqtunianut unniqtugut ilalik tamaitnik uumatyutinut uumayuvaluit mikkatanuitlu avatigiyait, piqatauyut atuqniqaqnit ilagigutainut.
Effluent	ᐃᒪᖅ ᐊᑦᑐᑯ	Halumailguq imaqtanga	Liquid waste discharged into the natural environment.	ᐃᒪᖅ ᐊᑦᑐᑰᓂᖅ ᑯᕖᔭᐅᔪᖅ ᓄᓇᒧᑦ.	Imaqta iqakut kuviyauyuq tahamunga huniumailgumut avatigiyauyumut.
Emulsion mixing plant	ᖄᖅᑕᖅᑐᓕᐅᕐᕕᒃ	Imiqpalayumut akuttivik	Facility serving the function of preparing ANFO explosives.	ᐱᓕᕆᕝᕕᒃ ᐊᑐᖅᑕᐅᕙᒃᑐᖅ ᖄᖅᑕᖅᑐᓄᑦ	Havagutit atuqtauyut piptyutauni hannaiyaqnit ANFO qaqtautit.
Emulsion-based explosives	ᐊᑯᐸᓕᖅᑕᐅᓯᒪᔪᑦ ᖄᖅᑕᖅᑐᑦ	Imiqpalayulgit qaqtautit	Mixture of two or more liquids in which one is present as microscopic droplets (e.g. ammonium nitrate) distributed throughout the other (fuel phase), stabilized with the help of emulsifier.	ᐊᑯᐸᓕᖅᓯᒪᔪᖅ ᒪᕐᕿᓂ ᐊᒥᓱᓂᒡᓘᓐᓃᑦ ᖃᐅᓯᖅᑐᒥᒃ ᐊᑕᐅᓯᖅ ᒥᑭᔫᒪᓇᖏᒥ ᐃᓚᒃᓴᖅᑲᖅᑳᓂ (ᓈᕐᓗᐅᔭᕋᖕᓂᐊᖅᑕᐅᔪᕕᓂᕐᓂ ᓯᑎᔪᖏᑦ ᐋᔭᖅᑕᐅᔪᕕᓂᑦ) ᐃᓕᔭᐅᕙᒃᑐᖅ ᐊᑐᓂ ᐊᓯᖓᓄᑦ (ᐅᖅᓱᐊᓗᒃ), ᐊᓯᙳᖅᑎᑦᑎᔾᔪᑕᐅᓪᓗᓂ ᑭᓂᖅᑎᕈᑎᒧᑦ ᐃᑲᔪᕈᑕᐅᓪᓗᓂ.	Akutnit malguk ilaplugitluniit imaqpalayut tapkuat aupa pihimania mikiyumik kutikkaqnianik (naunaipkutagiplugu ammonium nitrate) himautauyuq aipaanut (uqhugiyauyuq pityuta), hunialangitnia ikayuqtigiplugu qaqtautikhat.
Environmental Management System (EMS)	ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᐅᓚᑎᔾᔪᑎ	Avatiliqutinut Aulatyutit Haavgutit (EMS)	A framework that helps a company to achieve environmental goals and improve environmental performance through consistent control of its operations.	ᐋᖅᑭᒃᓱᖅᑕᐅᓯᒪᓂᖅ ᐃᑲᔪᕈᑕᐅᓂᐊᖅᑐᖅ ᑲᒻᐸᓂᒧᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᑐᕌᖓᖏᓐᓂᒃ ᐱᐅᓯᕆᐊᕐᓂᐊᕐᓗᒍ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᕙᓪᓕᐊᕋᐅᔾᓗᑎᒃ ᐊᐅᓚᓂᓕᒫᖓᓂᒃ.	Havagutit ikayuqtut nanminiliknik pitaqninut avatiliqutit pinahuaqnit nakuuhivaliqnilu avatiliqutit havattiaqnit atuinaqninut munaginit aulatani.

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Ephemeral	ᑰᒃᐸᓪᓚᐊᓂᖅ	Uumanikittut	A stream which flows only during or after rain or snow-melt and has no base flow component.	ᑰᒃᐸᓪᓚᐊᓂᖅ ᒪᕐᑯᐊᓂᓵᖅᑎᓪᓗᒍ ᐅᕐᕆᓘᓐᓃᑦ ᐊᐳᑦ ᐊᐅᒃᐸᓪᓚᐊᑎᓪᓗᒍ ᐃᖏᕐᕋᐃᓐᓇᐅᔪᕐᓂᖅᑲᑎᑦᑐᖅ.	Kuugauyaq tamna kuuktuq kihimiuyuq atuqtitlugu kinguagutluniit nipaliqaqtit aputlunit auktuqnianik kuukinagutaittuqlu.
Esker	ᓯᐅᕋᐅᑉ ᐃᖏᕐᕋᓂᖓ	QImiq	A long winding ridge of stratified sand and gravel formed by glacial meltwater.	ᐊᕗᖓᑐᖅᑕᖅ ᐃᖏᕐᕋᓯᒪᓂᖏᑦ ᓯᐅᕋᖅ ᐊᒻᒪᓗ ᐅᔭᖅᑲᕋᓛᑦ ᓯᕐᒥᒧ ᐊᐅᒃᐸᓪᓚᐊᓂᕆᔭᖕᒐᓂᙶᖅᑐᑦ.	Takiyuq hanguayaqtuq qimiqqaligiktitaqhimayuq hiugaq tuapaliaqlu pinguqtauhimayuq hikuqpiaqhimaniugaluamit auktuqnia imaq.
Exploration	ᕿᓂᖅᑲᑦᑕᐅᔪᕐᓂᖅ	Havikhaqhiuqniq	Process and activities of finding ore to mine.	ᖃᓄᐃᓕᐅᖅᐸᓪᓚᐊᓂᖅ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᓪᓗ ᓇᓂᓯᓇᓱᐊᕐᓗᓂ ᓴᕕᕋᔭᒃᓴᓂ ᐅᔭᕋᖕᓂᐊᒐᒃᓴᓂᒃ.	Pityuhiq huliniitlu naniyauyut havikhat uyagakhiuqni.
Explosive magazine	ᖄᖅᑕᖅᑐᖅᑲᕐᕕᒃ	Qaqtautiqaqvik	A building used for storage of explosives.	ᐃᒡᓗ ᓯᕐᓗᐊᓇᔭᐅᔪᖅ ᖄᖅᑕᖅᑐᓄᑦ.	Igluqpak atuqtauyuq tutqumavinik qaqtautit.
Exposure ratio	ᐆᒃᑐᕋᐅᑦ ᐊᒃᑐᐊᓂᖅᑲᕐᓂᕐᒍᑦ	Hatqiumaviuyq aktilanga	Method of estimating the risk to human health from a chemical. Calculated as the ratio of the estimated daily intake of a chemical to the tolerable daily intake of the chemical.	ᖃᐅᔨᓯᐊᕋᓱᐊᕐᓂᖅ ᐅᓗᕆᐊᓇᕋᔭᕐᓂᖓ ᐃᓅᑉ ᖃᓄᐃᓐᓂᕆᔭᖓᓄᑦ ᐃᓚᒃᓴᓂᙶᖅᑐᓂᒃ. ᓈᓴᖅᑕᐅᔪᖅ ᖃᔅᓯᐅᓂᕆᙳᐊᕋᔭᖅᑕᖓᓂᒃ ᐅᓪᓗᖅ ᐃᓗᐊᓂ ᐊᒃᑐᐊᓂᖅᑲᖅᑎᓪᓗᒍ ᐃᓚᒃᓴᒥᒃ ᓈᒻᒪᖕᓇᔭᖅᑐᖅ ᐅᓪᓗᖅ ᐊᑕᐅᓯᕐᒧᑦ ᐃᓚᒃᓴᓂ.	Pityuhiq mikhauttaqtuq hivuganaqninik inungnut aaniaqtailininut tapkunanga avugiyauttaqtut. Kititauyuq aktilanga mikhauhimania upluqmun timimuktaqnia naamagilaqnia upluqmun timimuktaqnia avugiyauvaktuq.

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Feature	ᖃᓄᐃᓕᖓᓂᖓᑦ ᓄᓇᐅᑉ	Qanugittunia	Pertaining to archaeology, portions of an archaeological site which are not portable but have been created or modified by humans. In this region, features are often formed of varying arrangements and numbers of rocks: hearths, stone circles (*i.e.*, tent rings), graves and cultural depressions or caches.	ᑐᕌᖓᔪᖅ ᐃᑦᑕᕐᓂᑕᓕᕆᓂᕐᒧᑦ, ᐃᓛᒃᑰᖅᓯᒪᔪᑦ ᐃᑦᑕᕐᓂᑕᖅᑲᕐᕕᓂᒃ ᓅᑕᐅᔪᓐᓇᖏᑦᑐᑦ ᑭᓯᐊᓂ ᓴᓇᔭᐅᓯᒪᓂᑯᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐋᖅᑭᒋᐊᖅᑕᐅᓯᒪᔪᕕᓃᑦ ᐃᓄᖕᖓ. ᐊᕕᒃᑐᖅᓯᒪᓂᐅᔪᕐᒥ, ᖃᓄᐃᓕᖓᓂᖏᑦ ᓄᓇᐃᑦ ᐋᖅᑭᒃᑕᐅᖅᑲᑦᑕᖅᑐᑦ ᐊᔾᔩᙱᖏᑑᑎᐅᓪᓗᑎᒃ ᐊᒻᒪᓗ ᖃᔅᓯᐅᓂᖏᑦ ᐅᔭᖅᑲᐃᑦ: ᐃᒐᕝᕖᑦ, ᐊᖕᒪᓗᖅᓯᓯᒪᔪᑦ ᐅᔭᖅᑲᑦ ᐊᑐᖅᑕᐅᓪᓗᑎᒃ (ᓲᖁᓗ, ᑐᐱᖅᑲᖅᕕᓂ), ᐃᓗᕖᑦ ᐊᒻᒪᓗ ᐱᖁᓯᑎᒍᑦ ᐃᓂᓕᐊᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐱᖁᔭᖅᑕᐅᔪᕕᓃᑦ.	Piplugit inituqlituqat, ilagiyat inituqlituqat inigiya tamna nuktilaittuq kihimik pinguqtauhimayuq ihuaqhigiaqhimayuqluniit inungnit. Uumani nunaliit avikhimaniani, qanugitnit hanavakhimayut allatqinik qanugitnigiyai qaphiunilu uyaqat: ingniuqviit, uyaqat kaivyagikhihmani (*naunaipkutagiplugu, tumiqaqviit), iluviqaqvit ilitquhiqnutlu iluttuqhimanit piguyaqaqvitluniit*.
Freshet	ᑰᒃᐸᓪᓚᐊᓃᑦ ᐊᐳᒻᒥᙶᖅᑐᑦ	Immaqtuqniq	In channels, the relatively high annual peak water discharge period resulting from spring/summer meltwater runoff of the snowpack accumulated over the winter.	ᑰᖕᓂ, ᖁᑦᑎᖕᓂᖅᑲᖅᑎᓪᓗᒍ ᐊᕐᕌᒍᑕᒫᑦ ᐃᒪᖅ ᐃᖕᒋᕐᕋᓂᕆᔭᖕᖓᑦ ᐅᐱᕐᖓᒃᓵᒥ/ᐊᐅᔭᕐᒥ ᐊᐅᒃᐸᓪᓚᐊᑎᓪᓗᒍ ᐃᒪᐃᑦ ᑰᒃᐸᓪᓚᐊᓂᖕᒋᑦ ᐊᐳᒻᒥᙶᖅᑐᑦ ᐅᑭᐅᖑᑎᓪᓗᒍ ᑲᑎᑉᐸᓪᓚᐊᔪᓂᙶᖅᑐᓂᒃ.	Kuukviuyuni, tapkuat atuqpakniqhat puqtuniqpauni imaq kuukkiqnit piplugit upingami/auyami mahaktiqnit kuuknit apihimayunit katihimanit ukiunganit.
Frost boils	ᒪᕿᐃᑦ ᐳᐃᕙᓪᓚᐊᓂᖕᒋᖅ	Qiqiliqnit puviqtitaqnit	Frost boils (also known as mud circles) are circular upwellings of soil created by frost heaving in arctic and alpine regions.	ᒪᕿᐃᑦ ᐳᐃᕙᓪᓚᐊᓂᖕᒋᑦ (ᑕᐅᕙᖕᒪᒥᔪᑦ ᒪᕿᖅ ᐊᖕᒪᓗᖅᓯᓂᖕᒋᑦ) ᐊᖕᒪᓗᖅᓯᓯᒪᔪᑦ ᐃᔾᔪᓂᙶᖅᑐᑦ ᖁᐊᖅᐸᓪᓚᐊᓂᖅᑲᖅᑎᓪᓗᒍ ᐅᑭᐅᖅᑕᖅᑐᒥ ᑭᙵᖅᑲᖅᑐᓂᓪᓗ.	Qiqiliqnit puviqtitaqnit (ilihimayaukmiyut maqlugat kaivyagiknit) kaivyagiktut puviqtitaqni nunap pinguqtauyut qiqiliqpaliani puviqtitaqni ukiuqtaqtumi kingikniqnilu nunagiyauyuni.
Fuel tank farm hypalon (liner)	ᐅᖅᓱᐊᓗᖅᑲᕐᕕᓂ ᐃᓗᐹᕈᑕᒃᓴᔭᖅ	Uqhuqaqvit qattaqyuaqaqvit ulapakpaluktut (maqitailitit)	A synthetic rubber material (chlorinated polyethylene) often used as a low-permeability liner.	ᖃᐸᓗᓈᖅᑕᑦ ᕿᐊᕿᐅᑎᓂ ᓴᓇᓯᓚᔪᖅ (ᕿᐊᕿᐅᑎᓕᐊᕈᑎᓂ) ᐊᑐᖅᑕᐅᒐᔪᒃᑐᑦ ᓯᑎᕈᓐᓇᖏᑦᑐᒥᒃ ᐃᓗᐹᕈᑕᒃᓴᔭᓇᔭᐅᓪᓗᓂ.	Alilaittuq ulapak huna (chlorinated qipliqtuqpaluktuq) atuqtauvakniqhaq maqiviulaitniqhanut maqitailitaunia.

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Fugitive dust	ᐳᔪᑦ ᐃᖏᕐᕋᔪᓂᙶᖅᑐᑦ	Ahiningaqtuq puyuq	Particulate matter, often sand or mineral dust, released to the atmosphere by mechanical disruption or wind scouring.	ᒥᑭᔩᑎᑦ, ᓯᐅᕋᕐᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐅᔭᕋᒃᑕᓕᐊᒐᒃᓴᓂ ᐳᔪᑦ, ᐲᖅᐸᓪᓚᐊᔪᑦ ᐊᕙᑎᒧᑦ ᐃᑯᒪᓂ ᐊᐅᓪᓛᖅᑐᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐊᓄᓕᔪᓂᒃ.	Mikiyut hunavaluit, amihuniqhani hiugait havikhatluniit puyuit, hiamaktut havagiyauyunut qanuguqtitaqninut anuqimitluniit algaktaqninit.
Glaciofluvial	ᓯᕐᒥᓂ ᐲᔭᖅᐸᓪᓚᐊᓃᑦ	Hikuqpiaqhimaningaqtut	Deposits and landforms created by glacial rivers and streams.	ᐲᔭᖅᐸᓪᓚᐊᓃᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᖃᓄᐃᓚᖓᕙᓪᓚᐊᓂᓕᔭᖏᓐᓄ ᓯᕐᒥᓂ ᑰᙳᖅᓯᒪᔪᑦ ᐊᒻᒪ ᑰᕋᓛᓂ.	Piqaqnit nunatlu pinguqtauhimayut hikuqpiaqhimaniqmin kuugait kuugauyatlu.
Greywater	ᐃᒪᖅ ᐊᑦᑐᑯ	Halumaittut imait	Water that originates from a camp kitchen, sink, or laundry.	ᐃᒪᖅ ᐃᒐᕝᕕᓂᙶᖅᑐᑦ ᓇᔪᕐᕕᓂ ᐃᒐᕝᕕᖏᓐᓂᒃ, ᐃᕐᒥᒡᕕᓂᒃ, ᐅᕝᕙᓘᓐᓃᑦ ᐊᓐᓄᕌᓂ ᐃᕐᒥᒃᓴᕐᕕᖏᓐᓂᒃ.	Imaq tahapkunangaqhimayuq hiniktaqvikmi niqhiuqvikmin, uaqvikmin, aanuganutluniit uaqviknit.
Gross Domestic Product (GDP)	ᑮᓇᐅᔭᓚᐊᑦ ᐱᕐᑯᑎᓂᙶᖅᑐᑦ ᓄᓇᓚᒡᔪᐊᒥ	Katitlugu Inungnut Havakhimayat (GDP)	The total monetary value of all final goods and services produced within a region, territory, or country within a specified period of time.	ᑲᑎᓪᓗᒋᑦ ᑮᓇᐅᔭᖅᑖᕆᑕᐅᔪᑦ ᐱᕐᑯᑎᓂ ᐱᔨᑦᑎᕋᐅᑎᓪᓗ ᓴᖅᑭᑕᐅᔪᑦ ᐊᕕᒃᑐᖅᓯᒪᓂᖃᖅᑐᒥ, ᐅᑭᐅᖅᑕᖅᑐᒥ ᐊᕕᒃᑐᖅᓯᒪᓂᕐᒥ, ᐅᕝᕙᓘᓐᓃᑦ ᓄᓇᓚᒡᔪᐊᕐᒥ ᖃᖓᐅᓂᓕᔭᖓᓂ ᒪᓚᒡᓗᒍ.	Tapkuat katitlugit maniit aktilat tamaitnut kinguliqpamik hunat kivgaqtutitlu hanayat tahamani nunaliit avikhimaniani, nunatagaq,nunaqyuaqluniit iluani taihimayup pivikhani.
Human health risk assessment	ᐃᓄᐃᑦ ᐋᓐᓂᐊᓚᑐᐃᓐᓇᓕᐊᖃᖅᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓂᖅ	Inungnut aaniaqtailini hivuganaqnit naunaiyautit	A process used to estimate the nature and probability of adverse health effects in humans exposed to chemicals in environmental media, now or in the future.	ᖃᐅᔨᓴᕐᓂᖅ ᖃᐅᔨᓇᓱᐊᕐᓗᓂ ᖃᓄᖅ ᐊᒻᒪ ᐋᓐᓂᐊᓚᕆᑕᐅᓂᖃᑐᐃᓐᓇᓕᐊᓚᖕᓂ ᐃᓄᐃᑦ ᐃᓚᒃᓴᓂ ᐊᕙᑎᖓᓃᒃᑯᑎᒃ, ᒫᓐᓇᐅᔪᖅ ᐅᕝᕙᓘᓐᓃᑦ ᓯᕗᓂᕐᒥ.	Pityuhiq atuqtauyuq mikhauttaqni ilitquhit pilagahuquqnilu ihuittumik aktuanit inungnut hatqiumani avugiyauvaktut avatiliqutinut hunait, tatya hivunikhamullu.
Incinerator	ᐃᑭᑎᕝᕕᒃ	Ikualattivik	An apparatus for burning waste material until it is reduced to an ash.	ᐃᑭᑎᕝᕕᐅᔪᖅ ᐊᑦᑕᑯᓂ ᐸᐅᙳᖅᑎᑕᐅᓪᓗᑎᒃ.	Hanalgut ikulattiviuyuq iqakunik hunanik mikhinnuaqhiqhugit aqyanguqnit.

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Inuit Impact and Benefit Agreement (IIBA)	ᐃᓄᐃᑦ ᐊᒃᑐᖅᑕᐅᓂᖏᑦ ᐃᑲᔪᕈᓯᐊᖏᓐᓄᑦᑐ ᐊᖏᕈᑎ	Inuit Aktuanit Ihuaqutitlu Angigutit (IIBA)	An agreement pursuant to development in Nunavut that may address such matters as Inuit training and preferential hiring, business opportunities for Inuit, and environmental and wildlife concerns, among others.	ᐊᖏᕈᑕᐅᓯᒪᔪᖅ ᒪᓕᒡᓗᒍ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᐊᕐᓂᖓ ᓄᓇᕗᑦ ᑲᒪᒋᔭᕐᑲᕐᓂᐊᕐᓗᑎᒃ ᓲᕐᓗ ᐃᓄᐃᑦ ᐊᔪᕈᓐᓃᖅᓴᖅᑕᐅᓗᑎᒃ ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔮᒃᓴᓂ ᑐᓂᔭᐅᓂᖅᓴᐅᕙᒡᓗᑎᒃ, ᓇᖕᒥᓂᕐᑲᖅᑐᑦ ᐱᕕᒃᓴᕐᑲᖅᑎᑕᐅᓗᑎᒃ ᐃᓄᖕᓂ, ᐊᒻᒪ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓂᕐᔪᑎᓄᑦ ᐃᓱᒫᓘᑕᐅᔪᓂᒃ, ᐊᓯᖏᓐᓂᒡᓗ.	Angigut malikhugit pivaliatitni Nunavutmi hugiagutaulat tahapkuatut piplugit Inuit ilihautait havaktikhaqtaqaqnikhaitlu, nanminilgit pilaqnikhait Inuit, avatiliqutitlu angutikhatlu ihumalutai, ahiiluttauq.
Inuit Owned Lands (IOL)	ᐃᓄᐃᑦ ᓄᓇᕐᑯᑎᖏᑦ	Inuit Nanmini Nunat (IOL)	With respect to the NLCA, it is land that vests in a Designated Inuit Organization as Inuit Owned Land.	ᑕᐅᑐᒡᓗᒍ ᓄᓇᕗᑦ ᓄᓇᑖᕐᓂᕐᒧᑦ ᐊᖏᕈᑎᒥᒃ, ᓄᓇᑦ ᐊᐅᓚᑕᐅᓗᑎᒃ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᓄᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᕐᑲᑎᒌᖏᓐᓄᑦ ᐃᓄᐃᑦ ᓇᓄᓇᕐᑯᑎᖏᓐᓂᒃ.	Piplugit tapkuat Nunavutagutit, nunat pihimanit Taiyauni Inuit Timigiyat tapkuat Inuit Nanmini Nunat.
Isocontainer	ᐊᑦᑕᖅᑕᐃᓕᒪᓂᓕᒃ ᐖᖅᓯᕖᒃ	Ilikugut puuguyat	A standardized, re-usable steel box used for storage and movement of materials by freight transport. Also often referred to as a sea can, shipping container, or freight container.	ᐊᑐᒐᒃᓴᓕᐊᖑᓯᒪᔪᖅ, ᐊᑐᖅᑕᐅᑲᓂᕈᓇᖅᑐᖅ ᓴᕕᖕᒥ ᓴᓇᓯᒪᔪᖅ ᑐᖅᑯᖅᓯᕙᐅᕙᒃᑐᖅ ᐊᐅᓪᓚᖅᑎᑦᑎᓂᐊᕐᓗᓂ ᓱᓇᑰᔾᔭᕐᓂ ᐅᓯᑲᖅᑕᐅᑎᒃᑯ. ᑕᐃᒍᖅᑕᐅᒐᔪᒃᑐᖅ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐅᓯᑲᖅᑕᐅᑎ, ᐊᐅᓪᓚᖅᑎᑦᑎᓂᐊᕐᓗᓂ ᐋᖅᓯᕖᒃ, ᐅᕝᕙᓃᓐᓃᑦ ᐅᓯᔭᐅᔪᓂᒃ ᐋᖅᓯᕖᒃ.	Atuqtauvaktuq, atutqiktalaq havik qiuqut tutqumavik nuktigutlu hunanik uhityutauyunut nuktigaut. Amihunitlu taiyauyuq tagiukkut puunguyuq, uhityut puuq, agyaqtutluniit puuq.
Isolated find	ᐊᑕᐅᓯᖅ ᓇᒡᕖᖅᑕᐅᔪᖅ	Ilikuqtuq nalvaq	Pertaining to archaeology, an archaeological site which consists of only a single artifact, whether it is a formed stone tool or a flake.	ᑐᕌᖓᔪᖅ ᐃᑦᑕᕐᓂᑕᓕᕆᓂᕐᒧᑦ, ᐃᑦᑕᕐᓂᑕᕐᑲᕐᕕᒃ ᐃᓗᓕᖅᑲᖅᑐᑦ ᐊᑕᐅᓯᑐᐊᕐᒥᒃ ᐃᑦᑕᕐᓂᑕᕐᒥᒃ, ᓴᓇᔭᐅᓂᑳᓘᓗᐊᕈᓂ ᐅᔭᖅᑲᓂᒃ ᓴᓇᕿᑎᐅᓗᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐃᓚᖓᕐᓂᑳᓘᓗᐊᕈᓂ.	Pityutauyuq inituqlituqamun, inituqlituqaqa inaa piqaqtuq atauhiinaqmik piqutituqamik, naliangugaluaqat uyagak hanalgut mikkannuaqluniit.

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Lacustrine	ᑕᓯᕐᓅᖓᔪᑦ	Tattit hinaagiyait	Related to lakes; in soils, refers to deposits associated with lake level fluctuations (e.g., benches or terraces that mark former shorelines or lakebed materials exposed by an uplifting of the land).	ᑐᕌᖓᔪᑦ ᑕᓯᕐᓄᑦ; ᐃᐸᔪᓃᑦᑐᓂᒃ, ᐅᕐᑲᐅᓯᕐᑲᖅᑐᖅ ᐃᓗᓕᕐᑲᖅᑐᓂᒃ ᐊᒃᑐᐊᓂᓕᖕᓂ ᑐᓯᐅᑉ ᓇᓛᖓᑦ ᐊᓯᙱᖅᑕᖅᑐᑦ (ᓱᕐᓗ, ᕗᖅᑐᓂᖓ ᓄᓇᐅᑉ ᐅᕙᓘᓐᓃᑦ ᒪᓃᓚᖕᓂ ᓇᓗᓇᐃᒃᑯᑕᕐᑲᖅᑐᑦ ᓯᓈᕕᓂᐅᑉ ᐃᓂᖓᓂᒃ ᐅᕙᓘᓐᓃᑦ ᑕᓯᐅᑉ ᐃᖅᓴᖓᓂᙲᕐᓂᑯᑦ ᓴᖅᑭᓯᒪᔪᑦ ᓄᓇ ᖁᕙᓯᖅᐸᓪᓕᐊᓂᖓᓄᑦ.	Tugangayut tahiqnut; nunaitnut, tugaqtut piqaqninut piplugit tattit imaugaqnitallatqiktaqni (naunaipkutagiplugu, qaligiktitat ivuqniuyutlunit naunaigutit inaagiyagaluanginut tattitluniit natii hunat hatqiqtut qunmuktihimaniinut nunap).
Landfarm	ᓄᓇ ᓱᕈᕐᓇᖅᑐᕐᑲᖅᑐᓂᒃ ᓄᖑᑎᕆᕙᒃ	Nunami iliuqaivik	A site that serves to facilitate biodegradation of organic contaminants.	ᐃᓂ ᓄᖑᐸᓪᓕᐊᓂᕐᑲᕈᓐᓇᖅᑐᓂᒃ ᓄᓇᓂᙳᖅᑐᓂᒃ ᓱᕈᕐᓇᖅᑐᐃᑦ.	Inigiya atuqtauyuq ihuaqutainut nungutpalialaqninut hunat halumailgut.
Landfill	ᐊᑦᑕᑯ	Nunami iqakuqvik	Site for the disposal of waste materials.	ᐃᓂ ᐊᑦᑕᕐᕕᐅᕗᒃᑐᖅ ᐊᑦᑕᑯᓂ.	Inigiya iqaqninut iqakut hunat.
Leach recovery	ᐃᓚᒃᓴᓂ ᐊᑐᕐᓗᓂ ᐲᔭᐃᓂᖅ	Maqikut ahinuktailinit	A chemistry-driven means of extracting gold from crushed rock by exposing it to a solution which favours its dissolution into the solvent.	ᐃᓚᒃᓴᕐᑲᖅᑐᓂᒃ ᐲᔭᐃᔾᔭᑕᐅᔪᖅ ᒌᓗᒥᒃ ᓯᕐᑲᓕᖅᑎᓯᒪᔪᓂᒃ ᐅᔭᖅᑲᓂᒃ ᓴᖅᑭᔾᔭᑕᐅᔪᖅ ᐃᑲᔪᕈᑕᐅᕗᒃᑐᖅ ᓯᕐᑲᓕᕙᓪᓕᐊᔾᔭᑕᐅᓪᓗᓂ ᐊᑯᐸᓕᖅᓯᒪᔪᕐᔪᐊᖅᑕᐅᑎᓪᓗᒍ.	Avugiyauttaqtut-pihimanit pityuhit amuyauni guulit hiquptigaqnit uyaqat hatqiumayut imaqpalayumun pivakninut kivittiqvit avuqhimayumun.
Leaching	ᐃᓚᒃᓴᕐᑲᖅᑐᒃᑰᖅᑎᑦᑎᓗᓂ	Maqinit	The process by which a liquid passes through a substance, dissolving some of the material and carrying it to other places. It can occur underground in soil and rock, or above ground through piles of material.	ᑭᓂᐸᔪᒃᑰᖅᑎᑦᑎᓗᓂ ᓯᑎᔪᕐᔪᑦ, ᓯᕐᑲᓕᕙᓪᓕᐊᑎᑦᑎᔾᔭᑕᐅᔪᖅ ᐊᓯᖏᓄᑦ ᓅᑕᐅᕙᓪᓕᐊᔾᔭᑕᐅᓗᓂᓗ. ᐊᑖᓂ ᐃᐸᔪᒥ ᐊᒻᒪᓗ ᐅᔭᖅᑲᒥᒃ, ᐅᕙᓘᓐᓃᑦ ᖃᖓᓂ ᓄᓇᐅᑉ ᑲᑎᑕᐅᕙᓪᓕᐊᔪᓂᒃ.	Tapkuat pityuhit pivaktut imaqtait apquhaqtaqnit hunatigut, akutyutauyut ilainit hunanit nakhautyauplutiklu ahiinut inaitnut. Pilaqhuni nunap iluagut nunakkut uyaqatigutlu, qangagutluniit maniqap akungatigut qaligiktihimayut hunat.

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L_{eq} / LA_{eq}	ᓂᐱ ᐊᓯᙱᑐᐸᓇᕆᑦᑐᖅ	L_{eq} / LA_{eq}	Continuous equivalent sound level over a specified time period.	ᓂᐱ ᑐᓴᖅᓴᐅᕙᒃᑐᑦ ᐊᓯᔾᔨᐸᓇᖅᑎᑦᑐᒥᒃ ᑕᐃᑲᓪᓗᐊᖅ ᑐᓴᖅᓴᐅᓂᖅᑲᕐᕕᒋᓂ.	Kayuhinaqtut ayyikkutapyai nipitunit taihimayumun pivigiyanut.
Liner	ᐃᓗᐹᕿᑕᖅ	Maqittailit	An engineered material placed at the base of a landfill to reduce the permeability.	ᓴᓇᔭᐅᓯᒪᔪᖅ ᖃᓪᓗᓈᖅᑕᖅ ᐃᓕᔭᐅᖃᑦᑕᖅᑐᖅ ᑐᙳᕗᕕᖕᒋᓂ ᐊᑦᑕᒌᕐᕕᖕᒥ ᓯᑦᑎᓗᐊᖅᑕᐃᓕᔾᔪᑕᐅᓂᐊᕐᓗᓂ.	Qauyimayiuyunit hanatyuhikhaliaq ilihimayuq ataani nunami iqakuqvikmun mikhigiaqhugit maqilagahuquqnit.
Lithic	ᐅᔭᕋᖕᒥᙵᖅᑐᖅ	Lithic-nguyuq	Made of stone.	ᓴᓇᓯᒪᔪᖅ ᐅᔭᕋᖕᒥ.	Hanahimayuq uyagakmit.
Lithic scatter	ᐅᔭᖅᑲᑦ ᐃᑦᑕᕐᓂᑕᕐᑲᕐᕕᒃ	Lithic-ngi hiamakhimayut	An archaeological site or portion of a site consisting of a scattering of stone artifacts, including tools and flakes.	ᐃᑦᑕᕐᓂᑕᕐᑲᕐᕕᒃ ᐅᖓᓘᓐᓃᑦ ᐃᓚᖓᓂᒃ ᐃᓂᒥᒃ ᐅᔭᕋᐅᕐᑰᔭᖅᑐᖅ ᐃᑦᑕᕐᓂᑕᓂᒃ, ᐃᓚᒋᓗᒋᑦ ᓴᓇᕿᑏᑦ ᐊᒻᒪᓗ ᐃᓚᙳᕐᓂᑰᓃᑦ.	Inituqlituqani inaa ilagiyaluniit inaata ilalgit hiamakhimayunik uyaqat piqutituqat, ilautitlugit hanalgutit ilavaluitlu.
Loam	ᐃᐸᔪᖅ ᓯᐅᕋᓚᒃ	Akuplilik	Soil composed of a well-balanced mixture of sand, silt, and clay.	ᐃᐸᔪᖅ ᐃᓚᖃᖅᑐᖅ ᓯᐅᕋᕐᒥᒃ, ᐅᔭᕋᖕᓂᐊᒎᒃᓴᓂᒃ, ᐊᒻᒪᓗ ᒪᕋᕐᒥᒃ.	Nuna ilalik ihuaqhihimayunik akuhimanit hiugaq, nuna, maqluklu.
Local Study Area (LSA)	ᐃᓂ ᖃᐅᔨᓴᖅᑕᐅᕕᒃ	Nunalikmi Naunaiyagaq Nuna (LSA)	As defined in the glossary of the EIS guidelines: that area where there exists the reasonable potential for immediate impacts due to project activities, ongoing normal activities, or to possible abnormal operating conditions.	ᑐᑭᓕᐊᕐᑐᓯᔪᖅ ᑕᐃᑲᙵᑦ ᐊᕝᑎᓕᙵᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᖅᑲᐅᓯᕐᒐᓂᒃ ᐊᑐᒐᒃᓴᐅᔪᓂᒃ: ᐃᓂᐅᔪᖅ ᐱᑕᖅᑲᖅᑐᒥᒃ ᐊᒃᑐᐃᔾᔪᑕᐅᑐᐃᓐᓇᙵᐊᓕᕐᓂ ᐱᔪᒥᒃ ᐱᓕᙵᐊᕐᒥ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ, ᑲᔪᓰᓐᓇᐅᔭᕐᓂᓕᕐᒥᒃ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ, ᐅᖓᓘᓐᓃᑦ ᓈᒻᒪᕆᓐᓂᓕᕐᒥᒃ ᐊᐅᓚᔾᔪᑕᐅᓂᐅᔪᓂᒃ.	Tukiliuqhimaniagut tapkunani taiguhit tapkuat EIS-ngi naunaipkutat: tamna nuna piqaqtut naamaktunik piqalaqnit aktuakautiginit piplugit havanguyuq huliniit, kayuhiinaqtut atuqtauvaktut huliniit, pilaqniluniit atugauyuittut aulanit qanugitni.

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Longhole open stoping (LH)	ᑐᙵᒐᕝᕕᖅᑲᖕᒋᑦᑐᒥᒃ ᐅᔭᖃᖕᓂᐊᓂᖅᑲᖅᕕᒃ	Takiyuq putulik imiktailitaittuq (LH)	An underground mining method involving development of open stopes (unsupported spaces) parallel to the strike of the ore body.	ᓄᓇᐅᑉ ᐊᑖᓂ ᐅᔭᖃᖕᓂᐊᖅᓂᖅ ᐃᓚᖅᑲᖅᑐᖅ ᓴᖅᑭᑎᑦᑎᕙᓪᓕᐊᓂᖅᒥᒃ ᐃᓂᒃᓴᓂ (ᑐᙵᒐᕝᕕᖅᑲᙵᒋᑦᑐᖅ ᐃᓃᑦ) ᓯᕕᖃᔭᒃᓴᒥ ᓈᒻᒪᓈᖅᑐᒥᒃ ᐲᔭᐃᓪᓗᑎᒃ.	Nunap iluani uyagakhiuguhiq ilalik pivaliatitninik angmaumayuq imiktailitaittuq (ikianginaq) nalaanittuq pitaqvikhanut tahamna havikhaqaqania.
Metal leaching/acid rock drainage (ML/ARD)	ᓇᖕᒥᓂᖅ ᓴᕖᑦ ᐲᔭᖅᐸᓪᓕᐊᓂᖕᒋᑦ/ᐆᓐᓇᖅᑐᖅ ᐅᔭᖅᑲᒥᒃ ᑰᖕᓂᖕᒐ	Havik maqiniq/huguilaq uyagak kuukviunia (ML/ARD)	Naturally occurring processes that happen when minerals containing metals and sulphur (called sulphides) come in contact with both air and water. Oxidizing sulphides can produce acid which, when carried by water, is called acid rock drainage (ARD). Metals from the surrounding rocks can be leached into water, which is called metal leaching. This can happen at acid or neutral pH.	ᓇᖕᒥᓂᖅ ᐊᐅᓚᓂᖅᑲᖅᑐᒥᒃ ᐅᔭᖃᖕᓂᐊᒐᒃᓴᓂᒃ ᓴᕕᖅᑲᖅᑐᓂᒃ ᐊᒻᒪᓗ ᐃᓚᒃᓴᖅᑲᖅᑐᖅ ᓴᕕᖅᑲᙵᒋᑦᑐᒥᒃ (ᑕᐃᔭᐅᔪᖅ ᓲᓪᕗᐃᑦ) ᑲᑎᑎᓪᓗᒋᑦ ᓯᓚᒧᑦ ᐊᒻᒪ ᐃᒪᖅᒧᑦ. ᑲᑎᑎᓪᓗᒋᑦ ᓲᓪᕗᐃᑦ ᓴᖅᑭᔾᔪᑕᐅᔪᓐᓇᖅᑐᖅ ᐆᑕᖅᓇᖅᑐᒥᒃ, ᐃᒪᒃᑯᑦ ᐃᖕᒋᖅᖃᑎᓪᓗᒍ, ᑕᐃᔭᐅᕗᖅ ᐆᓐᓇᖅᑐᖅ ᐅᔭᖅᑲᒥᒃ ᑰᖕᓂᖕᒐ. ᓴᕖᑦ ᐊᕙᓗᖕᒐᓂ ᐅᔭᖅᑲᓂᒃ ᐲᔭᕈᓐᓇᖅᒪᑕ ᐃᒪᖅᒧᑦ, ᑕᐃᔭᐅᔪᖅ ᓴᕖᑦ ᐲᔭᖅᐸᓪᓕᐊᓂᖅ. ᑕᐃᒪᐃᒍᓐᓇᖅᑐᖅ ᐆᑕᖅᓇᑐᓕᖕᒥᒃ.	Ilitquhia pivakniq pityuhia havikhait haviktaqagangata huguuqniqlu (taiyauyuq huguilaq) aktuayagangat tamatkiknik hilamun imaqlu. Qattiniqpalautivakta huguilaqniq pinguqtittugu huguilaq uyagakmin maqiviunia (ARD). Haviit tahapkunanga avatigiyanit uyaqatmaqilat imaqmun, tapkuat taiyauyut haviit maqinit. Una pilaq huguiniq hakugitpalaqniauniit immap qanugitnia.

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Mill	ᓯᖅᑲᑦᓕᓇᕐᕕᒃ	Havikhaliuqvik	A mill (or process plant) that usually includes a multi-stage crushing and grinding circuit to reduce the size of ore particles, followed by a milling circuit where gold (or other valuable mineral) is extracted through physical and/or chemical processes.	ᓯᖅᑲᑦᓕᓇᕐᕕᒃ ᐃᓚᖅᑲᔪᒃᑐᖅ ᐊᒥᓱᓂᒃ ᓯᖅᑳᔾᔪᑎᓂᒃ ᒥᑭᓪᓕᒋᐊᖅᑎᑦᑎᓂᐊᕐᓗᓂ ᓴᕕᕋᔭᐅᔪᓂᒃ, ᐊᒻᒪ ᓯᖅᑳᓂᖅᑲᕐᓗᓂ ᒨᓗ (ᐅᕝᕙᓘᓐᓃᑦ ᐊᓯᓂᒃ ᐊᑭᑐᔪᓂᒃ ᐅᔭᕋᕐᓂᐊᒐᒃᓴᑦ) ᐲᔭᖅᑕᐅᔪᑦ ᖃᓄᐃᓕᐅᓂᖅᑲᕐᓗᓂ ᐊᒻᒪ/ᐅᕝᕙᓘᓐᓃᑦ ᐃᓚᒃᓴᖅᑲᖅᑐᑎᒍᑦ ᐊᑐᕐᓗᑎᒃ.	Havikhaliuqvik (hanaviuyuquniit) tapkuat ilaqayuktut amihuiqtaqhugu atuqnikhait hiquptiginit hiqumagikhaqnitlu havagutit, kinguagutlu havikhaliuqniqmut atuqtauyut tapkuat guulit (ahiiluniit pinnagiyat havikhat) amuyauyut atuqhugit tigulgaqnit tamnalu tamnaluniit avugiyauvaktut pityuhit.
Mine	ᐅᔭᕋᕐᓂᐊᕐᕕᒃ	Uyagakhiuqvik	Excavations in the Earth from which ore and minerals are extracted.	ᓴᒡᒐᕐᕕᐅᓃᑦ ᓄᓇᒥᒃ ᓴᕕᕋᔭᑦ ᐊᒻᒪᓗ ᐅᔭᕋᕐᓂᐊᒐᒃᓴᓕᖕᓂᑦ ᐲᔭᖅᑕᐅᕕᐅᔪᑦ.	Amuqhaivit Nunap iluanit tapkuat havikhat havikhaqhiugatlu amuyauyut.
Mine life	ᐊᐅᓚᓂᓕᒃ ᐅᔭᕋᕐᓂᐊᕐᕕᒃ	Uyagakhiuqniup atuqnia	The length of time a mine is, or could be, in operation.	ᐊᑯᓂᐅᑎᒋᓂᖓᑦ ᐅᔭᕋᕐᓂᐊᕐᕕᒃ ᐊᐅᓚᓂᖅᑲᖅᑐᖅ, ᐅᕝᕙᓘᓐᓃᑦ ᐊᐅᓚᓂᖅᑲᕈᓐᓇᖅᑐᖅ.	Hivitunia pivigiya uyagakhiuqvik piyuq, pilaqluniit, aulanianik.
Mineral	ᐅᔭᕋᕐᓂᐊᒐᒃᓴᖅ	Havikhat	A mineral is a naturally occurring substance of solid and stable form that can be described by variable physical properties which relate to its chemical structure and composition. A mineral is different from a rock, which can be composed of many minerals or non-minerals.	ᐅᔭᕋᕐᓂᐊᒐᒃᓴᖅ ᐱᑕᖅᑲᓰᑦ ᓯᑎᔪᓂᒃ ᐊᒻᒪᓗ ᐊᐅᓚᓂᖅᑲᙱᑦᑐᓂᒃ ᓇᓗᓇᐃᖅᑕᐅᓂᖅᑲᕈᓐᓇᖅᑐᑦ ᐊᔾᔨᒌᙱᑦᑑᑎᓂᒃ ᐋᖅᑭᐅᒪᓂᖅᑲᖅᑐᓂᒃ ᐊᒃᑐᐊᓂᖅᑲᖅᑐᑦ ᐃᓚᒃᓴᖅᑲᖅᑐᑎᒍᑦ ᐋᖅᑭᐅᒪᔪᓂᒃ ᐊᒻᒪ ᐃᓗᓕᖅᑲᖅᑐᓂᒃ. ᐅᔭᕋᕐᓂᐊᒐᒃᓴᓕᒃ ᐊᔾᔨᐅᙱᑦᑐᖅ ᐅᔭᕋᕐᒥᒃ, ᐃᓗᓕᖅᑲᕈᓐᓇᖅᑐᓂ ᐊᒥᓱᓂᒃ ᐅᔭᕋᕐᓂᐊᒐᒃᓴᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐅᔭᕋᕐᓂᐊᒐᒃᓴᐅᙱᑦᑐᓂᒃ.	Havikhat tapkuat ilitquhiuyut piyaunit hunat naptuyut huniumaitni unniqtaulat allatqikninut takukhaunit qanugitnigiyai tugangayut avugiyauttaqninut qanugitnia pitquhialu. Havikhat allatqit uyaqanit, tapkuat ilaqalat amihuni havikhat havikhaungittutluniit.

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Mineral reserves	ᐅᔭᕋᖅᓂᐊᒐᒃᓴᖅᑲᖅᕕᒃ	Havikhat hippakuit	Mineral (ore) that is valuable and legally, economically, and technically feasible to extract.	ᐅᔭᕋᖅᓂᐊᒐᒃᓴᖅ (ᓴᕕᕋᔭᒃ) ᐊᑭᑐᔫᔪᖅ ᐊᒻᒪᓗ ᒪᓕᒐᖅᑎᒍᑦ, ᕿᓇᐅᔾᔭᒃᓴᐅᑎᖅᑲᖅᑲᖅᓗᓂ, ᐊᒻᒪ ᐲᔭᖅᑕᐅᔪᓐᓇᖅᓂᖅᑲᖅᓗᓂ.	Havikhat (haviit) tapkuat pinnagiyat maigaqtigutlu, kiinauyaliugutinut, piluaqnaqtuliqutinut piyuminaqnit amuyangit.
Mineral resources	ᐅᔭᕋᖅᓂᐊᒐᒃᓴᖅᑲᖅᕕᒃ	Havikhat piqaqnit	Mineral (ore) that is potentially valuable and for which reasonable prospects exist for eventual economic extraction.	ᐅᔭᕋᖅᓂᐊᒐᒃᓴᖅ (ᓴᕕᕋᔭᒃ) ᐊᑭᑐᔫᑐᐃᓐᓇᕆᐊᓕᒃ ᐊᒻᒪᓗ ᓇᓂᕕᕝᕕᐅᔪᓐᓇᖅᓂᖅᑕᐃᓐᓇᕆᐊᖅᑲᖅᓗᓂ ᕿᓇᐅᔾᔭᒃᓴᖅᓂᖅᑕᖅᑲᑐᐃᓐᓇᕆᐊᖅᑲᖅᓗᓂ ᐲᔭᐅᓗᑎᒃ.	Havikhat (haviit) tapkuat pinnagiyaulat tapkunangalu naamaktumik pilaqnit pihimayut kiinauyaliugutauvalianikhait amuyaunit.
Moraine (morainal deposit)	ᑲᑎᑉᐸᓪᓕᐊᓂᖏᑦ ᐅᔭᕋᖅᓂᐊᒐᒃᓴᑦ	Hikuqpiaqniugalup hanivakua (hanivakumi piqaqniq)	An accumulation of unconsolidated mineral debris (soil and rock), carried and deposited by glaciers.	ᑲᑎᑉᐸᓪᓕᐊᔪᑦ ᐅᔭᕋᖅᓂᐊᒐᒃᓴᑦ (ᐃᑉᔪᓂ ᐅᔭᖅᑲᓂᒡᓗ), ᓯᖁᒥᓂᖔᖅᑐᑦ.	Katihimania katihimaittunit havikhat hiamaumanit (nuna uyagaklu), nuuhimayuq iliyauyuqlu hikuqpiaqhimaniqmin.
Nitrogen oxide (NO_x as NO_2)	ᓇᐃᑐᓵᓐ ᐋᒃᓴᐃᑦ	Nitrogen oxide (NO_x as NO_2)	NO_x gas primarily consists of nitrogen oxide (NO) and nitrogen dioxide (NO_2). The gases are emitted with exhaust from combustion engines and are products of blasting operations. NO_x can be converted to nitric acid in the atmosphere and thus contribute to acid deposition.	ᓇᐃᑐᓵᓐ ᐋᒃᓴᐃᑦ ᐸᓪᓚᒃ ᐃᓚᖅᑲᖅᑐᖅ ᓴᐃᑐᓵᓐ ᑕᐃᐋᒃᓴᐃᑦᒥᒃ. ᐸᓪᓚᐃᑦ ᐸᔪᖅᓂᖔᖅᑐᑦ ᐃᑯᒪᓪᓕᖅᓂ ᐸᔪᖅᓂᖅᑭᑦ ᖄᖅᑕᖅᑐᓂᒃ ᖄᖅᑎᓇᑎᓪᓗᒋᑦ. ᓇᐃᑐᓇᒃ ᐋᓯᑦᖑᕈᓐᓇᖅᑐᑦ ᓯᓚᒥ ᐆᑕᖅᓇᖅᓯᓗᑎᒃ ᑲᑖᖅᑐᓂᒃ.	NO, kaasi piniqhaq ilaqaqnia nitrogen oxide (NO) tamnalu nitrogen dioxide (NO_2). Tapkuat kaasit anititauyut huppuktautainit ikumayut ingniqutit pinguqtauyutlu qaqtautit aulaninit. NO, pinguqtaulaq nitric huguilat hiami taimalu pityutaupluni huguiniq piqaqninik.
Non-contact water	ᐃᒪᐃᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᙱᑦᑐᖅ	Aktuayaungittuq imaq	Surface runoff from undisturbed areas.	ᐃᒪᐃᑦ ᐃᖏᖅᕋᔪᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᓂᖅᑲᙱᑦᑐᒍᑦ.	Maniqap qangani kuukviunia qanguqtaungilgunit nunanit.

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Non-potentially acid generating (nPAG)	ᐆᓐᓇᖅᑐᓕᐅᖏᑦᑐᑦ	Huguilittunaqhiyut (nPAG)	Rock that does not generate acid.	ᐅᔭᖅᑲᑦ ᐆᓐᓇᖅᑐᓕᐅᕈᓐᓇᖏᑦᑐᑦ.	Uyagak hugiulaittuq.
Nunavut Land Claims Agreement (NLCA)	ᓄᓇᕗᒥ ᓄᓇᑖᕋᓱᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑎ	Nunavutagutinut Angigutit (Nunavutagutit)	The NCLA is a land claims agreement that was negotiated as part of the creation of the Territory of Nunavut in 1999.	ᓄᓇᕗᒥ ᓄᓇᑖᕋᓱᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑎ ᐋᕿᔾᔪᑕᐅᓚᐅᖅᑐᖅ ᐃᓚᒋᖅᑲᑕᐅᓪᓗᒍ ᓴᖅᑮᓂᕐᒥᒃ ᐊᕕᒃᑐᖅᓯᒪᓂᐅᔪᒥᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᓇᕗᒥ 1999-ᖑᑎᓪᓗᒍ.	Tapkuat Nunavutagutit tapkuanguyut nunatagutinut angigutit qanigutauhimayut ilagiplugit tamna pinguqtaunia Nunatagauyuq Nunavut 1999-mi.
Nunavut Land Use Plan (NLUP)	ᓄᓇᕗᒥ ᓄᓇᒥᒃ ᐊᑐᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑦ	Nunavut Nunap Atuqnianut Upalungaiyaut (NLUP-nga)	The draft NLUP provides guidance for resource use and development and contains goals, objectives, and policies for land use planning in Nunavut.	ᑎᑎᕋᕐᖕᒐᖅᑕᐅᓯᒪᔪᖅ ᓄᓇᕗᒥ ᓄᓇᒥᒃ ᐊᑐᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑦ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᕗᖅ ᐊᑐᒐᒃᓴᓕᐊᓂᒃ ᐱᔭᒃᓴᐅᑎᑕᐅᓪᓗᓂ ᐊᒻᒪᓗ ᓴᖅᑭᔾᔪᑕᐅᓗᓂ ᑐᕌᒐᖅᑲᐅᖅᓗᓂ, ᑐᕌᒐᓇᔭᐅᔪᒪᔪᓂᒃ, ᐊᒻᒪᓗ ᐊᑐᐊᒐᓂᒃ ᓄᓇᒥᒃ ᐊᑐᕐᓂᕐᒧᑦ ᐸᕐᓇᐃᓂᕐᒥᒃ ᓄᓇᕗᒥ.	Tamna NLUP-nga piqaqtitiyuq naunaipkutaqmik piqaqnit atuqninut pivaliatitnilu piqaqhutiklu pinahuaqtanik, ihumagiyait, maligaitlu nunap atuqninut upalungaiyainiq Nunavutmi.
Nunavut Settlement Area (NSA)	ᓄᓇᕗᑦ ᓄᓇᓕᕐᑯᑎᖏᓐᓂᒃ ᐃᓂ	Nunavutagauyup Nuna (NSA-nga)	The NSA refers to the all lands within the Territory of Nunavut, as identified within the NLCA.	ᓄᓇᕗᑦ ᓄᓇᓕᕐᑯᑎᖏᓐᓂᒃ ᐃᓂ ᑐᕌᖕᒐᔪᖅ ᓄᓇᐃᑦ ᐃᓗᐊᓂ ᓄᓇᕗᒥ, ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᓄᓇᕗᒥ ᓄᓇᑖᕋᓱᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᒻᒥᒃ.	Tamna NSA-nga tugangayuq tamaitnut nunat iluani Nunatagauyuq Nunavut. Naunaiqhimayat tapkunani NLCA-nga.
Open talik	ᓴᖅᑭᔮᖅᑐᖅ ᖁᐊᐱᓐᓇᖏᑦᑐᖅ	Angmaumayuq auktuqtarniq	Talik that is unfrozen to ground surface above but encased in permafrost laterally and below.	ᖁᐊᐱᓐᓇᖏᓐᓂᑦ ᓄᓇᐅᑉ ᖄᖓᓂ ᖁᓕᐊᓂ ᑭᓯᐊᓂ ᐊᕙᓗᖓᓂ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᖁᐊᐱᓐᓇᖏᓐᓂᖓᓂᒃ ᓴᓂᐊᓂ ᐊᑖᖓᓂᓗ.	Auktuqtarniq tahamna qiqumailguq maniqap qanganut kihimik iluaniittuq qiqumaitnaqniup qunmut ataanilu
Ore	ᓴᕕᖃᔭᒃᓴᖅ	Havikhaq	Rock from which a valuable mineral can be extracted.	ᐅᔭᖅ ᐊᑭᑐᓂᓕᒃ ᐅᔭᖓᓂᐊᒐᒃᓴᖅ ᐲᔭᖅᑕᐅᔪᓐᓇᖅᑐᖅ.	Uyagak tapkunanga pinnagiyauyut havikhatamuyaulaq.

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Ore grade	ᓴᕕᕋᔭᒃᓴᐅᑉ ᖃᓄᐃᑎᒋᓂᖓ	Havikhap nakuutiginia	The concentration of a valuable mineral in ore. Often expressed in qualitative terms to describe the relative value of the ore.	ᑲᑎᖅᓱᖅᓯᒪᓂᖏᑦ ᐊᑭᑐᓃᑦ ᐅᔭᕋᓂᐊᒐᒃᓴᓂ ᓴᕕᕋᔭᓂᒃ. ᓇᓗᓇᐃᖅᑕᐅᕙᒃᑐᑦ ᐱᐅᓂᖏᑦᑎᒍᑦ ᓇᓗᓇᑕᐅᓂᐊᕐᓗᓂ ᐊᑭᑑᓂᕆᓇᔭᖅᑕᖓᑦ ᓴᕕᕋᔭᐅᑉ.	Tapkuat katihimanit nakuunit havikhat havikhaqni. Amihuniqhanit taiyauyut nakuutiginit piplugt unniqtuqnit piyaunit nakuunit havikhat.
Overburden	ᑲᑎᒪᐅᙱᑦᑐᑦ ᓱᓇᑐᐃᓐᓇᐃᑦ	Maniqap qalligiya	Unconsolidated material that must be removed to allow access to an ore body in a surface mining operation.	ᑲᑎᒪᐅᙱᑦᑐᑦ ᑐᓇᑐᐃᓐᓇᐃᑦ ᐹᔭᖅᑕᐅᔭᕆᐊᓖᑦ ᐱᕕᒃᓴᖃᕐᕕᐅᓂᐊᕐᓗᓂ ᓴᕕᕋᔭᒃᓴᑦ ᖄᖓᓂ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᑉ ᐊᐅᓚᓂᕆᔭᖓᓂᒃ.	Katitiqhimailguq huna ahivagialik pilaqnianut pilaqni havikhaqaqniuyuq maniqap qangani uyagakhiuqniqmun aulattiniqmi.
PAG	ᐆᓐᓇᖅᑐᓕᐅᕈᑕᐅᑐᐃᓐᓇᕆᐊᓕᒃ	PAG-nga	Potentially acid generating (rock).	ᐆᓐᓇᖅᑐᓕᐅᕈᑕᐅᑐᐃᓐᓇᕆᐊᓕᒃ (ᐅᔭᕋᒃ).	Huguilagahuquqtuq (uyagak).
Particulate matter	ᒥᑭᔩᑎᑦ ᓯᑎᔩᑦ	Mikiyunnuit ilagiyai hunat	Tiny pieces of solid or liquid matter associated with the Earth's atmosphere. Sources of particulate matter can be human-made or natural.	ᒥᑭᔩᑎᑦ ᓯᑎᔩᑦ ᐅᕙᓘᓐᓃᑦ ᑭᓂᖅᑐᑦ ᐊᒃᑐᐊᓃᑦ ᓄᓇᕐᔪᐊᑉ ᓯᓚᖓᓂᒃ. ᐱᖓᐅᖃᑦᑕᕐᓂᖏᑦ ᒥᑭᔩᑎᐅᔩᑦ ᐃᓄᖑᒍᑦ ᓴᓇᔭᐅᔫᓐᓇᖅᑐᓂᙵᕈᓐᓇᖅᑐᑦ ᐅᕙᓘᓐᓃᑦ ᓇᖕᒥᓂᖅ ᓄᓇᒧᑦ.	Mikkatat ilagiyai naptunit imiqpalanitluniit hunat piqatai tahaphuma Nunaqyuap hilagiyanit. Piqaqnit mikiyunnuit ilagiayai hunat inungnit hanaugainit ilitquhiuyunitluniit.
Permafrost	ᕿᐊᖑᓂᖅ ᓄᓇᐅᑉ ᐃᓗᐊ	QIqumainaqniq	Bedrock, organic, or earth material that has temperatures below 0˚C persisting over at least two consecutive years.	ᖃᐃᒃᓱᒐᖅ, ᓄᓇᒥᐅᑕᖅ, ᐅᕙᓘᓐᓃᑦ ᓄᓇᐅᓂᖅ ᓂᒡᓚᓱᖕᓂᓕᒃ ᐊᑎᖕᓂᓕᖕᒥᒃ 0˚C-ᒥᒃ ᑕᐃᒪᙵᓂ ᒪᕈᖕᓂ ᐅᑭᐅᓂᒃ ᐊᑯᓂᐅᑎᒋᓂᓕᖕᒥᒃ.	Qaiqtuq, hunauniq, nunamingaqtuqluniit huna uunaqnilik ataani 0˚C pihimania avataanut malgukluniity tukligik ukiuk.

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Permafrost base	ᖁᐊᖑᓂᐅᑉ ᑐᙵᕝᕕᖓ	Qiqumainaqniup tatigiya	The lower boundary of permafrost, an undulating and uneven surface. The ground temperature above the permafrost base is less than 0ºC and below the permafrost base is above 0ºC.	ᐊᑎᖕᓂᖅᓴᒦᑦᑐᖅ ᑭᒡᓕᖕᒐᑕ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᖁᐊᓯᒪᓂᖓᓂᒃ, ᒪᓂᙱᑦᑐᒥᒃ. ᓄᓇᐅᑉ ᓂᒡᓚᔪᖕᓂᖓᑦ ᖄᖓᓂ ᖁᐊᖅᓯᒪᓂᐅᑉ ᑐᙵᕝᕕᖓᓂᒃ ᐊᑦᑎᖕᓂᖅᓴᐅᔪᖅ 0ºC-ᒥᒃ ᐊᒻᒪᓗ ᐊᑦᑎᖕᓂᖅᓴᒥ ᓄᓇᐅᑉ ᖁᐊᖑᓂᖓᓂᒃ ᖁᑦᑎᖕᓂᐅᔪᖅ 0ºC-ᒥᒃ.	Tamna atikniqpaq kikligiya qiqumainaqniup, maliqtuyaqniuyuq ayyikkingittuqlu qagiyaa. Tamna manigap uunaqnia qulaanittuq qiqumainaqniup pivigiya tungauhimaya 0ºC ataanitytuqlu qiqumainaqniup pivigiya qulaniittuq 0ºC.
pH	ᐊᑐᒃᑲᖅ	Immap qanugitnia	The negative log of the concentration of the hydronium ion. The pH is a measure of the acidity or alkalinity of all materials dissolved in water, expressed on a scale from 0 to 14, where 7 is neutral, values below 7 are acidic, and values over 7 are alkaline.	ᐊᒥᓲᓂᐅᓂᖕᒋᑦ ᐱᐅᖕᒋᓐᓂᐅᔪᒥᒃ H ᐊᐃᑑᓂᐊᒻ ᐊᐃᔫᓐᒥᒃ. ᐊᑐᒃᑲᖅ ᐆᒃᑐᖃᐅᑕᐅᔪᖅ ᐆᑕᕈᓐᓇᕐᓂᕐᒥᒃ ᑭᓂᖅᑐᒥᒃ ᓱᓇᕈᓘᔭᕐᓂᒃ ᓯᖅᑲᓚᔭᐅᓯᒪᔪᓂᒃ ᐃᒪᕐᒥ, ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᓯᒪᔪᖅ ᐆᒃᑐᖃᐅᑎᒥᒃ 0-ᒥᒃ 14-ᒧᑦ, 7 ᓱᕐᑯᓯᕈᓇᖕᒋᓐᓂᓚᒃ, ᐊᑦᑎᖕᓂᖅᓴᐃᑦ 7-ᒥᒃ ᐆᑕᕐᓇᖅᑐᖅᑲᖅᓗᑎᒃ, ᐊᒻᒪᓗ ᐅᖓᑖᓃᑦᑐᑦ 17-ᓂᒃ ᑭᓂᖅᑑᓪᓗᑎᒃ.	Tamna tungauhimanianut titiqnia katiqhuqhimani hydronium ion. Tamna Immap qanugitnia uuktugauyuq hugilaqaqnianik tipitunianikluniit tamaita hunat akuhimanit imaqmun, unniqhimayuq uuktugutinut talvanga 0 tikitlugu 14, talvani 7 piittuginia, aktilat ataani 7 huguilat, aktilatlu avataani 7 tipituniuyut.
PM$_{10}$	PM$_{10}$	PM$_{10}$	Inhalable particulate matter. PM$_{10}$ particles are airborne particles that have a diameter of 10 µm or less and are thus a subset of total suspended particulate. The majority of PM$_{10}$ particles are from fugitive dust sources.	ᐊᓂᖅᑎᕆᔭᐅᔪᓐᓇᖅᑐᖅ ᒥᑭᔩᑦ. PM$_{10}$ ᒥᑭᔩᑎᐅᓂᖕᒋᑦ ᐊᓂᖅᓛᖅᑐᖅᑕᐅᔪᒦᑦᑐᓐᓇᖅᑐᑦ ᐊᒃᑎᒋᓂᖅᑲᖅᑐᑦ 10-ᓂᒃ ᐊᖕᒪᓗᖅᑑᓂᖕᒋᑦ ᒥᑭᓐᓂᖅᓴᐅᓪᓗᑎᒡᓘᓐᓃᑦ ᐊᒻᒪ ᐃᓗᓕᖕᒋᑦ ᑲᑎᓪᓗᒋᑦ ᐊᓂᖅᓛᖅᑐᖅᑕᐅᔪᒦᑦᑐᓂᒃ. ᐊᒥᓲᓂᖅᓴᑦ PM$_{10}$ ᒥᑭᔩᑦ ᐳᔪᓚᐅᖅᑲᑦᑕᖅᑐᓂᙴᖅᑐᑦ.	Hiluqtaulat mikiyunnuit hunat. PM$_{10}$ ilavaluit hilainaqhiqtut ilavaluit piyut akimun 10 µm tunganiluniit taimaittumiklu ilata ilagiyait katitlugu ikianginaqhiuqtut mikiyunnuit. Tapkuat amigaitniqpat PM$_{10}$ ilagiyait tahapkunanga puyuqningaqtut.

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$PM_{2.5}$	$PM_{2.5}$	$PM_{2.5}$	Respirable particulate matter ($PM_{2.5}$) particles are a subset of PM_{10} and are defined as particles with a diameter less than 2.5 µm. These particles are small enough to enter deep into the respiratory system. The majority of particulate matter emitted in diesel engine exhaust is $PM_{2.5}$.	ᐊᓂᖅᕹᖅᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᒥᑭᔫᑎᑦ ($PM_{2.5}$) ᒥᑭᔫᑎᐅᔪᑦ ᐃᓗᓕᖏᓐᓂᖖᒑᖅᑐᑦ PM_{10}-ᒥᒃ ᐊᖏᒪᓗᕐᓂᖏᑦᑕ ᐊᒃᑎᒋᓂᖏᑦ 2.5 ᐊᖏᒪᓗᖅᑑᓂᖏᑦ ᒥᑭᓐᓂᖅᓴᐅᔪᑦ. ᑕᒪᒃᑯᐊ ᒥᑭᔫᑎᑦ ᒥᑭᔫᑕᐅᓗᐊᒧᑦ ᐊᓂᖅᑎᕈᑎᓄᑦ ᐃᓗᐊᓅᕈᓐᓇᖅᑐᑦ. ᐊᒥᓱᓂᖅᓴᐃᑦ ᒥᑭᔫᑕᐅᓂᐅᔪᑦ ᐃᑯᒪᓖᔭᐊᓕᖕᓄᑦ ᐅᖅᓱᐊᓗᕐᑲᖅᑐᓂᒃ ᐳᔪᕐᓗᖏᓐᓂᒃ $PM_{2.5}$-ᖑᕗᑦ.	Aniqhakgiyaunginagialik mikiyunnuit hunat ($PM_{2.5}$) hunavalunnuit ilagiyait tapkuat PM_{10} unniqtugauyutlu ilagiyannuagiyait aktilalgit tungani 2.5 µm. Tahapkuat ilagiyannuagiyait mikaugiyait naamaknit aniqhaktauyunulat. Tapkuat amigaitniqhait ilannuagiyait hunat tahamangaqtut uqhuqyuat ingniqutit puyuitnit tamna $PM_{2.5}$.
Polycyclic aromatic hydrocarbons (PAH)	ᐊᑐᖅᑕᐅᒐᔪᖕᓂᒃᑯᑦ ᑎᐱᕐᑲᖅᑐᑦ ᑭᓂᖅᑐᓂᒃ ᐳᔪᕐᓂᒃ	Qipliqtuningaqtut tipait hydrocarbon-ngi (PAH)	Organic compounds comprised of two or more aromatic rings. These compounds are by-products of combustion and can be emitted into the environment from both natural and anthropogenic sources.	ᑲᑎᖖᒐᐅᖅᑐᓂᒃ ᒪᕐᕿᖕᓂᒡᔫᓐᓃᑦ ᐅᓄᕐᓂᖅᓴᓂᒡᔫᓐᓃᑦ ᑎᐱᕐᑲᖅᑐᓂᖖᒑᖅᑐᑦ. ᑲᑎᖖᒐᐅᖅᑐᑦ ᐃᑯᐊᓪᓚᒃᑐᓂᖖᒑᕐᑲᑦᑕᖅᑐᑦ ᐊᕙᑎᒧᐊᕈᓐᓇᖅᓗᑎᒃ ᓇᖕᒥᓂᖅ ᓄᓇᒥᒃ ᐊᒻᒪᓗ ᐊᕙᑎᒥ ᓱᕈᓐᓇᐅᔪᓂᒃ.	Hunauyut ilagiyait pilgit malguknik ilaplugitluniit tipaitnut kaivyagiknit. Tahapkuat ilagiyait pinguqtauhimanit ikittaqniqnit anialat avatigiyauyumun tamatkiknit ilitquhiat ikipkagauvaktunitlu piqaqninit.
Post-closure	ᒪᑐᔭᐅᓯᒪᓕᖅᑎᓪᓗᒍ	Umiqaqtitlugu	The period of time following the shut-down of a mine or other facility, during which monitoring of its effects should be continued.	ᓯᕗᓂᐊᓂ ᒪᑐᔭᐅᓂᕐᑲᖅᓯᒪᓕᖅᑎᓪᓗᒍ ᐅᔭᕐᖓᓂᐊᕐᕕᒃ ᐅᖁᕐᓗᓐᓃᑦ ᐊᓯᖏᓐᓂᒃ ᓴᓇᕖᓂᒃ, ᖃᐅᔨᓴᐅᔭᕐᓂᕐᑲᐃᓐᓇᐅᔭᓕᕐᓗᓂ ᐊᒃᑐᖅᑕᐅᓯᒪᓂᕐᑲᖅᑐᓂᒃ.	Tamna pivigiya kinguagut umiqaqtitlugu tamna uyagakhiuqvik ahialuniit hanaviuyuq, atuqtitlugu munagiyauvia aktuaninut kayuhinaqtukhauyuq.

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Post pillar cut and fill mining (C&F)	ᐲᔭᐃᕙᓪᓕᐊᓗᓂ ᐃᓗᓪᓕᖅᑐᐃᕙᓪᓕᐊᓗᑎᒡᓗ ᐅᔭᕋᖕᓂᐊᕿᓂᒃᓯᒪᓕᕐᓂᖅ	Atuqaqtitlugu nappaqutauyuq kipiyaunia kivviuhiqnialu uyagakhiuqvik (C&F)	A type of cut and fill mining (see definition: cut and fill mining) whereby rock pillars are left unexcavated to support the excavation.	ᐲᔭᐃᕙᓪᓕᐊᓂ ᐃᓗᓪᓕᖅᑐᐃᕙᓪᓕᐊᓂᕐᓗ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᔪᖅ (ᑕᑯᓗᒍ ᑐᑭᓕᐊᖑᔪᖅ ᐲᔭᐃᓂᖅ ᐃᓗᓪᓕᖅᑐᐃᓗᓂᓗ ᐅᔭᕋᖕᓂᐊᕐᓂᖅ) ᐅᔭᖅᑲᖅ ᑐᙵᕝᕕᓕᐊᖑᔪᑦ ᐲᔭᖅᑕᐅᓯᒪᙱᑦᑐᑦ ᒪᑭᒪᑎᑕᐅᔪᒃᓴᐅᓗᓂ ᓴᒡᒐᕐᕕᐅᔪᖅ.	Kipluiniuyuq kivviuhiqtuiniqlu uyagakhiuqvikmik (takulugu tukiliuguta: kipluiniq kivviuhiqniqlu uyagakhiuqvikmik) tahapkuat uyaqat napaqutauyut kihingugat huniumaititlugit imiktailitauyut amuqhaiviuyumin.
Precautionary principle/ approach	ᖃᓄᐃᓕጣᑕᐃᓕᔅᔪᑎᒥᒃ ᑐᙵᕝᕕᒃ/ᖃᓄᐃᓕᐅᕈᑎ	Nautiumatyutauni ihumagiyat/pityuhit	Where there are threats of serious or irreversible damage, lack of full scientific certainty must not be used as a reason for postponing cost-effective measures to prevent environmental degradation.	ᐅᓗᕆᐊᓇᖅᑐᖃᑐᐃᓐᓇ23ᕆᐊᖃᖅᑐᒥᒃ ᐱᒻᒪᕆᐅᔪᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐋᖅᑭᒃᓴᐅᖏᑦᑐᒥᒃ ᓱᕈᖅᑐᓂᒃ, ᖃᐅᔨᓴᕐᓂᖃᑦᑎᐊᖏᓐᓂᖅ ᐊᑐᖅᑕᐅᓂᐊᙱᓚᖅ ᐱᔾᔪᑎᒃᓴᖃᕐᓂᐊᕐᓗᓂ ᑭᖑᕙᕆᐊᖅᑎᑦᑎᓂᕐᒥᒃ ᐊᑭᓕᖕᓄ-ᐊᒃᑐᐊᓂᖃᑐᐃᓐᓇᕆᐊᓕᖕᓄᑦ ᐱᐅᙱᓕᖅᑎᑦᑎᕙᓪᓕᐊᓂᕐᒥᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ.	Tahapkunani hivuganaqnilikni akhut ihuaqhilaittumik ahiguiniq, pihimaitninik tamaat naunaiyaiyit nalupyakninut atuqtauyaqangittut piplugit kinguvagiaqaqnit akikitniqhat piyaunit pittailitainut avatiliqutit piyautiangitnit.
Prehistoric	ᖃᖓᓂᑐᖃᐃᑦ ᑎᑎᖅᑕᐅᓯᒪᙱᑦᑐᑦ	Hivuagut atuqpakhimanit	Pertaining to archaeology, refers to a time period during which there were no written records. This period of time is also known as pre-contact.	ᑐᕌᖓᔪᖅ ᐃᑦᑕᕐᓂᑕᓕᕆᓂᕐᒧᑦ, ᐅᖃᐅᓯᓕᒃ ᖃᖓᐅᓚᐅᖅᑐᒥᒃ ᑎᑎᕋᖅᑕᐅᓯᒪᙱᑐᑐᖃᕐᓂᒃ. ᑕᒪᓐᓇ ᖃᖓᐅᓂᐅᓚᐅᖅᑐᖅ ᖃᐅᔨᒪᔭᐅᔪᖅ ᐃᒫᒃ ᑎᑭᑕᐅᓚᐅᕐᓇᑎᒃ ᑕᕆᐅᑉ ᐊᑭᐊᓂᕐᒥᙶᖅᑐᓂᒃ.	Piplugit inituqlituqat, tugangayut pivikha atuqtitlugu tapkuat titigaqhimaitnit atuqpaknit. Una pivigiya ilihimayaukmiyuq aktuqtauniahaqtitlugu.
Pre-stripping	ᐲᔭᐃᓂᖅ	Hivuagut-qangiyaqnia	Action of removing the overburden and waste rock material over the ore material from an area where an open pit mine will be operated.	ᐲᔭᐃᓂᖅ ᖄᖓᓃᑦᑐᓂᒃ ᓄᓇᒥᒃ ᐊᒻᒪᓗ ᐊᑦᑕᑯᑦ ᐅᔭᖅᑲᑦ ᖄᖓᓃᑦᑐᑦ ᓴᕝᕋᔭᒃᓴᓂ ᑕᐃᑲᙵᑦ ᐃᓂᒥᒃ ᖄᖓᒍᑦ ᐅᔭᕋᖕᓂᐊᒃᕕᐅᔪᒃᓴᒥᒃ.	Huliniq ahivaqtiqnia qanganittuq iqakutlu uyaqat hunat qangani tapkuat havikhat hunat nunanit tahapkuat angmaumayut iluttuqhimayuq uyagakhiuqvik aulataunia.

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Production rate	ᓴᓇᔭᐅᕙᓪᓕᐊᓂᖏᑦᑕ ᖃᔅᓯᐅᓂᖏᑦ	Hanayaunianut kayumiknia	Average mining and ore processing rate.	ᐅᔭᕋᖕᓂᐊᕐᓂᖅ ᐊᒻᒪᓗ ᓴᕕᕋᔭᒃᓴᓕᐊᖑᕙᓪᓕᐊᓂᖏᑦᑕ ᖃᔅᓯᐅᓂᖏᑦ.	Atuqpakniqhaq uyagakhiuqvik havaguhiata kayumiknia.
Proponent	ᑑᒃᓯᕋᖅᑎ	Uuktugutilik	The individual or organization that proposes to develop the Project.	ᐃᓄᒃ ᓘᓐᓃᑦ ᑎᒥᕆᔭᐅᔪᕐᓘᓐᓃᑦ ᑑᒃᓯᕋᖅᑐᖅ ᓴᖅᑭᑦᑎᔪᒪᔪᖅ ᐱᓕᕆᒃᓴᒥᒃ.	Tamna inuk timiuyuqluniit uuktutilik pivaliatitnianik tamna Havanguyuq.
Public	ᑭᒃᑯᓕᒫᑦ	Inungnut	Any potentially affected person in potentially affected communities, which includes individual members of an affected community, as well as organized community interest groups.	ᓇᓕᒥᐊᖕᒪᓂᒃ ᐊᒃᑐᖅᑕᐅᓂᖅᑲᑐᐃᓐᓇᓇᐊᓕᒃ ᐃᓄᒃ ᐊᒃᑐᖅᑕᐅᓂᖅᑲᑐᐃᓐᓇᓇᐊᓕᖕᒥᒃ ᓄᓇᓕᖕᓂ, ᐃᓚᖃᖅᑐᖅ ᐃᓄᑐᐃᓐᓇᐃᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᖃᖅᑐᒥᒃ ᓄᓇᓕᖕᒥᒃ, ᐊᒻᒪᑦᑕᐅᖅ ᐋᖅᑭᒃᓱᖅᑕᐅᓯᒪᔪᒥᒃ ᓄᓇᓕᖕᒥᒃ ᐃᓚᓕᐅᑎᔪᒪᓂᖃᖅᑐᓂᒃ.	Kitutliqak aktualaqnit inuit aktuayaunahuquqtut nunaliuyut, ilalgit inmigut ilauyut aktuayauyumun nunaliuyumun, timiuyuluttauq tuhaumaqatauyumayut ilagiit.
Pycnocline	ᐃᒪᐅᑉ ᐃᖏᕐᕋᓂᖓ	Immap uqumaitnia	Vertical zone in the water column in which density changes rapidly with depth. Seawater density is a function of salinity and temperature.	ᐃᒪᖅ ᑐᑭᒧᐊᒃᑐᖅ ᐅᖁᒪᐃᓪᓕᕙᓪᓕᐊᓂᖓ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᔪᖅ ᓱᒃᑲᔪᒥᒃ ᐃᑎᓂᖓ ᒪᓕᑦᓗᒍ. ᑕᓇᐅᑉ ᐅᖁᒪᐃᓪᓕᓂᖓ ᑕᕆᐅᖑᓂᖓᓂᖕᒑᖅᑐᖅ ᐊᒻᒪᓗ ᓂᒡᓚᓱᖕᓂᓇᔭᖕᒐᓂᒃ.	Qunmut pivigiya imaqmi anmuinaq tahamna uqumaitnia ahianguqtaqtuq qilamik itinianut. Tagiuq imaq uqumaitnia piyauyuq tagiuquqtunia uunaqnialu.
Quarry	ᓴᒡᒐᕐᕕᒃ	Tuapaktaqvik	A pit from-which rock is extracted, usually for use as a construction material.	ᓴᒡᒐᕐᕕᐅᔪᖅ ᐅᔭᖅᑲᓂ ᐲᔭᐃᕝᕕᐅᔪᖅ, ᐊᑐᖅᑕᐅᒐᔪᒃᑐᖅ ᓴᓇᔭᐅᕙᓪᓕᐊᓂᕆᔭᖕᒐᓂᒃ ᓱᓇᓂᒃ.	Ilutuniqtahamangat uyagak amuyauyuq, atuqniqhauvaktut hanalgutauyunut hunanut.
Reasonably foreseeable future projects or activities	ᓯᕗᓂᖓ ᐊᑐᖅᑕᐅᔪᒥᓇᖅᑐᑦ ᐱᓕᕆᐊᓄᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓄᑦ ᓘᓐᓃᑦ	Naamaktumik atuqniagahugiyaunia hivunikhami havanguyuq huliniitluniit	Projects (or activities) formally accepted into a regulatory approvals process occurring within the outer geographical limit of possible interaction with the Project.	ᐱᓕᕆᐊᑦ (ᐅᕝᕙᓘᓐᓃᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ) ᐊᑐᖅᑕᐅᕙᒃᑐᑦ ᒪᓕᒐᒃᓴᓕᐊᓄᑦ ᐊᖏᖅᑕᐅᔪᒃᓴᓂᒃ ᓯᓚᑎᐊᓂ ᓄᓇᓕᐅᑉ ᑭᒡᓕᖕᒋᓐᓂᒃ ᐊᑐᖅᑕᐅᑐᐃᓐᓇᓇᐊᓖᑦ ᐱᓕᕆᐊᖅᒍᑦ.	Havanguyut (huliniitluniit) naamangiyautaqhimayut aulattiyiuyunit angigutainit pityuhiqnit atuqhimayut iluani hilatagut nunaliqutit kikliani ilaliutyalaqnianit taphuma Havanguyup.

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Reclamation	ᐅᑎᖅᑎᑦᑎᕙᓪᓚᐊᕋᐅᓯᕐᓂᖅ	Halumaqhainiq	Activities done during the life of mine (progressive reclamation) or at the end of mine life to restore the land to its original contour, use, or condition.	ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐅᔭᕋᖕᓂᐊᓂᖃᐅᔭᖅᑎᓪᓗᒍ (ᐱᕙᓪᓚᐊᕋᐅᓯᕐᓂᖅ ᐅᑎᑦᑎᑦᓂᕙᓪᓚᐊᕋᐅᓯᕐᓂᕐᒥᒃ) ᐅᕝᕙᓪᓘᓐᓃᑦ ᐃᓱᓕᑎᓪᓗᒍ ᐅᔭᕋᖕᓂᐊᕐᓂᖅ ᓄᓇ ᐱᖅᑯᓯᖕᒪᓄᑦ , ᐊᑐᕈᑎᖕᒪᓄᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᖃᓄᐃᓕᖕᒪᓂᓇᔭᖕᒪᓄᑦ.	Hulinigiyauyut atuqtitlugu atuqnia uyagakhiuqnik (atuguiqpaliani halumaqhaqnit) ihulitnianilunit uyagakhiuqviup atuqnia ilitquhigaluangatut iliuqaqnia nuna qanugitnigiyagaluangatut, atuqnia qanugitnialuniit.
Regional Study Area (RSA)	ᐊᕕᒃᑐᖅᓯᒪᓂᕐᒥᒃ ᖃᐅᔨᓴᖅᑕᐅᕝᕕᒃ	Nunaliit Avikhimania Naunaiyaqnia Nuna (RSA)	As defined in the glossary of the EIS guidelines: the area within which there is the potential for indirect or cumulative biophysical and socio-economic effects.	ᑐᑭᓕᐅᖅᑕᐅᓯᒪᔪᖅ ᑐᑭᓕᐊᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᖃᐅᓯᕐᒥ ᐊᑐᒐᓕᐊᖏᓐᓂᒃ: ᐃᓂᐅᔪᖅ ᑕᒪᐅᖕᒐᑲᐅᑎᒋᐅᙱᑦᑐᖅ ᐅᕝᕙᓘᓐᓃᑦ ᐊᖏᒡᓕᕙᓪᓚᐊᔪᓂᒃ ᓄᓇᓂᖕᒫᖅᑐᓂᒃ ᐊᒻᒪᓗ ᐃᓅᓯᓕᕆᓂᕐᒧ–ᑮᓇᐅᔾᔭᒃᓴᐅᑎᓂ ᐊᒃᑐᖅᑕᐅᓂᐅᔪᓂᒃ.	Unniqtuqhimaniani talvani Tukiliugutit tapkunani EIS-ngi naunaipkutat: Tamna nuna pilaqnigiya tugaqpiaqhugu katihimaniluniit takukhaunigiyait inuliqutitluniit-kiinauyaliugutit aktuanit.
Residual effect	ᐊᒃᑐᐊᓂᕐᓗᓂᙱᓚᖅᑐᑦ	Amiakut aktuanit	As defined in the glossary of the EIS guidelines: predicted adverse impacts that remain after mitigating measures have been applied.	ᑐᑭᓕᐅᖅᑕᐅᓯᒪᔪᖅ ᑐᑭᓕᐊᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᖃᐅᓯᕐᒥ ᐊᑐᒐᓕᐊᖏᓐᓂᒃ: ᓂᕆᐅᒋᔭᐅᔪᑦ ᐊᒃᑐᐊᓂᕐᓗᒍᑕᐅᓇᔾᔪᐊᖅᑐᑦ ᑕᐃᑲᐅᖏᓐᓇᖅᑐᑦ ᐋᖅᑮᒍᑕᐅᓂᕐᑳᓂᒃᑲᓗᐊᖅᑎᓪᓗᒍ.	Unniqtuqhimanitigut tukiliugutini tapkunani EIS-ngi naunaipkutat atuqniagahuginia ihuittumik aktuanit amiakuit aktuanit huniumaittut ihuaqhigiaqaqtitlugit piyauni atuqaqtitlugit.

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Runoff	ᑯᕕᕙᓪᓕᐊᔪᓂᙵᕐᑦ	Kuukviuniq	Runoff is the part of precipitation that appears in surface streams and is a measure of the hydrologic response of a watershed. It is the quantity of water that is discharged ("runs off") from a watershed during a given time period. It is commonly presented as a depth of water over an entire watershed, in millimeters.	ᑯᕕᕙᓪᓕᐊᔪᓂᙵᕐᑦ ᐃᓚᖃᖅᑐᖅ ᖃᐅᓯᖅᓂᙵᕐᑐᓂᒃ ᓴᖅᑭᐸᒃᑐᑦ ᖄᖓᓄᑦ ᑰᕋᑰᓂ ᐊᒻᒪᓗ ᐃᓚᖃᖅᑐᖅ ᐃᖏᕐᕋᓂᕆᖃᑦᑕᖅᑕᖓᑦ ᐊᖏᓪᓕᕙᓪᓕᐊᓂᖓ ᒥᑭᓪᓕᕙᓪᓕᐊᓂᖓᑕᓘᓐᓃᑦ ᐃᒪᖃᕐᕕᖑᑦ. ᐊᒃᑎᒋᓂᕆᔭᖓᑕ ᐃᒪᐅᑉ ᐲᔭᖅᐸᓪᓕᐊᓂᕆᔭᖓ ("ᑯᕕᕙᓪᓕᐊᓂᖅ") ᐃᒪᖃᕐᕕᖕᒥ ᖃᖓᐅᓂᖓ ᒪᓕᒡᓗᒍ. ᓴᖅᑭᖓᔪᒃᑐᖅ ᐃᑎᓂᖓᑕ ᐃᒪᖃᕐᕕᖕᒥ, ᒥᓚᒦᑕᖏᓐᓂᒃ.	Kuukviuniq ilagiyat nipaliqniq qanniqniqluniit takukhauyuq maniqap qangani kuugauyat pityutauyuqlu imaliqutinut hugiaqnit imaqaqniuyunut. Aktilagiyauyuq imaqnut kuvipkagauyuq ("kuukviuniq") imaqaqniuyumit atuqtitlugu pivigiyani. Atuqpakniqhaq hatqiqnia itinianut imaq tamaanut imaqaqniuyumun, milimiitatigut.
Sea can	ᐱᖁᑎᒃᑯᕕᑦ ᐅᒥᐊᖁᑏ ᐅᓯᔭᐅᕚᒃᑐᑦ	Tagiumi uhityut puunguyuq	Refer to definition for isocontainer.	ᐅᖃᐅᓯᖃᖅᑐᖅ ᑐᑭᓕᐊᕆᓯᒪᔪᒥᒃ ᐱᖁᑎᒃᑯᕕᓂᐅᔪᓂᒃ.	Takulugu unniqtuta ilikugut puunguyuq.
Sealift	ᐅᒥᐊᖅᔪᐊᑦ ᐅᓯᑲᖅᑕᐃᑦ	Tagukkut uhiniq	A large-scale transportation of supplies by sea.	ᐊᖏᔫᑎᓂᒃ ᐅᓯᔭᐅᕚᒃᑐᑦ ᐅᒥᐊᖅᔪᐊᒃᑯᑦ.	Angiyuq agyaqtuut ilakhanut tagiukkut.
Sedimentation pond	ᐃᒪᖅᓯᙲᖅᑎᑕᐅᓯᒪᔪᕕᓂᖅ	Halumaqhaivik tahigaq	Artificial pond constructed to allow settlement of sediments from the water prior to discharge.	ᓴᓇᔭᐅᓯᒪᔪᖅ ᐃᒪᖅᓱᒃ ᓯᖃᓕᓂᒃ ᐃᓂᓪᓚᒍᑕᐅᕚᒃᑐᖅ ᐃᒪᐅᑉ ᓇᖅᓴᖓᓂᒃ ᐲᔭᖅᑕᐅᓂᐊᖅᑎᓪᓗᒋᑦ.	Tahigaliuqhimayuq hanayaq pipkaqninut kivittiqnit halumailgut imaqmit hivuani kuvipkaqniahaqlugit.
Stockpile	ᑲᑎᖅᓱᖅᑕᐅᓂᑦ	Qaligiktihimayut	A pile or storage location for bulk material (ore in the present case) forming part of the material handling process.	ᑲᑎᖅᓱᖅᑕᐅᕝᕕᐅᕚᒃᑐᖅ ᑐᖅᑯᖅᑐᐃᕝᕕᒡᔪᓐᓃᑦ ᐊᖏᔫᑎᓂᒃ (ᓴᕕᕋᔭᒃᓴᖅ ᒫᓐᓇᐅᔪᖅ ᑲᑎᖅᓱᖅᑕᐅᔪᑦ) ᐃᓇᖏᓐᓂᒃ ᑲᒪᒋᔭᐅᕙᓪᓕᐊᔪᓂᒃ.	Qaligiktitat tutqumavitluniit inigiyat angiyunut hunat (havikhat tatya huniumaititlugit) ilagiyauyut hunat tiguttaqnit pityuhit.

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Substrate	ᖄᖓᓂ ᐅᒪᓂᖃᖅᑐᖅ	Maniqap ataani	The surface or material layer on which an organism lives, grows, or feeds.	ᖃᖔ ᐅᕝᕚᓘᓐᓃᑦ ᓱᓇᒧᑦ ᓇᓕᒧᖕᒐᓃᑦᑐᑦ ᐆᒪᓂᖃᖅᑐᑦ ᓇᔪᖃᑦᑕᖅᑐᑦ, ᐱᕈᖃᑦᑕᖅᑐᑦ, ᐅᕝᕚᓘᓐᓃᑦ ᓂᕆᕝᕕᖏᔪᕙᒃᑐᖅ.	Tamna maniqap ataani hunatluniit qaligiktihimanit tapkunani uumayuvaluit nayuqtat, piguqtut, nigivigiyatlu.
Sulphur dioxide (SO_2)	ᐃᓚᒃᓴᖅ ᓴᕕᖃᓐᖏᑦᑐᒥᒃ ᐳᔪᖅ	Sulphur dioxide (SO_2)	Fossil fuel that contains a small amount of sulphur-containing organic compounds. During fuel combustion, the sulphur is oxidized and emitted as SO_2 gas with the engine exhaust. In the atmosphere, SO_2 can further oxidize to sulphate, which contributes to acid deposition.	ᐅᔭᖅᑲᑐᖅᑲᖅᓂᙵᖅᑐᓂᒃ ᐅᖅᓱᐊᓗᒃᓴᖅ ᐃᓚᖅᑲᓛᒃᑐᖅ ᑲᑎᙵᐅᖅᑐᓂᒃ ᐃᓚᒃᓴᓂᒃ. ᐅᖅᓱᐊᓗᒃ ᐃᑯᐊᓚᑎᓪᓗᒍ, ᐃᓚᒃᓴᖅ ᐳᔪᙳᖅᐸᒃᑐᖅ ᐃᑯᒪᓂ ᐳᔪᖅᓗᖕᒐᓂᒃ. ᓯᓚᐅᓂᖅᒥ, ᑕᒪᓐᓇ ᐳᔪᖅ ᐳᔪᙳᒃᑲᓐᓂᖅᐸᒃᑐᖅ ᐆᓐᓇᖅᑑᓕᖅᓗᓂ, ᐱᔾᔪᑕᐅᕙᒃᑐᖅ ᐆᓐᓇᖅᑑᓂᖅᒧᑦ.	Nunamingaqtut uqhukhat piqaqtut mikiyunik aktilangi sulphur-piqaqtut uumayunuaqnut ilagiyait. Atuqtitlugu Uqhuq ikipkaqnia, tamna sulphur ikipkaqnia aniapkaqnialu tamnaupluni SO_2 kaasia ingniqutip huppuktaqnianit. Hilami, SO_2 pilaq hulivaliq ikipkaqnia tipittuqhuni. Tamna ilaliutiyuq huguilaq iukaqtaqnianik.
Sustainable development	ᐱᕈᒃᑲᓂᕈᓐᓇᖅᓂᖅᒧ ᑲᒪᒋᔭᖅᑲᑦᑎᐊᖅᓂᖅ	Atutqikhalat pivaliatitni	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.	ᐱᕙᓪᓕᐊᑎᑦᑎᓂᖅ ᐊᖑᒻᒪᑎᔪᖅ ᐱᔭᐅᔭᓇᐊᖅᑲᖅᑐᓂᒃ ᒫᓐᓇᐅᔪᒧᑦ ᐊᓯᖏᓐᓄᑦ ᐊᓯᙳᖅᑎᑦᑎᖏᓪᓗᓂ ᓯᕗᓂᕆᔭᐅᓂᐊᖅᑐᓄᑦ ᐊᑑᑎᒋᔭᐅᔪᓐᓇᖅᓂᐊᖅᑐᓂᒃ ᓇᖕᒥᓂᖅ ᐱᔭᓇᐊᖅᑲᖅᓂᐊᖅᑕᖏᓐᓂᒃ.	Pivaliatitnit pihimayut piyaqaqnit tatya pihimaittumik pilaqniyt hivunikhamun kinguvakhanut pitaqniinik nanminiq piyaqaqnit.
Tailings	ᐊᒥᐊᒃᑯᖅᓗᐃᑦ	Uyagaktaqnikut	The materials left over after the process of separating the valuable component from an ore.	ᐊᒥᐊᒃᑯᙳᖅᓯᒪᔪᑦ ᐊᕕᒃᑐᖅᑕᐅᓯᒪᔪᓂᒃ ᐱᐅᔫᑏᑦ ᐱᔫᖅᑕᐅᕌᓂᒃᖄᖓᒥᒃ ᓴᕕᕋᔭᒃᓴᒥᒃ.	Tamna huna kihingugaq kinguagut havaktauninit ahivaqtiqnit pinnagiyauyut hunat havikhanit.
Tailings Impoundment Area (TIA)	ᐊᑭᐊᒃᑯᖅᓗᐃᑦ ᑐᖅᑯᖅᑕᐃᕝᕕᖓ	Uyagaktaqnikut Hiamaktailivia Nuna (TIA)	A storage and management area for tailings.	ᑐᖅᑯᖅᑐᐃᕝᕕᒃ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᕕᒃ ᐊᒥᐊᒃᑯᖅᓗᖕᓂᒃ.	Tutqumavik aulataunialu nuna uyagaktaqnikunut.

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Talik	ᐊᕐᖀᒍᓕᒫᖅ ᖁᐊᕈᓐᓇᙱᑦᑐᖅ ᒪᓂᕋᖅ ᓄᓇᒥ ᖁᐊᖅᓯᒪᖃᑦᑕᖅᑐᒥ.	Auktuqtarniq	Perennially unfrozen ground in a permafrost environment.		Ilitquhia qiqumaittuq manigaq qiqumainaqniqmi avatigiyani.
Thermokarst	ᓄᓇᐅᑉ ᐋᖅᑭᒃᓱᖅᓯᒪᓂᖓᓕᖅᑕᖓ	Quglugaqniq	Land-surface configuration that results from the melting of ground ice in a region underlain by permafrost. In areas that have appreciable amounts of ice, small pits, valleys, and hummocks are formed when the ice melts and the ground settles unevenly.	ᓄᓇᐅᑉ ᖄᖕᒐᓂ ᐋᖅᑭᒃᓱᖅᓯᒪᓂᖓᓕᖅᑕᖕᒐᑦ ᐊᐅᒃᑎᓪᓗᒍ ᒪᓂᕋᐅᑉ ᓯᑯᖕᒐ ᓄᓇᒥᔭᓕᖕᒥ ᓄᓇᐅᑉ ᐊᑖᓂ ᖁᐊᖅᓯᒪᐃᓐᓇᐅᔭᖅᑲᑦᑕᖅᑐᒥᒃ. ᑕᐃᒃᑯᓂᖕᒐ ᓯᑯᓯᒪᓂᖅᑲᖅᑲᖅᑕᖅᑐᓂ, ᐃᓗᑐᓂᓛᑦ, ᑭᖖᒐᐃᑦ ᓇᖅᓴᖕᒋᓐᓂ, ᑭᖖᒑᕈᕐᓂ ᓴᓇᔭᐅᓲᑦ ᒥᑯᐃᑦ ᐊᐅᒃᑳᖕᒐᒥᒃ ᐊᒻᒪᓗ ᒪᓂᕋᖅ ᐃᓂᓚᒃᑳᖕᒐᒥᒃ ᒪᓂᕋᐅᓇᓂ.	Nunat iluani qanugitnia piplugu auktitaqniq maniqap hikua tahamani nunaliit avikhimaniani ataanittulik qiqumainaqniqmik. Nunani piqaqpiaqniqhani hikunik, mikiyut ilutunit, naqhait, quglugaqniit pinguqtauyut piyagangat hiku auktugaqnia manigaqlu tungaligangat ayyikkingittumik.
Through talik	ᖁᐊᕈᓐᓇᙱᑦᑐᒃᑯᑦ	Iluagut auktumaniq	Talik that is unfrozen above to the ground surface, unfrozen below to the base of the permafrost, but encased in permafrost laterally.	ᖁᐊᕈᓐᓇᖕᒋᓐᓂᖅ ᖁᓛᓂ ᒪᓂᕋᕐᒥ, ᖁᐊᖅᓯᒪᙱᓐᓂᖅ ᐊᑖᓂ ᑐᙵᕕᖓᓄᑦ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᖁᐊᖅᓯᒪᓂᖓᔭᖕᒐᓂᒃ, ᑭᓯᐊᓂ ᐊᕙᓗᓯᒪᔪᖅ ᖁᐊᖅᓯᒪᓂᐅᑉ ᓴᓂᒨᖕᒐᔪᒥᒃ.	Auktumaniq qiqumaittuq qulaani maniqap qangani, qiqumaittuq ataani tungaviata qiqumainaqniup, kihimik avallulik qiqumainaqniqmik qungmungayumik.
Till (glacial till)	ᐃᒪᐅᑉ ᓇᑎᖕᒐᓃᑦᑐᑦ	Hikuluk (hikiunauqpiaqniup hikulua)	Till or glacial till is an unsorted, coarsely graded, and extremely heterogeneous sediment deposited directly by a glacier.	ᓯᕐᒥᓂᖖᒎᖅᓯᒪᔪᑦ ᐃᒪᐅᑉ ᓇᑎᖕᒐᓃᖅᓯᒪᔪᑦ, ᒥᑭᔫᑕᐅᓂᖏᑦ ᐊᔾᔨᒌᙱᓐᓂᓖᑦ ᒥᑭᔫᓂᖏᑦ, ᐊᔾᔨᒌᙱᑦᑑᑎᒻᒪᕆᐅᓪᓗᑎᒃ ᐃᒪᐅᑉ ᓇᑎᖕᒐᓃᖅᓯᒪᒧᑦ ᓯᕐᒥᓂᖖᒎᖅᑐᑦ.	Hikuluk hikuhimaqpiaqniup hikulualuniit aviktuqhimaitniq, maniittuq qanga,allatqiktitaqnia hunavaluit iliuqaqnit tugapiaqhugit hikuhimaqpiaqniqmin.
Total Suspended Particulates (TSP)	ᐆᒃᑐᕋᖅᑕᐅᓯᒪᓃᑦ ᓂᐅᖅᑕᐅᔪᓐᓇᖅᑐᑦ	Katitlugit Puktalaqnit Hunavaluit (TSP)	A measure of the mass concentration of particulate matter in air.	ᐆᒃᑐᕋᖅᑕᐅᓯᒪᔪᑦ ᐊᒥᒌᓂᖓᔭᓂᖕᒋᑦ ᓂᐅᖅᑕᐅᔪᓐᓇᖅᑐᑦ.	Uuktuguta aktilanga katipkaqhimaniup hunavaluit hilainaqmi.

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Total Suspended Solids (TSS)	ᐆᒃᑐᕋᖅᑕᐅᓯᒪᓃᑦ ᐸᓂᖅᑐᑦ ᓂᐅᖅᑕᐅᔪᓐᓇᖅᑐᑦ	Katitlugit Puktalaqnit Naptunit (TSS)	A measure of the dry weight of particulate material in a water sample.	ᐆᒃᑐᕋᖅᑕᐅᓯᒪᔪᑦ ᐸᓂᖅᑐᑦ ᓂᐅᖅᑕᐅᔪᓐᓇᖅᑐᓂ ᐃᒪᕐᒥ ᖃᐅᔨᓴᖅᑕᐅᔫᒃᓴᒥᒃ.	Uuktuguta paniumayuq uqumaitnia hunavaluit imamp uuktugaqniani.
Toxicity Reference Value (TRV)	ᐅᓗᕆᐊᓇᕐᓂᕐᒧᑦ ᓇᓗᓇᐃᖅᓯᔾᔪᑎ	Tuqunaqtut Taiyaunit Aktilangi (TRV)	The maximum acceptable dose or concentration of a chemical that can be received by a receptor without an appreciable risk of adverse health effects during a human lifetime.	ᓈᒻᒪᒋᔭᐅᔪᓐᓇᕐᓂᖅᐸᕐᒥᒃ ᐊᒃᑎᒋᓂᖓ ᐃᓚᒃᓴᓂ ᐱᔭᐅᔪᓐᓇᖅᑐᖅ ᐅᓗᕆᐊᓇᖏᓪᓗᓂ ᑎᒥᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐃᓅᓯᓗᒃᑖᖅ ᐃᓱᐊᓄᑦ.	Tamna anginiqpaq naamaknia aktilanga katipkaqhimanialuniit avugiyauttaqtuq pilqata pitaqviuyumun pihimaittumik hivuganaginia ihuittumik aktuanit atuqtitlugu inuup inuhiani.
Traditional Knowledge (TK)	ᖃᐅᔨᒪᔾᔭᐅᔪᑐᖃᑦ	Ilitquhiit Ilihimani (TK)	As defined in the glossary of the EIS guidelines: cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission. Specific Inuit Traditional Knowledge is referred to as Inuit Qaujimajatuqangit.	ᑐᑭᓕᐊᖑᔪᖅ ᑐᑭᓕᐊᖑᔪᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᕿᐅᓯᖓᓂᒃ ᐊᑐᒐᓕᐊᖑᔪᓂᒃ: ᑲᑎᖅᓱᖅᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᒪᔾᔭᐅᓃᑦ, ᐊᑐᖅᑕᐅᕙᒃᑐᓂᒃ ᐊᒻᒪᓗ ᐅᒃᐱᕆᔾᔭᐅᔪᓂᒃ, ᐱᕙᓪᓕᐊᕋᐅᔾᔪᓂ ᖃᓄᐃᓕᐅᕐᓂᖅᖅᐸᓪᓕᐊᑎᓪᓗᒍ ᐊᒻᒪᓗ ᑐᓂᔾᔭᐅᕙᓪᓕᐊᑎᓪᓗᒋᑦ ᑭᖑᕚᕆᓄᑦ ᐃᓕᖅᑯᓯᖅᑎᒍᑦ. ᓯᕗᒻᒧᐊᒃᑎᑦᑎᓇᓱᐊᖅᑎᓪᓗᒋᑦ. ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᖃᖕᒋᑦ ᑕᐃᒫᒃ ᑕᐃᔭᐅᕗᑦ.	Tukigiyani talvani tukiliugutit tapkuat EIS-ngi naunaipkutat: katihimaniq ilagiya ilihimaniq, pitquhiq ukpigiyaqluniit, pivaliahimayuq atuqpaliqninit pityuhit tuniqagauplunilu kinguvagiinit ilitquhiit nuuttaqninit. Taihimayut Inuit Ilitquhit Ilihimani taiyauyut taphuminga Inuit Qaujimajatuqangit.

English Term	Translated Inuktitut Term	Translated Inuinnaqtun Term	English Definition	Inuktitut Definition	Inuinnaqtun Definition
Underground mine	ᓄᓇᐅᑉ ᐊᑖᒍ ᐅᔭᒐᒃᓂᐊᕐᓂᖅ	Nunap iluani uyagakhiuqvik	A mine working where the ore deposit is accessed via a decline (ramp) or inclined vertical shaft. Levels are excavated horizontally off the decline or shaft to access the ore body, and stopes are excavated perpendicular (or near perpendicular) to the level into the ore.	ᐅᔭᒐᒃᓂᐊᖅᑐᓕᕆᓂᖅ ᓴᕕᒐᔭᒃᓴᖃᖅᑐᒥᒃ ᐱᔭᐅᕙᒃᑐᑦ ᓄᓇᒧᑦ ᐃᓗᐊᓄᐊᖅᐸᓪᓕᐊᓗᓂ. ᐊᑦᑎᖕᓂᖕᑭᑦ ᓴᖕᖓᖅᑕᐅᕙᓪᓕᐊᓪᓗᑎᒃ ᓴᓂᒧᑦ ᐊᒻᒧᒃᐸᓪᓕᐊᓪᓗᓂ ᐲᔭᐃᓂᐊᕐᓗᓂ ᓴᕕᒐᔭᒃᓴᓂᒃ, ᐊᒻᒪᓗ ᒪᔪᕋᕖᑦ ᓴᖕᖓᖅᑕᐅᓪᓗᑎᒃ ᓴᓂᒨᖕᖓᔪᒥᒃ (ᖃᓂᒋᕙᖕᖓᓂᓪᓘᓐᓃᑦ ᓴᓂᒧᑦ) ᐊᑦᑎᖕᓂᖕᖓᓄᑦ ᓴᕕᒐᔭᒃᓴᐅᑉ.	Uyagakhiuqvik atuqtuq tapkuninga havikhanik piqaqnia pilaqnit atuqhugit uvinganiq (apqutauyuq) hivinganialuniit ilunmugaqvik. Puqtutqikni amuyauyut hanimun tahamangat uvinganiqmit ilunmuktaqvikmitluniit pinahuaqhugu havikhaqaqniq, qulligitlu amuhiviuyut qunmunganit (qunmungayaqtutluniit) nalaani havikhat.
Valued Ecosystem Components (VECs)	ᐱᓐᓇᕆᔭᐅᔪᑦ ᐆᒪᔪᑦ ᓇᔪᕐᕕᒋᕙᒃᑕᖕᒋᑦ ᐃᓗᓕᖕᒋᑦ	Pinnagiyat Uumatyutit Ilagiyat (VECs)	As defined in the glossary of the EIS guidelines: those aspects of the environment considered to be of vital importance to a particular region or community, including: resources that are either legally, politically, publically, or professionally recognized as important, such as parks, land selections, and historical sites; resources that have ecological importance; and resources that have social importance.	ᑐᑭᓕᐊᒍᔪᖅ ᑐᑭᓕᐅᖅᑕᐅᓯᒪᔪᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᖃᐅᓯᓂᒃ ᐊᑐᒐᒃᓴᖕᑭᓐᓂᒃ: ᑕᐃᒃᑯᐊ ᑐᕌᖕᒐᔪᑦ ᐊᕙᑎᒧᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ ᐱᒻᒪᕆᐅᓂᖅᑲᒻᒪᕆᒃᑐᓂᒃ ᐊᕕᒃᑐᖅᓯᒪᓂᕐᒥᐅᑕᐅᔪᓄᑦ ᓄᓇᓕᖕᒧᓪᓘᓐᓃᑦ, ᐃᓚᒋᓗᒋᑦ: ᐱᕕᒃᓴᑦ ᒪᓕᒐᖅᑎᒍᓪᓘᓐᓃᑦ, ᒐᕙᒪᓕᕆᓂᒃᑯᓪᓘᓐᓃᑦ, ᓴᓇᔨᒻᒪᕆᒃᑎᒍᓪᓘᓐᓃᑦ ᐃᓕᑕᕆᔭᐅᓯᒪᔪᑦ ᐱᒻᒪᕆᐅᓂᖕᑭᓐᓇᓄᑦ, ᓃᕐᓗ ᒦᙵᐃᕐᓯᕐᕖᑦ, ᓄᓇᑖᕐᓯᐊᕐᓂᕐᒧᑦ, ᐊᒻᒪᓗ ᑭᖕᒍᓂᑐᕐᑲᕐᓂ ᐃᓂᐅᔪᓂᒃ; ᐱᕕᒃᓴᐃᑦ ᐆᒪᔪᕐᑲᕐᕕᐅᔪᑦ ᐱᒻᒪᕆᐅᑎᑕᐅᓯᒪᓂᕐᑲᖅᑐᑦ, ᐊᒻᒪᓗ ᐱᕕᒃᓴᐃᑦ ᐃᓅᓯᓕᕆᓂᖅᑎᒍᑦ ᐱᒪᕆᐅᓂᓛᑦ.	Tukiliuqniani tapkunani tukiliugutit tapkuat EIS-ngi naunaipkutat: tahapkuat ilagiyat avatiliqutit ihumaginit atuqpiaqnit ilagiyai nunliit avikhimanit nunaliuyutlu ilagiyait: piqaqnit naliaknittut maligaliqutit, katimayiuttaqtut, inungnut, havaktiuqpiaqtutluniit ilittuginit atuqpiaqninut, tahapkuatut minguiqhiqviit, nunap taihimanit, atuqpakhimanitlu inait; piqaqnit pihimayut uumatyutinut atuqpiaqnilgit; piqaqnitlu inuliqutinut atuqpiaqtut.

English Term	Translated Inuktitut Term	Translated Inuinnaqtun Term	English Definition	Inuktitut Definition	Inuinnaqtun Definition
Valued Socio-economic Components (VSECs)	ᐱᓐᓇᕆᔭᐅᔪᑦ ᐃᓅᓯᓕᕆᓂᖅ–ᑮᓇᐅᔾᔭᒃᓴᐅᑎᓄᑦ ᐃᓗᓕᖕᒋᑦ	Pinnagiyat Inuliqtutit-kiinauyaliugutit Ilagiyat (VSECs)	As defined in the glossary of the EIS guidelines: those aspects of the socio-economic environment considered to be of vital importance to a particular region or community, including components relating to the local economy, health, demographics, traditional way of life, cultural well-being, social life, archaeological resources, existing services and infrastructure, and community and local government organizations.	ᑐᑭᓕᐊᖑᔪᖅ ᑐᑭᓕᐅᖅᑕᐅᓯᒪᔪᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒃᑐᖅᑕᐅᓂᕐᒧᑦ ᐅᖃᐅᓯᓂᒃ ᐊᑐᒐᒃᓴᖕᒋᓐᓂᒃ: ᑕᐃᒃᑯᐊ ᑐᕌᖕᒐᔪᑦ ᐃᓅᓯᓕᕆᓂᖅ–ᑮᓇᐅᔾᔭᒃᓴᐅᑎᓄᑦ ᐊᕙᑎᖕᒋᓐᓂᒃ ᐃᓱᒪᒋᔭᐅᔪᑦ ᐱᒻᒪᕆᐅᓂᖃᒻᒪᕆᒃᑐᓂᒃ ᐊᕕᒃᑐᖅᓯᒪᓂᕐᒥᐅᑕᐅᔪᓄᑦ ᓄᓇᓕᖕᒧᑦ–ᓘᓐᓃᑦ, ᐃᓚᒌᓗᒌᑦ ᐃᓗᓕᖕᒋᑦ ᐊᒃᑐᐊᓂᓖᑦ ᓄᓇᓕᖕᒥ ᑮᓇᐅᔾᔭᒃᓴᐅᑎᖕᒋᓐᓄᑦ, ᖃᓄᐃᖕᒋᓐᓂᐊᕐᓂᕆᔾᖕᒋᓐᓄᑦ, ᓄᓇᓕᐅᑉ ᐊᔾᔨᒌᙱᑦᑑᑎᐅᓂᕆᔾᖕᒋᑦᑕ ᐃᓅᓯᖕᒋᓐᓄᑦ, ᐃᓅᓯᑐᖅᑲᖕᒋᓐᓂᒃ ᐊᑐᖅᐸᒃᑕᖕᒋᓐᓄᑦ, ᐃᓕᖅᑯᓯᖅᑎᒍᑦ ᖃᓄᐃᖕᒋᑦᑎᐊᕐᓂᕆᔾᖕᒋᓐᓄᑦ, ᐃᓅᓯᓕᕆᔾᔪᑎᖕᒋᓐᓄᑦ, ᐃᑦᑕᕐᓂᑕᓕᕆᓂᕐᒧᑦ ᐱᕖᒃᓴᐃᑦ, ᐱᔾᔪᑎᖃᐅᑎᒋᔭᖕᒋᓐᓄᑦ ᐊᒻᒪᓗ ᒪᑭᒪᔾᔪᑕᐅᔪᑦ ᓄᓇᓕᖕᒥ, ᐊᒻᒪᓗ ᓄᓇᓕᖕᒥ ᒐᕙᒪᕐᑯᑎᖕᒋᓐᓂᒃ ᑎᒥᕐᑯᑎᖕᒋᓐᓄᑦ.	Tukiliuqniani tapkunani tukiliugutit tapkuat EIS-ngi naunaipkutat: tahapkuat ilagiyat inuliqtutit-kiinauyaliugutit avatigiyait ihumagiyauyut atuqpiaqninik taihimayumi nunaliit avikhimaniani nunaliuyutluniit, ilautitlugit ilagiyai tugangayut nunaliit kiinauyaliugutai, aaniaqtailiniq, inugiakniq, ilitquhiit inuuhiqmun, ilitquhiit inuuhigiknit, inuuniqmun inuutyutit, inituqlituqat piqaqnit, nunaliuyutlu kavamait timigiyait.

Acronyms and Abbreviations

Acronyms and Abbreviations

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

AEMP	Aquatic Effects Management Plan
BACT	Best achievable control technology
BC MOE	British Columbia Ministry of Environment
BIF	Banded iron formation
BIPR	Bathurst Inlet Port and Road
CCME	Canadian Council of Ministers of the Environment
CESCC	Canadian Endangered Species Council
COPC	Contaminants of potential concern
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWB	Community Well-being
CWS	Canadian Wildlife Service
DEIS	Draft Environmental Impact Statement
EC-MSC	Environment Canada – Meteorological Service of Canada
EFAP	Employee and Family Assistance Program
EIS	Environmental Impact Statement
EIS guidelines	Nunavut Impact Review Board final Guidelines for the Preparation of an Environmental Impact Statement
EUB	Alberta Energy and Utilities Board
FEIS	Final Environmental Impact Statement
ILCR	Incremental lifetime cancer risk
INAC	Indian and Northern Affairs Canada (now Aboriginal Affairs and Northern Development Canada)
IOL	Inuit Owned Land
ISQG	Interim sediment quality guideline
KIA	Kitikmeot Inuit Association
LSA	Local Study Area
MLA	Marine Laydown Area
NBS	Network for Business Sustainability
NIRB	Nunavut Impact Review Board

NLCA	Nunavut Land Claims Agreement
NLUP	Nunavut Land Use Plan
NPC	Nunavut Planning Commission
NTKP	Naonaiyaotit Traditional Knowledge Project
NU	Nunavut
NWT	Northwest Territories
PASS	Passive air sampling station
PDA	Potential Development Area
PEL	Probable effect level
PRISM	Program for Regional and international Shorebird Monitoring
Rescan	Rescan Environmental Services Ltd., an ERM company
RIC	Resource Inventory Committee
RMWI	Recommended maximum weekly intake
RSA	Regional Study Area
SARA	*Species at Risk Act*
TEM	Terrestrial ecosystem mapping
TK	Traditional Knowledge
TSP	Total Suspended Particulate
TSS	Total Suspended Solids
US EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UTM	Universal Transverse Mercator
VEC	Valued Ecosystem Component
VSEC	Valued Socio-economic Component
WHO	World Health Organization

1. Introduction

1. Introduction

Sabina Gold & Silver Corp. (Sabina) has prepared the draft Environmental Impact Statement (DEIS) for the development of the Back River Gold Project (Project). The DEIS has been developed to conform to the Guidelines for the Preparation of an Environmental Impact Statement (NIRB 2013) with the concordance table found in Appendix V1-1. The DEIS document index is included in Appendix V1-7 and a complete DEIS Table of Contents is presented in Appendix V1-8. The DEIS consists of the following volumes:

Volume 1: Draft Environmental Impact Statement: Main Volume — provides an overview of the DEIS, including a summary of the proposed Project, background and need for the Project, baseline studies, effect assessment methods and results, as well as the management and mitigation plans to meet commitments in this EIS.

Volume 2: Project Description and Alternatives — describes the proposed Project, including estimated schedule, facilities and infrastructure, phases including site preparation, construction, operation, and closure and post/closure activities, estimated workforce, and alternatives considered to the Project and within the Project.

Volume 3: Public Consultation, Government Engagement, and Traditional Knowledge — presents results of extensive engagement and consultation completed to date and the Traditional Knowledge available at both a regional and local level.

Volume 4: Atmospheric Environment — includes results of background atmospheric studies, an assessment of the Project's GHG emissions relative to Nunavut, Canada and the world, and potential effects of the Project on air quality and noise levels in the region.

Volume 5: Terrestrial Environment — describes results of background studies and potential effects of the Project on the terrestrial environment, including sensitive landforms, vegetation, birds, and caribou.

Volume 6: Freshwater Environment — presents results of background studies and potential effects of the Project on the freshwater aquatic environment, including flow and quality of water, and effects on fish and fish habitat.

Volume 7: Marine Environment — addresses results of background studies and potential effects of the Project on the marine environment, including sea ice, water and sediment quality, fish and marine mammals.

Volume 8: Human Environment — presents results of socio-economic background studies and potential effects of the Project on nearby communities and the people of these communities.

Volume 9: Methodology, Effects of Environment on Project, Accidents and Malfunctions — presents methods used to undertake assessments of potential effects on the biophysical and socio-economic environments. The cumulative effects assessment of the Project considering past, present, and reasonably foreseeable projects and activities in the region that might also cause effects on valued components assessed in the EIS. Other assessments included an evaluation of potential accidental events, their potential effects, and likelihood of occurrence of these events, as well as the effects of the environment on the Project (i.e., extreme weather, climate change).

Volume 10: *Management Plans* — presents Sabina's management system and related management plans that will be established to limit and mitigate any potentially negative effects and enhance benefits of the Project on its employees, contractors, residents of Nunavut, and the natural environment.

Volume 11: *Water Licence Application* — presents the Type A water licence to facilitate the coordinated NIRB and NWB process.

Volume 12: *Other Approvals* — presents applications to support request exception from review for site preparation activities as well as authorizations needed for Project construction, operation and closure.

The list of agencies, organizations and individuals to receive a paper and/or electronic version of the DEIS is presented in Appendix V1-5.

The Project includes the Goose Property and the George Property, a Marine Laydown Area situated in the southern portion of Bathurst Inlet, and, connecting winter roads. The Project is mostly on Inuit-Owned Lands (IOL) with some supporting access corridors located on Crown Lands. The Project has an estimated ten year operating mine life with current reserves identified within three deposits at Goose Property and three deposits at George Property. The mine schedule includes open pit and underground mine methods with a total ore feed to a single mill at the Goose Property of 12.5 million tonnes. The tailings will report to a tailings impoundment area (TIA) at the Goose Property. The Goose and George Properties and the Marine Laydown Area will each have a power plant, fuel storage, accommodations complex, and sewage treatment. Annual resupply will use sealift methods during open water and aircraft year round. Access between the Properties and the Marine Laydown Area will be the seasonal construction and use of a winter road corridor.

1.1 PROPONENT INFORMATION

Sabina is a public Canadian mining company (SBB: TSX) that is focused on development of its 100%-owned Back River Project. Company contact details are as follows:

> Sabina Gold & Silver Corp.
> 930 West 1st Street, Suite 202
> North Vancouver, BC
> Tel: 604-998-4175 or 888-648-4218
> Fax: 604-998-1051

Sabina has been actively completing mineral exploration in the Kitikmeot Region since 2004 initially at the Hackett River Project and at the Back River Project since it was acquired in 2009. Through these continued programs, Sabina has developed a more robust corporate structure and workforce to support advanced exploration and continues to build toward project development and operations.

Sabina intends to build a mine with integrity — one that is safe, environmentally responsible, and beneficial to all parties involved. To meet this commitment, Sabina has commissioned numerous consultants and experts to contribute and write the DEIS for the Back River Project. This information is provided in Appendix V1-4.

Sabina believes that its record in Nunavut demonstrates how it has learned to incorporate environmental and socio-economic considerations successfully into the exploration activities to date. Sabina has demonstrated its ability to adaptively protect the environment and minimize the adverse impacts of its operations on the land, water, and wildlife of the area. Sabina has also fostered relationships such that it has learned to work with local communities, Inuit organizations, and government agencies in an adaptive manner to minimize, where possible, the adverse social impacts of its activities while maximizing the socio-economic benefits to the residents of the Kitikmeot region and Nunavut as a whole.

Sabina intends to balance good stewardship in the protection of human health and the natural environment with the need for economic growth.

1.2 REGIONAL CONTEXT

The Back River Project is an advanced exploration gold Project located in the West Kitikmeot region of Nunavut, as shown in Figure 1-1, at approximately 65° to 66° north latitude, and 106° to 107° west longitude. The Project includes the Goose Property, the George Property, a Marine Laydown Area in southern Bathurst Inlet, and connecting winter roads.

The closest communities to the Project are Kingaok, located approximately 160 km to the north of the Goose Property, and Omingmaktok located approximately 250 km to the northeast of the Goose Property. The communities of Kugluktuk and Cambridge Bay are the closest major regional settlements. Kugluktuk and Cambridge Bay are likely sources of workers and contractors. Communities of the Eastern Kitikmeot region are also likely sources of workers and contractors including Gjoa Haven, Kugaaruk and Taloyoak. Yellowknife, NWT, is a transport hub and a source for workers, goods and services.

1.3 LAND TENURE

The Property comprises 45 federal mineral leases and 16 federal mining claims covering approximately 128,530 acres or 52,014 ha (Appendix V1-3). The mineral tenure are administered by Aboriginal Affairs and Northern Development Canada (AANDC), and referred to as Crown Land. The Project's gold deposits are situated on Inuit Owned Lands (IOL) and administered by Nunavut Tunngavik Inc. (NTI; sub-surface and mineral rights) and the Kitikmeot Inuit Association (KIA; surface rights) on behalf of the Inuit Beneficiaries as designated under the NLCA. The mineral leases covering the Project's deposits and prospective areas were recorded by the Government of Canada prior to the creation of Nunavut under the NLCA in 1999. Consequently, they are considered to be 'grandfathered' under the NLCA, meaning that the mineral production royalties payable to the mineral rights owner are administered by the Government of Canada under the Canada Mining Regulations. The royalties collected are then transferred to NTI as the new sub-surface mineral rights owner.

1.4 NEED AND PURPOSE OF THE PROJECT

The purpose of the Back River Project is to mine and process ore from seven deposits (Main, Llama, Umwelt, Locale 1, Locale 2, and Lone Cow Pond) and ship gold doré to world markets so there is an economic return on investment while protecting the environment and maximizing the socio-economic benefits to the region.

The need for this project is:

- to provide a return on investment to the Company's shareholders;
- to supply gold to the international marketplace. The reasonably foreseeable international demand for gold has created market conditions that Sabina believes are favourable for operating mines at the Back River Project;
- to support the Nunavut Planning Commission Broad Planning Principles, Policies and Goals (Nunavut Planning Commission 2007);

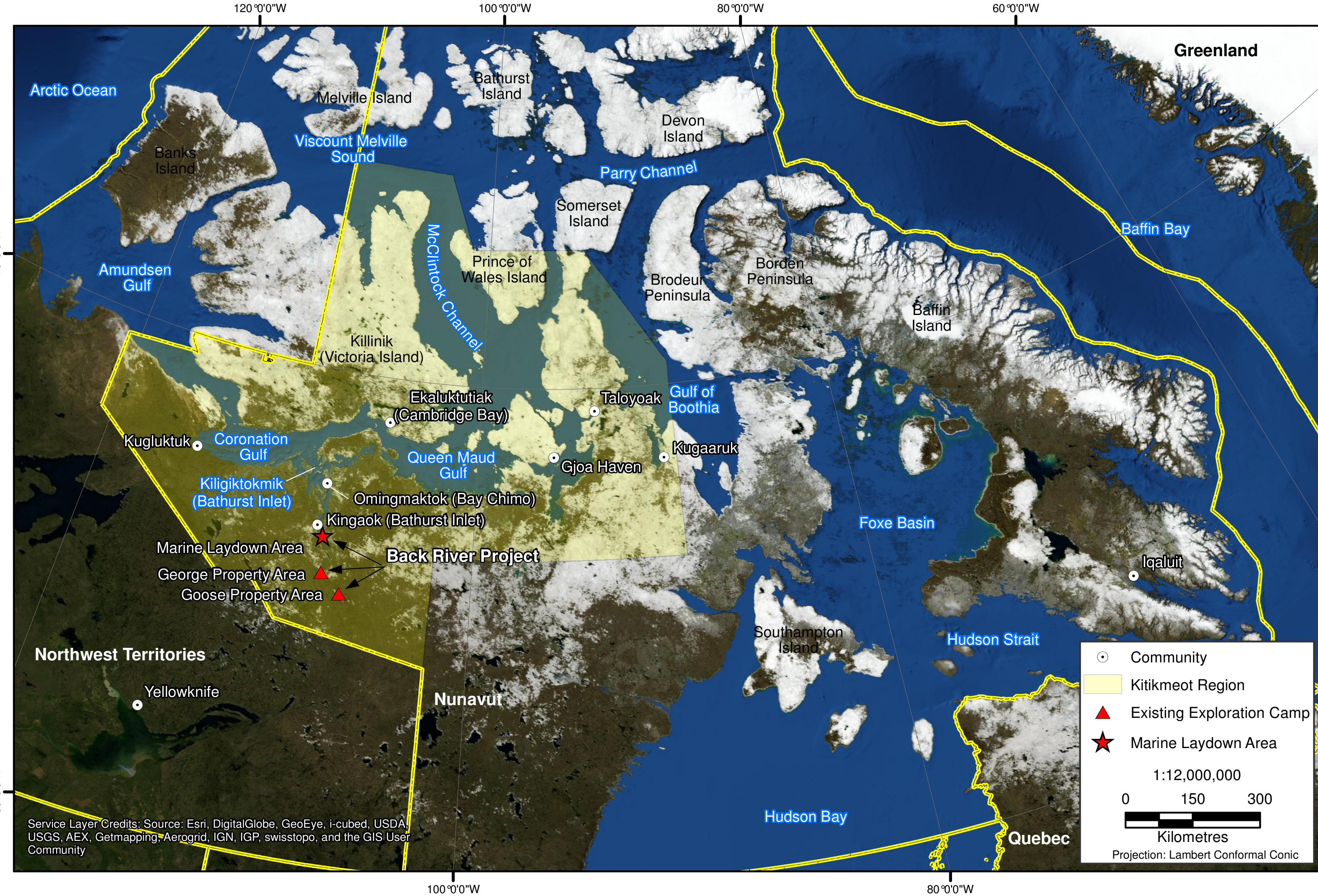

Figure 1-1

Sabina GOLD & SILVER CORP.

Back River Project Location and Kitikmeot Communities

Figure 1-1

Rescan an ERM company

- to contribute to the development of infrastructure, skills training, employment, and business opportunities in Nunavut, as outlined in the Nunavut Exploration and Mining Strategy (Government of Nunavut 2007). This will help build healthy communities and strengthen partnerships between Sabina and stakeholders and institutions;
- to contribute to Canada's northern strategy to strengthen Canada's sovereignty, protect the country's environmental heritage, promote economic and social development and improve Northern governance (Indian and Northern Affairs Canada 2008);
- overall net benefit of the Project to sustainable development in Nunavut

1.4.1 Precautionary Principle

Sabina is committed to environmentally responsible and socially acceptable exploration and mining practices. We are dedicated to creating and maintaining a safe environment for both the land we occupy and the people that drive its success. The company's philosophy is to conduct its operations to protect not only the environment, but the health and safety of its employees and the public as well.

Sabina also subscribes to the principles of sustainable development in mining. While mining cannot occur without an impact on the surrounding natural environment and communities, our responsibility is to limit negative environmental and social impacts and to enhance positive impacts. The use of the Precautionary Principle promotes action to avert risks of serious or irreversible harm to the environment.

Sabina integrates the application of the Precautionary Approach throughout the design of the Project. This approach forms the basis for project design criteria, the effects assessment volumes of the DEIS, the alternatives assessment (Volumes 1 through 9) and the EHS management practices which are detailed in the Environmental Management System (Volume 10). The application of the precautionary approach will continue with ongoing engineering and feasibility and a preliminary list of commitments made throughout all volumes of the DEIS is found Appendix V1-6. This list will be revised and updated with development of the Feasibility Study and the Final Environmental Impact Statement.

<u>Application of the Precautionary Principle</u>

As understood by Sabina, the "precautionary principle" or precautionary approach means as follows: if an action has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus, then that action should be considered harmful (Volume 2, Section 2.1.4). The principle implies that there is a social responsibility to protect the public from exposure to harm when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result. Sabina's approach can be summarized as follows:

- Priority 1 — collect the scientific data required to allow scientific consensus to be achieved;
- Priority 2 — consult with local stakeholders to incorporate local and traditional knowledge into our data to help reach consensus;
- Priority 3 — design all facilities and activities with adaptive management in mind. In cases where uncertainty remains, Sabina has considered experience from other locations and projects. Sabina has also built in appropriate safety factors in the design of the facility or in the proposed action. Sabina has incorporated flexibility so that the activity or design can be actively adapted to accommodate possible future change;
- Priority 4 — design and implement monitoring programs to address all areas of uncertainty so that data are being generated to a) allow for scientific consensus to be achieved, and b) to allow activities where some uncertainty exists to be adaptively managed in a timely manner.

1.5 ALTERNATIVES

Alternatives within the Project have been evaluated according to the following criteria: Technical feasibility; Cost implication in terms of implementation; Potential impacts to the environment; and Amenability to reclamation. Preliminary engagement and consultation discussions have been considered as part of the alternatives assessment for pre-feasibility studies and as feasibility studies advance, alternatives assessment will also incorporate: Community acceptability or preference; and Enhancing socio-economic effects.

For each Project alternative, once an option is judged "technically feasible", objectives can be qualitatively evaluated on the basis of professional judgement and previous experience with similar Projects or situations. Objectives are meaningful attributes that are essential for Project success, and the ranking of these objectives provides the basis for distinguishing between various options.

There are two categories of alternatives:

- tier one alternatives are related to executing the Project and consist of options evaluated that would shape the overall development of the Back River Project; and
- once the decisions have been made related to the above alternatives, a second tier of alternatives consist of trade-off analysis for executing various key components of the Project.

1.5.1 Discussion of Major (Tier One) Alternatives for the Project

The alternatives that shaped the overall development of the Back River Project are discussed in Volume 2, Chapter 4 and include:

- Project "Go/No Go" decision;
- access and transportation alternatives for year round access to the Project;
- ownership scenario and BIPR connection;
- selection of the deposits included in the project development;
- location of the waste rock stockpiles and the Tailing Impoundment Area;
- selection of the metallurgical process for extracting gold;
- means of energy generation at the various Project sites; and
- site reclamation and closure alternatives.

1.5.2 Discussion of Alternatives (Tier Two) within the Project

Once decisions have been made on the major alternatives shaping the Project, a second tier of alternatives are considered as means of executing components of the Project and evaluated. Many of these include trade-off studies for various components of the Project such as:

- dock configuration at the Marine Laydown Area; and
- camp sizes driven by man-power requirement.

Once decisions have been made, the configuration of the various Project sites is optimized during the preliminary and detailed design phases of the Project. Optimization focuses on:

- detailed site layouts and location of infrastructure;
- site roads and laydown areas within the Project development areas;

- water management approaches within the Project development areas;
- general waste management.

As engineering and baseline environmental data collection advances alternatives will be further refined and assessed as part of continued feasibility studies.

1.6 OPTIMIZATION OF BENEFITS OF THE PROJECT

Sabina believes in the economic viability and potential of the Back River Gold Project, and that project development will bring much needed training and employment opportunities, as well as increased investment in services to the people of the Kitikmeot region and Nunavut as a whole. This economic development will further support self-reliant communities with reduced dependence on government without a compromise to the health of the people or the land through the continued creation of stable private sector employment.

Many of the policies and strategies for Nunavut speak to self-reliance and improved quality of life as drivers for balanced economic development that require both the protection and use of renewable resources with the development of non-renewable resources. Sabina believes that the Project can be a key driver in meeting these objectives, particularly within the Kitikmeot region of Nunavut. Sabina has provided its understanding and projections of how the Project can benefit the Kitikmeot communities and all Nunavummiut in Volume 3 of the DEIS.

The proposed Project has the potential to offer year-round employment to interested Nunavummiut in Kitikmeot. Benefits will accrue to Inuit from the IIBA, and also from royalties paid to NTI over the operating life of the mine.

For the construction phase, key economic benefits of the Project include the following:

- direct Project employment of approximately 180 person-years for Nunavut (assumed mainly within the Kitikmeot Region) and 1,200 person-years for all of Canada;
- total employment (direct, indirect, and induced) of approximately 483 person-years for the Kitikmeot Region, 1,086 person-years for Nunavut, and 6,245 person-years for all of Canada;
- total GDP (direct, indirect, and induced) contributions of approximately $47.3 million in the Kitikmeot Region, $96.6 million in Nunavut, and $597.5 million in all of Canada; and
- total tax revenue (federal and provincial/territorial) contributions of approximately $6.7 million from economic activity in the Kitikmeot Region, $12.5 million in Nunavut, and $97.2 million for all of Canada.

For the operation phase, key economic benefits of the Project include the following:

- direct employment of approximately 1,111 person-years for the Nunavut (assumed mainly within the Kitikmeot Region) and 4,442 person-years for all of Canada;
- total employment (direct, indirect, and induced) of approximately 2,191 person-years for the Kitikmeot Region, 4,266 person years for Nunavut, and 28,041 person-years for all of Canada;
- total GDP (direct, indirect, and induced) contributions of approximately $355.7 million in the Kitikmeot Region, $532.5 million in Nunavut, and $2,857.2 million in all of Canada; and
- total tax revenue (federal and provincial/territorial) contributions of approximately $106.5 million from economic activity in the Kitikmeot Region, $124.5 million in Nunavut, and $519.1 million for all of Canada.

The Back River Project is located in an isolated, remote area of Nunavut with limited access. For this reason, infrastructure such as roads and marine docking facilities are needed to access the Project as well as connect the Properties that make up the Back River Project. Sabina is open to other negotiated use and access along its road corridor, however, at this time it will be considered a private road, along with the marine facility, and closed to public use.

1.7 FUTURE DEVELOPMENT

1.7.1 Project Phases

The life of the Back River Project is twenty-nine (29) years (including closure and post-closure) as indicated in Table 1.7-1. It is expected that site preparation activities will begin in 2014 with the site preparation activities followed by two years of construction of the Goose and George site infrastructure. For the purpose of this assessment, the first year of production is termed “Year 1”. Production will carry on for 8.5 to 12 years followed by the period of reclamation and closure activities (up to 10 years). Sabina expects to follow up with post closure monitoring of the site for approximately five years. However, post closure monitoring will carry on until closure objectives have been achieved.

Table 1.7-1. Life of Project

Activities	Duration	Year (Estimated)	Section of Volume 2
Site Preparation	2 years (Year -4 to -2)	2014-2016	Section 6
Construction	2 years (Year -2 to 1)	2016-2017	Section 6
Operation (for the purpose of the environmental assessment)	8.5 years (Year 1 to 9)	2017-2026	Section 7
Reclamation and Closure	Up to 21 years (Year 8 to 18)	2027-2037	Section 8
Post-closure Monitoring	5 years (Year 19 to 24)	2038-2043	Section 8

1.7.2 Potential Development Area

For each site listed above, Sabina has identified a Potential Development Area (PDA). Since the Project design is at the conceptual phase, the actual footprint of these facilities is likely to shift within this PDA as further geotechnical investigations are undertaken and the design of the facilities is finalized. The PDA makes allowance for potential relocation of certain facilities within its boundaries. With the exception of the freshwater aspects, for the purpose of the environmental effects assessment on other aspects (landform, vegetation, wildlife), it is assumed that the entire area of the PDA is lost for the duration of the mine life. For freshwater aspects, the assessment focuses on the expected physical footprint of the facilities and their expected effects on the freshwater VECs.

1.7.3 Potential Use of Infrastructure and Development of Additional Ore Deposits

The infrastructure at the Goose and George Properties, as well as the Marine Laydown Area, is designed to enable ongoing use and expansion beyond the currently defined operating mine life. The “Life of the Project” may extend beyond ten years should additional mineral deposits become economical to develop (Volume 2, Section 3). As most of the mineral deposits targeted have a short exploitation life (one to five years), Sabina will adopt a progressive reclamation approach.

As exploration is a Life of Project activity, it is likely that additional deposits will be delineated and become economical to develop over the life of the project. The current environmental assessment which includes cumulative assessment focusses on mining activities within the Potential Development Area of each site. Should additional deposits be located outside of the PDAs as defined in this EIS, Sabina will submit an application for an amendment to its Project Certificate.

1.8 REGULATORY REGIME

The Project is subject to a regulatory regime relating to Project approval, construction, operations, maintenance, and monitoring. A list of existing and required authorizations is found in Appendix V1-2. The primary project approval regulations and requirements include a Part 5 environmental review by the Nunavut Impact Review Board and a Project Certificate under the NLCA Article 12; a Water Licence under the Nunavut Waters and *Nunavut Surface Rights Tribunal Act*; an amendment to the Metal Mining Effluent Regulations for inclusion of a Tailings Impoundment Area on Schedule 2; an Authorization under Section 35 of the *Fisheries Act*; leases and surface rights from AANDC under *Territorial Lands Act* in relation to activities on Crown Lands; leases and surface rights from the KIA in relation to activities on Inuit Owned Lands; an Inuit Impact and Benefits Agreement; and a Water Compensation Agreement. A detailed list of applicable statutes, regulations, codes, and standards to which the Project will be subject may be found in Appendix V1-2 of this volume.

1.8.1 NIRB Exception from Review

Sabina is seeking approvals for the staging of equipment and materials for the Project prior to completion of the NIRB review. In particular, Sabina is formally requesting exceptions to proceed with the site development work pursuant to Section 12.10.2(b) of the Nunavut Land Claims Agreement (NLCA) to allow for the required approvals and licences to be granted. Additional details are presented in Volume 2, Section 6.

In its *draft NIRB Technical Guide Series – Proponents' Guide* (April 2013), NIRB will consider an application for exception from review under the following circumstances for permits, licences or approvals required to:

> *a) facilitate scientific research and/or the collection of data to support the review of a project proposal;*
>
> *b) allow continued exploration and/or bulk sampling programs while a related project is undergoing review and/or*
>
> *c) facilitate the limited transport and storage of equipment and materials related to a project undergoing review, in recognition of the seasonal constraints imposed by the arctic conditions of the Nunavut Settlement Area.*

Sabina is seeking either exemption or "exception from review" be granted for activities required during two years of site preparation. Applications have been prepared (Volume 12) for these activities that include access to Crown and Inuit-owned lands under land use permits and water use under Type B licences for:

- seasonal operation of the existing exploration camps at Goose and George;
- continued exploration, environmental and engineering data collection;
- operation of the existing and proposed rock quarry locations at the Marine Laydown Area, Goose and George Properties;
- installing and/or increasing fuel storage capacity at the Marine Laydown Area, Goose and George Properties;
- building an all-weather road between the existing Goose camp and Umwelt exploration area;
- extending the existing all-weather airstrip at Goose Property;

- establishing the Marine Laydown Area through installation of a camp with capacity up to 100 personnel; a laydown for the delivery of equipment and fuel; and, supplies for construction of the Back River Project;
- expanding the existing George camp to accommodate 120 personnel; and
- constructing and using a winter road to connect the Marine Laydown Area with the Goose Property.

The transportation and storage of equipment, fuel, and materials during site preparation is essential to the development the Back River Project as it will allow Sabina to progress into timely construction of the Project. These temporary and/or seasonal components would also support advanced exploration and environmental baseline activities in the area and improve safety and environmental protection.

2. Public Consultation and Engagement and Government Engagement

2. Public Consultation and Engagement and Government Engagement

2.1 PUBLIC CONSULTATION AND ENGAGEMENT

Public consultation and engagement is a legal requirement in Nunavut, an industry best practice, and important corporate commitment. Effective public consultation and engagement helps ensure that community members are informed and knowledgeable about proposed projects, that community support for those projects is more readily obtained, and sustainable development goals are achieved. A key goal of Sabina's public consultation and engagement program has been to ensure the Company obtains a 'social licence to operate', by securing the support of a majority of residents from potentially impacted local communities.

In order to obtain this goal, a number of process goals have been followed[1]: 1) identification and prioritization of communities and community stakeholder groups; 2) developing an understanding of key community and stakeholder views regarding the Project; 3) addressing community and stakeholder issues and expectations; and 4) continuous improvement. The establishment of open, respectful, and jointly beneficial relationships with local communities and stakeholders have been, and will continue to be, key priorities for Sabina. Sabina further recognizes the unique characteristics of the Inuit lifestyle and has strived to engage local communities in a culturally sensitive and appropriate manner. The Company is also committed to maintaining ongoing dialogue with local communities and will continue to be open to suggestions as to how its public consultation and engagement activities can be improved.

Sabina has and will continue to engage with the Kitikmeot Inuit Association (KIA), which is the primary Inuit organization with rights and responsibilities in the Project area. Kitikmeot Region communities have also been a key focus of Sabina's public consultation and engagement activities. These communities have been categorized based on the different levels of consultation and engagement employed by Sabina in each location. Categories were determined using a community's proximity to the Project, their potential to be affected by Project-related socio-economic and ecosystemic effects, and linkages to other aspects of the Project.

Category 1 communities include those communities closest to the Project and are where the Project will have the strongest ecosystemic or socio-economic influence. Category 1 communities have been engaged by Sabina more frequently and intensively than other communities in the region and include Cambridge Bay (Ekaluktutiak), Kugluktuk (Coppermine), Kingaok (Bathurst Inlet), and Omingmaktok (Bay Chimo). Residents of Category 1 communities will be given employment and contracting opportunity preference for the Project, and Cambridge Bay and Kugluktuk will serve as points-of-hire. Additionally, the focus of Sabina's traditional knowledge study has been on these four communities.

Category 2 communities, generally, have weaker socio-economic and cultural ties to the Project area than Category 1 communities. Sabina still engaged these communities regularly, but not necessarily to the same extent as Category 1 communities. These communities include Gjoa Haven (Ursuqtuq), Taloyoak (Spence Bay), and Kugaaruk (Pelly Bay). Category 2 communities may become points of hire in the future if employment numbers are sufficient although all residents will be given preference for employment and contracting opportunities with the Project. Category 3 communities have weaker

[1] These process goals are loosely based on the "four steps to community stakeholder engagement" presented in NBS (2012).

socio-cultural and ecosystemic ties to the Project than Category 1 or 2 communities, but may have economic and/or institutional linkages. These communities may also become points of hire in the future. Yellowknife, Northwest Territories and Iqaluit, Nunavut are Category 3 communities. Sabina has engaged these communities on a more limited basis.

A number of Northwest Territories Aboriginal organizations have been (or will be) engaged for the Project. Engagement has occurred (or will occur) primarily through informational meetings with the leadership and other representatives of these organizations. Publically available traditional knowledge from these organizations has also been reviewed by Sabina and documented in a report on Northwest Territories Aboriginal traditional knowledge.

Sabina's public consultation and engagement program is multi-faceted. It includes a commitment to cultural sensitivity and inclusiveness, and the use of various community engagement methods and tools. These include public meetings, meetings with key stakeholders and stakeholder groups, meetings with community advisory groups in Cambridge Bay and Kugluktuk, Project site visits, social media (e.g., websites and Twitter/email/RSS feeds), a Project newsletter, other distribution materials, establishment of a Cambridge Bay office, use of local employees and contractors including a Cambridge Bay-based Community Liaison Officer, execution of a traditional knowledge study in partnership with the KIA, execution of various socio-economic/environmental studies, the eventual negotiation of an Inuit Impact and Benefit Agreement with the KIA, other forms of community engagement (e.g., radio shows, trade show participation, cross-cultural training, and community advertisements), and community donations.

Sabina began its public consultation and engagement program in June 2012. Since that time, dozens of formal meetings and numerous informal meetings with Project stakeholders have been held. Meeting minutes were taken during many of Sabina's public consultation and engagement activities, and have been incorporated into a public consultation database that contains over 150 topic directories. This database has been analyzed to identify key issues and concerns amongst communities and stakeholders. These can be categorized under three main themes: community benefits and engagement, employment and training, and environmental management and monitoring.

<u>Community Benefits and Engagement</u>

- Inuit culture, harvesting, and livelihoods should not be negatively affected by the Project.
- Kitikmeot communities should receive maximum benefit from the Project.
- Fear that the Project will prematurely shut down, promised benefits won't be realized, and negative socio-economic effects will result.
- Communities should be regularly engaged about the Project, throughout the mineral development process.
- Inuit should play a role in Project-related environmental management and monitoring.
- Mechanisms pertaining to the permitting, regulation, and oversight of the Project are unclear in some instances.

<u>Employment and Training</u>

- Preferential employment opportunities should be made available to Inuit from the Kitikmeot Region.
- Training and apprenticeship programs should be established to help those without mining skills and experience to become meaningfully employed

- Mandatory criminal record checks will mean that many Kitikmeot residents will not be considered for employment.
- Youth should be a focus of the employment and training initiatives developed by Sabina.
- Routing employees through Yellowknife should be avoided as it leads to issues pertaining to substance abuse, absenteeism, and family instability.
- Programs should be developed to support workers and their families dealing with personal, financial, and employment-related issues.

Environmental Management and Monitoring

- A comprehensive environmental management and monitoring program should be developed. Key areas of concern for local communities include caribou, fish, water quality, and mine tailings and contaminants.
- Archaeological sites within the Project footprint must be protected.
- Spill training, avoidance, and response capabilities must be developed by the Company.
- Cumulative and transboundary effects of the Project must be assessed and managed.
- Guarantees must be in place that mine closure will be done properly.

Information obtained through public consultation and engagement has played a role in the planning and design of the Project in a number of ways including baseline data collection, impact prediction, significance assessment, and the development of mitigation and monitoring programs. Public consultation and engagement will also provide new information to be considered as the Project advances. For example, Sabina's *Community Involvement Plan* (see Volume 10) commits the company to regular meetings and community engagement throughout the Project's development and operation. Likewise, procedures are in place to document and respond to any community feedback, suggestions, and concerns that arise. Sabina will also adapt its Community Involvement Plan as necessary to ensure it remains relevant and effective.

Other management plans developed by the Company reflect public comments and concerns. For example, Sabina has gone through extensive effort to ensure no significant negative socio-economic and environmental effects will result from the Project, and has used both scientific methods and TK in this process. Likewise, Sabina has developed policies and plans that address three key areas of concern for local communities: caribou, fish and water quality, and mine tailings and contaminants. Sabina has additionally committed to providing various opportunities to the Kitikmeot Region including preferential employment, contracting, and training for local Inuit, continued implementation of a Kitikmeot-focussed donations policy, and the paying of all applicable taxes and royalties to governing bodies. An Inuit Impact and Benefit Agreement (IIBA) to be negotiated with the KIA will further outline Sabina's benefits-oriented commitments. Sabina hopes to additionally fly Kitikmeot employees directly to site or through Cambridge Bay. Overnighting in non-home communities, such as Yellowknife, will be avoided wherever possible. An Employee Assistance Program (EAP) will be made available to every Sabina employee and their immediate families and all employees will have access to Human Resources personnel to whom they can speak in confidence. Further information on the commitments Sabina has made to address public comments and concerns is provided in Section 1.6.3 of Volume 3 and Volume 10 (Management Plans).

2.2 GOVERNMENT ENGAGEMENT

The purpose of Sabina's government engagement program has been to provide government officials with clear and comprehensive information regarding the proposed Project and the various mitigation plans that support its development. Sabina has also regularly communicated important Project timelines and milestones to government officials, so that they can more effectively plan their workloads and be sufficiently prepared to participate in the environmental assessment process. To date, the goals of Sabina's government engagement program have been to:

- Develop two-way communication and dialogue that builds trust and results in action.
- Provide information to government officials about the Project in a timely, transparent, and accessible fashion to support government agencies in their review processes.
- Obtain information and knowledge from government agencies in order to help Sabina address issues and develop appropriate mitigation strategies.

Sabina has engaged a number of federal agencies on various occasions about the Project, including the Canadian Northern Economic Development Agency (in particular, the Northern Projects Management Office), Fisheries and Oceans Canada, Aboriginal Affairs and Northern Development Canada, Environment Canada, Natural Resources Canada, and Transport Canada. Sabina has often looked to the Northern Projects Management Office to help coordinate information exchange, and assemble the most appropriate federal officials to participate in meetings and other events such as site visits.

The Government of Nunavut participates in, and provides expertise during, the environmental assessment and review process for proposed mines in Nunavut. Sabina will continue to work with the Government of Nunavut co-ordinator for its government engagement activities but will also engage specific departments as needed (e.g., those interested in socio-economic and wildlife issues). The Government of the Northwest Territories will be involved primarily in the assessment of transboundary and cumulative effects for the Project.

Sabina has used a wide range of government engagement methods and has emphasized building trust and personal relationships to the greatest extent possible. Introductory and follow-up meetings have been held with various government regional and headquarters management teams. These meetings often involved as many relevant people as possible (and appropriate), across various interest areas.

Sabina's corporate web page (http://www.sabinagoldsilver.com/s/Home.asp) and the Company's Project-specific web page (http://www.backriverproject.com) provide useful Project information and are regularly updated as new information on the Project becomes available. Project newsletters (prepared primarily with a northern community audience in mind) are also sent to interested government officials. Other Project information and materials (e.g., presentation hand-outs; project summary sheets; pictures, posters, and maps; other materials) have additionally been distributed to government officials.

Sabina recognizes there will be an on-going need for both formal and informal government engagement activities. Any significant Project-related correspondence will be provided directly to NIRB and will become part of the public record, as required by their process.

3. Project Description

an ERM company

3. Project Description

3.1 INTRODUCTION

Sabina Gold & Silver Corp (Sabina) is a public Canadian mineral exploration company that is focused on development of its 100%-owned Back River Project.

The Back River Project is an advanced exploration gold project located in the West Kitikmeot region of Nunavut. The project includes the Goose Property, the George Property, a Marine Laydown Area (MLA) in southern Bathurst Inlet, and winter roads connecting the three sites. The location of the Back River Project (the Project) is presented in Figure 3.1-1.

The Goose Property consists of several mineral deposits. The Goose Main and the Llama deposits are economically viable by open pit mining, while a combination of open pit and underground mining will be used to develop the Umwelt deposit. The George Property is located approximately 60 km to the northwest of the Goose Property, and consists of a large connected mineralization zone. With three deposits identified as being economically viable using open pit methods: Locale 1, LCP North, and, Locale 2.

The Project consists of the Construction, Operation, and Closure of the infrastructure and mining facilities required for extracting gold from these three deposits at the Goose Property and the three deposits at the George Property. Based on currently known resources, the Project has an estimated 10 year operating mine life. Continued exploration may extend the projected mine life.

Ore will be mined and trucked using conventional open pit and underground methods and processed using standard gravity and leach recovery processes at a mill located at the Goose Property. At each mining site, the waste rock will be deposited in designated storage areas on surface adjacent to the mine pits. Tailings from the mill will be deposited in a single Tailings Impoundment Area (TIA) in proximity to the mill. The current plan for open pit and underground mine production focuses on achieving an average production of 300,000 ounces of gold annually.

The expected life of the Project is presented in Table 3.1-1. When specifically referred to, Year 1 represents the first year of Operation.

Table 3.1-1. Expected Life of Project

Activities	Duration	Year (Estimated)
Site Preparation	2 years	2014-2016
Construction	2 years	2016-2017
Operation (for the purpose of the environmental assessment)	10 years	2017-2026
Reclamation and Closure	10 years	2027-2037
Post Closure Monitoring	5 years	2038-2043

3.1.1 Current Activities

Sabina is currently conducting exploration at both the Back River Project and Wishbone-Malley Project. These activities in the Kitikmeot Region are supported by two camps – one at Goose Property and one at George Property. Sabina is also authorized to establish temporary seasonal camps to support exploration and environmental baseline programs.

Figure 3.1-1

Back River Project Location

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The Goose Property currently consists of a 120-person all-season camp powered by a 365 kW diesel-powered generator with backup. It includes offices, core processing facilities and heavy equipment maintenance facilities. The George Property camp consists of a 75-person camp, core processing facilities, maintenance facilities and fuel storage. Both camps are operated on a seasonal basis with camp generally closed annually from early October to late January. Seasonal winter connections between the camps and Bathurst Inlet have been used in prior exploration work to support annual re-supply and transfer of equipment and fuel.

3.1.2 Future Development

Exploration activities are ongoing and mineral resources are being defined for the following mineral deposits:

- Goose Property: extending operations to underground at Llama and Main and an open pit mine at the Echo deposit along with ore from both Umwelt's open pit and underground mines;
- George Property: an open pit and underground mine at the LCP South deposit and extending operations to underground at Locale 1 and Locale 2.

It is expected that exploration drilling will confirm the economic viability of these deposits with upcoming programs in 2014 and 2015. The development of these mineralized deposits will not require additional project infrastructure. However, the exploitation of these additional deposits will extend the operations period of the mine life.

3.1.3 Land and Mineral Tenure

The majority of the Project, including the MLA and Goose and George properties, is located on either surface rights or surface and subsurface rights on IOL administered by the KIA. A portion of the proposed connecting winter roads are located on Crown Land.

The Project area comprises 45 federal mineral leases and 16 federal mining claims covering approximately 128,530 acres or 52,014 ha. All of the tenure is in good-standing. Figure 3.1-2 shows Sabina's claim and lease map of the property as well as showing the adjacent Wishbone area. All leases and claims are 100% owned by Sabina, and are currently in good standing.

3.1.4 Project Phases

The Preliminary Feasibility Study (PFS) was completed and published in October, 2013. It recommended Back River Project as being an economically positive and realistic project. The PFS produced a preliminary design of what the mine may look like, economic studies to suggest whether a mine would be financially possible and environmental studies to determine what effects a mine would have on the environment. The Draft Environmental Impact Statement parallels and describes this work.

Sabina plans to advance to the Feasibility Study phase in 2014, developing the operating and economics plan in further detail. Detailed engineering would follow should the results of the Feasibility Study be favourable and the Final Environmental Impact Statement will parallel and describe these works.

With successful arrangement of financing and receipt of the necessary operating permits, the Project will enter the Construction phase in 2015 with the intention of producing the first gold in 2017 (Table 3.1-2). This phase will comprise the construction of the mine (open pits) itself, the ore processing plant (mill), camps for the workers, an enhanced airstrip at Goose, site roads, and infrastructure for power, water and waste. Construction of the mine will also require the construction of a dock and laydown area at the MLA at Bathurst Inlet. The Site Preparation (pre-construction) and Construction phases will need substantial numbers of workers, contributing markedly to the Nunavut economy.

Table 3.1-2. Project Phases

Activities	Duration	Year (Estimated)
Site Preparation	2 years	2014-2016
Construction	2 years	2016-2017
Operation	10 years	2017-2026
Reclamation and Closure	10 years	2027-2037
Post-closure Monitoring	5 years	2038-2043

The Construction phase will lead into the Operation phase, which is expected to continue for 8 to 10 years, based on the mineral deposits that are currently known. Sabina will seek to recruit a stable workforce capable of operating the mine efficiently and safely, giving preference to northern residents. The taxes paid by the Project to federal and territorial levels of government will materially benefit both the local and national economy. Sabina will continue to explore for gold in the area; further discoveries may extend mine operation beyond 10 years.

The available gold mineralization will ultimately be exhausted, whereupon the mine will enter the Closure and Reclamation phase. Expected to last about 10 years, this phase will decommission the mine, demolish the buildings, and will return the site to a stable condition that has no effect on the environment.

3.2 PROJECT DEVELOPMENT CONSIDERATIONS

3.2.1 Sustainability

Sabina is committed to environmentally responsible and socially acceptable exploration and mining practices. Sabina subscribes to the principles of sustainable development in mining. While mining cannot occur without an effect on the surrounding natural environment and communities, Sabina's responsibility is to limit negative environmental and social impacts and to enhance positive impacts.

3.2.2 Public Consultation and Traditional Knowledge

Traditional Knowledge (TK) is an "indispensable element both as baseline information and as an Inuit lens through which impact analyses can be better understood and can also result in a more active and meaningful community engagement" (NIRB 2013). Sabina has undertaken extensive public consultation and TK studies which have guided the development of the Project.

3.2.3 Biophysical Environment

Comprehensive baseline studies were done to characterize the receiving environment at both the local and regional scale. A range of mitigation measures were identified that will enable Sabina to minimize effects on the receiving environment.

Construction activities will utilize the existing Project infrastructure and footprint to minimize land disturbance and improve the overall efficiency of construction activities. Where possible, permanent support infrastructure will be built at the onset of construction, to be used during both Construction and Operation. In many instances, temporary infrastructure will be used for the duration of the Construction phase.

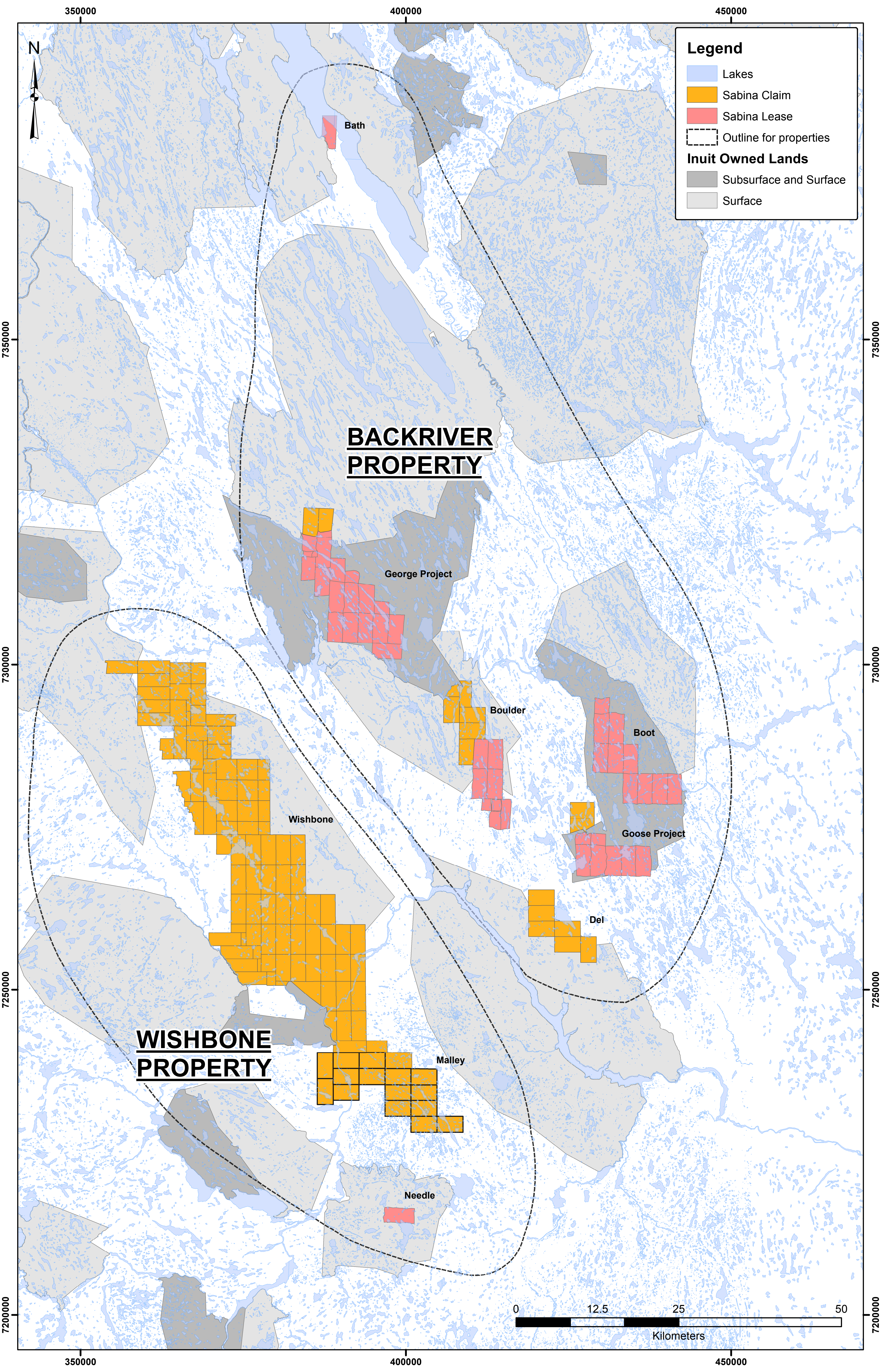

Figure 3.1-2

Sabina Mineral Tenure Map

Several mitigation measures are incorporated into the Project design in order to minimize potential adverse impacts on the receiving environment. These measures include:

- minimizing the Project footprint, thus minimizing the loss or alteration of habitat and reduction of habitat effectiveness;
- containing the Project mining activities within the Goose and George watersheds;
- avoiding known archaeological and culturally sensitive sites and prioritize avoidance of important (unique and/or old) sites;
- maintaining a 31-metre buffer from streams and waterways;
- using winter roads for access to the Goose and George properties;
- maximizing air transportation to bring supplies and material to Project sites;
- maintaining a buffer zone from important bird nesting areas;
- maximizing sourcing of aggregate and borrow materials from open pits; and
- selecting water sources in which Project water withdrawals will minimize the potential for drawdown and affects to fish habitat and the aquatic environment.

The Project area has a broad range of wildlife species. Sabina discourages unnecessary disturbance to wildlife such as feeding and harassment of wildlife. Wildlife encounters are logged and reviewed and hunting is prohibited on Sabina sites.

3.2.4 Economic Impacts of the Project

The Project represents significant socioeconomic benefits. If the mineral resource will not be developed, the potential effects and predicted benefits will not be realized. The total GDP impact is estimated to be over $600 million during the Construction phase. The Project will bring revenues of approximately $52.8 million to the federal and $44.4 million to the provincial and territorial governments across Canada in the form of taxes. The Project will substantially benefit Nunavut and will contribute as much as $96.6 million in GDP to Nunavut during the two years. The Project is estimated to result in a total of 6,245 person-years of direct, indirect and induced employment across Canada.

Total Canadian GDP impacts of the Project are predicted at $2,857.2 million over the 10 years of production. Total tax revenue during Operation is estimated at $519.1 million, consisting of $263.7 in federal and $255.4 in provincial/territorial tax revenue. The Project will substantially benefit Nunavut and will contribute as much as $532.5 million in GDP to Nunavut during the Operation phase. During this phase of the Project it is expected that the total direct, indirect and induced employment for Canada as a whole will be 28,041 person-years.

3.2.5 Potential Effects of Environment

Environmental considerations have informed the design, operation, and closure of the Project. Extreme weather (storms, extreme rainfall or snowfall, extreme low temperatures) and geo-hazards (seismicity, ground and slope instabilities) pose risks to the Project infrastructure and in turn represent concerns for human safety and the environment. Included in the context of extreme weather is the potential for global climate change to affect the Project. The flat terrain and permafrost also add to the engineering challenges which the Project must surmount. Engineering hazard assessments have been completed to outline these potential effects and the engineering measures that will be implemented to mitigate and control them.

3.3 PROJECT INFRASTRUCTURE

The Back River Project consists of three main sites and winter road corridors:

- Figure 3.3-1, MLA;
- Figure 3.3-2, Goose Property;
- Figure 3.3-3, George Property; and
- Figure 3.3-4, Winter Road Overview.

For each site listed above, Sabina has identified a Potential Development Area (PDA). Since the Project design is at the conceptual phase, the actual footprint of these facilities is likely to shift within this PDA as further geotechnical investigations are undertaken and the design of the facilities is finalized. The PDA makes allowance for potential relocation of certain facilities within its boundaries. With the exception of the freshwater aspects, for the purpose of the environmental effects assessment on other aspects (landform, vegetation, and wildlife), it is assumed that the entire area of the PDA is lost for the duration of the mine life. For freshwater aspects, the assessment focuses on the expected physical footprint of the facilities and their expected effects on the freshwater VECs.

3.3.1 Access to Project Sites

3.3.1.1 Logistics

Logistics and establishing cost effective access to the mining sites is a major challenge for the development of this Project. Options for access are via air, marine, or over land whether as winter or all-weather roads. An extensive Transportation Study was undertaken in order to establish the most economical and environmentally sound means of accessing the Project site for bulk deliveries of equipment, materials and consumables. This study concluded that the preferred methods of access were:

- Year round air transportation which requires the construction of all-weather airstrips at Goose and George from the onset of the Project development.
- Two marine shipping routes connecting the MLA at Bathurst Inlet which is accessed during the open water season (end-August to end-October).
- Winter roads to link the MLA to the Goose and George properties. Material, equipment, and supplies delivered to the MLA will be transported to the Goose and George properties over a winter road from mid-January to April annually. The winter road between George and Goose properties will also be used to transport ore from George to Goose for processing.
- All-weather on-site roads.

3.3.1.2 Marine Shipping and Marine Laydown Area Facilities

The Project includes a facility located at Bathurst Inlet, approximately 130 km north-northwest of the Goose Property. Cargo will be transported to the MLA by barges and ships. The majority of marine transport (estimated to be 80%) would be from an eastern port such as Belledune, NB with the balance via barge from Hay River, NWT. The preferred route is for the vessels to follow the established shipping route used for resupplying Cambridge Bay and veer south towards the community of Kingoak on Bathurst Inlet.

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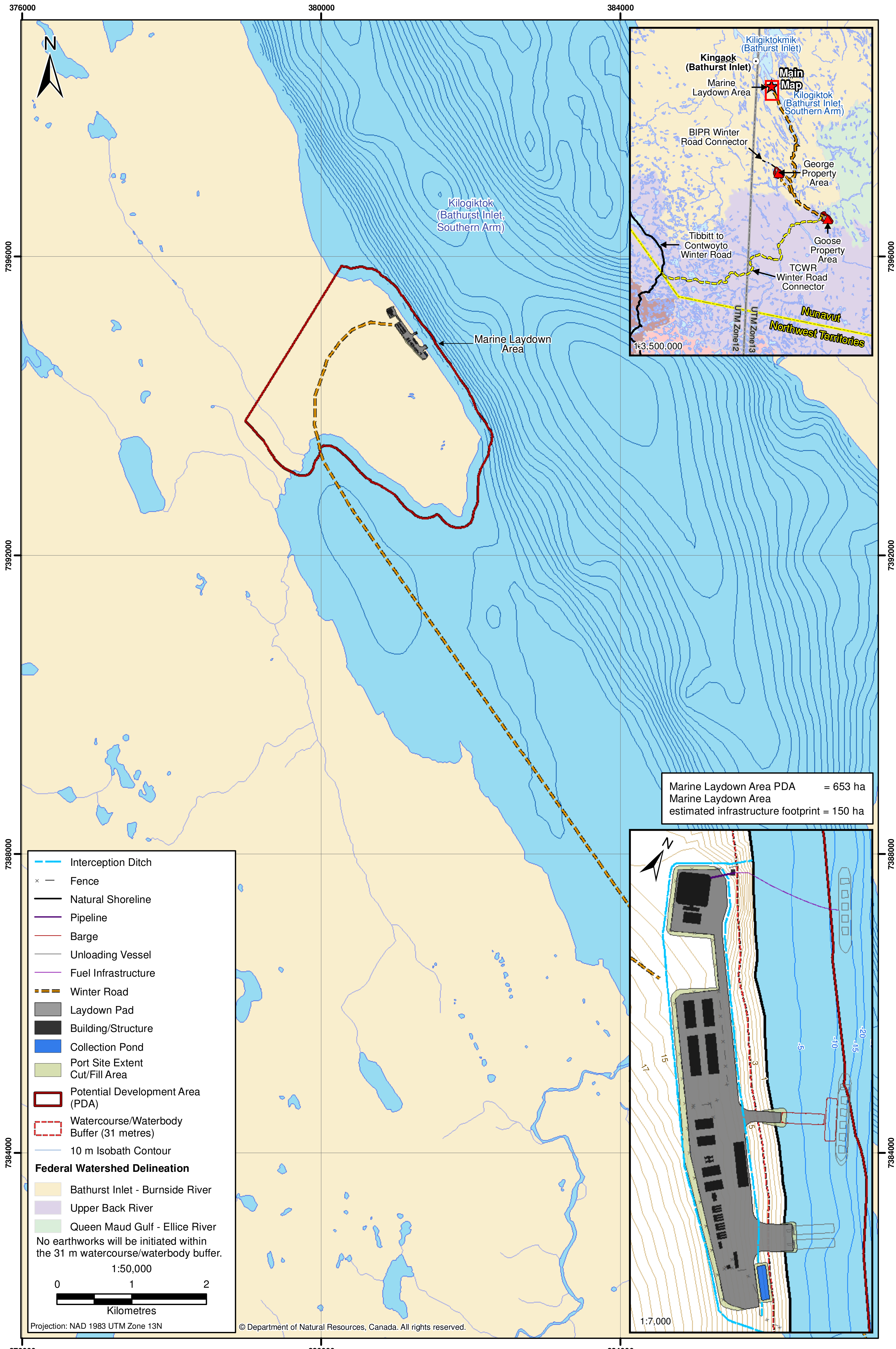

Figure 3.3-1

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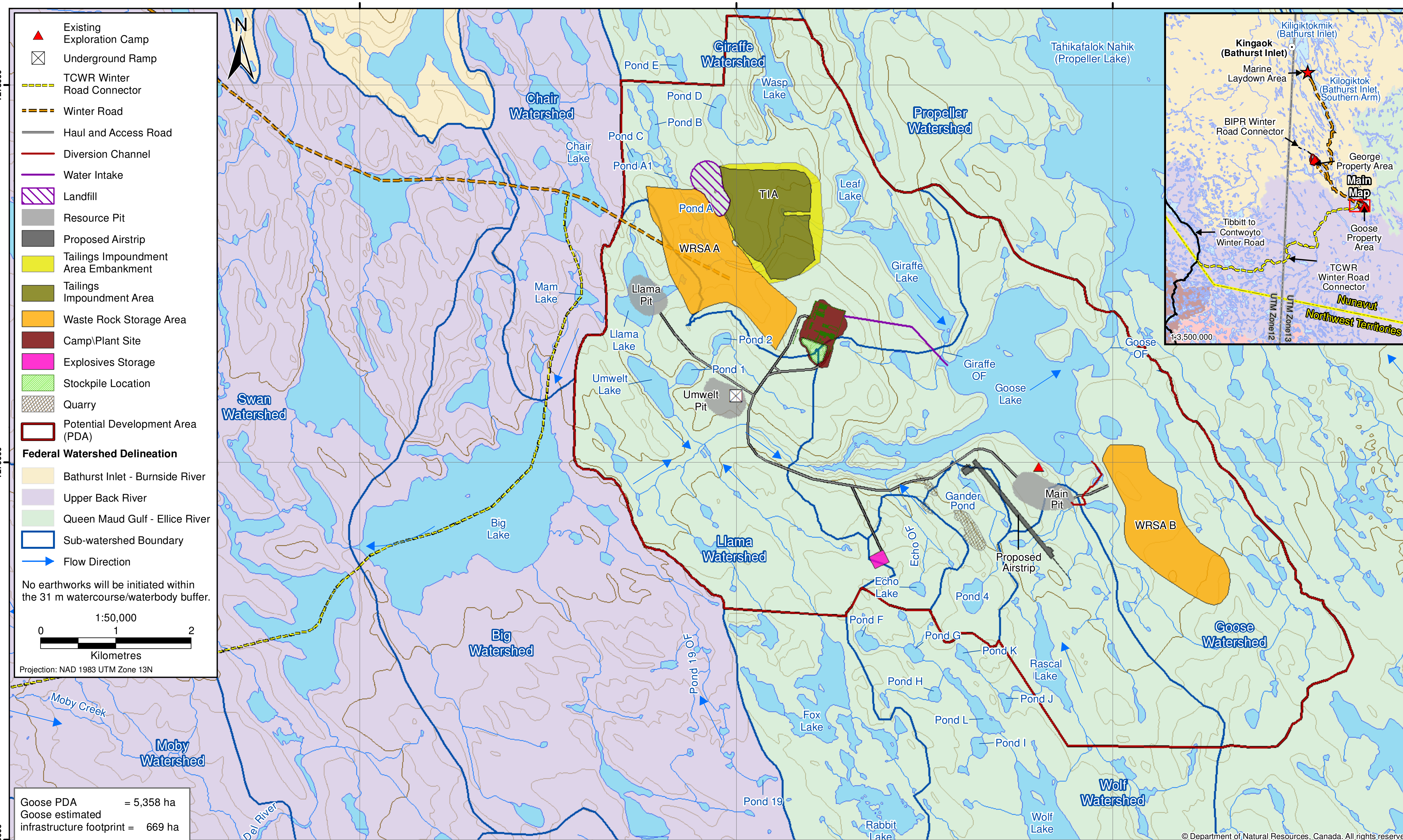
Project Development Area and Infrastructure Areas - Marine Laydown Area

Figure 3.3-1

Rescan an ERM company



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Rescan an ERM company

Figure 3.3-2

Project Development Area and Infrastructure Areas - Goose Property

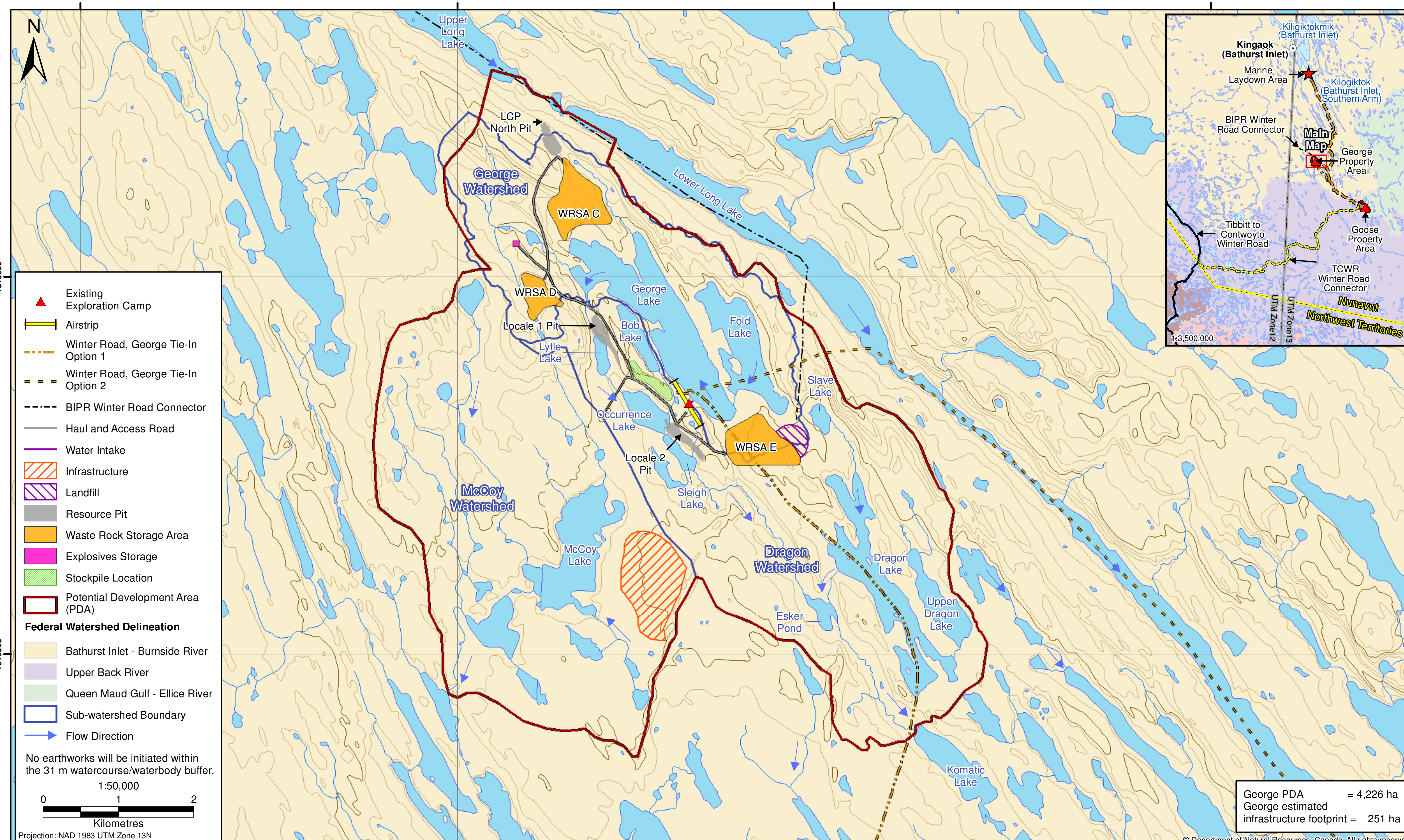

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Figure 3.3-3

Project Development Area and Infrastructure Areas - George Property

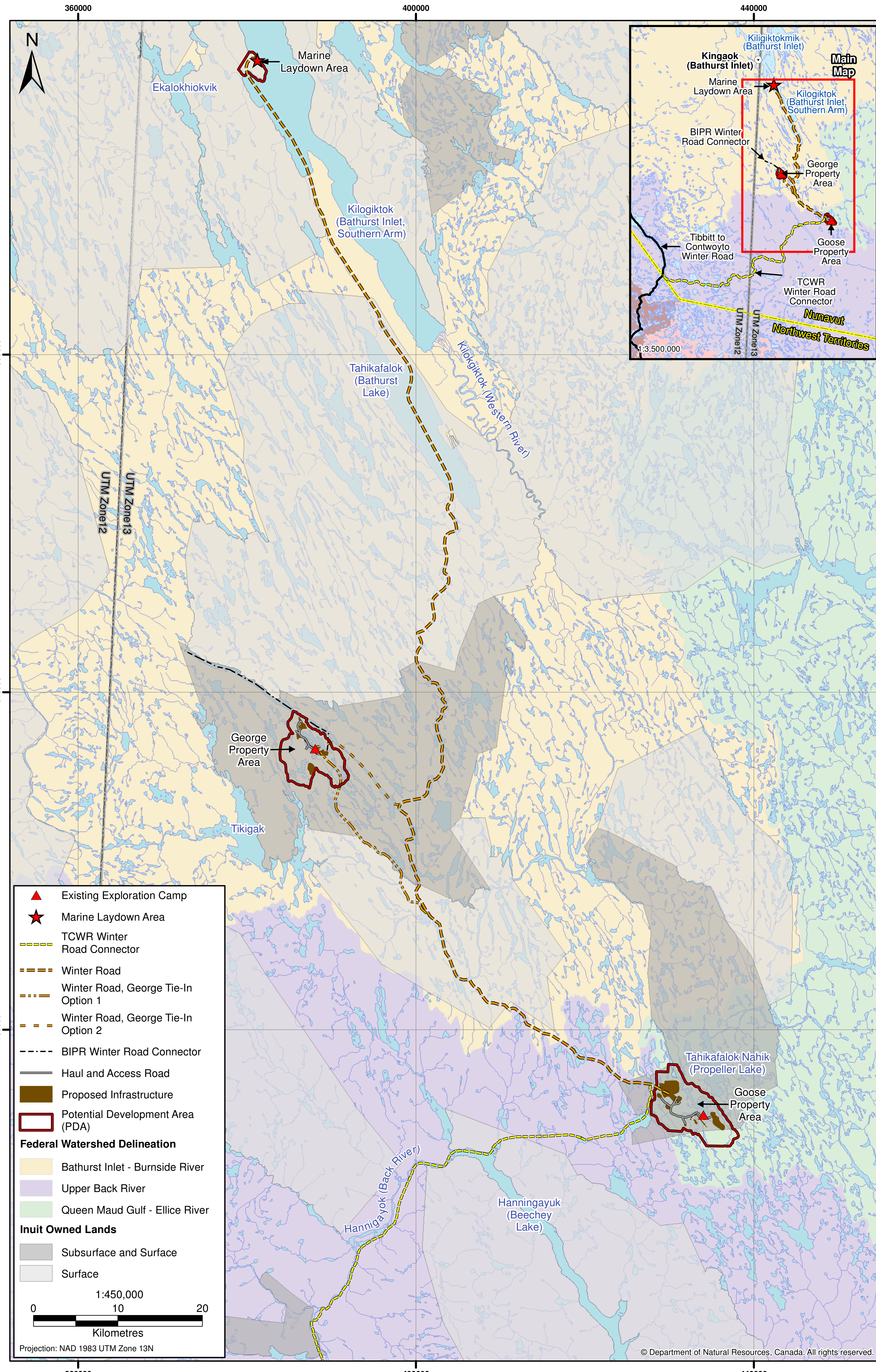

Figure 3.3-4

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Road Corridor Overview

Figure 3.3-4

Rescan Engineers & Scientists

The MLA will be connected via winter roads to the Goose Property during Site Preparation, Construction, and Operations, and to the George Property primarily during Operations. The MLA will be used to receive fuel, cargo, and consumables during construction and operation of the Project. Fuel and cargo will be received and staged at the MLA during the ice-free period, typically from end of August to end of October, and will be transported to the respective properties by freight trucks using the winter roads from January to April. Outside of the aforementioned periods, MLA activities will be limited to on-site storage and monitoring for loss prevention.

Products will not be exported via the port, as gold doré will be transported by outbound flights.

3.3.1.3 Air Transportation

Fixed wing aircraft and helicopters are integral parts of the plan to transport people, materials, and supplies. There will be airstrips at all three sites, MLA, Goose and George. The MLA will not have an all-season airstrip; however, the site will be able to handle small turboprop aircraft on an ice strip during winter and floatplanes on open water in summer.

At Goose, an all-weather airstrip and apron capable of servicing passenger and large cargo aircraft will be constructed. Ice and open water airstrips will continue to be used as required. The airstrip will be up to 2.8 km long, 45 m wide and may be hard-surfaced. The airstrip will be equipped with lights and instrumentation in accordance with appropriate Federal regulations. Up to five (fixed wing) flights per day are expected during the construction phase, three flights per day during the Operations phase and one flight per month during summer through Closure. The airstrip infrastructure will include a radio shack/communications, generator, waiting room, and dispatch office.

Air traffic related to George will be lighter duty. An all-weather airstrip and aprons capable of servicing Twin Otters aircrafts or equivalent will be constructed there. Ice airstrips will continue to be used as required for passengers and large cargo. Ice airstrips will be 1,830 m long and 50 m wide. The all-weather airstrip will be up 900 m long, 30 m wide, and unpaved. The airstrip will be equipped with lights and instrumentation in accordance with appropriate Federal regulations. Up to five (fixed wing) flights per day are expected during the construction phase, three flights per day during Operation and one flight per month at Closure. The airstrip building will include a radio shack/communications, generator, waiting room, and dispatch office.

3.3.1.4 Winter Roads

Two winter roads will be constructed for the Back River Project. A third connecting the Project to Tibbitt to Contwoyto Winter Road is under consideration. The winter roads cross both IOL and Crown land. The designated Project Development Area (PDA) includes a 200 m corridor, or 100 m on either side of the road centre line. Water for their construction and maintenance will be from various sources along the winter road corridor that will satisfy DFO under-ice water taking protocol. The characteristics of each winter road are as follows:

- Goose Property – Marine Laydown Area Winter Road:
    - The road is approximately 160 km in length and 30m in width on water or 10m in width on land with pullouts every 1 to 3 km. It will route approximately 50% over land and 50% over water.
    - Period of use: January to April annually transport fuel, equipment and supplies from MLA to George or to Goose. The available trucking window is 75 days and using 95 tonne trucks, the number of trucks needed per year range from 3 to 50 (depending on mine operations schedule) making two return trips per day.

  - Emergency shelters are located every 60 km along the road.
- Goose-George Winter Road:
  - The spur road connects George to the Goose-MLA Winter Road is approximately 20 km in length and 15m in width with pullouts every 1 to 3 km.
  - Period of use: January to April annually (site preparation to closure) to transport stockpiled ore from George to Goose. The available trucking window is 75 days and using 80-tonne trucks, the number of trucks needed per year is up to 50 (depending on mine operations schedule) each making 1 to 2 trips per day.

3.3.1.5 All-weather Roads

The onsite roads within each Property will be constructed as all-weather roads. Roads will be private and not for public use. All-weather roads will be constructed with run-of-quarry rock placed directly onto the tundra to preserve the permafrost. A layer of graded surfacing material will be placed to provide a protective trafficking layer. Construction materials are assumed to be from locally developed geochemically suitable rock quarries. Relatively small stream crossings, assume non fish-bearing water, will use large diameter culverts and larger crossings, assume fish-bearing water, will use a combination of single-lane modular free-span bridges or culverts.

3.3.2 Marine Laydown Area Site Preparation and Construction

The MLA will be developed as a staging area for equipment, material, fuel and supplies required for the construction and operation of the Project. Construction of the MLA will begin as part of the Site Preparation (pre-construction) activities and the facility will be operational for Year -2 of Construction. The MLA will remain operational until Closure. The conceptual layout of the MLA is presented in Figure 3.3-1 and the characteristics of the facilities are as follows:

- The Potential Development Area (PDA) at the MLA is 653 ha. The footprint of facilities within the PDA is 98 ha.
- An estimated 100,000 tonnes of aggregate will be required for construction. A local quarry will be required but the intent is to optimize cut and fill. Only geochemically stable material will be used for earthworks.
- All-weather site roads will be constructed. Extensive laydown areas (estimated at 90 ha) will be prepared for seasonal storage of resupply. Dedicated storage areas will be constructed for temporary storage of solid wastes, hazardous wastes and ammonium nitrate containers.
- All wastes will be shipped off site for disposal.
- A landfarm will be constructed for the treatment of hydrocarbon contaminated snow and soils.
- Potable and industrial water will be sourced from Bathurst Inlet. A desalination plant (capacity of 50 m^3/day) will be installed to produce potable domestic water.
- The camp will house 100 persons during Construction and 50 during Operations and will be equipped with a sewage treatment facility and an incinerator for disposal of domestic waste. The treated sewage effluent will be discharged to the tundra or Bathurst Inlet if within approved specifications.
- On-land fuel storage will consist of 45 ML (four tanks at 10 ML and one tank at 5 ML). Fuel will be delivered by sealift during open water season.
- Power will be generated by one (1) 1MW generator.

- Buildings will include reagent storage; warehousing facility; emergency facilities (fire and ambulance station); general maintenance building (site services); waste management building; 100-person camp and administration complex (workforce with contingency) complete with kitchen, dry and recreational facilities; modular desalination water treatment system; modular sewage treatment system; diesel power plant and power utility building.
- A floating dock and unloading ramp will be constructed to accommodate the sealifts. The marine footprint area of this facility is 0.23 ha.

3.3.3 Goose Property Site Preparation and Construction

The Goose Property will be the primary site for the Back River Project. The development proposes three open pits with one descending into an underground mine. Additional underground access to mineral resources is being considered for Llama and will be finalized with ongoing feasibility. The development of this site will include the construction of the necessary infrastructure for the ongoing operation of the Project. The site layout of the Goose Property is presented in Figure 3.3-2 and characteristics of the infrastructure constructed at the Goose Property are as follows:

- The PDA for Goose is 5,358 ha. The footprint of facilities within the PDA is approximately 669 ha.
- An estimated 1.2 M tonnes of aggregate will be required for construction. Up to five quarry sites and up to five borrow areas will be developed. To the extent practicable, stripped material from the Umwelt open pit will be used for construction. Only geochemically stable material will be used for earthworks.
- All-weather site roads will be constructed within the site.
- Extensive laydown areas will be prepared for seasonal storage of resupply. Dedicated storage areas will be constructed for temporary storage of solid wastes, hazardous wastes, mill reagents and ammonium nitrate containers. Up to 5,200 tonnes of ammonium nitrate will be stored on site. Site drainage will be designed to contain potentially contaminated runoff.
- Waste management facilities will consist of a waste sorting facility, a landfill for disposal of inert solid waste, a landfarm for treatment of hydrocarbon contaminated snow and soil, and, an incinerator for the combustion of combustible camp waste. All hazardous wastes will be shipped off site for disposal.
- Potable domestic and industrial water will be sourced from Goose Lake. A potable water treatment plant will be installed. Supplemental water requirements will be met by a supply system from Propeller Lake to Goose Lake.
- The camp will house up to 700 persons during Construction and 350 during Operations. A modular sewage treatment plant will be installed. During the Construction phase, treated sewage effluent will be discharged to the tundra.
- A 45 ML tank farm will be constructed for fuel storage (four tanks at 10 ML and one tank at 5 ML). Fuel will be delivered by air freight or tanker trucks from the MLA. Multiple 100,000 L isocontainers will be used as day tanks throughout the site.
- A 16.5 MW main power plant will be constructed at the mill along with a stand-alone 70 kW generator at the airstrip. Additional generation will be added to support the underground mining at the Umwelt deposit. The TIA decant tower, seepage pond pumps, seasonal open pit dewatering will run on their own diesel generators. This will eliminate the need for long distance, high voltage transmission lines to the Llama, Umwelt, and Goose Main open pits.

- Buildings will include the mill and crusher buildings; assay laboratory; emulsion mixing plant; wash bay; explosives magazines; reagent storage; core logging facility; warehousing facility; emergency facilities (fire and ambulance station); general maintenance building (site services); mine maintenance building; waste management building; light vehicle maintenance workshop; heavy equipment maintenance workshop; 700-person camp complete with kitchen, dry and recreational facilities; administration complex; modular potable water treatment system; modular sewage treatment system; diesel power plant; power utility buildings; brine mixing buildings.
- An oily water treatment plant will be constructed within the maintenance facilities. The treated water will be recirculated within the light vehicle and mine maintenance shops. Waste oil will be collected and either burned in an approved waste-heat generator or incinerator or drummed and removed from site as hazardous waste.

3.3.4 George Property Site Preparation and Construction

The development of George Property includes three open pits and will include the construction of the necessary infrastructure for ongoing mining operation. Construction activities at the George Property are expected to begin during Year 5 of operation. The site layout of the George Property is presented in Figure 3.3-3 and characteristics of the infrastructure constructed at the George Property are as follows:

- PDA: 4,226 ha. The footprint of facilities within the PDA is approximately 251 ha.
- An estimated 100,000 tonnes of aggregate will be required for construction. Three quarry sites and three borrow area will be developed. Only geochemically stable material will be used for earthworks.
- All-weather site roads will be constructed within the site.
- General laydown areas will be prepared for seasonal storage of resupply. Dedicated storage areas will be constructed for temporary storage of solid wastes, hazardous wastes, and, ammonium nitrate containers. Up to 100 tonnes of ammonium nitrate will be stored on site.
- Waste management facilities will consist of a waste sorting facility, a landfarm for treatment of hydrocarbon contaminated snow and soil, dedicated solid waste and hazardous waste temporary storage areas, and, an incinerator for the combustion of combustible camp waste. Non-hazardous solid waste may be landfilled on site or trucked to the Goose landfill for disposal; hazardous waste will be shipped off site for disposal.
- Potable domestic and industrial water will be sourced from George Lake. A potable water treatment plant will be installed.
- The camp will house up to 300 persons during Construction and 150 during Operations. A modular sewage treatment plant will be installed. Treated sewage effluent will be discharged to the tundra.
- On-site fuel storage will consist of three steel tanks at 5 ML capacity. Fuel will be delivered by tanker trucks from the MLA over the winter road. Multiple 100,000 L isocontainers will be used as day tanks throughout the site.
- Power will be generated by two 600-kW generators.
- Buildings will likely include an emulsion mixing plant and wash bay; explosives magazines; reagent storage; core logging facility; warehousing facility; emergency facilities (fire and ambulance station); general maintenance building (site services); mine maintenance building;

waste management building; light vehicle maintenance workshop; heavy equipment maintenance workshop; ventilation systems; 50-person camp complete with kitchen, dry and recreational facilities; administration complex; modular potable water treatment system; modular sewage treatment system; airstrip and associated navigation equipment; diesel power plant; power utility buildings; brine mixing buildings.

- An oily water treatment plant will be constructed within the maintenance facilities. The treated water will be recirculated within the light vehicle and mine maintenance shops. Waste oil will be collected and either burned in an approved waste-heat generator or drummed and removed from site as hazardous waste.

3.3.5 Tailings Impoundment Area (TIA) Construction

The TIA is located on the Goose Property and is situated to the north of the proposed plant site area. It is composed of two embankments:

- The Main Embankment, a 2,700 m long embankment at its ultimate length, which wraps around from the north and to the east, towards Leaf Lake and Propeller Lake; and
- The West Embankment, a 1,300 m long embankment at its ultimate length, which runs along the toe of the PAG Waste Dump in the Llama and Umwelt Pit Waste Storage Area, east of Llama Lake.

The TIA will be designed as a “zero discharge facility” with the basin and the upstream faces of the embankments lined with an HDPE system to control seepage from the facility.

Containment structures for the TIA, such as the dams, will be designed and constructed according to stringent engineering standards. The long-term monitoring and inspection of containment structures for the TIA will be considered during the design and construction phase. Specific design allowances will be made for permafrost conditions, slopes, seismic activity and site drainage requirements, particularly during peak flow conditions. An overview of the design parameters is presented in Table 3.3-1.

3.3.5.1 Dam Hazard Classification

The guidelines provided by the Canadian Dam Association (CDA) have been used to determine the dam classification and to suggest the corresponding minimum inflow design flood (IDF) and earthquake design ground motion for the tailings embankment. The dam safety classification for the tailings embankment is considered ‘HIGH’ requiring the facility to be designed for an IDF of 1/3 between the PMF and the 1/1000 year 24-hr storm event for this project equating to approximately 209 mm, an earthquake design ground motion (EDGM) of the 1/2500 year seismic event, which, for this project site, is a peak ground acceleration of 0.05g with a probability of exceedance of 0.4%.

3.3.5.2 TIA Development Plan and Schedule

The TIA has been designed to be constructed in four stages. The first stage will be capable of storing one year of tailings solids (1.55 Mt) and process water (an assumed volume of 250,000 m^3 based on tailings pond bathymetry). Stage 1 is to be constructed in Year -1, with preparation of the TIA Basin in advance of Stage 1 to be conducted in Year -2. Stage 2, constructed in Year 1, has the capacity for storing all tailings deposition, and supernatant pond volume, up to the end of Year 4. Stage 3, which is constructed in Year 4, has capacity for storage of tailings and pond volume up to the end of Year 7. The final stage, Stage 4, is constructed in Year 7, and has capacity for the ultimate tailings and pond volumes.

Table 3.3-1. Design Basis for the Tailings Impoundment Area

Item	Design Criteria
Mine Production	Total ore milled = 16.3 Mt Throughput = 5,000 tpd 10 years
Tailings Properties	% solids = 49% Average in-situ dry density of 1.3 t/m^3 from startup to the end of Year 1, 1.4 t/m^3 from start of Year 2 to EOM Ice entrainment allowance of 10% tailings volume
Tailings Impoundment Area	Geomembrane faced rockfill embankment constructed with run of mine nPAG waste rock Starter embankment (Stage 1) constructed for 12 months of tailings production plus Inflow Design Flood (IDF), freeboard, and process water Embankments raised via downstream construction to store additional tailings production plus IDF, freeboard, and process water Basin and embankments covered with 100 mil HDPE geomembrane and a 16 oz. nonwoven geotextile underlay and overlay to the geomembrane Minimum 150 mm of bedding material (sand) Minimum 1000 mm of liner ice protection material (sand) on TIA basin, minimum 3000 mm tapered wedge of liner ice protection material (sand) at a 3H:1V side slope on the TIA upstream embankment faces Storm storage (IDF) of 290,000 m^3 Wave run-up and additional contingencies of 3 m Minimum static factors of safety: 1.3 – Short Term Conditions 1.5 – Long Term Conditions (Steady state seepage, normal reservoir level)

3.3.5.3 TIA Monitoring

Geotechnical instrumentation will be installed in the tailings embankment and foundation during construction and during the life of the project. This may comprise of vibrating wires, thermistors and slope inclinometers and movement (survey) monuments will be installed at selected planes along the North and East Embankments. The instrumentation will be monitored during the construction and operation of the TIA to assess embankment performance and to identify any conditions different to those assumed during design and analysis. Amendments to the ongoing designs and/or remediation work can be implemented to respond to the changed conditions, should the need arise. Monitoring of civil and mechanical operational components will be a daily/shift requirement, to ensure that systems are functioning correctly. Excess noise, wear, movement, leakage, and spillage may indicate problems with pipelines or valves.

3.3.6 General Waste Facilities Site Preparation and Construction

The waste management infrastructure for the Project will be established at the onset of the site preparation activities for use during Construction, Operations, and Closure and Reclamation. At each of the three sites, this will consist of:

- a sewage treatment plant;
- an incinerator for combustion of nonhazardous and combustible wastes;
- a landfarm for the treatment of contaminated soils and snow;
- a waste sorting facility;

- a landfill for disposal of non-hazardous solid wastes (Goose and George only; exception is MLA); and
- a hazardous waste storage area.

All waste products will be sorted at waste sorting facilities local to each project site. Material will be safely stored until it is transported to an appropriate recycling or disposal facility. All three sites will have both indoor and outdoor storage, and waste will be segregated, handled, transported, and stored appropriately to ensure containment and physical security.

Combustible wastes will be temporarily stored in dedicated bins within the waste incineration building or in proximity to the portable incinerators until they are to be incinerated. Hazardous waste and recyclable non-hazardous, non-combustible materials will be temporarily stored on site in designated and approved storage areas. The majority of other items will be stored in the laydown yard outdoors, and in shipping containers where appropriate. This includes recyclables such as tires, electronics and electrical materials, and scrap metal. Materials designated for offsite disposal will be packaged for shipment to certified waste management facilities for subsequent treatment, recycling, and/or disposal.

Sewage and grey water from the camp and maintenance facilities will be treated in wastewater treatment plants (rotating biological contactor). Treated sewage effluent will be discharged to a designated and approved area in the terrestrial environment during Site Preparation and Construction. This discharge will be designed to minimize erosion and degradation of the permafrost.

3.4 OPERATIONS

3.4.1 Resources and Reserves

The current mineral resource estimate is based on geologic block models that incorporated 470 drillholes at the Goose Property and 619 at the George Property. To convert mineral resources to mineral reserves, extraction design was undertaken, mining cut-off grades and recovery factors were applied, and mining dilution was added. Table 3.4-1 shows total mineral reserves for the Back River Project.

Table 3.4-1. Total Mineral Reserves for the Back River Project (May 1, 2013)

Area	Classification	Tonnes (kt)	Au (g/t)	Contained Au (koz)
Llama Open Pit	Proven	-	-	-
	Probable	2,565	6.30	519
Umwelt Open Pit	Proven	-	-	-
	Probable	4,264	5.65	775
Goose Open Pit	Proven	1,890	4.56	277
	Probable	2,832	4.42	402
Locale 1 Open Pit	Proven	-	-	-
	Probable	547	5.21	92
Locale 2 Open Pit	Proven	-	-	-
	Probable	365	3.98	47
LCP-North Open Pit	Proven	-	-	-
	Probable	362	5.58	65
Total Open Pit	**Proven**	**1,890**	**4.56**	**277**
	Probable	**10,935**	**5.40**	**1,900**
Umwelt Underground	Proven	-	-	-
	Probable	2,165	8.11	564

(continued)

Table 3.4-1. Total Mineral Reserves for the Back River Project (May 1, 2013; completed)

Area	Classification	Tonnes (kt)	Au (g/t)	Contained Au (koz)
Total Underground	**Proven**	**-**	**-**	**-**
	Probable	**2,165**	**8.11**	**564**
Total Back River Property	**Proven**	**1,890**	**4.56**	**277**
	Probable	**13,100**	**5.85**	**2,464**

Notes:
For the open pit Mineral Reserve estimate, a 1.52 g/t COG was used for the Goose deposits and a 2.00 g/t COG was used for the George deposits.
A COG of 6.00 g/t was used for the underground Mineral Reserve estimate.
A gold price of $1,250/troy ounce is assumed.
Mineral Reserves are based on Measured and Indicated Mineral Resources only.
An exchange rate of Cdn$1.00 to US$1.00 is assumed.
Dilution and recovery factors are applied as per previous discussion.

3.4.2 Geology and Mineralogy

The Back River Project is located in the northeastern corner of the Slave Geologic Province and forms part of the Canadian Shield. The Slave Geologic Province is predominantly comprised of metamorphosed greenstone and turbidite sequences and plutonic rock underlain by older gneiss and granitoids. Volcanic-turbidite series rocks are widespread and abundant, consisting of large areas of turbidites flanked by narrow volcanic belts. Iron formations are locally abundant in the volcanic-turbidite series and host most of the stratabound gold deposits.

The targeted gold deposits in the Back River Project (located within the Goose and George properties) are hosted by carbonate, oxide and silicate iron formations that are cut by quartz and sulphide-bearing quartz veins. Most of the known or observed gold mineralization identified is associated with the sulphide-bearing quartz veins which are accompanied by pyrite, pyrrhotite, arsenopyrite, silicification and shearing. The gold mineralization to a lesser extent also occurs within greywacke units beneath the iron formations. Gold appears to have a spatial association with narrow porphyritic felsic dikes wherever these units are present.

Most of the deposits are amenable to extraction by open pit methods because of their surface proximity.

3.4.3 Mining

The mine plan consists of open pits and an underground mine operation supporting a 5,000 t/d milling operation. The current plan for open pit and underground mine production focuses on achieving an average production of 287,000 ounces of gold annually. The six proposed open pit mines include the Umwelt pit, Llama pit, and Goose Main pit (located at the Goose Property), and the Locale 1, Locale 2 and LCP-North pits (located at the George Property). The latter three pits are known collectively as the George pits. Open pit mining will be carried out by conventional truck/shovel methods. At this stage, only the Umwelt deposit will be mined underground. However, as exploration activities continue, additional deposits may be identified that could be developed by both open pit and underground methods.

Mining will begin with open pits at the Goose Property. Open pit mining at the Goose pits is supplemented by underground mining at Umwelt starting in Year 3, and mining of the George pits occurs starting in Year 6 through Year 8.5.

Tables 3.4-2 and 3.4-3 summarize the key aspects of the mining operation for the Goose and George properties.

Table 3.4-2. Summary of Goose Property Mine Operation

Mining Site	Characteristics
Llama Open Pit (Year 1 to 4) Pit Area: 200,200 m^2 Maximum Pit Dimensions : 610 m x 370 m Maximum Depth: 190m below surface	• Pit limits impinge on Llama Lake. Loss of Llama Lake as lake must be isolated and drained for mine workings. Dewatering to occur in Year 1. • Segregation of PAG and nPAG rocks; stockpiles adjacent to Llama open pit within a catchment of Giraffe watershed. Waste rock piles placed in 3 m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit is filled with water from adjacent waterbodies.
Umwelt Open Pit (Year -2 to 2) Pit Area: 210,900 m^2 Maximum Pit Dimensions: 615 m x 380 m Maximum Depth: 175m below surface	• Pit limits do not impact on waterbodies. • Segregation of PAG and nPAG rocks; stockpiles adjacent to Llama open pit within a sub drainage basin of Giraffe watershed. Waste rock piles placed in 3 m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit will be filled with water from adjacent waterbodies, treated TIA effluent, and contact water.
Main Open Pit (Year 2 to 6) Pit Area: 276,700 m^2 Maximum Pit Dimensions : 775 m x 390 m Maximum Depth: 195 m below surface	• Pit limits impinge on an inflow stream to Goose Lake. This watercourse will be diverted upstream of the pit to another Goose inflow watercourse to the east. • Segregation of PAG and nPAG waste; storage areas adjacent to Main open pit within a catchment of the Goose watershed. Waste rock piles placed in 3 m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit will be filled with water from adjacent waterbodies and contact water.
Underground – Umwelt (Year 3 to 8) Maximum Depth: ~650 m below surface	• Decline/ramp located at the bottom of Umwelt Open Pit ~165 m below ground surface. • Mine workings trend downward ~35° from horizontal for ~1,100 m southeast of the Umwelt Open Pit.
Overburden and Waste Rock Management	
Waste Rock Storage Area A Surface area = 1,876,730 m^2	• Umwelt Pit: 1,300 kt of overburden, 19,000 kt of PAG rock, and, 16,000 kt of nPAG rock • Llama Pit: 15,000 kt of overburden, 21,000 kt of PAG rock, and, 13,000 kt of nPAG rock • Segregation of PAG and nPAG rocks; stockpiles adjacent to Llama open pit within a catchment of Giraffe watershed. During operations, material will be placed in 3m benches to allow freezing and at closure, capped with nPAG material. Some waste rock will be repurposed and reclaimed for use as backfill in Umwelt underground workings.
Waste Rock Storage Area B Surface area = 1,584,900 m^2	• Goose Pit: 4,000 kt of overburden, 13,000 kt of PAG rock, and, 28,000 kt of nPAG rock. • Segregation of PAG and nPAG rocks; stockpiles adjacent to Llama open pit within a catchment of Giraffe watershed. During operations, material will be placed in 3 m benches to allow freezing and at closure, capped with nPAG material.

Table 3.4-3. Summary of George Site Mining Operation

Mining Site	Characteristics
Locale 1 (L1) Mine development in Year 7 Pit Area: 89,119 m^2 Maximum Pit Dimensions: 565 m x 175 m Maximum Depth: 95 m below surface No overburden Open Pit Waste Rock (WRSA D): - PAG Rock: 2,800 kt - nPAG Rock: 2,700 kt	• Pit limits impinge on Lytle Lake; a diversion channel will be excavated to allow the inlet to Lytle Lake to bypass the pit, and to construct a dike to hold back the waters of Lytle Lake from the pit. Lost lake area is approximately 20,341 m^2. Diversion required for outflow from George Lake. • Segregation of PAG and nPAG rocks; storage areas situated adjacent to open pit. • Waste rock piles placed in 3m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit is filled with water from adjacent waterbodies and contact water.
LCP North Mine development in Year 8 Pit Area: 61,098 m^2 Maximum Pit Dimensions : 460 m x 180 m Maximum Depth: 95 m below surface No overburden Open Pit Waste Rock (WRSA C): - PAG Rock: 3,000 kt - nPAG Rock: 2,900 t	• No waterbodies impacted by limits of open pit. • Segregation of PAG and nPAG rocks; storage areas adjacent to open pit. • Waste rock piles placed in 3m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit is filled with water from adjacent waterbodies and contact water.
Locale 2 (L2) Mine development in Year 9 Pit Area: 69,528 m^2 Maximum Pit Dimensions: 620 m x 150 m Maximum Depth: 75 m below surface No overburden Open Pit Waste Rock (WRSA E): - PAG Rock: 1,600 kt - nPAG Rock: 1,500 kt	• Pit limits impinge on Occurrence Lake; local drainages around the pit perimeter will be diverted, and a dike will hold back the waters of Occurrence Lake from the pit. Lost lake area is approximately 18,076 m^2. • Segregation of PAG and nPAG rocks; storage areas adjacent to open pit. • Waste rock piles placed in 3m benches to allow freezing and at closure capped with nPAG material. • At closure, open pit is filled with water from adjacent waterbodies and contact water.

3.4.3.1 Lake and Mine Workings Dewatering

The footprints of some of the open pits overlay surficial lakes. At the Goose Property, the Llama deposit is under Llama Lake. Diversion works will be constructed to isolate Llama Lake and the lake will be dewatered. All water from Llama Lake will be transferred to the TIA for use as mill process water.

The underground mine at the Umwelt deposit is projected to extend below the current permafrost level and groundwater inflows have been estimated. The average groundwater inflow rate is estimated to be 1 L/s; however, groundwater inflows up to 10 L/s may be encountered as a result of the mine development intersecting a potentially permeable structure. In mining areas above the permafrost, no groundwater inflows are expected and surface water that collects within the open pits will be transferred to the TIA (at Goose) and Water Management Facility (at George) by either pipeline or truck. Underground mine dewatering will be achieved using a combination of submersible and horizontal pumps located throughout the working levels. The pumps will handle mine water via multiple lifts throughout the mine to minimize the pump size and power requirements.

At the George Property, there will be a need to construct perimeter dikes and to dewater portions of two shallow lakes (Lytle Lake and Occurrence Lake) as part of the development of the open pits at Locale 1 and Locale 2 respectively. Impermeable retention dikes will be constructed to isolate the pits from these lakes.

3.4.4 Waste Rock Management

Waste rock will be placed into Waste Rock Storage Areas (WRSAs) adjacent to the final pit limits. Preliminary mine models indicate an open pit operations stripping ratio (waste to ore) of approximately 13:1. The current mine production schedule produces an estimated 125 Mt of waste rock (overburden and waste rock), approximately 45% of which is anticipated to be potentially acid-generating (PAG) rock. Refer to Tables 3.4 2 and 3.4 3 for a summary of the quantities breakdown by location. During Operations, materials will be designated as ore, low-grade ore, PAG waste rock, or nPAG waste rock, and managed accordingly.

To minimize haul distances, there will be separate waste rock storage areas for each open pit. Significant aspects of each waste rock storage area design are as follows:

- While both overburden and nPAG rock will follow normal loading and dumping practices, PAG rock will be deposited in lifts of 3-m thick to promote aggradation of permafrost conditions within the stockpile. Hence the waste rock stockpiles will have a relatively large footprint and are expected to be less than 30 m in height.
- PAG rock will be encapsulated within the waste rock storage areas, beneath a 4-m depth of nPAG cover materials equivalent to the active permafrost zone, so that the PAG waste will be maintained in a permanently frozen state. There may be the need for some rehandling of wastes at the end of mine life to place an nPAG cover over the PAG materials.
- Waste rock storage areas will be located to minimize flow-through drainages, and diversions will be constructed to minimize surface runoff entering waste rock storage areas.

3.4.5 Ore Management

At the Goose area, small run-of-mine (ROM) stockpiles of up to 10,000 tonnes will be located at each pit. From these ROM stockpiles, a mixed fleet of 91- and 136-tonne trucks will move ore to the mill stockpile ore stockpile (capacity of 1 million tonnes) or to the low-grade stockpile (capacity of 3 million tonnes). The primary crusher at the Goose Property will be located at the mill site. The ore will be crushed to minus 150 mm in size.

At the George Property, a mixed fleet of 91- and 136-tonne trucks will move ore from the open pits to a ROM stockpile adjacent to the mobile crusher plant. There, ore will be crushed to 150 mm minus in size. The crushed ore stockpile will have a capacity of up to 500,000 tonnes. The crushed ore will be trucked from this stockpile to the Goose mill stockpile over the winter road from January to April annually.

3.4.6 Mineral Processing

The mill will be sized for a throughput of 5000 tonnes per day of ore. Metallurgical testwork to date suggests grinding to 100 μm followed by whole-ore leaching will provide economical recoveries. The process will include the following operations:

- *Crushing and Grinding*

  The ore will be crushed in three stages and ground in a ball mill. Gravity concentration will recover coarse gold. The gravity product will be intensive leached.

- *Leaching and Gold Recovery*

  After crushing and grinding, gold will be recovered by leaching. The leach circuit will be carbon-in-leach (CIL) followed by carbon elution, electro-winning and smelting to produce gold bullion.

- *Treatment of Leach Residue*

  Residue from the CIL circuit will be pumped to an 18.5 m-diameter high-rate thickener to recover residual cyanide and water. The thickener overflow will be pumped back to the leach feed box as dilution water. The underflow of the thickener will be sent to the cyanide destruction circuit prior to being pumped to the TIA.

- *Cyanide Destruction*

  The underflow of the residue thickener will be pumped to a cyanide destruction circuit. The resulting tailings will then be pumped to the Tailings Impoundment Area.

- *Reagents*

  Various reagents will be used in the process. All reagents will be arranged in a separate reagent preparation and storage facility in a secure area equipped with level indicators and instrumentation to ensure that spills do not occur during operation. Appropriate ventilation and fire and personnel safety protection will be provided at the facility.

- *Storage and Transportation of Final Product*

  Gold doré bars will constitute the final product. These bars will be stored in a secure section of the mill and transported via plane off site on a regular basis.

3.4.7 Tailings Management

The tailings generated by the milling processed will amount to 5,436 tonnes per day. The tailings will be pumped to the TIA as slurry containing 49% solids. The suspended solids will settle and consolidate within the TIA and the resulting supernatant water will be recycled to the mill as process water.

Numerous mines have operated or currently operate tailings facilities in cold regions under severe winter (freezing) conditions. In many instances a frozen layer forms over the TIA supernatant pond. The design and operating considerations for the Back River Project include the following:

- Shape the tailings impoundment surface (during summer tailings deposition) to provide a winter pond that can be maintained "localized" in one, or specific, areas of the facility.
- Concentrate winter tailings discharge from a single, relocate-able, point. This will tend to channelize the flow and move it through and under the ice cover where the solid/liquid separation occurs. This prevents sheet tailings flow over the ice a freezing of water and subsequent ice entrainment in the tailings.
- Commence winter tailings discharge from a more remote location and retreat the deposition point closer to the source/pond/recovery point, in steps, as winter progresses.
- Store sufficient water in the tailings facility prior to freezing, to provide for all anticipated ice and pore water losses during winter (i.e., develop and maintain a good water/ice balance).

- The potential for dusting can be exacerbated during cold winter conditions as a "freeze drying" process tends to destroy capillary tensions in partially saturated sand materials, making it more susceptible to dusting. Appropriate provisions will be required to prevent dusting such as increasing the freeboard height to 5 m and installing sediment control fencing along the embankment crests downwind of the prevailing wind.

Seepage through the embankments will be limited by the installation of a HDPE liner system throughout the facility. The upstream embankment face and TIA basin will be lined with a composite HDPE geomembrane which is sandwiched between nonwoven geotextile and together placed on top of a bedding layer. This system is designed to limit the potential for tearing or puncturing of the liner to mitigate water loss and target zero discharge. A 1,000 mm layer of nominally compacted ice protection material (sand/sandy gravel) will then be placed on the HDPE liner in the basin, with a tapered wedge of material placed on embankment face, to protect the liner against ice damage.

The estimated total leakage for the facility is between 2×10^{-5} m^3/s to 3×10^{-5} m^3/s at the end of production, and this will decrease post-closure as the tailings consolidate and the supernatant pond is removed and a surface cover is constructed. Surface runoff and seepage will be transported via collection ditches to collection ponds and pumped back into the TIA supernatant pond.

3.4.7.1 Managing the Tailings Impoundment Area

The TIA will be controlled and monitored using a formalized procedure that is incorporated into the mine's Environmental Management System (EMS). Sabina will adopt the guidelines developed by the Mining Association of Canada entitled "Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities" (2005), which provides useful guidance in documenting staff roles and management procedures. Geotechnical instrumentation will be installed in the tailings embankment and foundation during construction and over the life of the Project. The instrumentation will be used to monitor and assess embankment performance and to identify any conditions different to those assumed during design and analysis. Key control and monitoring subject areas should include:

- Inspections of the TIA with regard to performance monitoring, instability indicators, stability monitoring, tailings deposition, water management and control, and quality of effluent;
- Construction controls, including the use of a construction management program;
- Procedures for dust control; and
- Quality assurance and quality control measures for operations, monitoring and inspections.

3.4.8 Water Management

During operation, no water will be discharged from the TIA to the receiving environment. The tailings will settle and consolidate in the TIA entrapping up to 40% water by weight. The net water loss to the consolidated tailings will be in the range of 2,000 m^3/day. The supernatant from the TIA will be returned to the mill for use as process water. In order to satisfy the mill water requirement, fresh water will be drawn a rate of up to 4,510 m^3/day. During dry periods, Goose Lake will be supplemented from Propeller Lake in order to prevent excessive draw down of Goose Lake to mitigate effects to fish and fish habitat.

3.4.8.1 Water Use and Supply

Freshwater will be required to support the domestic and industrial water requirements at the Goose Property, George Property, and the MLA. In addition to the potable water treating capacity as the other sites, a desalination unit will be installed at MLA. Freshwater will also be required for the process plant at Goose, ongoing exploration activities, winter road building, and other activities.

The freshwater will be sourced from the locations shown in Table 3.4-4. Water intake will be designed in accordance with DFO guidelines. These pumping station and water intakes will be established during the construction period.

Table 3.4-4. Water Supply during Operations

Site	Volume	Source
Goose Property	Domestic: up to 210 m^3/day Industrial: up to 4,300 m^3/day Total water demand: 4,510 m^3/day	Goose Lake and Propeller Lake. Recycle water from TIA
George Property	Domestic: 45 m^3/day Miscellaneous Industrial: 70 m^3/day Total water demand: 115 m^3/day	George Lake or other local water source
Marine Laydown Area	Domestic: 30 m^3/day Miscellaneous Industrial: 20 m^3/day Total water demand: 50 m^3/day	Bathurst Inlet or local freshwater source; desalination

Industrial water used in maintenance shops or wash down of vehicles will not be treated. To the extent possible, industrial and wash water will be collected, treated for suspended solids and oils removal, and recycled.

3.4.8.2 Surface Water Management

For the Goose Property, Sabina's water management approach during operations is to collect and move all mine contact water (open pit runoff and seepage, waste rock stockpile runoff, stockpile runoff, Llama Lake dewatering, and Umwelt underground mine dewatering) to the TIA. With the development of the open pits, the construction of waste rock storage areas and the construction of the TIA, the mining operations at the Goose Property will result in the diversion of approximately 17% of the natural drainage of the Goose watershed to the TIA. All water collected within the TIA will be directed to the mill as process water.

In preparation of the site for mining of the ore deposits, diversion ditches and structures will be constructed to divert non-contact runoff from mine workings. For each mine workings (open pits, waste rock storage areas and TIA) drainage patterns within the Goose Project Development Area (PDA) will be altered either permanently or for the life of the mine workings as shown in Table 3.4-5.

For the George Property, Sabina's water management approach is to collect and contain all mine contact water (open pit runoff and seepage, waste rock stockpile runoff, stockpile runoff). The construction of the waste rock stockpile will ensure that runoff from WRSAs is contained and channeled to collection ponds where runoff water quality can be monitored, and treated if required, prior to release to the receiving environment. Perimeter drainage ditches or channels will be constructed around stockpile areas in order to divert inflows to this stockpile area. At each open pit, dewatering water will be pumped/trucked to a waste rock storage area collection pond. Due to the short duration of the mining activity at each pit (less than one year per pit), Sabina does not predict ARD generation prior to progressive reclamation. Nevertheless, runoff water quality will be monitored prior to discharge to the receiving environment and treatment will be provided should it be required. Some drainage patterns within the George PDA will be altered either permanently or for the life of the mine workings as shown in Table 3.4-6.

Table 3.4-5. Drainage Pattern Alteration at the Goose Property

Permanent Drainage Patterns Alterations at the Goose Property	
Tailings impoundment Area	• Physical footprint of the facility causes permanent changes to drainage patterns. • Perimeter ditches/trenches/structures to intercept and divert non-contact flows away from TIA. • All precipitation and inflows in TIA are contained and there are no releases to the receiving environment until the post closure period. • Seepage intercepted and pumped back to TIA. • Controlled release at post closure; runoff directed to a single discharge location to ensure monitoring and treatment if required.
Waste Rock Areas (A and B) and Landfill site	• Physical footprint of the facility causes permanent changes to drainage patterns. • Perimeter ditches/trenches/structures to intercept and divert non-contact flows away from waste rock areas or landfill. • All precipitation and runoff are contained, collected and pumped to the TIA. There is no release of runoff to the receiving environment until the post closure period. • Controlled release at post closure; runoff directed to a single discharge location to ensure monitoring and treatment if required.
Site infrastructure (plant site, stockpiles, laydown, air strip)	• Physical footprint of the facility causes permanent changes to drainage patterns. • Perimeter ditches/trenches/structures to intercept and divert non-contact flows away from infrastructure areas. • To the extent possible, building pads are constructed on top of permafrost (more infilling than cut) thus altering drainage patterns. • At closure, infrastructure is removed and surfaces are scarified to promote natural rehabilitation of disturbed areas.
Temporary Drainage Patterns Alterations	
Umwelt Pit	• Temporary diversion of streams flowing through the current footprint of the Umwelt Pit.
Llama Pit	• Temporary diversion of streams flowing through the current footprint of Llama pit. • Dewatering of Llama Lake.
Goose Pit	• Temporary diversion of streams flowing through the current footprint of the Goose Pit .

Table 3.4-6. Drainage Pattern Alterations at George Property

Permanent Drainage Patterns Alterations at the George Property	
Waste Rock Storage Areas (C, D, and E)	• Physical footprint of the facility causes permanent changes to drainage patterns. • Perimeter ditches/trenches/structures to intercept and divert non-contact flows away from waste rock storage areas or landfill. • All precipitation and runoff is contained, collected and pumped to the ponds. There is no release of runoff to the receiving environment prior to treatment, if required.
Site infrastructure (camp site, stockpiles, laydown, air strip)	• Physical footprint of the facility causes permanent changes to drainage patterns. • Perimeter ditches/trenches/structures to intercept and divert non-contact flows away from infrastructure areas. • To the extent possible (more infilling than cut), building pads are constructed on top of permafrost thus altering drainage patterns. • At closure, infrastructure is removed and developed areas will be re-graded and contoured to remove uneven ground for public safety, minimize the potential for erosion, and to blend with the surrounding landscape.
Temporary Drainage Patterns Alterations	
Locale 1	• Construction of perimeter dike in Lytle Lake • Temporary diversion of streams flowing through the current footprint of the Locale 1 Pit.
LCP North	• Temporary diversion of streams flowing through the current footprint of the open pit.
Locale	• Construction of perimeter dike in Occurrence Lake • Temporary diversion of streams flowing through the current footprint of the Locale 2.

4. Traditional Knowledge

4. Traditional Knowledge

Traditional Knowledge (TK) can be defined as a “cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission” (NIRB 2007). TK studies provide a valuable way of documenting spatial and temporal patterns of hunting, harvesting, fishing, habitation and travel in a given area. They can also provide detailed information on local ecological processes, socio-cultural patterns and institutions, spirituality, ethical and other matters.

Sabina recognizes the inherent value of TK and the importance local communities place on its use in the environmental assessment of proposed developments. As such, Sabina has made significant efforts to engage local communities through incorporation of their TK into the Project’s planning and design. Volume 3 describes Sabina’s approach to TK and the methods used to collect and interpret it. Specific details as to how TK has been incorporated into these activities are summarized in Volume 3, Table 3.1-1 - Uses of Traditional Knowledge in Sabina’s Draft Environmental Impact Statement for the Back River Project, and are described in further detail in relevant volumes of the DEIS.

Sabina has, or will, utilize five primary sources of TK: a Naonaiyaotit Traditional Knowledge Project (NTKP) database report for the Project, theme-based TK workshops, a report on existing and publically available Northwest Territories TK, the results of public consultation and engagement activities, and other sources. Likewise, Inuit Qaujimajatuqangit values have helped guide Sabina’s decision making for the Project and have been incorporated into the design of the Company’s overall Project management approach. It is also important to highlight that Sabina partnered with the KIA in two key elements of its TK study – preparation of the NTKP database report and execution of the theme-based TK workshops. The basis of this partnership was a TK Agreement signed between Sabina and the KIA in May 2012. Signing of this agreement provided Sabina with access to TK held by the KIA in the NTKP database. The agreement also outlines the terms and conditions pertaining to Sabina’s use of the TK. Sabina and the KIA additionally cooperated in the collection and reporting of new (or otherwise unrecorded) TK in the Project area.

Sabina has considered TK on an equal basis with all scientific forms of information collected for the Project. For example, TK has been integrated into various environmental and socio-economic baseline studies conducted for the Project. This information has helped complement existing scientific and socio-economic information, provide new and otherwise unrecorded information, and/or provide alternative views and/or interpretations to be considered. For example, baseline studies were designed to characterize wildlife which have been identified as culturally important to Inuit. These studies also involved the collection and analysis of scientific and TK data (e.g., from the NTKP database report) on the relative seasonal and annual trends in abundance and distribution of wildlife, along with estimated productive capacity where practical, migratory patterns, and associated wildlife corridors and travel routes. Wildlife habitat use within the Local Study Area (LSA) and Regional Study Area (RSA), including the identification of critical habitat features such as crossing points for caribou, raptor nest and carnivore den locations, and important staging areas for migratory birds was also documented using TK. Ecosystems of traditional and cultural importance due to their value as wildlife habitat, were incorporated into a habitat suitability model and mapped as high quality habitat, wherever possible.

Some of the wildlife baseline studies also involved the advice and help of local landusers in the field to assist with the placement of remote cameras on the tundra in areas deemed as important habitat for wildlife, particularly caribou. Landusers were similarly consulted and included with regards to the positioning of posts used for the wildlife DNA mark-recapture study. Workshops were also conducted with landusers from Cambridge Bay, Kugluktuk, Bathurst Inlet, and Omingmaktok as part of the Project's socio-economic studies to document contemporary travel routes, harvesting areas and practices, and other land uses. TK on wildlife and land use activities was also often shared with the Company during public consultation and engagement activities. Information gained from these activities was subsequently used as baseline information from which the human and environmental risk assessments were developed. Sabina has additionally utilized traditional Inuinnaqtun place names wherever possible in the DEIS and during Sabina's public consultation and engagement activities.

TK has helped inform the effects assessment that was conducted for the Project in a number of ways. For example, the baseline against which potential effects were assessed was established using both TK and scientific information. However, the results of the NTKP database report (i.e., KIA 2012) were also used for scoping and refining the initial VEC/VSEC list for the Project. This report presents maps and textual descriptions of valued animal species, environmental components, and traditional land use activities. The information contained in this report was used to determine if these valued components potentially interacted with the proposed Project and, if so, they were included in the initial VEC/VSEC list. This information, along with information from public consultation, consultation with regulatory agencies, and regulatory considerations, was used to determine a final VEC/VSEC list. A draft list of VECs/VSECs was also presented to each community advisory group in November 2012 and at public meetings in each Kitikmeot community in April 2013 for review and comment. While a number of clarifications were made to the public, no significant concerns were noted regarding the VEC/VSEC list that was presented.

As a result of TK being incorporated into Sabina's baseline data collection and impact prediction/effects assessment activities, Sabina's final significance determinations have thus been informed by TK. Every effort has been made to ensure equal consideration of TK and scientific data in the conclusions that were drawn. However, significance assessment methods and conclusions were additionally scheduled to be presented in each Kitikmeot community and with each community advisory group in November 2013 for review and comment. Any issues raised during these meetings will be addressed in Sabina's FEIS submission. Detailed minutes of these meetings will also be presented in Sabina's FEIS submission.

Finally, TK has helped inform the development of mitigation and monitoring programs for the Project. Public concerns have been raised (e.g., during public consultation and engagement activities) in regards to the potential for the Project to negatively affect wildlife (particularly caribou) or degrade their forage and habitat quality. Mitigation and management strategies have thus been developed for a number of VECs and VSECs that will serve to minimize the potential effects of the Project on wildlife and wildlife habitat valued by Inuit. For example, the Project's design utilizes winter access roads (rather than all-season roads) that preferentially cross large lakes. This will reduce the potential for disruption to the movement of caribou, grizzly bear, and other wildlife during summer movements; minimize loss and degradation of vegetation due to physical clearing; reduce deposition of airborne dustfall; and reduce surface compaction.

Direct and indirect mitigation and adaptive management strategies for wildlife VECs, and the ways in which TK was incorporated into the development of these strategies, are summarized in Volume 3 and detailed elsewhere in the DEIS. TK will also be used in the monitoring of potential Project effects. Not only has TK contributed to the baseline against which future effects can be measured, but locally shared TK will also provide new observations and information to be considered as the Project advances. The future gathering and use of TK has been incorporated into a number of management plans for the Project. For example, Sabina's *Community Involvement Plan* commits the company to regular public meetings and community engagement throughout the Project's lifecycle. Likewise, procedures will be in place to document and respond to any community feedback, suggestions, and concerns that arise. Volume 10 (Management Plans) should be consulted for additional information on these matters.

5. Existing Environment and Baseline Information

5. Existing Environment and Baseline Information

Comprehensive environmental baseline information has been collected for the Project. Details of the available baseline information (as required in Section 7.3 of the EIS guidelines) for all VECs, VSECs, and Subjects of Note can be found in supporting Volumes 4 (Atmospheric Environment), 5 (Terrestrial Environment), 6 (Freshwater Environment), 7 (Marine Environment), and 8 (Human Environment).

Baseline information was collected and used to: 1) understand existing conditions in the local and regional area of the Project; 2) identify potential environmental effects that were likely to result from Project components and activities; 3) provide a benchmark (i.e., before-after-control-effect (BACI) approach) for evaluating the potential effects of the Project through monitoring; 4) to characterize pre-disturbance conditions for the purpose of reclamation activities; and 5) support predictive modelling for effect analysis.

Table 5-1 presents a summary of available baseline information. The following sections provide a summary of the existing environment and available baseline information.

Table 5-1. Summary of Field-collected Baseline Information for the Back River Project

Assessment Subject Area and Component	VEC, VSEC, or Subject of Note	Years of Available Data
Atmospheric Environment		
Air Quality	VEC	2011, 2012, 2013
Noise and Vibration	VEC	2012
Meteorology and Climate	Subject of Note	2001-2004; 2006-2013
Terrestrial Environment		
Geology	Subject of Note	1982-85,1987,1989, 1990-94,1997, 1999, 2000-2013
Geochemistry	Subject of Note	2007, 2010, 2011, 2012, 2013
Permafrost	Subject of Note	2007-2013
Landforms and Soils	Subject of Note	2012
Vegetation and Special Landscape Features	VEC	2012
Caribou	VEC	2007, 2010-2013
Grizzly Bear	VEC	2012-2013
Muskox	VEC	2007, 2010
Wolverine/Furbearers	VEC	2012-2013
Migratory Birds (Upland Birds and Waterfowl)	VEC	2007, 2011-2013
Raptors	VEC	2007, 2011-2013
Freshwater Environment		
Hydrology	VEC	2007, 2010-2013
Groundwater	Subject of Note	2012, 2013
Limnology and Bathymetry	Subject of Note	1994, 2006, 2007, 2010-2013
Water Quality	VEC	1993, 1997, 2006-2007, 2010-2013
Sediment Quality	VEC	2007, 2010-2013
Fish/Aquatic Habitat	VEC	2007, 2010-2013
Fish Community	VEC (lake trout; Arctic grayling)	1990, 1996, 2006, 2010-2013

(continued)

Table 5-1. Summary of Field-collected Baseline Information for the Back River Project (completed)

Assessment Subject Area and Component	VEC, VSEC, or Subject of Note	Years of Available Data
Marine Environment		
Physical Processes	Subject of Note	2001, 2007, 2008, 2010, 2012, 2013
Water Quality	VEC	2001, 2007, 2008, 2010, 2012, 2013
Sediment Quality	VEC	2001, 2002, 2007, 2010, 2012, 2013
Fish/Aquatic Habitat	VEC	2001, 2007, 2010, 2012, 2013
Fish Community	VEC (Arctic char)	2001, 2010, 2012, 2013
Seabirds/Seaducks	VEC	2010, 2013
Ringed Seals	VEC	2007, 2009, 2012, 2013
Human Environment		
Archaeology	VSEC	2001, 2003, 2010-2013
Paleontological	Subject of Note	2012
Non-traditional Land and Resource Use	VSEC	2012
Socio-economics	VEC (Economic Development, Business Opportunities, Employment, Education and Training)	2012
Health, Safety, and Community Well-being	VSEC	2012
Subsistence Economy and Land Use	VSEC	2012
Country Foods/Human Health	VSEC	2012, 2013

5.1 ATMOSPHERIC ENVIRONMENT

5.1.1 Air Quality

The air quality in the region can generally be classified as pristine. Local emissions are limited to stationary (power generation and heating) and mobile sources (trucks, snowmobiles, all-terrain vehicles, etc.) operated by local residents in communities of the West Kitikmeot. Because of the limited local emissions sources, long-range transport of air contaminants is an important influence on ambient air quality. The atmospheric boundary layer in the Arctic is generally very stable and surface inversions occur frequently. As a result, dispersion of air contaminants can be less effective in the Arctic that in other regions.

An air quality baseline program was initiated at the Goose Property in 2011 and in 2012 and 2013 the program was expanded to include areas of the George Property as well as the southern part of Bathurst Inlet. Dustfall stations and passive air sampling stations (PASS) for nitrogen dioxide (NO_2), sulphuric dioxide (SO_2) and ozone (O_3) concentrations were deployed on site during the summer months in order to assess the ambient air quality of the area.

The average dustfall levels were approximately 0.2 to 0.4 $mg/dm^2/day$ with the highest dustfall measurement of 1.13 $mg/dm^2/day$ occurring in July 2011 (Rescan 2012b). These results indicate that the total dustfall recorded was low as expected for a non-industrial area, and values were well below criteria set in the following jurisdictions: Alberta, British Columbia, Ontario, and Saskatchewan. There are currently no applicable dustfall criteria for Nunavut or the Northwest Territories.

Of the 33 metals analysed, fourteen were below the detection limits, and overall metal deposition rates for the nineteen metals that were detected at one or more stations during at least one month were very low. The highest median acid deposition rate observed was 291 eq/ha/yr which occurred in 2011. This value is less than any of the CCME published calculated critical loads of acid deposition for forest soils for provinces in Canada, given that the province with the lowest mean critical load is Saskatchewan with a value of 539 eq/ha/yr.

Passive ambient air quality sampling systems (PASS) obtained monthly average concentrations for criteria air contaminants including sulphur dioxide (SO_2), nitrogen dioxide (NO_2), and ozone (O_3). The PASS results are expressed as monthly average concentrations. The maximum 30-day O_3 level of 55 ug/m^3 falls within the expected background range of 49 to 78 ug/m^3 (25 to 40 ppb; Health Canada 1999). Since there are no 30-day standards for NO_2 or SO_2 in Nunavut, 30-day averages collected by PASS are conservatively compared with Nunavut annual standards. The 30-day average NO_2 concentrations range from 0.1 to 1.1 ug/m^3, which is much less than the annual standard of 60 ug/m^3; while the 30-day average SO_2 concentrations range from 0.1 to 1.3 ug/m^3, which is much less than the annual standard of 30 ug/m^3 (Rescan 2012b).

Background concentrations from ambient air quality monitoring stations at other remote locations in Nunavut and the Northwest Territories for TSP, PM_{10}, $PM_{2.5}$ or CO were used to represent Project background for the DEIS. Background concentrations of TSP, PM_{10}, $PM_{2.5}$ or CO are assumed to be 7.5, 3.8, 5 and 100 μg/m^3, respectively. Site-specific Total Suspended Particulates (TSP) and $PM_{2.5}$ will be available from 2013 monitoring and will be available for the FEIS.

5.1.2 Noise and Vibration

Aside from mine exploration activities, the noise environment in the Project area is pristine. There are no additional industrial sites or human settlements close enough to the Project to be audible; consequently, only natural sources such as wind, precipitation, and wildlife will contribute to background noise levels.

Noise monitoring was conducted in March and June 2012 using sound level meters that were deployed at ten sites at varying distances from Goose Camp, George Camp, and the Marine Laydown Area. The locations were selected to characterize the range of baseline conditions in the region, based on their proximity to known deposits and sensitive wildlife receptors. The time periods were chosen to encompass winter and summer conditions, and to include the critical bird nesting period and a portion of the caribou migration in June. Monitoring was undertaken for 24 hours at each location. Natural background noise sources recorded included birds, animals, insects, precipitation and winds. Anthropogenic sources recorded included heavy machinery and aircraft (Rescan 2013a).

In general, the June monitoring period had higher noise levels than the March monitoring period due to the fact that during the June monitoring period more non-anthropogenic noise sources, such as birds and insects, were recorded than during the March monitoring period. The highest noise levels were measured at stations which were situated at Goose and George exploration camps, which is to be expected due to the noise generated by anthropogenic sources during exploration.

The levels measured are comparable to estimated baseline levels for quiet, rural areas as given in the Health Canada guidance, which considers a quiet rural area with day-night sound levels due to human-made sounds to be below 45 dBA (Health Canada 2011). Only a single monitoring location experienced noise levels greater than 45 dBA during both monitoring periods.

Noise data collected in 2012 was reflective of pristine background noise conditions as well as exploration camp noise conditions. Data compares well with background studies done in other pristine areas, where L_{eq} values can range from 9 to 22 dbA, depending on proximity to noise sources, wind speed and snow cover (Menge, Ross, and Ernenwein 2002). There are no significant nearby anthropogenic sources and, as such, these baseline levels are considered representative of the noise environment across the modelled area.

There are no significant anthropogenic sources of vibration within the study area and therefore baseline vibration monitoring was not carried out.

5.1.3 Climate and Meteorology

The Project area is located near the northern boundary of the North American Continent in the vicinity of the Arctic Circle. The climate in the area is characterized by extremes. The Project area experiences relatively low amounts of precipitation, but due to sub-zero temperatures for the majority of the year, also experiences high snow accumulation. Summer is a season of nearly perpetual sunlight, while winter is dominated by night, twilight and extreme cold. Due to the relative absence of obstructions to impede the wind (e.g., trees, buildings, mountains), wind speeds are generally high.

Project specific meteorological baseline data collection commenced in August 2004 at the George and Goose meteorological stations. A meteorological station is also located in southern Bathurst Inlet and baseline data is available episodically from 2001 to present. These stations continue to be operational to date. A micro-meteorology station (micro-met) has been installed seasonally in Goose Lake in 2012 and 2013 to gather data to calculate site specific evaporation rates. Long-term meteorological data are collected at Environment Canada – Meteorological Service of Canada (EC-MSC) meteorological stations. EC-MSC operates meteorological stations in the West Kitikmeot Region of Nunavut. The closest stations which are currently operating are Lupin CS and Kugluktuk A and CS meteorological stations. The stations recorded temperature, precipitation, wind speed and direction, snow depth, solar radiation, and evaporation.

The temperatures recorded at the Goose and George stations were similar with annual average air temperatures ranging from -11.6°C to -5.8°C at George and -11.5°C to -6.6°C at Goose. The mean monthly air temperatures for the George meteorological station ranged from -32.2°C to 14.4ºC and at the Goose meteorological station mean monthly air temperatures ranged from -33.0°C to 14.5°C. In terms of annual average air temperatures, data from the Back River Project area and EC-MSC regional stations show that 2006, 2010 and 2011 were warmer than climate normal, and 2007, 2008 and 2009 were similar to climate normals. The daily average maximum temperatures at the George and Goose meteorological stations over the period were 28.2°C and 28.9°C respectively, both occurring in July 2007. The minimum temperatures were -43.7°C and -45.5°C respectively, both occurring in January 2012. The climate normal record maximum temperature was 34.9°C which occurred at the EC-MSC operated Kugluktuk station in July 1989 and the record low extreme minimum temperature was -49.0°C which occurred in January 1987 at the EC-MSC Lupin A station.

The precipitation gauges on the meteorological stations record summer rainfall and included winter precipitation and evaporation pans starting in 2012. During the 2006 to 2011 monitoring period, summer monthly rainfall ranged from 0 mm (September 2006) to 102 mm (August 2008). The summer total rainfall between June and September ranged from 4 mm (2006) to 211 mm (2008). When comparing the summer rainfall for the months with available data to data from the regional stations for the same period, the precipitation is generally similar; therefore, annual precipitation at the George and Goose meteorological stations can be inferred from the regional station data. Based on data from regional meteorological stations during the 2006 to 2011 reporting period, total annual precipitation ranged from a low of 125 mm in 2009 to a high of 344 mm in 2007 mm (Rescan 2012a).

For future climate trends, recent literature (Lemmen et al. 2008) suggests that mean annual temperature may increase in Canada’s North by approximately 2.0°C for the climate normal period for the years 2010 to 2030 and by approximately 6.0°C for the climate normal period for the years 2070 to 2100. Over the same time periods, projections suggest that total annual precipitation could increase from 5 to 8% and 15 to 30%, respectively. The projected increase in mean annual air temperatures would lead to effects on the regional cryosphere. This would likely include alterations to sea, river, and lake ice regimes, and winter snow pack, especially during shoulder seasons of spring and fall, as well as to permafrost conditions.

5.2 TERRESTRIAL ENVIRONMENT

5.2.1 Geology and Permafrost

The Project is located at the intersection of three geological provinces in the West Kitikmeot Region of Nunavut. The majority of the Project (the Goose Property and most of the George Property) extends over the northeastern corner of the Slave Geologic Province. The eastern limits of the Project are underlain by the Churchill Geologic Province. The Marine Laydown Area (MLA) and the northern portion of the George Property are underlain by Lower to Middle Proterozoic sedimentary rocks of the Kilohigok Basin, part of the Bear Geologic Province. Glacial material deposited after the Quaternary Wisconsin Glaciation covers much of the Archean geological provinces. Glacial deposits are predominantly comprised of moraine type deposits (glacial till), which mostly consist of sand and variable amounts of silt. There is a large glacial moraine in the south-eastern portion of the Project area, which is approximately 200 km long and extends in a north-east direction.

Gold mineralization is typically structurally controlled at the Goose Property and stratabound within the banded iron formation (BIF) at the George Property, although mineralization can diffuse into surrounding greywacke and mudstone at either property. Gold mineralization is most often associated with sulphide minerals, particularly arsenopyrite, and visible gold is found almost exclusively in zones with abundant arsenopyrite. Other sulphide minerals (pyrite and pyrrhotite) are typically enriched in a halo in the BIF and greywacke around the arsenopyrite-rich ore zones. The mafic dikes have very low sulphide contents and are devoid of gold mineralization.

The Project is located within the continuous permafrost region of western Nunavut. A seasonally thawed active layer is present immediately beneath ground surface, with a mean maximum depth of approximately 2 m. Subsurface temperatures are perennially below 0 ^{0}C at depths up to approximately 500 m below ground surface, except beneath some surface waterbodies. Open taliks are present beneath surface waterbodies with depths exceeding 1.3 m. Through taliks that connect to the deep groundwater are inferred to be present beneath waterbodies with widths greater than 200 m and 350 m at the Goose and George Property Area PDAs, respectively. Cryopegs are inferred to be present at the base of the permafrost and adjacent to deep talik, as the groundwater beneath the permafrost has been shown to be hyper-saline. The basal cryopeg at the Goose Property Area is estimated to be 100 m thick.

5.2.2 Landforms and Soils

The Project is located in an area dominated by gently undulating or rolling landscapes with numerous kettle lakes connected by streams. Terrain elevation ranges between 300 and 700 metres above sea level (masl) and slope gradients rarely exceed 7%. Uplands are typically covered by morainal materials (44% of the total PDA) deposited on Precambrian, sedimentary, metamorphic or intrusive rocks. Glaciofluvial (9.5%), organic (6.5%), marine (5.1%) and lacustrine (3%) deposits are less common. Exposed bedrock occurs over 5.2% of the PDA. The thickness of mineral soils overlaying bedrock (overburden) is the highest in plains and very gently sloping areas (avg. 10.6 m) and decreases in rolling and undulating landscapes (avg. 4.8 m).

A number of distinct landform types, including eskers, morainal rocky ridges, and boulder fields exist throughout the terrestrial RSA. Cold climate is also associated with several soil phenomena. Thermokarst typically occurs in wetlands as a system of very irregular hummocks and hollows, which form as a result of frost heaving and ice accumulation on the bottom of organic horizons. Frostboils are typically circular (1 to 3 m in diameter) upwellings of mud that are created by frost heaving. The Project is located within continuous permafrost. The presence of permafrost and annual cycles of freezing and thawing results in poor development of soils. About 2/3 of the inspected soils have been classified as Static Cryosols and 1/3 as Turbic Cryosols.

Baseline soil samples were collected at 51 sites within the LSA and 20 sites outside of the LSA but within the RSA in 2012. Most soils have a low proportion of coarse fragments (below 30%) and low surficial stoniness (below 15%). Most soils are moderately coarse (loam, sandy loam, fine sandy loam). Mineral soils in the terrestrial RSA are predominantly acidic (median pH is 5.9, range from 4.7 to 6.8). While in general soil metal concentrations in the LSA do not exceed CCME guidelines, arsenic levels can be naturally-elevated (greater than CCME soil guidelines for industrial use) within the George PDA.

5.2.3 Vegetation and Special Landscape Features

The regional distributions of ecosystems were characterized within a Regional Study Area (RSA) by using two independent satellite-derived classifications. The terrestrial RSA was the same for vegetation and wildlife VECs. In total, twenty-nine unique ecosystems overlap the terrestrial RSA. These have been generalized into broad ecosystem classes reflecting similarities in ecological conditions. Together, the Bedrock-Sparse and Tundra-Heath classes comprise 60% of the terrestrial RSA.

Terrestrial ecosystem mapping (TEM) and rare plant surveys were conducted in 2012 within the 134,370-ha vegetation and terrestrial wildlife LSA. Vegetated ecosystems, constituting 73% of the LSA, are dominated by mesic tundra, dry-sparse tundra, and moist shrub-dominated tundra. The mesic tundra association, comprising nearly one-third of the LSA, is characterized by extensive areas dominated by dwarf woody shrub species, with a highly variable component of herbs, graminoids, mosses, and lichens. Sparsely-vegetated ecosystems, constituting nearly 9% of the total LSA, typically occur on thin morainal veneers or exposed bedrock, windswept esker crests, blocky tundra, marine beaches and other barren sites that limit vegetation establishment. Non-vegetated ecosystems, constituting approximately 18% of the LSA, are dominated by freshwater lakes and ponds. Special landscape features, identified for their importance as wildlife habitat or potential to support rare plant species, include esker complexes, cliffs, bedrock outcrop and lichen-dominated ecosystems, riparian ecosystems, wetland ecosystems, and marine beaches and old beach heads. A total of 890 plant species identifications were made during the TEM and rare plant field surveys within the LSA and RSA. The largest species group in the identified flora is that of the vascular plants, followed by the macrolichens. 90 rare plant species were identified and were mainly found close to the shoreline of Bathurst Inlet throughout the LSA and RSA. No invasive plant species were found in the LSA during the 2012 field surveys.

5.2.4 Caribou

The Project is located within the range of three barren-ground caribou herds. The most important is the Bathurst caribou herd, which uses habitat within the RSA, primarily during post-calving and occasionally during spring migration. The Ahiak herd (also known as the Queen Maud herd) has also been observed in the RSA, primarily during the late summer, fall and winter but also during spring migration. The Dolphin and Union herd is named after the Dolphin and Union Strait which this herd crosses each spring and fall to summer on Victoria Island. The southern extent of the winter range on the mainland likely overlaps with the Marine Laydown Area.

The range and movements of caribou herds have been studied by the governments of NU and NWT using radio and GPS collars. Satellite collars are fitted on female caribou which report their location every few hours or days. Satellite collar data collected since 1996 for the Bathurst herd and since 2001 for the Ahiak and Dolphin and Union herds was used to map the distribution and movement of caribou herds on a seasonal basis and assess overlap with the Project.

In addition, regional and local-scale data on caribou have been collected in the RSA since 2007 using aerial surveys, motion-triggered cameras and habitat mapping. This combined approach provided valuable data on the locations, and movements of caribou herds during the spring and fall migrations and during calving and post-calving periods in relation to the Project.

Aerial surveys were conducted in 2007 (five surveys), 2008 (three surveys) and 2010 (three surveys) using standard aerial census techniques for large mammals. These surveys were timed to occur in the spring, calving, post-calving and fall periods for caribou. Surveys were conducted along pre-determined transect lines within the RSA; transect lines were parallel at a distance of eight km apart. Sixty motion-triggered cameras were deployed in 2012 and 2013 to monitor when caribou used the RSA and to examine the use of landscape features identified by Inuit IQ as being preferred by caribou; such as eskers, river crossings or hilltops for insect relief.

Collaring data indicate that Bathurst herd caribou are found predominantly in and around the RSA during the mid-summer months. Bathurst caribou winter below the tree line in Nunavut and the NWT. During spring migration, caribou move quickly north to the calving grounds between the Hood and Burnside Rivers. The Project is located on the eastern edge of the migration route to the calving grounds and approximately 100 km to the south-east of the calving grounds. During post-calving and summer, caribou leave the calving grounds and move south and south-east to the summer grounds. Some of these caribou move through the RSA, predominantly to the south and west of the Project.

The Ahiak herd also occurs in the Project area during certain seasons based on the results of collar data. Ahiak caribou are found in the RSA primarily during the summer and early fall, but may be found in the RSA during winter and spring at low densities. Ahiak caribou winter both above and below the treeline, generally southeast of the Project. The northern edge of the winter range overlaps the Project location. During spring migration, some caribou move through the RSA as the Project is located at the western edge of the spring migration range. Calving is conducted approximately 250 km northeast of the Project in the Queen Maude Gulf, outside of the RSA. The Ahiak caribou move southwest to their summer range which overlaps the RSA between mid-July and the end of August (Rescan 2013). A smaller portion of collared Ahiak caribou remain in the southern portion of the RSA during the fall and throughout the winter.

Collar data for Dolphin and Union caribou indicate that this herd has potential to interact with the RSA during winter only. A low number of collared caribou used the northern RSA; it is possible that un-collared caribou (males and juveniles) may use the RSA during the winter season especially in the northern portion of the RSA near the MLA. Dolphin and Union caribou calve and summer on Victoria Island prior to their fall migration. In the fall, the herd migrates to the southern coast of Victoria Island for the rut, before migrating back across sea ice between October and late November to over-winter on the mainland. Dolphin and Union caribou are likely present at low densities in the northern extent of the RSA, near the Marine Laydown Area in the winter. The Dolphin Union caribou herd uses the ice to cross Coronation Gulf on their spring and fall migration to and from Victoria Island (Gunn 2005).

Data from aerial surveys reported few caribou in the RSA during calving, with low numbers of caribou reported during the post-calving and summer periods. Six medium-sized groups (> 100) with the largest group recorded at 300 individuals were observed west of the RSA. Caribou observed during aerial surveys conducted in the RSA were likely Bathurst caribou during the post-calving period, Ahiak caribou during late summer, and likely Dolphin and Union caribou during spring surveys in March in the northern portion of the RSA.

Data from motion-triggered cameras support the data from satellite collars on the timing of caribou occurring in the RSA. Approximately 600 caribou most likely belonging to the Ahiak herd were recorded in the southeast sector of the RSA during the summer period in July and August. The Dolphin and Union caribou herd has a minimal chance to interact with habitat in the RSA during the period when cameras were out on the tundra, so it is likely that this herd was not detected by motion-triggered cameras in the RSA.

5.2.5 Grizzly Bear

Barren-ground grizzly bears inhabit the northern edge of the grizzly bear range in North America. Arctic habitats have relatively low plant productivity and as a result, barren-ground grizzly bears use large home ranges and exist at low densities compared to other grizzly bear populations in more productive ecosystems. Average home range sizes vary from 2,100 km^2 for females to 7,245 km^2 for males, and home ranges of individuals overlap more than they do in southern latitudes (McLoughlin, Ferguson, and Messier 2000).

Populations of barren-ground grizzly bear in the central Canadian Arctic are structured into three spatially distinct groups, located in the Kugluktuk region, Bathurst Inlet region, and North Slave region (McLoughlin, Cluff, and Messier 2002a). Grizzly bears in the terrestrial RSA are part of the Bathurst Inlet population cluster and there is no official estimate on grizzly bear population size for the West Kitikmeot region of Nunavut. However, a crude estimate of 800 grizzly bears was determined for a 200,000 km^2 portion of the northwestern mainland of Nunavut, which includes the terrestrial RSA (Ross 2002). This estimate assumed a density of four bears per 1,000 km^2 based on grizzly bear densities in nearby areas (Ross 2002).

Three types of baseline surveys have been conducted for grizzly bears in the RSA: population-estimation using DNA mark-recapture, den surveys, and incidental observations. The DNA-based mark-recapture program was conducted over two years; 2012 and 2013 in an area of approximately 17,300 km^2 surrounding the Project location. The survey included a 120 cell grid of 12 X 12 km cells. Each cell contained a baited post to attract bears which would investigate the post and leave hairs on barbed wire wrapped around the post. The posts were checked seven times during the summer, every 9 to 12 days. Bears were identified from their DNA in the hairs and a population estimate calculated from the proportion of bears that return to the posts during the summer. In 2012, 111 bears were identified in the study area (61 in the RSA) with the highest numbers of bears on the lower reaches of the Western River (>10 bears), along the Back River and on the large eskers 10 to 15 km west and southwest of George camp. These numbers indicate approximately twice the density of grizzly bears in the Project area relative to the assumed density previously thought (Ross 2002). Results from 2013, and the combined population estimate will be included in the FEIS.

Den surveys for wolf and fox dens were conducted in June and July between 2007 and 2013 along eskers, stream banks, low hills, and other likely denning areas. Grizzly bear dens were recorded incidentally when observed. In 2007 and 2011, no dens were recorded during den surveys; however, two grizzly dens were observed incidentally during breeding bird surveys. In 2012, two additional grizzly bear dens were observed, one during den surveys and the other incidentally.

Eleven grizzly bears were observed incidentally in 2007. In 2010, four grizzly bears were observed during aerial surveys for caribou and muskox. In 2011 two female grizzly bears with two young cubs each were observed. In addition, a total of 19 adults and 16 cubs were observed incidentally during the baseline studies conducted in 2012 and the 60 remote cameras deployed in the RSA during 2012 captured an additional 85 unique observations. The majority of incidental observations of grizzly bears were concentrated near Bathurst Inlet and in the Western River watershed.

5.2.6 Muskox

The global range of muskox extends across most Arctic islands, northern Greenland, and most of the Canadian tundra, including the Kitikmeot region of Nunavut (Gunn 2003). Overall, in Nunavut and the NWT, the number of muskox was estimated at 134,000 to 144,000 individuals in 2001. The Government of Nunavut estimates that there are 19 populations totalling approximately 50,000 muskox within the Kitikmeot Region (Dumond 2006).

In 2005 the number of muskox between northeast Contwoyto Lake and southwestern Bathurst Inlet, an area that includes the RSA, was estimated at 604 ± 225 animals (Dumond 2007) down from 3,400 ± 460 animals in

1986 (Gunn 1990). Muskox that occur within the RSA are referred to as the central mainland population. Muskox are found throughout the region at relatively low densities (Gunn 1990; Dumond 2007). Average summer home range size is 223 km^2 and they move an average of 2.6 km/day (Reynolds 1998).

Field data for muskox were collected during aerial surveys for caribou in 2007, 2008 and 2010. Surveys followed pre-determined parallel transect lines that were spaced 8 km apart within the RSA. In 2007, five aerial surveys were conducted in May, June, early July, late July, and September and a total of 50 muskox were observed on transects with an additional 82 observed off transect (> 500 m from the plane). In 2008, two adults were observed during the May survey and two during the July survey and an additional 98 muskox (84 adults and 14 young) were observed incidentally. In 2010, aerial surveys were conducted in May, June, and July and a total of 53 muskox were observed with an additional 34 muskox recorded off transect. Each aerial survey typically observed 2 to 3 groups of muskox. In addition to aerial surveys, three muskox were observed incidentally in the RSA in 2011, and ten separate incidental observations totaling 114 muskox were observed in the RSA in 2012 (Rescan 2013). Typically, a group was observed each year on the low hills to the west of Bathurst inlet, while the other 1 to 2 herds were observed at various locations in the southern portion of the RSA. Productivity (calves and juveniles per adult) of muskox herds observed was very low, frequently with 1-2 calves per 20-30 adults in the spring.

5.2.7 Wolverine/Furbearers

Arctic furbearers in the Kitikmeot region include wolverines, wolves, red and Arctic foxes, and Arctic ground squirrels. Wolverines and grey wolves are two species representative of furbearers in the environmental assessment with wolves acting as a proxy for foxes (both canids).

Wolverines are members of the mustelid family, which includes weasels, badgers, and marten. Like other mustelids, wolverines are carnivorous, and are both scavengers and predators on a wide range of prey (COSEWIC 2003). Very large home ranges and low population densities are characteristic of this solitary species (Persson, Wedholm, and Segerstrom 2010; Inman et al. 2012). In Nunavut, wolverines have very large territories ranging from 100 km^2 for an adult female to over 600 km^2 for an adult male (Feldhamer, Thompson, and Chapman 2003). Wolverine populations in the central Arctic appear to be stable, though recent estimates are lacking (COSEWIC 2003). The total population size of wolverines in Nunavut is estimated at 2,000 - 2,500 individuals (COSEWIC 2003; Slough 2007).

The grey wolf is the largest member of the *Canis* genus and was once abundant over much of North America and Eurasia; however, its range has contracted due to habitat destruction and hunting. The wolf is still widespread throughout much of northern Canada, including the West Kitikmeot region of Nunavut. Populations are stable or increasing within their Canadian range, except in northern Alberta and some parts of the NWT (Hayes 1995; Frame 2008). Wolf reproductive success and population size are largely regulated by the availability of caribou.

Three types of baseline surveys have been conducted for wolverine and furbearers in the RSA including: i) population-estimation using DNA mark-recapture for wolverines; ii) carnivore den surveys; and iii) incidental observations. The DNA-based mark-recapture program was conducted over two years; 2012 and 2013 in two areas approximately 2,000 km^2 each, surrounding the Project location. In 2012 and 2013, a 35 km by 35 km survey grid, divided into 49 cells (5 km X 5 km) was located between Goose and George Properties. An additional grid consisting of 50 cells (5 km X 5 km) was centered around the proposed MLA during 2013. A baited post was located within each cell and re-baited during three checks (approximately 10 days between checks) during March and April. A total of 12 individuals were detected in 2012, including 4 females and eight males. Only one male wolverine was detected during other wolverine surveys conducted in Nunavut or the NWT and results indicate that the Project area supports a moderately sized wolverine population. A formal population estimate will be made after analysis of the 2013 samples and included in the FEIS.

Carnivore dens surveys were conducted in the RSA via low level aerial surveys in esker and glacial-fluvial habitat in 2007, 2011, 2012 and 2013 to identify dens that are active and to identify resident carnivore species using the RSA. No wolverine dens were observed during the aerial surveys in the RSA; however, in 2012 two active wolverine dens were found incidentally within rocky boulder habitat and located within 1 km of proposed site infrastructure. One of these dens was active in 2013. In 2007, five active wolf dens were recorded with pups observed at four of the dens in the RSA, one of the wolf dens were located <3 km from the George camp. No wolf dens were found in 2011, and those revisited from the 2007 surveys were unoccupied. In 2012, two active wolf dens were found both greater than 25 km from proposed infrastructure.

Incidental observations of wolverine have been recorded in the RSA between 2001 and 2013. Nearly 20 incidental observations of wolves and pups have been recorded between 2007 and 2012.

Thirty remote cameras located in the RSA in 2012 recorded 51 observations of wolverine between March and April and 74 observations of wolves totaling 92 individuals between late-May/early June to late-August. Several of these detections are likely repeated observations of individuals at the same or multiple cameras.

5.2.8 Migratory Birds

Migratory birds including waterbirds and upland breeding birds travel long distances to breed on the Arctic tundra during the short summer season. Migratory birds and their nests are protected under the Canadian *Migratory Birds Convention Act* (1994), the *Canada Wildlife Act* (1985) and the Nunavut *Wildlife Act*.

Aerial surveys have been conducted for waterbirds between 2007 and 2013 in five grids in the terrestrial RSA during staging and breeding periods. Survey grids, measuring 16 X 16 km of parallel transects separated by 2 km, were located surrounding the Goose and George Properties and at representative control sites. In 2011 the grids were surveyed at the Goose Property, and in 2012 and 2013 grids at the Goose and George Properties and control sites were surveyed. Surveys were conducted by helicopter following established survey protocols developed by the Canadian Wildlife Service and the United States Fish and Wildlife Service (CWS and USFWS 1987).

A total of 24 waterbird species belonging to several species groups including ducks (dabbling and diving), geese, swans, loons, terns/gulls, cranes, jaegers, and grebes were detected during waterbird surveys conducted in the terrestrial and marine RSAs (see Section 5.4.6 of this Chapter) between 2007 and 2012. Of the species recorded, five species of conservation concern listed as “Sensitive” in Nunavut (CESCC 2010) were observed including, long-tailed duck, Arctic tern, glaucous gull, common eider, and king eider.

A much greater number of flocks and birds were observed during staging periods in the survey blocks near the Goose Property. Flocks of birds were well distributed on waterbodies in this area, with the highest abundance of geese observed in the fall of 2012 within 2 km of Goose Lake and Propeller Lake.

The area surrounding the George Property supports much fewer waterfowl during staging, with the exception of one small lake, approximately 5 km northwest of George camp, which supported large flocks of birds during both spring and fall staging, and was the only lake used for spring staging near the George Property Area in 2012.

Waterbird breeding surveys were conducted during the summer (June and July), when resident birds are laying eggs and rearing young. Very few breeding birds were observed. Long-tailed duck pairs were the most commonly observed, and the majority of pairs occurred in the survey blocks near the Goose Property Area. Confirmed breeding has been documented for some species in the terrestrial RSA including Canada goose, northern pintail, and sandhill crane. Canada geese were the most commonly detected.

Upland breeding birds are ground-nesting species that include migratory songbirds and shorebirds, and resident ptarmigan. Surveys for upland breeding birds were conducted in 2007, 2011, 2012 and 2013 using the methods established for the Program for Regional and international Shorebird Monitoring (PRISM) and point counts to identify what species are present (including listed species), and to determine territory densities and habitat associations. The numbers and locations of the surveyed PRISM plots were stratified in the RSA in different habitat types. Thirty PRISM plots were surveyed in 2011, 54 in 2012, and 8 in 2013. In addition, 60 point count surveys were conducted in 2013 near the MLA.

Twenty-one upland breeding bird species (10 songbirds, 9 shorebirds, and 2 ptarmigan) were observed in the RSA during PRISM surveys. Ten of these are listed as “Sensitive” in Nunavut due to concern for long term population declines or require special attention or protection to prevent them from becoming at risk. The 10 Sensitive species are: American golden-plover, American pipit, American tree sparrow, dunlin, Harris’s sparrow, hoary redpoll, least sandpiper, red-necked phalarope, semipalmated sandpiper, and white-crowned sparrow. Songbirds were detected on average five times more often than shorebirds and ptarmigan. Breeding evidence was confirmed for nine species. The Lapland longspur was the most commonly detected species, and combined with the savannah sparrow, made up approximately 78% of all songbird territories recorded. The American tree sparrow was the most common “Sensitive” species recorded.

Three distinct habitat communities were noted for songbirds. One community, which includes the savannah sparrow, is primarily associated with wet habitat types such as wetlands and sedge meadow. A second community, including the American tree sparrow and white-crowned sparrow was associated with moist habitats with tall shrubs, and a third group of birds was associated with dry, upland, heath habitat including species such as the horned lark, American pipit and Harris’s sparrow. Shorebird species, except the American golden plover, were observed more often associated with moist and wet habitat. Ptarmigan were predominantly observed in dry and moist habitat types.

5.2.9 Raptors

Raptors are top predators and are often considered ideal indicator species because their health and reproductive success often reflect the size and health of the populations of prey populations. Raptors migrate north to breed on cliffs and tundra areas.

Nine species of raptors are expected to occur in the Kitikmeot Region, and have been documented in the RSA. Five of these species nest on steep cliff ledges including the peregrine falcon, golden eagle, bald eagle, gyrfalcon, and rough-legged hawk (Poole and Bromley 1988). Common ravens are passerines (a perching bird), but are considered to be “functional raptors” since ravens compete with raptors for nesting sites on cliffs (Poole and Bromley 1988). Three raptors are ground nesting species: short-eared owl, snowy owl, and northern harrier.

Raptor surveys were conducted in the RSA between 2007 and 2013 following standard methods (RIC 2001). Helicopter surveys were flown at >50 m away from cliffs nests at 30 - 80 km/hr. Nest sites were surveyed twice – in late May to locate occupied nests, and in July to determine nesting success and breeding productivity. Surveys recorded raptor species, number of birds, chicks, or eggs, UTM locations of nests, and potential territories. Ground nesting raptors were surveyed during ground-based surveys for upland breeding birds. Habitat information was also collected to describe raptor nesting habitat within the RSA.

All nine raptor species and common raven were detected during raptor surveys and incidentally. Breeding was detected in the RSA for all five raptor species of conservation concern in Nunavut (golden eagle, gyrfalcon, rough-legged hawk, peregrine falcon, and short-eared owl). The surveys conducted in 2007, covering the majority of the RSA, indicated that the greatest concentration of nests occurred in the central and northern portions of the RSA, but a number were also located between Goose and George Properties, and along the Western River valley east of the Goose Property area. The productivity (proportion of nests that produce young) of raptor nests varied widely from year to year. Of the nests observed in 2007, peregrine falcons were the most commonly detected, but productivity was poor; only 7% of nests were productive in August. The second year of survey, 2011, was a very poor year for raptor reproduction. A survey in early June, 2011, observed 11 occupied nests of 13 that were previously surveyed within 30 km of Goose Property in 2007. None of these nests belonged to peregrine falcon. None of the occupied nests were productive in 2011. An additional eight nest sites were located in the study area, but none of them occupied. One nest belonging to the ground-nesting short-eared owl was detected during upland breeding bird surveys. In 2012 raptor productivity was much higher. 124 raptor nests were observed within 30 km of the Goose and George Properties (69 were re-detected from previous years), of which 61 nests were occupied by four raptor species, including peregrine falcon, golden eagle, gyrfalcon and rough-legged hawk and the common raven, with peregrine falcon nests recorded most frequently. Young were observed for all four raptor species and signs of fledgling were recorded for all but peregrine falcon.

Only two raptor nests were found within 1.5 km of proposed infrastructure. One nest was a gyrfalcon nest and was found on a ledge within 1.5 km of proposed infrastructure west of Goose Camp and the other was that of a peregrine falcon located on a ledge near George camp. The peregrine falcon nest had four young that were raised to at least two weeks of age.

5.3 FRESHWATER ENVIRONMENT

5.3.1 Surface Hydrology

The Project is located within the watershed boundaries of the Ellice River Watershed and the Western River Watershed. All proposed infrastructure at the Goose Property lies within the Ellice River Watershed, which flows northwest and enters the ocean on the west side of Bathurst Inlet. All proposed infrastructure at the George Property lies within the Western River Watershed, which flows north and enters Bathurst Inlet at its southernmost point. The Back River Watershed is located south of the Goose Property Potential Development Area (PDA) and flows east eventually entering the Arctic Ocean south of Gjoa Haven.

Baseline hydrology data are available for the Goose Property LSA from 2010 to 2013 and for the George Property LSA from 2012 and 2013. Surface hydrology is governed by the Arctic nival regime where peak flow discharges during the spring, shortly after air temperature rises above freezing. In small basins, these high flows can last as little as a few days. Peak flow typically occurs immediately after ice break-up in lakes and channel reaches, especially in the smaller basins. Due to the presence of permafrost, small streams do not receive groundwater contributions, and flow discharges from these basins may cease after freshet until the late summer rains begin. For rivers draining larger watersheds, the freshet peak may be delayed relative to smaller drainages as snowmelt from upper portions of the watershed is routed through the drainage network. Precipitation events in the late summer and early fall may lead to a second hydrographic peak, but this is generally of lower magnitude than the freshet peak. Channel freeze-up typically occurs between late October and early November. In smaller drainage basins, stream channels typically freeze to their bottom, with zero flow occurring in winter. In very large catchments and larger lake outlets, flow energy and water turbulence may sufficiently maintain streamflow and prevent downstream reaches from freezing completely.

5.3.2 Limnology and Bathymetry

Limnological and bathymetric information have been collected in the Project area since 1994, with extensive baseline studies focusing on the Goose Property LSA in 2010 and 2011, and on both the George and Goose property LSAs in 2012 and 2013. Lakes are generally small and shallow, ranging between 5 and 500 ha in surface area and less than 10 m in maximum depth. Lakes shallower than 2 m are usually frozen to the bottom during the winter months. Lakes are usually well mixed from the surface to the sediments during the open-water season due to wind-driven forcing. Some gradients in temperature and density may occur in deeper lakes or in ice-covered lakes in winter, although this is uncommon. The water clarity of lakes is generally high, despite the potential for wind-driven mixing to the sediments. Water temperatures in lakes and streams tend to follow the Arctic climate, with greatest temperatures observed in August at the height of the short summer.

5.3.3 Groundwater

The Project lies within the continuous permafrost zone of the continental Canadian Arctic, and as such groundwater is present deep below the continuous permafrost layer (e.g. > 400 m below surface). Water present in the active layer above the permafrost, which is thawed during the summer only, can interact with surface waters in general. There is minimal connection between the surface active-layer and deep groundwater flow regimes due to the presence of the thick low-permeability permafrost. The deep sub-permafrost groundwater is hydraulically connected with the surface water and the active layer via through-taliks beneath large lakes, such as those below Goose and George lakes. Structural features in the bedrock, such as the northwest-southeast trending faults commonly found at the Goose and George properties, may act as preferential flow pathways for groundwater in taliks and beneath the permafrost. In general, the deep groundwater flows from higher elevation large lakes (lakes which overlie through taliks) to lower elevation large lakes, therefore the flow direction can be inferred from the surface elevation of the large lakes that overly through taliks. Site-specific groundwater data were collected in 2012 and 2013 within the Goose and George Property PDAs. Thermistor strings, vibrating wire piezometers, borehole packer testing, and a Westbay well have been used to characterise the groundwater environment. The Westbay well, installed adjacent to the Umwelt deposit in 2013, has been used to conduct groundwater quality sampling. Preliminary results of groundwater sampling indicate that the deep groundwater is more saline than seawater, with total dissolved solid concentrations of 47,000 mg/L and higher, and has elevated levels of chloride and select trace metals. Groundwater quality indicated by the Westbay well will be representative of water that will seep in to the Umwelt underground and be managed as part of the overall Site Water Monitoring and Management Plan (Volume 10, Chapter 7).

5.3.4 Freshwater Water Quality

Comprehensive baseline water quality data are available from the area from 2010 to 2013, with historical information available for specific areas from 1993, 1997, 2006-2007. The water of lakes and streams is typical of pristine Arctic surface waters, with low concentrations of anions, suspended material, nutrients, and most metals.

Results from site-specific data indicate that lakes in the area have slightly acidic to alkaline pH waters, ranging from 6.3 to 8.3 (Rescan 2012f). Dissolved oxygen concentrations are typically above CCME guidelines for the protection of aquatic life in early life stages (9.5 mg O_2/L) but some lakes naturally have lower oxygen levels during the winter or summer. Lakes are very clear with low turbidity values, and generally have low nutrient concentrations (e.g. ammonia and nitrate are considerably lower than the CCME guidelines). Based on the CCME recommended trigger ranges for total phosphorus, most lakes would range from ultra-oligotrophic to mesotrophic.

Metal concentrations in lakes are generally low, and tend to be lower in the summer than in winter. Metal concentrations are below CCME guidelines for the protection of freshwater quality life, with the exceptions of aluminum, arsenic, chromium, cadmium, and copper. These metals can show naturally elevated concentrations, sometimes near or just above the CCME guidelines, depending on the location and season of sampling. Aluminium and copper are the metals that are most frequently found naturally elevated (Rescan 2012f).

Results from site-specific data indicate that streams in the area have similar water quality to lakes, with the exception of having more occurrences of naturally elevated metal concentrations. Copper was the metal that was most frequently found to be naturally elevated in streams (Rescan 2012f).

5.3.5 Freshwater Sediment Quality

Baseline sediment quality data are available from the area from 2007 to 2013. The sediment of lakes and streams is typical of pristine Arctic freshwater systems.

Results from site-specific data indicate that sediments tended to be moderately to slightly acidic. The organic content of the sediments in both lakes and streams tended to be low. Lake sediments were composed of silt and sand particles, with the larger gravel and the smaller clay particles generally comprising <15% of the total. Stream sediments tended to be dominated by larger sand and gravel particles.

Lake sediments have naturally elevated metal concentrations that are often greater than CCME guidelines for arsenic, cadmium, chromium, copper, and/or zinc. The majority of lakes that have been sampled have sediment arsenic concentrations greater the CCME interim sediment quality guideline (ISQG), and many lakes have sediment arsenic concentrations greater than the CCME probable effect level (PEL) guideline. Lakes in the George Property area tend to have higher natural sediment arsenic concentrations compared to lakes in the Goose Property area.

Stream sediments have naturally elevated metal concentrations that are often greater than CCME guidelines for arsenic, cadmium, chromium, and copper. Similar to lakes, stream sediment arsenic concentrations are naturally elevated, and more so in the George Property compared to other areas.

5.3.6 Freshwater Fish/Aquatic Habitat

Baseline aquatic biota data are available from the area from 2007 to 2013. Some historical information is also available from 1990 and 1997. Baseline fish habitat data have been collected in the Goose and George Property LSAs from 2010 to 2013. More than 30 streams have been characterized in the Goose Property LSA, and more than 20 in the George Property LSA.

The aquatic biota of lakes and streams is typical of pristine Arctic freshwater systems. The long cold winters, large spring freshet, and short summer all contribute to low overall primary production and low primary producer biomass in lakes and streams. In systems with strong seasonal dynamics and low productivity, consumers tend to be closely coupled to the primary producers and the local environment, and can show substantial variation between years and locations. Lake zooplankton and lake and stream benthic invertebrate communities all showed considerable variation, consistent with the close coupling between trophic levels and the strong local effects. Site-specific baseline information has characterized healthy and robust communities of benthic invertebrates.

Within the Goose LSA, there are permanent barriers to fish migration along the stream between Pond A and Giraffe Lake (where the TIA has been located) and along the stream between Umwelt Lake and Goose Lake. Habitat quality for rearing and spawning Arctic Grayling (*Thymallus arcticus*) is generally best in the reaches immediately upstream and downstream of lakes. High quality habitat is present at Rascal Outflow within the stream connecting Rascal and Goose lakes. This stream contains small cobble and gravel that supports Arctic Grayling spawning and rearing, as well as providing a migratory corridor between lakes with overwintering habitat.

Within the George LSA, the stream/pond system between George Lake and Komatic Lake is characterized by low gradient habitat featuring glides and occasional pools and riffles, typical of beaded tundra streams. The portion of the stream system between George Lake and Lytle Lake features boulder fields that may become impassable at low water due to subsurface flow. However, spawning and rearing habitat for Arctic grayling is fair to good in reaches downstream of Sleigh Lake.

Large lakes such as Propeller, Goose and George lakes provide the majority of year-round fish habitat for locally abundant fish species such as Lake Trout (*Salvelinus namaycush*) and Arctic Grayling within the LSAs. These deep lakes have sufficient oxygenated water to sustain fish populations during the ice-covered season. In contrast, shallow lakes (<2 m) and streams freeze completely during the winter and are unavailable as overwintering habitat.

5.3.7 Freshwater Fish Community

Goose Lake is the lake most central to proposed infrastructure for the Goose Property area. This lake, along with many other lakes and streams in the immediate area, has been surveyed for fish from 1997, and 2007 to 2013. Fish have been present in all lakes that have been sampled to date. However, some of the shallow ponds are not fish-bearing due to their shallow depth and ephemeral connectivity to other waterbodies.

For the Goose Property area, lake and stream freshwater fish communities consist of nine species, with Lake Trout and Arctic Grayling being the most numerous. The species that have been found in lakes by site-specific baseline studies include Lake Trout (*Salvelinus namaycush*), Round Whitefish (*Prosopium cylindraceum*), Lake Cisco (*Coregonus artedi*), Longnose Sucker (*Catostomus catostomus*), Ninespine Stickleback (*Pungitius pungitius*), and Lake Whitefish (*C. clupeaformis*). The species that have been found in streams are Arctic Grayling (*Thymallus arcticus*), Slimy Sculpin (*Cottus cognatus*), and Burbot (*Lota lota*).

Existing concentrations of mercury in tissue samples from Lake Trout and Round Whitefish are below the Health Canada guidelines for human consumption (Rescan 2012e). Lakes from where fish tissue samples have been collected include Llama, Goose, Umwelt, Gander, and Reference B. Fish from all sampled lakes had similar concentrations of metals.

George Lake is the lake most central to proposed infrastructure for the George Property area. This lake, along with many other lakes and streams in the immediate area, has been surveyed for fish from 2007, 2012 and 2013. Fish have been present in all lakes that have been sampled to date, with the exception of some lakes in the Kanosak Creek (George Outflow) drainage. However fish may use these waterbodies seasonally as they migrate up and down the watershed.

The George Property area lies within a different regional watershed than the Goose Property area, and all surface waters from the George Property area ultimately drain north to Bathurst Inlet. The freshwater fish communities are different between the 2 properties.

For the George Property area, lake and stream freshwater fish communities consist of five species, with Lake Trout being the most numerous. The species that have been found in lakes by site-specific baseline studies include Lake Trout, Arctic Grayling, Round Whitefish, Burbot, and Slimy Sculpin. Lake Trout was the dominant species in lakes. Streams were dominated by Slimy Sculpin and Burbot, with some Arctic Grayling.

Existing concentrations of mercury in tissue samples from Lake Trout from George Lake and Reference Lake C are below the Health Canada guidelines for human consumption (Rescan 2012e).

None of the species found to date from the Goose and George Property areas are considered endangered, threatened, or listed under Canada's *Species at Risk Act*. There are currently no non-aboriginal recreational fish harvesting activities or commercial fisheries in the Goose Property area, the George Property area, or the on-land portion of the MLA.

5.4 MARINE ENVIRONMENT

5.4.1 Physical Processes

Bathurst Inlet is a deep inlet located along the northern coast of the Canadian mainland, within the territory of Nunavut. The entrance to the inlet is between Cape Barrow (68° 01' N, 110° 06' W) and Cape Flinders (68° 17' N, 108° 35' W), and the body extends for over 200 km southwest into the mainland, past the Arctic Circle. The navigable corridor within Bathurst Inlet is generally very deep, with depths between 100 and 200 m depth for most of the inlet. However several sills are located along the channel which can rise to depths above 50 m.

Consolidated first-year sea ice (1.5 to 2 m average thickness) usually covers Bathurst Inlet from October to June, and ice break-up usually occurs in the first few weeks of July. Tidal elevations are very weak in the region, with maximum amplitudes below 0.5 m.

Site-specific physical oceanographic information has indicated that the water column consists of a strongly stratified two-layered pycnocline structure with a 15 to 20 m warm, fresh and oxygenated top layer above a colder, saltier and lower oxygen bottom layer (Rescan 2008, 2012). Water circulation generally followed a two-layered positive estuarine flow with surface waters moving towards Coronation Gulf and the deep water moving into Bathurst Inlet. The estuarine flow is driven primarily from horizontal pressure gradients generated by the combined freshwater inputs of several rivers located along the inlet, such as the Western River situated at the head of the inlet or the Hiukitak River that flows into Gordon Bay. Significant variability could also occur in both current speeds and directions at all times, due to the strong influence of winds on the water column. Average velocities in southern Bathurst Inlet were less than 10 cm/s in the bottom layer, while in the top layer they ranged from 20 to 60 cm/s with maximum recorded magnitudes reaching over 90 cm/s during strong wind events.

Maximum surface significant wave heights were estimated at roughly 2 m height for the study region. Most currents were linked to wind-driven forcing; calculated tidal currents were generally almost negligible.

5.4.2 Marine Water Quality

Baseline water quality data are available from southern Bathurst Inlet from 2007, 2008, and 2012 to 2013. Historical information is also available from 2001.

The water of southern Bathurst Inlet is typical of pristine Arctic marine waters, with low concentrations of nutrients, suspended solids, and metals. Nutrients are higher in the winter and lower or depleted in the summer when they are being used by phytoplankton. Nitrate concentrations are near or below detection limits in the summer, while phosphorus concentrations are still measureable in surface waters (> 0.01 mg P/L). Southern Bathurst Inlet is considered oligotrophic based on phytoplankton biomass levels.

Metal concentrations in southern Bathurst Inlet are generally below the CCME guidelines for the protection of marine aquatic life and often undetectable. Near-shore sites near river outflows or in regions of shallow bathymetry sometimes have elevated levels of suspended material and metal concentrations. Metals which have been found to be naturally elevated above CCME marine guidelines in a small subset of samples include cadmium, chromium, and mercury.

5.4.3 Marine Sediment Quality

The sediment quality in Bathurst Inlet has been sampled in 2001, 2002, 2007, 2010, 2012, and 2013. Sampling near the proposed Marine Laydown Area was conducted in 2013. The sediments of Bathurst Inlet are heterogeneous as a result of local physical processes. Sediments ranged from sandy (>90% sand particles) through loose clay-silt sediments (70% clay with the remainder silt). Sand tends to predominate in the shallower sites (<5 m), with silts and clays become more frequent in the deeper near-shore sites.

Marine sediment metal concentrations are generally below the CCME interim marine sediment quality guidelines. However, near-shore sites with high silt/clay content frequently have naturally elevated concentrations of arsenic, chromium, and copper, with elevated levels of arsenic and copper being the most common. Marine sediment metal concentrations have not been found to be greater than the CCME marine probably effect level guidelines which are higher than the marine interim sediment quality guidelines.

5.4.4 Marine Fish/Aquatic Habitat

Baseline marine fish habitat data and marine aquatic resource data have been collected in the marine RSA in Bathurst Inlet since 2001 and in the marine LSA in 2012 and 2013.

The marine ecosystem in Bathurst Inlet is strongly affected by the physical environment. Winter time productivity in the Inlet is low due to light limitation, but higher in the summer (0.5 to 1.0 µg chl *a*/L). In the spring, the abundant nutrients in the surface waters combined with increased light levels cause a spring bloom, which serves as an important food source for zooplankton and the pelagic food web. A diverse and robust benthic invertebrate community has been characterized in southern Bathurst Inlet. Benthic invertebrate organisms found to date have included the small bivalves *Macoma* and *Astarte*, which serve as important food sources for fish, as well as polychaetes worms, cumaceans, and amphipods.

Baseline data on marine habitat have been collected in the RSA in Bathurst Inlet since 2001 and in the LSA in 2012 and 2013. The shoreline of the LSA and the southern section of the RSA are dominated by a shallow water shelf, which extends to a depth of approximately 10 m and a distance of 120 m offshore. Beyond this, the bottom descends steeply to depths greater than 40 m. The substrate in the intertidal zone is dominated by cobble and gravel, while deeper areas feature more mud and silt. Based on nearshore surveys and traditional knowledge, potentially important habitat areas for marine and anadromous fish were identified in the LSA and RSA. The outlet of some rivers are important habitat for Arctic Char (*Salvelinus alpinus*), with some of these areas acting as migratory pathways for anadromous Arctic Char. Intertidal gravel beaches and shallow gravel beds are important spawning habitats for Capelin (*Mallotus villosus*).

5.4.5 Marine Fish Community

Fish community data is available for southern Bathurst Inlet from 2001, 2010, and 2012. Site-specific baseline surveys have found 14 fish species in southern Bathurst Inlet, the most numerous of which depended on sampling year and season.

The marine fish community composition reflects the presence of freshwater in the marine system: 13 of the 14 species are associated with low-saline environments during at least one part of their life history. Of the 14 fish species captured in southern Bathurst Inlet, the most common included Fourhorn Sculpin (*Myoxocephalus quadricorni*) (which was the most abundant species in 2001 and 2010 surveys), and Capelin (*Mallotus villosus*) (which were the most abundant species in 2012 when sampling coincided with the their spawning period). Pacific Herring (*Clupea pallasii*), Starry Flounder (*Platichthys stellatus*), Arctic Cisco (*Coregonus autumnalis*) and Saffron Cod (*Eleginus gracilis*) made up the remainder of the commonly caught species. None of the captured species are currently considered endangered, threatened, or listed under Canada's *Species at Risk Act*.

Bathurst Inlet does support aboriginal subsistence fisheries with Cod and Arctic Char as the preferred target species for subsistence hunters. Although documented historically, Arctic Char was not caught at any marine site during the site-specific baseline sampling. Non-aboriginal recreational fish harvest in Bathurst Inlet is expected to be low, and there are currently no commercial fisheries harvests reported in Bathurst Inlet.

5.4.6 Seabirds and Seaducks

Migratory birds including waterbirds and upland breeding birds travel long distances to breed on the Arctic tundra during the short summer season. Migratory birds and their nests are protected under the Canadian *Migratory Birds Convention Act* (1994), the *Canada Wildlife Act* (1985) and the Nunavut *Wildlife Act*.

Aerial surveys for waterbirds (seabirds and seaducks) were conducted along the shoreline of Bathurst Inlet in the marine RSA in 2010 and 2013 and in a grid surround the proposed Marine Laydown Area in 2013. Surveys were conducted by helicopter following established survey protocols developed by the Canadian Wildlife Service and the United States Fish and Wildlife Service (CWS and USFWS 1987).

A total of 24 waterbird species belonging to several species groups including ducks (dabbling and diving), geese, swans, loons, terns/gulls, cranes, jaegers, and grebes were detected during waterbird surveys conducted in the terrestrial and marine RSAs between 2007 and 2012. Of the species recorded, five species of conservation concern listed as “Sensitive” in Nunavut (CESCC 2010) were observed including, long-tailed duck, Arctic tern, glaucous gull, common eider, and king eider.

Staging surveys, conducted in the spring and fall, indicate that large flocks of waterbirds, especially geese, move through the area during these times on their way to their breeding and/or wintering grounds. A greater diversity of ducks was observed during the fall surveys, including flocks of long-tailed duck. Several staging areas were documented in the marine RSA; most notable was the bay directly to the south of the proposed MLA.

Waterbird breeding surveys were conducted during the summer (June and July), when resident birds are laying eggs and rearing young. Very few breeding birds were observed. Canada geese were the most commonly detected. No evidence of breeding was recorded in the marine RSA along the shoreline during either ground surveys or aerial surveys.

5.4.7 Ringed Seals

There are two marine mammals that are resident in the marine RSA in Bathurst Inlet: the ringed seal and the bearded seal. Canadian populations of ringed seals are designated as Not at Risk (COSEWIC 2002b) but are considered a high priority candidate on the Species Specialist Subcommittees’ (SSC) candidate list and the COSEWIC candidate list for reassessment in fall of 2013 (COSEWIC 2012) based on new evidence that climate change poses a serious threat to ringed seals given the expected and extensive loss of sea ice. Canadian populations of bearded seals are designated as data deficient (COSEWIC 2002a) and are listed as mid priority candidates on the SSC candidate list, but have not yet been scheduled for reassessment (COSEWIC 2012). Both ringed and bearded seals represent an important resource for Inuit people although harvests of bearded seals are much smaller. Traditional knowledge of the presence, location, and structure of the breathing holes and subnivean lairs permitted the Inuit hunters to exploit this abundant resource throughout the frozen ice season.

Ringed and bearded seals are dependent on sea ice and snow to survive. They rely on sea ice for extended periods during moulting, and live on sea ice during critical months for breeding, whelping, and nursing. Population size estimates of both ringed and bearded seals are usually conducted in the spring (late May through mid-June) during the moulting season when they are hauled out on the sea ice making them visible during aerial surveys.

Baseline surveys were conducted for seals to determine where seals are using the ice for molting and their population size in the marine RSA that stretches from the southern tip of Bathurst Inlet to the north end of the Kent Peninsula. Aerial surveys for ringed and bearded seals have been conducted in the marine RSA using standard census techniques in Bathurst Inlet in 2007, 2009, 2012 and 2013 coinciding with the peak period of seal haul-out in June during the spring moulting period. The density (uncorrected density) of ringed seals in Bathurst Inlet was consistent between years. The corrected density of ringed seals in the marine RSA using seal count data from 2012 was estimated to be 2.05 seals/km^2. The density of seals in the southern portion of the RSA near the MLA was lower than that in the northern section of the RSA, however, densities of ringed seals were correlated to ice conditions with highest densities associated with cracked ice and solid ice and the lowest density in areas of high ice deformation and extensive melt water.

Ringed seal pups were observed during aerial surveys conducted in 2012 and 2013. Fewer pups were observed in the southern portion of the RSA relative to the northern portion. In addition, several ringed seal lairs were observed in the northern portion of the RSA west of Omingmaktok during seal surveys conducted in 2013. No lairs were observed in the southern portion of the Inlet (south of Kanuyak Island) or near the MLA during all years. Furthermore, no lairs were observed in the inlet south of Kingaok during wolverine DNA surveys conducted near the MLA in March and April 2013.

The occurrence of bearded seals in Bathurst Inlet was much lower than ringed seals with only 42 and nine bearded seals observed in 2007 and 2009, respectively. Bearded seals were associated with cracked ice and ice with melt water in areas that were fairly shallow (< 150 m).

5.5 HUMAN ENVIRONMENT

5.5.1 Archaeology and Paleontology

The Archaeological Setting is focused on a Regional Study Area (RSA) defined in Nunavut Archaeologist Permit 2012-12A. Archaeological and paleontological sites in Nunavut are protected under territorial or federal legislation. Archaeological and paleontological sites in Nunavut are protected under Section 51 of the *Nunavut Act* (*Nunavut Archaeological and Palaeontological Sites Regulations),* the *Territorial Land Use Regulations* of the *Territorial Lands Act* and by the *Canada Oil and Gas Operations Act* (*Canada Oil and Gas Geophysical Operations Regulations*).

Permits to conduct archaeological and paleontological research throughout Nunavut are applied for and issued under the *Nunavut Act* (*Nunavut Archaeological and Paleontological Sites Regulations*). In addition, work conducted on Inuit Owned Lands or within the Nunavut Settlement Area should be conducted in accordance with Articles 21 and 33 of the *Nunavut Land Claims Agreement*.

Highly significant paleontological finds have been made in Nunavut (e.g., Ellesmere Island, Axel Heiberg Island) and the Northwest Territories (e.g. Normand Wells); however, to date no fossils have been found by geologists or any other Back River Project field staff working on site. Based on the age of the rock units (Archean Age) and its close affinity with volcanic/pyroclastic rocks as well as subsequent metamorphism (Lambert 2005), it is not expected to find visible indications of fossils in rocks in the study area.

The Project area is within the lands traditionally used by the Copper Inuit, who are ethnographically defined as a group of the Central Eskimo. The territory of the Copper Inuit includes: portions of Victoria and Banks Islands; the Barrenlands south to Back River; Beechey Lake west to Contwoyto Lake; and extends from Wise Point, west of the Coppermine River and east to Perry River (Damas 1984). Early explorations of the area in and around the RSA were conducted by Samuel Hearne (1770 and 1772), John Franklin (1819-1822), George Back (1833-1834) and Vilhjalmur Stefansson and the Canadian Arctic Expedition (1910 and 1913 to 1918).

Previous archaeological research in the Arctic indicates that the earliest archaeological materials from this region date to approximately 3,500 BP and are associated with the Pre-Dorset culture (3,800 to 2,700 BP) (McGhee 1996). Artifacts from later cultural traditions including the Dorset (2,700 to 1,000 BP), Thule (1,100 to 200 BP), and Taltheilei (2,600 to 200 BP) are also expected within the RSA.

Previous archaeological studies in the region began as part of the Danish 5th Thule Expedition in 1921-1924 (Mathiassen 1927). During the 1970s geologist Fred Campbell reported on archaeological sites recorded while conducting work for the Geological Survey of Canada (Campbell 1975, 1977). In 1978, David Morrison conducted a survey of southern Bathurst Inlet and recorded 61 archaeological sites (Morrison 1978, 1979). In 2004 Darren Keith and Andrew Stewart conducted an oral history and archaeological study of a caribou hunting camp site (*Tahikaffaaluk*) at the north end of Bathurst Lake (Keith and Stewart 2005). Additional archaeological investigations have been conducted as part of site-specific baseline work for this Project (Rescan 2012d, Rescan 2013b), the George Lake area by Bertulli (1991), the Goose Lake area by Fedirchuk (1997), the BIPR Project (Fedirchuk 2001, Blower 2003, Tischer 2010) and the Hackett River Project (Rescan 2008).

There are 269 known archaeological site with the RSA as of the end of 2013 (Rescan 2013). Of the 269 sites 172 are prehistoric, 39 are historic, 26 are multicomponent sites with both prehistoric and historic features or artifacts, and 34 are of undetermined antiquity. Within the RSA there are 3 burials, 124 campsites, 37 resource gathering sites, 38 lithic workshops, 33 lithic reduction sites, 5 lithic isolated tool sites, 4 lithic isolated finds (debitage), 17 markers (cairns or inuksuk), 1 quarry site, 2 faunal tool sites, 3 historic artifact scatters, and 1 historic isolated find. Of the 269 sites, 83 contain both artifacts and features, 97 contain only features, and 89 contain only artifacts. Artifacts attributable to specific cultural traditions have been identified at 22 of the 269 sites with 19 having artifacts indicative of the Pre-Dorset, one of the Dorset tradition, and two from the Taltheilei tradition.

There are 177 known archaeological sites within the LSA as of the end of 2013 (Rescan 2013). Of the 177 sites 126 are prehistoric, 18 are historic, 17 are multicomponent sites with both prehistoric and historic features or artifacts, and 16 are of undetermined antiquity. Within the LSA there are no burials, 84 campsites, 27 resource gathering sites, 30 lithic workshops, 19 lithic reduction sites, 5 lithic isolated tool sites, 3 lithic isolated finds (debitage), 5 markers (cairns or inuksuk), 1 faunal tool sites, 2 historic artifact scatters, and 1 historic isolated find. Of the 177 sites 54 contain both artifacts and features, 61 contain only features, and 62 contain only artifacts. Artifacts attributable to specific cultural traditions have been identified at 12 of the 177 sites with 9 having artifacts indicative of the Pre-Dorset, 1 of the Dorset tradition, and 2 from the Taltheilei tradition.

There are an additional 37 archaeological sites located within the buffer of the winter road connector to the TCWR that are outside the RSA. Of these 37 sites 31 are prehistoric, 2 are historic, 1 is a multicomponent site with both prehistoric and historic features, and three are of undetermined antiquity. Four of the sites are campsites, 2 are resource gathering sites, 16 are lithic workshops, 9 are lithic reduction sites, and 6 are markers (cairns or inuksuk). Of the 37 sites 5 contain both artifacts and features, 8 contain only features, and 24 contain only artifacts. Artifacts attributable to specific cultural traditions have been identified at 1 site that has artifacts indicative of the Pre-Dorset.

5.5.2 Socio-economics

The socio-economic LSA consists of the communities of Bathurst Inlet (known as Kingaok), Omingmaktok (also known as Bay Chimo), Cambridge Bay (also known as Iqaluktuuttiaq), and Kugluktuk (previously known as Coppermine), while the RSA is expanded to also include the eastern Kitikmeot communities of Gjoa Haven (also known as Uqsuqtuuq), Taloyoak (previously known as Spence Bay), and Kugaaruk (previously known as Pelly Bay). The communities of Omingmaktok and Bathurst Inlet are no longer occupied year round and do not offer typical municipal services such as retail, health and education services. As such, baseline studies focused on the five Kitikmeot communities that are populated year round.

The population of the Kitikmeot Region was estimated to be 6,012 in 2011, an increase of 12.1% since 2006. The Kitikmeot communities range in size from approximately 771 residents in Kugaaruk to 1,608 residents in Cambridge Bay. All Kitikmeot communities have experienced substantial population growth over the past two decades and have a notable portion of the population 15 years of age and under (from a low of 28.7% of the population in Cambridge Bay to 41.6% in Kugaaruk; Statistics Canada 2012).

Approximately 32% of the potential labour force in the Kitikmeot Region (i.e., those aged 15 years and older) had some form of post-secondary education. This proportion increases to approximately 44% among those aged 25 years and older. However, overall, education levels were relatively low in 2006 as approximately 61% of Kitikmeot residents are without a high school diploma, as compared to 57% of Nunavummiut and 24% of Canadians. Attainment levels for apprenticeship and trade certifications ranged from almost one quarter of the population in Kugaaruk (22%) to just over one tenth (12%) of the population in Cambridge Bay (Statistics Canada 2007).

The life expectancy of Nunavummiut at birth is lower than other Canadians (by approximately 10 years) and has decreased in recent years, whereas the life expectancy of Canadians as a whole generally continues to increase each year (Statistics Canada 2012). Other notable issues linked to community health in Nunavut are food security, well-being, housing, crime, health behaviours (e.g., smoking and substance abuse), as well as mental health and suicide. These issues interact and collectively contribute to the overall health and well-being of communities in Nunavut.

The Kitikmeot Region has a mixed economy, focusing on public sector services, private sector market economies, and traditional activities. Formal economic sectors of particular importance include: government administration, health care and social services, education, retail, construction, transportation, tourism services, arts and crafts, and mineral exploration and development (Statistics Canada 2007). The service sector is the foundation of local economies in the Kitikmeot Region, accounting for about 80% of employment. In contrast, primary and secondary industries, including resource-based industries and construction, account for about 20% of local employment (Statistics Canada 2007). With the exception of Cambridge Bay, the Kitikmeot communities reported median individual incomes below the Nunavut average, ranging from approximately $18,336 in Kugluktuk to only $15,744 in Taloyoak (Statistics Canada 2007).

Private sector businesses prominently include accommodation and retail, as well as a range of smaller-scale goods and service providers in each community. Cambridge Bay, and to a lesser extent Kugluktuk, stands out as a community where the private sector has a more important role in the economy. Typical local businesses in Kitikmeot communities include retail (Co-op and Northern Stores), a hotel, and construction and contracting services, among others.

5.5.3 Land Use

The land use RSA was selected to provide broad-scale information on land use characteristics and patterns, and includes the communities of Bathurst Inlet, Omingmaktok, Kugluktuk, and Cambridge Bay. The land use LSA is defined as the area of land and water that encompasses the Project and is consistent with the largest wildlife boundaries (wildlife terrestrial RSA and marine RSA).

In 2012, there were 65 active exploration projects in Nunavut, including 22 in the Kitikmeot Region and 18 near the communities of Bathurst Inlet, Cambridge Bay, and Kugluktuk. This is a reduction from 95 active exploration projects in the Kitikmeot in 2011, including 35 near the project RSA. Currently, there are no active mines in the Kitikmeot Region (Nunavut Geoscience 2012). To help manage development, the NTI has adopted several policies related to exploration and mining, including a general mining policy in 1997, a uranium policy in 2007, and a reclamation policy in 2008 (INAC 2010). There are two main types of land title and tenure within Nunavut – Inuit Owned Land (IOL) and Crown lands. The Back River Project properties are located on both IOL and Crown land.

The Nunavut Planning Commission (NPC) has developed a draft Nunavut Land Use Plan (NLUP) for all areas of Nunavut that are outside of municipal boundaries. The draft NLUP provides guidance for resource use and development and contains goals, objectives, and policies for land use planning in Nunavut. Land use designations include: protecting and sustaining the environment, encouraging conservation planning, building healthier communities, encouraging sustainable development, and mixed use (NPC 2012).

There are both cultural and commercial land uses in the vicinity of the Project. Cultural land use is guided by a longstanding relationship of reciprocity and respect between Inuit people and their environments. Commercial land use consists primarily of sport hunting, tourism, mineral exploration, and transportation and shipping. Tourism and recreation activities in the land use RSA include hiking, hunting, fishing, boating, canoeing, kayaking, dog sledding, cross-country skiing, and snowmobile riding (Nunavut Tourism 2011). While the area is geographically difficult to access, hunting, trapping, fishing, and camping does take place throughout the RSA. Muskox, caribou, wolf, and wolverine are among the species people in the Kitikmeot Region rely upon, with caribou being the most harvested terrestrial mammal. Fishing occurs throughout the RSA and is not limited to specific areas (Rescan 2012c).

The traditional economy is largely focused on cultural and subsistence land use including non-commercial hunting, fishing, trapping, and gathering. Subsistence harvesting reduces the need for store-bought food and other household items. Participation in the subsistence economy remains high and includes the majority of Kitikmeot residents (H. Priest and Usher 2004). Animals are harvested for personal consumption and are shared with others through informal networks. Participation in harvesting activities and country food consumption are linked to food security as well as Inuit culture and community well-being (Rescan 2012c).

Within the land use LSA, subsistence activities are mainly conducted by residents of Omingmaktok, Bathurst Inlet, and Cambridge Bay. Kugluktuk land users reported the majority of their land use takes place west of the LSA. Caribou, wolf, and wolverine were the most commonly harvested species within the LSA. Located within the LSA, Beechy Lake is a common destination for land users from Bathurst Inlet, Omingmaktok, and Cambridge Bay. Fishing takes place throughout Bathurst Inlet and on surrounding lakes. Species of focus include Arctic Char, lake trout, whitefish, cod, wolffish, and Arctic grayling. There are many commonly used travel routes throughout the LSA (Rescan 2012c).

5.5.4 Country Foods

Country foods are animals, plants, and fungi used by humans for nutritional or medicinal purposes that are harvested through hunting, fishing, or gathering of vegetation. These foods are an important part of a healthy diet, have medicinal qualities, and are of high cultural and traditional importance. The quality of country foods is directly related to the quality of the surrounding environmental media and chemicals accumulated from the environment may be present in the edible tissue portions of the country foods. The potential for adverse effects to human health due to chemicals present in country foods depends on the concentration of the chemical, which type and part of the country food is eaten, life stage of the consumer, quantity of food consumed, and frequency of consumption.

In July 2013, a country foods baseline risk assessment was completed for the Project. The country foods LSA was selected to include areas that may be influenced by future Project-related activities, and included the George Property, Goose Property, Marine Laydown Area, and a 1-km buffer zone along winter road access corridors.

Seven country foods were assessed under baseline conditions to determine the risk to human health due to the incidental consumption of contaminants of potential concern (COPCs) in these foods. The country foods evaluated included: caribou, (*Rangifer tarandus*), Arctic ground squirrel (*Spermophilus parryii*), Canada goose (*Branta canadensis*), lake trout (*Salvelinus namaycush)*, bay mussel (*Mytilus trossulus*), ringed seal (*Phoca hispida),* and berries (*Vaccinium vitis-idaea and Vaccinium uliginosum*).

Metals were selected as the COPCs, since metals occur naturally under baseline conditions. In addition, the proposed Project is a gold mine and future Project activities could influence metal concentrations in environmental media. The country foods baseline risk assessment integrated the results of the environmental media baseline data and human receptor characteristics. Exposure ratios were calculated based on the estimated daily intake of COPCs and regulatory toxicity reference values.

Of the COPCs identified, arsenic may have carcinogenic potential; therefore, the incremental lifetime cancer risk (ILCR) was calculated for consumption of arsenic in country foods. An ILCR below $1{\times}10^{-5}$ is considered acceptable. For all COPCs, the recommended maximum weekly intake (RMWI) and the recommended number of weekly servings were calculated for each country food. RMWIs are the highest intake rates of country foods that can be eaten without incurring the potential for health effects.

Based on calculated ILCRs and RMWIs, no significant risks to the health of human consumers of country foods were identified due to incidental ingestion of metals present in the foods. People in the area can continue to eat caribou, Arctic ground squirrels, Canada geese, lake trout, ringed seals (muscle and blubber tissue), bay mussels, and berries (bog blueberry and bog cranberry) at the consumption rates used in the baseline assessment.

6. Potential Effects Assessment

6. Potential Effects Assessment

This chapter provides an overview of the methodology used for the Project-related potential effects assessment and presents summaries of the results of the effects assessments conducted for all Valued Ecosystem Components (VECs) and Valued Socio-economic Components (VSECs). The effects assessments conducted were consistent with the requirements of Section 12.5.2 of the Nunavut Land Claim Agreement (NLCA) and the Nunavut Impact Review Board (NIRB) final *Guidelines for the Preparation of an Environmental Impact Statement* (EIS guidelines [NIRB 2013]) for the Project.

Environmental effects are changes to the current environmental or socio-economic conditions that occur as the result of a project. An effects assessment is the process of identifying and quantifying the effects of a proposed project (i.e., its components and related physical activities) on environmental conditions.

As specified in the EIS guidelines (Section 7, Effect Assessment Methodology), details of public consultation, community engagement, and government engagement are described in *Volume 3: Public Consultation, Government Engagement, and Traditional Knowledge* of this DEIS. In addition, the details of Traditional Knowledge (TK) collection methodology, along with the detailed report generated by the Kitikmeot Inuit Association, Lands and Environment Department (KIA 2012), are also provided in Volume 3 of this DEIS.

6.1 METHODOLOGY OVERVIEW

This section provides an overview of the methodology used for the Project-related potential effects assessment. Please refer to Volume 9, Chapter 1 for a detailed description of the effects assessment methodology.

Both public consultation and TK were used in multiple areas of the overall assessment methodology. The results of the *Inuit Traditional Knowledge of Sabina Gold & Silver Corp., Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project (NTKP)* report (KIA 2012) were used for scoping and refining the potential VEC/VSEC list. The KIA report presents clear maps of valued animal species, environmental components, and traditional land use activities. This information was used to determine if these valued aspects potentially interacted with the proposed Project, and if so, they were included in the VEC/VSEC list. The information in the KIA report was also used to help determine appropriate spatial study areas for baseline data collection and potential effects assessment.

The Project-related potential effects assessment consisted of the following steps:

- Establishing the Scope of the Effects Assessment, which included the selection of VECs and VSECs and defining spatial and temporal boundaries;
- Identifying potential interactions with the Project and VECs/VSECs;
- Characterizing the potential effects;
- Identification of mitigation and management measures to eliminate or reduce potential effects;
- Characterize residual effects (those effects predicted to remain after the application of mitigation and management measures); and
- Determine the significance of residual effects.

6.1.1 Scope of the Assessment and Selection of VECs/VSECs

The scope of the EIS is determined as part of the NIRB process. NIRB consulted with the public and interested parties in the Kitikmeot Region and Yellowknife in February of 2013 (as well as ongoing information and correspondence) to determine the scope of the EIS. A “Public Scoping Meetings Summary Report” was issued by NIRB in March of 2013, and the “Final Scope List for the NIRB’s Assessment of the Back River Project” can be found as Appendix B in the EIS guidelines.

The scope of NIRB’s assessment is based on the requirements of Section 12.5.2 of the Nunavut Land Claims Agreement (NLCA), NIRB’s 10 Minimum EIS Requirements, and the Back River Project Proposal which was submitted on June 15, 2012.

The selection of potential VECs and VSECs was based on the NIRB scoping process which involved consultation with all potentially affected communities. The scoping and refining of the potential VEC/VSEC list was based on Sabina-led public consultation (where a potential list of VECs/VSECs was presented to the communities for feedback and input), the TK report (KIA 2012), consultation with regulatory agencies, and regulatory considerations. The final list was provided to NIRB for inclusion in the draft EIS guidelines, so that they were available for review and comment by all interested parties. The final list as indicated in the Sabina submission of April 8, 2013 for the final EIS guidelines are the VECs/VSECs included in this DEIS.

Table 6.1-1 presents the final VEC/VSEC list used in the DEIS. It should be noted that all proposed VECs/VSECs from the NIRB guidelines are included in Supporting Volumes 4 through 8, regardless of whether they were selected for VECs/VSECs or Subjects of Note. Those selected for VECs/VSECs were subjected to an effects assessment, while those selected for Subjects of Note have all of the requested information provided in the supporting volume.

6.1.2 Assessment Boundaries

The following general spatial boundaries are used in the DEIS:

- **Project Footprint -** includes all physical structures and activities that comprise the Project. Potential Development Areas (PDAs) that included potential Project infrastructure plus a buffer were used for some VECs.
- **Local Study Area (LSA) -** The LSA includes the Project footprint area plus additional area depending on the VEC/VSEC. The definition of the LSA provided in the glossary of the EIS guidelines is as follows: That area where there exists the reasonable potential for immediate effects due to project activities, ongoing normal activities, or to possible abnormal operating conditions.
- **Regional Study Area (RSA) -** The RSA includes the LSA plus additional area depending on the VEC/VSEC. The definition of the RSA provided in the glossary of the EIS guidelines is as follows: The area within which there is the potential for indirect or cumulative biophysical and socio-economic effects.

The specific LSAs and RSAs for each VEC and VSEC are provided as maps in the Supporting Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment). Additional information for each study area specific to each VEC and VSEC is also provided in Volumes 4 through 8.

Section 7.5.2 of the EIS guidelines requires that the following Project phases have defined temporal boundaries: construction, operation, maintenance, temporary closure, final closure, and post-closure periods, including planned exploration.

Table 6.1-1. Valued Ecosystem Component and Valued Socio-economic Component Scoping Process Information

Subject Area	Potential VEC/VSEC of the Project Identified from Revised Draft Guidelines (NIRB, March 2013)	Anticipated Ecosystemic and Socio-economic Impacts of the Project from Final Scope (NIRB, March 2013)	Potential Interaction with Project	Consultation with Communities [1] and TK Information [2]	Consultations with Regulatory Agencies[3] and Regulatory Considerations[4]	VEC, VSEC, or other[5,6] within EIS
Atmospheric Environment	Air quality	Air quality	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Atmospheric VEC - Air Quality
Atmospheric Environment	Climate and meteorology	Climate and meteorology	Yes	Few or no comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note *Climate change will be included in Individual Assessment Areas
Atmospheric Environment	Noise and vibration	Noise and vibration	Yes	Few or no comments expressed	Few or no comments expressed Moderate regulatory considerations	Atmospheric VEC - Noise and Vibration
Freshwater Environment	Water quantity	Water quantity	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Freshwater VEC - Water Quantity
Freshwater Environment	Hydrogeology	Hydrogeology	Yes	Few or no comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note
Freshwater Environment	Groundwater quality	Groundwater quality	Yes	Moderate to significant comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note
Freshwater Environment	Surface water quality	Surface water quality	Yes	Moderate to significant comments expressed	Few or no comments expressed Moderate regulatory considerations	Freshwater VEC - Water Quality
Freshwater Environment	Sediment quality	Sediment quality	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Freshwater VEC - Sediment Quality
Freshwater Environment	Aquatic ecology	Aquatic ecology	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Included in Individual Assessment Areas
Freshwater Environment	Aquatic biota: representative fish as defined in the Fisheries Act, benthic invertebrates, other aquatic organisms	Aquatic biota including representative fish as defined in the Fisheries Act, aquatic macrophytes, benthic invertebrates and other aquatic organisms	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Included in Individual Assessment Areas
Freshwater Environment	Habitat including fish habitat as defined in the Fisheries Act	Habitat including fish habitat as defined in the Fisheries Act	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Freshwater VEC - Fish Habitat
Freshwater Environment	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Freshwater VEC - Arctic Grayling
Freshwater Environment	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Freshwater VEC - Lake Trout
Marine Environment	Seabirds	Seabirds	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Marine VEC - Marine Seabirds
Marine Environment	Marine ecology	Marine ecology	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Included in Individual Assessment Areas
Marine Environment	Marine water quality	Marine water and sediment quality	Yes	Few or no comments expressed	Few or no comments expressed Moderate regulatory considerations	Marine VEC - Water Quality
Marine Environment	Marine sediment quality	Marine water and sediment quality	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Marine VEC - Sediment Quality
Marine Environment	Marine biota including fish and Species at Risk	Marine biota including fish and benthic flora and fauna	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Included in Individual Assessment Areas
Marine Environment	Marine habitat	Marine habitat	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Marine VEC - Fish Habitat
Marine Environment	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Commercial, recreational and Aboriginal fisheries as defined in the Fisheries Act	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Marine VEC - Arctic Char
Marine Environment	Marine wildlife (marine mammals)	Marine wildlife	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Marine VEC - Ringed Seals
Terrestrial Environment	-	Terrestrial and marine species at risk	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Included in Individual Assessment Areas

(continued)

Table 6.1-1. Valued Ecosystem Component and Valued Socio-economic Component Scoping Process Information (continued)

Subject Area	Potential VEC/VSEC of the Project Identified from Revised Draft Guidelines (NIRB, March 2013)	Anticipated Ecosystemic and Socio-economic Impacts of the Project from Final Scope (NIRB, March 2013)	Potential Interaction with Project	Consultation with Communities [1] and TK Information [2]	Consultations with Regulatory Agencies[3] and Regulatory Considerations[4]	VEC, VSEC, or other[5,6] within EIS
Terrestrial Environment	Terrestrial ecology	Terrestrial ecology	Yes	Moderate to significant comments expressed	Few or no comments expressed Low regulatory considerations	Included in Individual Assessment Areas
Terrestrial Environment	Landforms and soils	Landforms and soils	Yes	Few or no comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note; Terrestrial VEC - Special Landscape Features
Terrestrial Environment	Permafrost and ground stability	Permafrost and ground stability	Yes	Few or no comments expressed	Moderate to significant comments expressed Low regulatory considerations	Subject of Note
Terrestrial Environment	Geological Features (Geology and Geochemistry)	Geological features including discussion of geology and geochemistry	Yes	Few or no comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note
Terrestrial Environment	Vegetation	Terrestrial vegetation	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Terrestrial VEC - Vegetation
Terrestrial Environment	Representative terrestrial mammals to include caribou, caribou habitat and behaviour	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Terrestrial VEC - Caribou
Terrestrial Environment	Muskox	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Terrestrial VEC - Muskox
Terrestrial Environment	Wolverine	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Terrestrial VEC - Wolverine/Furbearers
Terrestrial Environment	Polar Bears	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	No	-	-	-
Terrestrial Environment	Brown Bears (brown and grizzly)	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Brown No	Moderate to significant comments expressed	Few or no comments expressed Moderate regulatory considerations	Terrestrial VEC - Grizzly Bears
Terrestrial Environment	Wolves	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Yes	Moderate to significant comments expressed	Few or no comments expressed Moderate regulatory considerations	Terrestrial VEC - Wolverine/Furbearers
Terrestrial Environment	Less conspicuous species that maybe be maximally exposed to contaminants	Representative terrestrial mammals to include caribou, caribou habitat migration and behaviour, muskoxen, wolverine, grizzly bears, polar bears, wolves and less conspicuous species that may be maximally exposed to contaminants	Yes	Moderate to significant comments expressed	Few or no comments expressedModerate regulatory considerations	Terrestrial VEC - Wolverine/Furbearers
Terrestrial Environment	-	Wildlife migration routes and crossings	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Included in Individual Assessment Areas
Terrestrial Environment	Raptors	Raptors	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Terrestrial VEC - Raptors

(continued)

Table 6.1-1. Valued Ecosystem Component and Valued Socio-economic Component Scoping Process Information (completed)

Subject Area	Potential VEC/VSEC of the Project Identified from Revised Draft Guidelines (NIRB, March 2013)	Anticipated Ecosystemic and Socio-economic Impacts of the Project from Final Scope (NIRB, March 2013)	Potential Interaction with Project	Consultation with Communities [1] and TK Information [2]	Consultations with Regulatory Agencies[3] and Regulatory Considerations[4]	VEC, VSEC, or other[5,6] within EIS
Terrestrial Environment	Migratory Birds	Migratory birds	Yes	Few or no comments expressed	Moderate to significant comments expressed Significant regulatory considerations	Terrestrial VEC - Migratory Birds
Human Environment	Employment	Employment	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Employment
Human Environment	Land use and mobility	Land use	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Human VSEC - Subsistence Economy and Land Use
Human Environment	Food security	Food security	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Human VSEC - Subsistence Economy and Land Use
Human Environment	Food security	Food security	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Human VSEC - Country Foods / Human Health
Human Environment	Language	Language	Yes	Few or no comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Subject of Note
Human Environment	Cultural and community harvesting	Cultural and commercial harvesting	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Moderate regulatory considerations	Human VSEC - Subsistence Economy and Land Use
Human Environment	Non-traditional land use and resource use	Non-traditional land use and resource use	Yes	Few or no comments expressed	Few or no comments expressed Moderate regulatory considerations	Human VSEC - Subsistence Economy and Land Use
Human Environment	Archaeology	Archaeology	Yes	Moderate to significant comments expressed	Few or no comments expressed Moderate regulatory considerations	Human VSEC - Archaeology
Human Environment	Palaeontology	Palaeontology	Yes	Few or no comments expressed	Few or no comments expressed Low regulatory considerations	Subject of Note
Human Environment	Cultural Resources	Cultural	Yes	Few or no comments expressed	Few or no comments expressed Moderate regulatory considerations	Human VSEC - Archaeology
Human Environment	Family and community cohesion	Family and community cohesion	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Health and Community Well-being
Human Environment	Potential indirect effects of project on frequency and types of crime incidents	-	Yes	Few or no comments expressed	Moderate to significant comments expressed Low regulatory considerations	Included in Individual Assessment Areas
Human Environment	Community infrastructure and public service, including housing	Community infrastructure and public services	Yes	Few or no comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Health and Community Well-being
Human Environment	Economic development and opportunities	Economic development opportunities	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Economic Development
Human Environment	Contracting and business opportunities	Contracting and business opportunities	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Business Opportunities
Human Environment	Benefits and revenues (tax, royalties, etc.)	Benefits and revenues (tax, royalties, etc.)	Yes	Few or no comments expressed	Moderate to significant comments expressed Low regulatory considerations	Subject of Note
Human Environment	Education and training	Education and training	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Education and Training
Human Environment	Population demographics	Population demographics	Yes	Few or no comments expressed	Moderate to significant comments expressed Low regulatory considerations	Subject of Note
Human Environment	Individual and community wellness	Individual and community wellness	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Health and Community Well-being
Human Environment	Health and safety including employee and public safety	Health and safety including employee and public safety	Yes	Moderate to significant comments expressed	Moderate to significant comments expressed Low regulatory considerations	Human VSEC - Health and Community Well-being

Notes:

1. Community consultation information reflects information from Back River Project consultations up to February, 2013. A full analysis will be provided in the Draft EIS submission.

2. TK Information refers to the contents of the Inuit Traditional Knowledge of Sabina Gold & Silver Corp: Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project (NTKP) (KIA 2012).

3. Government engagement information reflects information from Back River Project consultations up to February, 2013.

4. Regulatory considerations are a high level view of the legislation in place to address potential impacts.

5. Table entries labelled as "Included in Individual Assessment Areas" refer to topics that will be addressed in context, within one or more other assessments

6. Table entries labelled as "Subject of Note" refer to unique topics addressed as a subsection within a specific assessment.

The temporal boundaries for the Project phases were defined as follows:

- Site Preparation: 2 years
- Construction phase: 2 years
- Operational phase: 10 years
- Reclamation and Closure phase: 10 years
- Post-closure phase: 5 years
- other potential phases:
  - Temporary Closure: less than 2 years
  - Care and Maintenance Phase: 2 to 10 years
  - Exploration: included in Construction and Operational phases.

As required in Section 7.5.2 of the EIS guidelines, a rationale and justification for the spatial boundaries used for each VEC and VSEC is provided in the Supporting Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment).

6.1.3 Identification of Potential Interactions with Project and VECs/VSECs

The first step was to identify the potential interactions between the Project and the VECs and VSECs. Table 1.2-3 in Chapter 1, Volume 9 presents a matrix showing various components of the Project by Phases along with the VECs and VSECs. This matrix was completed based on professional judgement and experience at other similar projects in Nunavut and the Northwest Territories, and was based on the initial matrix provided in the Project Description.

6.1.4 Characterization of Potential Effects

If an interaction was indentifed between the Project and a VEC/VSEC, then that potential effect was described to the extent possible using quantitative, semi-quantitative or qualitative techniques. For some VECs or VSECs, modelling was used to predict and characterize aspects of the interactions. The specific methods used for each VEC and VSEC are described in the Supporting Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment).

For each potential effect on a VEC or VSEC, the nature of that effect was characterized in as much detail as possible, and using some of the attributes that would later be used to describe the significance of any residual effects, such as magnitude, geographic extent, duration, frequency, reversibility, resiliency, ecological context, and probability. A discussion of any shortcomings or uncertainty in the characterization was also included.

6.1.5 Identification of Mitigation and Management Measures

Mitigation and management measures were identified and described that could eliminate or minimize the potential effects of the Project on a VEC/VSEC. Mitigation measures that are identified for use are considered to be technically, environmentally, and economically feasible. Key approaches to avoid, reduce, control, eliminate, offset, or compensate potential effects include:

- **Optimizing Alternatives:** Preventing or reducing adverse environmental effects by changing an aspect of the Project (e.g., choosing a different location for a waste rock storage area).
- **Design Changes:** Preventing or reducing adverse environmental effects by redesigning aspects of the Project (e.g., changing from a solid stream crossing to an open-bottomed culvert).

- **Best Achievable Control Technology (BACT):** Eliminating, minimizing, controlling, or reducing adverse effects through the use of proven and economically achievable technological applications (e.g., high density sludge water treatment plants).
- **Management Practices:** Eliminating, minimizing, controlling, or reducing adverse effects on VECs and VSECs through management practices (e.g., managing water intake requirements to avoid adversely affecting water levels and hence fish/aquatic habitat).
- **Follow-Up Monitoring and Adaptive Management:** Monitoring the implementation of mitigation measures where uncertainty exists, and adjusting mitigation based on monitoring results (e.g., Wildlife Mitigation and Monitoring Plan).
- **Compensation:** Offsetting remaining effects that cannot be prevented or reduced through remedial or compensatory actions, so that the net effect on the community or ecosystem is neutral or beneficial (e.g., enhancement of similar habitat in another area, enhancement of other social/economic/cultural benefits).
- **Enhancement:** Providing measures to enhance a beneficial effect. Enhancement generally applies to socio-economic effects.

For each of the VECs and VSECs, a description was provided of any mitigation or management measures that could be used to eliminate or reduce potential negative interactions with the Project.

The measures included in the detailed Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment) are measures that have been shown to work in other similar situations in the Arctic. Sabina is committed to implement these effective mitigation measures and to use adaptive management approaches to ensure mitigation measures are optimized.

6.1.6 Characterization of Residual Effects

If the proposed mitigation measure(s) were not sufficient to eliminate a potential effect, a residual effect was identified. If the implementation of mitigation measures completely eliminated a potential effect, then the effect was not carried forward, and no additional analysis was undertaken.

Detailed characterization was conducted for VEC/VSECs for which a residual effect was predicted in order to assess how significant the effect will be. Wherever possible, these studies included quantitative methods. Where data are lacking, professional judgment was used to determine the extent of potential effects. The methodologies and underlying assumptions and data limitations are presented in the detailed Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment).

6.1.7 Determining the Significance of Residual Effects

The significance of residual effects of the Project is based on a comparison of the current environment (as documented by comprehensive baseline studies; see Chapter 5 of this volume) without the Project with the predicted state of the environment with the Project, after mitigation measures are applied. Identified Project-related residual effects were described using the defined attributes direction, magnitude, geographic extent, duration, frequency, reversibility, resiliency, ecological context, and probability (refer to Table 1.2-4 in Chapter 1 of Volume 9 for further details) along with attributes outlined in the EIS guidelines. The ratings assigned to the attributes, along with the likelihood of occurrence, were used to determine the overall significance rating of a residual effect.

Definitions of each of the attributes may be VEC/VSEC specific and may vary accordingly. Where available, quantitative thresholds (e.g., freshwater aquatic life guidelines or ambient air criteria), are used to assist with evaluating the significance of residual effects. Other assessment end-points, such as the ability to meet or impair land and resource management planning objectives may also be used to assist in the determination of significance.

The definition of significance determination included in the EIS guidelines (NIRB 2013) is as follows: "Impact significance is based on comparing the predicted state of the environment with and without the Project and expressing a judgment as to the importance of the changes identified."

NIRB directed that the EIS shall present the residual effects assessment of the Project so that the reader can clearly understand the real consequences of the Project, the degree of mitigation of effects, and which effects cannot be mitigated or compensated for.

NIRB also directed that the dynamic change of ecosystems and their components be considered in determining significance.

The overall significance of an effect is derived from the experience and professional judgment of the environmental practitioners who prepared the assessment, considering the rankings of the contributing attributes of significance. While substantially based on professional judgment, the following are general rules of thumb applied in determining significance:

- If the magnitude of the effect is low, then the predicted effect is "not significant," recognizing that magnitude includes consideration of sensitive species, habitats or populations. If effects on measurable components such as air or water quality meet applicable performance criteria, standards or guidelines, then the magnitude of the effect is negligible to moderate, and therefore the prediction will be for an effect that is "not significant."
- If the geographic extent of the effect is confined to the Project footprint or LSA, then the predicted effect is likely to be "not significant."
- If the extent of a negative socio-economic effect is limited to individuals who also receive a corresponding positive benefit, then the predicted effect is likely to be "not significant."
- If the effect has a moderate to high reversibility, the predicted effect is likely to be "not significant."
- If the duration of the effect is short term (e.g., site preparation and construction period only) then the effect prediction is also likely to be "not significant."

6.2 ATMOSPHERIC ENVIRONMENT

As part of the scoping process, air quality and noise and vibration were selected as VECs. Meteorology and climate was considered a Subject of Note and all required information noted in the EIS guidelines is included in the DEIS.

All VECS were assessed over spatial and temporal scales. Spatially, potential effects were evaluated within a Local Study Area (LSA) and a larger Regional Study Area (RSA). Three LSAs were selected for the atmospheric VECs, encompassing the area around each of the Goose and George Potential Development Areas (PDAs), with boundaries of approximately 10 km in all directions from infrastructure, and also a smaller LSA around the Marine Laydown Area (MLA). The atmospheric RSA was the same as that used for the terrestrial wildlife RSA and covered 12,620 km^2 and includes a buffer of approximately 10 km around the LSAs. All potential Project effects were considered during the Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases.

Specific legislation was considered during the assessment, including appropriate federal and territorial objectives/standards. The following standards and objectives were used for the air quality assessment: Nunavut Ambient Air Quality Standards (Government of Nunavut 2011), 2020 Canadian Ambient Air

Quality Standards (CCME 2012), National Ambient Air Quality Objectives (CCME 1999) and British Columbia Air Quality Standards (PM_{10} and acid deposition) (BC MOE 2009; BC MOE 1979). For dust deposition WHO Air Quality Guidelines for Europe (WHO 2000) were used. The noise criteria were based on the following documents: Alberta Noise Directive 038 (EUB 2007), Health Canada (2010) Useful Information for Environmental Assessment (Section 6: Noise Effects), WHO (1999) Guidelines for Community Noise and US EPA (1974) Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety.

6.2.1 Air Quality

Activities associated with the Project have the potential to generate emissions of criteria air contaminant (CACs) and also lead to dust and acid deposition. The main sources of emissions associated with the project are stack emissions, vehicle exhaust emissions, fugitive dust emissions from vehicles travelling on unpaved roads, emissions associated with blasting and aircraft emissions. Eight air quality indicators (nitrogen oxide (NOx as NO_2), sulphur dioxide (SO_2), carbon monoxide (CO), total suspended particulates (TSP) matter, particulate matter (PM_{10}), respirable particulate matter ($PM_{2.5}$), dust deposition and acid deposition) were included in the assessment and an air quality modelling study was conducted to characterize the highest concentrations of each air quality indicator within the atmospheric LSA. Volatile Organic Compounds (VOCs) and ozone (O_3) were scoped out of the assessment due emission rates that are considered not significant.

The assessment described the mitigation and management activities planned to reduce or eliminate potential effects on air quality. Mitigation measures included: energy efficiency measures, measures to reduce fuel use, the use of water or dust suppression fluids to reduce dust from unpaved roads, transported material and equipment in the crushing facility, and the use of emission control systems such as wet scrubbers, baghouses, and filters. For the anticipated peak activity year, the modeling study predicted that concentrations of SO_2, CO and dust deposition would be below the objectives/standards at all locations and the NO_2, $PM_{2.5}$ and acid deposition exceedances were contained within the Project Development Areas (PDAs). The remaining two air quality indicators (TSP and PM_{10}) showed exceedances outside the PDA, and thus would remain as residual effects after mitigation.

The two residual effects are predicted to be of moderate magnitude and limited to the LSA, and to be reversible within the life span of the Project. The residual effects would be attributed to emissions of dust from open-pit mining activities, in particular unpaved road dust generated on site. Contingent on the implementation of mitigation measures outlined in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17), the significance of residual effects for air quality is predicted to be **Not Significant**.

6.2.2 Noise and Vibration

Construction and operation of the Project will introduce noise and vibration sources largely in the form of construction equipment, haul vehicles, blasting and vehicle and aircraft traffic. A review of the potential Project interactions with noise and vibration identified nine potential effects that may occur; seven potential effects on humans and two potential effects on wildlife. These nine potential effects are: sleep disturbance (humans), interference with speech communications (humans), complaints (humans), high annoyance (humans), noise-induced rattling (humans), noise-induced hearing loss (humans), cosmetic and structural damage of buildings (humans), loss of habitat (wildlife) and disturbance (wildlife).

The assessment described the mitigation and management activities planned to reduce or eliminate potential effects on noise and vibration. Mitigation measures included: ensuring equipment is fitted with appropriate mufflers and silencers, limiting activities such as blasting and take-off and landing of aircraft to certain times of the day, and housing stationary sources in building or using enclosures, berms, acoustic screening and shrouding. The results of quantitative noise modelling for the peak activity year show that predicted noise levels are below the criteria for interference with speech communications (humans), complaints (humans), high annoyance (humans), noise induced rattling (humans) and noise induced hearing loss (humans). Similarly, there are not expected to be any cosmetic and structural damage of buildings (humans) effects from Project-generated vibration. However, noise levels are predicted to exceed relevant criteria for loss of habitat (wildlife) and disturbance (wildlife) at various identified receptors due to construction and operation activities, blasting, road traffic and aircraft movements. In addition, noise levels from mine construction and operations are predicted to temporarily exceed the sleep disturbance (humans) criteria at the proposed location of the Goose camp. Therefore, three potential effects would remain as residual effects after mitigation: sleep disturbance (humans), habitat loss (wildlife) and disturbance (wildlife). Residual effects of the Project on wildlife are included in the terrestrial wildlife chapters (Volume 5, Chapters 5 to 10).

The predicted residual effect of the Project on noise and vibration (sleep disturbance for humans) is limited to within the Project footprint, with a moderate magnitude as noise levels are predicted to exceed the criteria for sleep disturbance by less than 5 dBA, and reversible within the life span of the Project. Contingent on the implementation of mitigation measures outlined in the Noise Abatement Plan (Volume 10, Chapter 18), the significance of this residual effect is predicted to be **Not Significant**.

6.3 TERRESTRIAL ENVIRONMENT

As part of the scoping process the following terrestrial components were selected as VECs: vegetation and special landscape features, caribou, grizzly bear, muskox, wolverine and furbearers, migratory birds, and raptors. Geology, permafrost, and landforms and soils were considered Subjects of Note and all required information noted in the EIS guidelines is included in the DEIS.

Potential effects on terrestrial and wildlife VECs were evaluated spatially within a Local Study Area (LSA) and a larger Regional Study Area (RSA). The terrestrial LSA covered 1,344 km^2 and included the Goose and George Potential Development Areas (PDAs), which contain all proposed Project infrastructure for the Goose and George Property Areas, respectively, the MLA PDA, the winter roads connecting the Goose, George, and MLA PDAs, and a buffer (1 to 1.5 km) surrounding the outer boundary of the PDAs and roads. The terrestrial RSA encompasses the LSA, and a 35 km buffer on either side of all proposed Project infrastructure and winter road corridors between the three PDAs and covers approximately 12,620 km^2. All potential Project effects were assessed during the Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases, with a focus on a “worst-case” scenario approach whereby the phase or phases with the largest effect on the VEC are discussed. Specific legislation was considered during the assessment, including the *Species at Risk Act* (*SARA*), the *Migratory Birds Convention Act*, and the *Nunavut Wildlife Act*.

The following presents summaries of the primary Project activities that are anticipated to interact with the terrestrial VECs, mitigation measures, and effects assessment for each terrestrial VEC.

6.3.1 Vegetation and Special Landscape Features

Potential Project effects on the VEC vegetation and special landscape features included the direct loss or degradation of vegetation or special landscape features. These potential effects were characterized by using the indicators diversity, productivity, and resiliency. The mitigation and management measures designed to eliminate or minimize potential Project effects on vegetation and special landscape features include: minimizing the Project footprint, using winter roads, and reducing fugitive dust where possible.

Following the application of mitigation and management measures, two residual effects were identified: vegetation loss, and special landscape feature loss. These residual effects are a result of the assumption that the entire PDAs would be lost. In reality, the area of vegetation/special landscape feature loss will be much less as it will be confined to the final footprint of the Project. The magnitude of the anticipated residual effects is expected to be low, the duration long term, the frequency is once but continuous/permanent, and the residual effects would be confined to within the Project footprint (PDA). The residual effects were assumed to be irreversible; however there may be some recovery after closure. Contingent on the implementation of mitigation measures outlined in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for vegetation and special landscape features is predicted to be **Not Significant**.

6.3.2 Caribou

Potential Project-related effects on the VEC caribou included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter roads, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, three residual effects were identified: habitat loss, disturbance due to noise, and reduction in reproductive productivity. The magnitude of all three of the residual effects is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the Project footprint which would be long term. The effects would be sporadic in nature, and confined to within the Project footprint for habitat loss, the LSA for noise disturbance, and potentially the RSA for reduction in reproductive productivity. The residual effects are also anticipated to be reversible with the exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for caribou is predicted to be **Not Significant**.

6.3.3 Grizzly Bear

Potential Project-related effects on the VEC grizzly bear included Project activities that could alter the following indicators: habitat loss, disturbance due to noise (e.g., displacement from areas of habitat), disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Winter roads were excluded from the assessment as grizzly bears are hibernating when these roads are constructed and used. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, four residual effects were identified: habitat loss, disturbance due to noise, attraction, and reduction in reproductive productivity. The magnitude of all four of the residual effects is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss which will be long term within specific areas of the Project footprint, sporadic in nature, and confined to within the Project footprint for habitat loss and attraction, and the LSA for noise disturbance, and potentially the RSA for reduction in reproductive productivity. The residual effects are also anticipated to be reversible with the exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for grizzly bear is predicted to be **Not Significant**.

6.3.4 Muskox

Potential Project-related effects on the VEC muskox included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, three residual effects were identified: habitat loss, disturbance due to noise, and reduction in reproductive productivity. The magnitude of all three of the residual effects is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the Project footprint which would be long term. The effects would be sporadic in nature, and confined to within the Project footprint for habitat loss, the LSA for noise disturbance, and potentially the RSA for reduction in reproductive productivity. The residual effects are also anticipated to be reversible with the exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for muskox is predicted to be **Not Significant**.

6.3.5 Wolverine/Furbearers

Potential Project-related effects on the VEC wolverine and furbearers included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, four residual effects were identified for wolverine: habitat loss, disturbance due to noise, attraction, and reduction in reproductive productivity, and two residual effects were identified for wolves: habitat loss and disturbance. The magnitude of all of the residual effects for both wolverine and wolves is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the Project footprint which would be long term. The effects would be sporadic in nature, and confined to within the Project footprint for habitat loss and attraction, the LSA for noise disturbance, and potentially the RSA for reduction in reproductive productivity. The residual effects are also anticipated to be reversible with the possible exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for wolverine and furbearers is predicted to be **Not Significant**.

6.3.6 Migratory Birds

Potential Project-related effects on the VEC migratory birds included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste and chemical handling measures to avoid attracting wildlife to wastes and contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, two residual effects were identified for migratory birds: habitat loss, and disturbance. The magnitude of both of the residual effects is expected to be low, the duration medium term (confined to the life of the Project) for disturbance and long term for habitat loss within specific areas of the Project footprint. The effects would be sporadic in nature, and confined to within the Project footprint for habitat loss, and to the LSA for disturbance. The residual effects are anticipated to be reversible with the exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for migratory birds is predicted to be **Not Significant**.

6.3.7 Raptors

Potential Project-related effects on the VEC raptors included Project activities that could alter the following indicators: habitat loss, disturbance due to noise, disruption of movement, direct mortality and injury, indirect mortality, attraction, exposure to contaminants, and reduction in reproductive productivity. Mitigation and management measures that will be in place to eliminate or minimize the potential effects include minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

Following the application of mitigation and management measures, five residual effects were identified: habitat loss, disturbance, direct mortality and injury, attraction, and reduction in reproductive productivity. The magnitude of all five of the residual effects is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss which would be long term within specific areas of the Project footprint. The effects would be sporadic in nature, and confined to within the Project footprint for habitat loss and attraction, and the LSA for disturbance, direct mortality and injury, and reduction in reproductive productivity. The residual effects are also anticipated to be reversible or reversible with effort for attraction, with the possible exception of habitat loss within specific areas of the Project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the significance of residual effects for raptors is predicted to be **Not Significant**.

6.4 FRESHWATER ENVIRONMENT

As part of the scoping process the following freshwater components were selected as VECs: surface hydrology, freshwater water quality, freshwater sediment quality, freshwater fish/aquatic habitat, and freshwater fish communities. Groundwater, limnology and bathymetry were considered Subjects of Note and all required information noted in the EIS guidelines is included in the DEIS.

Potential effects on VECs were evaluated spatially within Local Study Areas (LSA) for each of the Goose and George Properties and larger Regional Study Areas (RSA) that contained each of the LSAs. The Goose Property LSA covered 365 km^2 and included the Goose Property Potential Development Area (PDA) and followed the boundaries of the Propeller and Big watersheds. The Goose Property RSA covered 6,815 km^2 and included parts of the Ellice River Watershed and encompassed the Goose Property PDA and the LSA. The George Property LSA covered 105 km^2 and included the George Property PDA, and followed the boundaries of the Dragon, George, McCoy, and Lower Long watersheds. The George Property RSA covered 4,034 km^2 and included part of the Western River Watershed and encompassed the George Property PDA and LSA. All potential Project effects were assessed during the

Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases. Specific legislation that was considered during the assessment included the *Fisheries Act* and the *Species at Risk Act* (SARA). Canadian Council of Ministers of the Environment (CCME) water and sediment quality guidelines for the protection of freshwater aquatic life were used in the water and sediment quality assessments.

The following presents summaries of the primary Project activities that are anticipated to interact with the freshwater VECs, mitigation measures, and effects assessment for each freshwater VEC.

6.4.1 Hydrology

Potential Project effects on the hydrology VEC included water use, site water management activities, and winter roads. The potential effects from these activities were assessed using three indicators which were quantity of water used, streamflows, and lake volumes. The mitigation and management measures designed to eliminate or reduce the potential effects on surface hydrology included: the design of maximum water use volumes for key waterbodies in order to protect critical fish habitat, following DFO protocols for winter water withdrawal, confinement of infrastructure to local watersheds, and following winter road construction and maintenance DFO operational statements.

Following the application of mitigation and management measures, two residual effects were identified: change in streamflows, and change in lake volumes. The magnitude of the anticipated residual effects is expected to be low, the duration medium term (confined to the life of the Project), continuous in nature, and confined to within the PDAs or LSAs. The residual effects are also anticipated to be reversible. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for hydrology is predicted to be **Not Significant**.

6.4.2 Freshwater Water Quality

Potential Project-related effects on the freshwater water quality VEC included Project activities that could alter the following indicators for water quality: pH, TSS, nutrients, metals, hydrocarbons, BOD, chorine, and cyanide. The potential effects from Project activities were assessed based on potential interaction pathways with the freshwater environment, including runoff, water withdrawals, treated discharge, and aerial deposition. Mitigation and management measures will be in place to control these pathways, and therefore minimize or eliminate potential Project effects on the freshwater water quality VEC. The Site Water Monitoring and Management Plan (Volume 10, Chapter 7) along with Project design features such as using geochemically suitable material for roads and pads will eliminate or reduce potential effects to freshwater water quality.

Following the application of mitigation and management measures, three residual effects were identified: sediment introduction to surface waters as a result of site preparation, construction, and decommissioning, water quality changes due to site contact water, and water quality changes due to mine contact water. The magnitude of the anticipated residual effects is expected to be low, the duration short to medium term (confined to the life of the Project), sporadic in nature, and confined to within the freshwater LSA. The residual effects are also anticipated to be reversible. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the significance of residual effects for freshwater water quality is predicted to be **Not Significant**.

6.4.3 Freshwater Sediment Quality

Potential Project-related effects on the freshwater sediment quality VEC included Project activities that could alter the following indicators for sediment quality: particle size, nutrients and organic carbon, metals, and hydrocarbons. The potential effects from Project activities were assessed based on potential interaction pathways with the freshwater environment, including runoff, water withdrawals, treated discharge, and aerial deposition. Mitigation and management measures will be in place to control these pathways, and therefore minimize or eliminate potential Project effects on the freshwater sediment quality VEC. The Site Water Monitoring and Management Plan (Volume 10, Chapter 7) along with mitigation measures to avoid erosion will eliminate or reduce potential effects to freshwater sediment quality.

Following the application of mitigation and management measures, three residual effects were identified: sediment introduction to freshwater sediments as a result of site preparation, construction, and decommissioning, sediment quality changes due to site contact water, and sediment quality changes due to mine contact water. The magnitude of the anticipated residual effects is expected to be low, the duration short to medium term (confined to the life of the Project), sporadic in nature, and confined to within the freshwater LSA. The residual effects are also anticipated to be reversible. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the significance of residual effects for freshwater sediment quality is predicted to be **Not Significant**.

6.4.4 Freshwater Fish/Aquatic Habitat

The assessment of potential Project-related effects on freshwater fish/aquatic habitat involved the direct effects of Project activities on the physical habitat of freshwater fish. Potential indirect effects are addressed as part of the freshwater water quality and sediment quality assessments. Project activities that have the potential to directly affect freshwater fish/aquatic habitat include the loss of lake habitat due to lake dewatering, development of open pits, water withdrawal for domestic and process use, and winter road construction. Stream habitat may also be lost due to the construction of mine infrastructure. The primary mitigation measure to avoid potential effects on freshwater fish/aquatic habitat is the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible. The TIA and waste rock storage areas have been located to avoid fish-bearing waters. Another key mitigation measure is the establishment of maximum water volume uses which have been based on protecting critical life stages of fish in Goose, Propeller, and George lakes. Unavoidable losses of fish habitat (e.g. loss of Llama Lake due to Llama Open Pit) will be compensated through the implementation of a Conceptual Fish Offsetting Plan. Therefore, no residual effects are anticipated on the VEC freshwater fish/aquatic habitat.

6.4.5 Freshwater Fish Community

Potential Project-related effects on the VEC freshwater fish community focused on the two abundant freshwater or anadromous fish species in the LSAs, Lake Trout and Arctic Grayling. The main potential Project-related effect to these species is direct mortality with subsequent decreases in population abundance. The following potential Project activities could contribute to the direct mortality and decreased population abundance of Lake Trout or Arctic Grayling: lake dewatering, building of winter roads, construction of the Project footprint, water withdrawal for domestic and process use or winter road construction, and blasting with explosives. The primary mitigation measure to avoid potential effects on Lake Trout and Arctic Grayling is the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible. The TIA and waste rock storage areas have been located to avoid fish-bearing waters. Another key mitigation measure is the establishment of maximum water volume uses which have been based on protecting critical life stages of fish in Goose, Propeller, and George lakes. Unavoidable losses to these freshwater fish species (e.g. loss of Llama Lake due to Llama Open Pit) will be further mitigated through the implementation of a Conceptual Fish Offsetting Plan.

Following the application of mitigation and management measures, one residual effect was identified: the possible reduction in Arctic Grayling populations as a result of the loss of Llama Lake and local drainages. Umwelt Outflow serves as spawning and rearing habitat for Arctic Grayling, and the reduction in flow in this system could adversely affect Arctic Grayling populations. The residual effect is expected to be of moderate magnitude, be of medium duration (confined to the lifetime of the Project), continuous, confined to the LSA, and potentially reversible if watershed inputs are restored during closure. Overall, the significance of residual effects for Arctic Grayling is predicted to be **Not Significant**. Contingent on the implementation of mitigation measures outlined in the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), no residual effects for Lake Trout are anticipated.

6.5 MARINE ENVIRONMENT

As part of the scoping process, the following marine components were selected as VECs: marine water quality, marine sediment quality, marine fish/aquatic habitat, marine fish communities, seabirds/seaducks, and ringed seals. Marine physical processes were considered a Subjects of Note and all required information noted in the EIS guidelines is included in the DEIS.

Potential effects on VECs were evaluated spatially within a Local Study Area (LSA) and a larger Regional Study Area (RSA). The marine LSA covered 32 km^2 and included the water portion of the Potential Development Area (PDA) for the MLA as well as the over-water portion of the winter road across Bathurst Inlet (~14 km) to the Nunavut mainland. The marine RSA covered 3,000 km^2 and included the marine LSA plus all of Bathurst Inlet as far north as Omingmaktok. All potential Project effects were assessed during the Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases. Specific legislation that was considered during the assessment included the *Fisheries Act*, the *Species at Risk Act* (SARA), the *Migratory Birds Convention Act*, and the *Nunavut Wildlife Act*. Canadian Council of Ministers of the Environment (CCME) water and sediment quality guidelines for the protection of marine and estuarine life were used in the water and sediment quality assessments.

The following presents summaries of the primary Project activities that are anticipated to interact with the marine VECs, mitigation measures, and effects assessment for each marine VEC.

6.5.1 Marine Water Quality

Potential Project effects on the marine water quality VEC included shipping activities; sediment introduction to water as a result of site preparation, construction, and reclamation; site contact water; winter roads; explosives; fuels, oils, and polycyclic aromatic hydrocarbons (PAHs); treated discharges; and dust deposition. The potential effects from these activities were assessed based on their potential interaction pathways with the marine environment, including runoff, contact and physical effects (shipping), treated discharge, and aerial deposition. The mitigation and management measures designed to control these pathways, and therefore minimize or eliminate potential Project effects on the marine water quality VEC included: minimizing vessel speeds and restricting vessels to deeper waters, intercepting runoff in ditches and diverting the water to a collection pond at the MLA, using geochemically suitable material for roads and pads, adhering to regulatory guidelines for treated discharges, and using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials as well as for dust suppression and incineration.

Following the application of mitigation and management measures, three residual effects were identified: marine water quality changes due to shipping (propeller wash), sediment introduction to marine waters as a result of site preparation, construction, and reclamation, and marine water quality changes due to site contact water. The magnitude of the anticipated residual effects is expected to be low, the duration short to medium term (confined to the life of the Project), sporadic in nature, and confined to within the marine LSA. The residual effects are also anticipated to be reversible. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP;

Volume 10, Chapter 19) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for marine water quality is predicted to be **Not Significant**.

6.5.2 Marine Sediment Quality

Potential Project effects on marine sediment quality shared the same pathways and mitigation and management measures as outlined for marine water quality. The primary pathways between the Project activities and the marine sediment quality VEC were identified as runoff, contact and physical effects (shipping), discharge, and aerial deposition. The same mitigation and management measures would be applied as described above in the marine water quality section.

Following the application of mitigation and management measures, three residual effects were identified: marine sediment quality changes due to shipping (propeller wash), sediment introduction to the marine environment as a result of site preparation, construction, and reclamation, and marine sediment quality changes due to site contact water. The magnitude of the anticipated residual effects is expected to be low, the duration short to medium term (confined to the life of the Project), sporadic in nature, and confined to within the marine LSA. The residual effects are also anticipated to be reversible. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19) and the Site Water Monitoring and Management Plan (Volume 10, Chapter 7), the significance of residual effects for marine sediment quality is predicted to be **Not Significant**.

6.5.3 Marine Fish/Aquatic Habitat

The assessment of potential Project-related effects on marine fish/aquatic habitat involved the direct effects of Project activities on the physical habitat of marine fish. Potential indirect effects are addressed as part of the marine water quality and sediment quality assessments. Project activities that have the potential to directly affect marine fish/aquatic habitat include the in-water construction of MLA infrastructure (in-water construction of a seasonal dock and beach ramp).

The following measures are expected to fully mitigate the potential Project effect on marine fish/aquatic habitat: measures in place to eliminate or reduce potential effects to water quality and sediment quality, and the construction of artificial marine shoals to offset the marine fish/aquatic habitat loss as described in the Conceptual Fisheries Offsetting Plan. Therefore, no residual effects are anticipated on the VEC marine fish/aquatic habitat.

6.5.4 Marine Fish Community

Potential Project effects on the VEC marine fish community focused on Arctic Char and include potential direct mortality from in-water construction and blasting, population effects from introduced species carried by ballast water, and underwater noise from shipping activities. Mitigation measures to eliminate or reduce potential effects to the marine fish community include limiting the amount of in-water construction, eliminating ballast water exchange, and enforcing speed limits for ships navigating through the RSA.

Following the application of mitigation and management measures, one residual effect was identified: effects of shipping noise on marine Arctic Char populations. The magnitude of the anticipated residual effect is expected to be low, the duration medium term (confined to the life of the Project), sporadic in nature (3-10 ships per open-water season, depending on the Project phase), and confined to the marine RSA. The residual effect will be reversible as it will end when shipping associated with the Project ends. Contingent on the implementation of mitigation measures outlined in the Aquatic Effects Management Plan (AEMP; Volume 10, Chapter 19), the Shipping Plan (Volume 10, Chapter 15), and the Noise Abatement Plan (Volume 10, Chapter 18), the significance of the residual effect for marine fish communities as assessed for Arctic Char is predicted to be **Not Significant**.

6.5.5 Seabirds and Seaducks

Two types of Project-related activities were evaluated for potential effects to the VEC seabirds and seaducks, including shipping and Construction and Operation activities at the MLA. Mitigation measures have been implemented to minimize or eliminate the effects of the Project on seabirds and seaducks. For example, the seabird and seaduck staging areas identified during the baseline surveys were included in Project design to avoid these sensitive habitats. These areas will be avoided by developing pre-determined flight paths, when possible, to provide horizontal and vertical buffer distances from staging birds. A flight altitude of 650 m will also be maintained above known staging areas where it is safe to do so. Aircraft landing and take-offs will avoid staging areas for the safety of humans and wildlife.

Consideration of the mitigation and management activities planned to reduce potential Project effects on seabirds and seaducks resulted in the identification of two residual effects after mitigation: disturbance (e.g., noise) and reduced reproductive productivity. These residual effects were expected to be of moderate to low magnitude, of medium duration (confined to the life of the Project), sporadic in nature, confined to within the marine RSA, and reversible. The residual effects were rated as **Not Significant**, contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Management Plan (Volume 10, Chapter 20).

6.5.6 Ringed Seals

Two types of Project-related activities were evaluated for potential effects to the VEC ringed seals, including shipping and Construction and Operation activities at the MLA (e.g., aircraft and traffic on winter roads that overlap marine areas). Mitigation measures will be implemented to minimize or eliminate the effects of the Project on ringed seals. Shipping for the Project will be conducted during the open-water periods only (August 25 to October 31) when ringed seal density in the marine LSA and RSA is anticipated to be very low. Activities occurring at the MLA are expected to be during the open-water shipping period and during the winter when the winter roads are operational (December through March). These time periods correspond to periods when seals are not in the vicinity of the LSA or southern RSA (south of Kingaok). Therefore, the Project is not predicted to result in any residual effects on ringed seals.

6.6 HUMAN ENVIRONMENT

As part of the scoping process, the following human environment components were selected as VSECs: archaeological sites, economic development, business opportunities, employment, education and training, health and community well-being, non-traditional land and resource use, subsistence economy and land use, and country foods. Paleontological sites, human health risk assessment, and environmental risk assessment were considered Subjects of Note and all required information noted in the EIS guidelines is included in the DEIS.

Potential effects on VSECs were evaluated spatially within a Local Study Area (LSA) and a larger Regional Study Area (RSA). LSAs and RSAs are separately defined for archaeology, socio-economics, land use, and country foods. For archaeology, the LSA consisted of a 5 km buffer around all Project infrastructure, and the RSA was the same as the terrestrial RSA. For socio-economics, the LSA consisted of west Kitikmeot region communities, and the RSA was expanded to include eastern Kitikmeot communities and Yellowknife. For land use, the LSA consisted of a 5 km buffer around Project infrastructure and the RSA was the combined area of the terrestrial and marine RSAs. For country foods, the LSA was the maximum boundary of the atmospheric and terrestrial LSA, and the RSA was the combined boundary of the terrestrial and marine RSA. All potential Project effects were assessed during the Site Preparation, Construction, Operations, Reclamation and Closure, and Post-closure Project phases.

The following presents summaries of the primary Project activities that are anticipated to interact with the human environment VSECs, mitigation measures, and effects assessment for each VSEC.

6.6.1 Archaeology

Potential Project-related effects on the VSEC archaeological sites included the disturbance of archaeological sites. During construction, Project activities that could have potential effects on archaeological sites include: clearing and grading for roads and pipeline rights-of-way; clearing, grading, and excavation for foundations and building footings; earth moving and blasting for mine construction; and tailing and waste rock deposition. Residual effects are anticipated to sites located within 50 m of the PDAs and the road rights-of-way. These sites have a high probability of being directly affected from disturbance due to ground altering activity by construction. Archaeological sites between 50 m and 1,000 m from Project developments have the potential to be indirectly affected during construction and operations through increased human presence in the area.

There are 305 known archaeological sites within the archaeology RSA and the Tibbitt to Contwoyto Winter Road Connector Assessment Area. There are 132 known archaeological sites within 1,000 m of the PDAs that may be impacted either directly or indirectly by the Project. Of the 132 sites within 1,000 m, 84 are between 150 m and 1,000 m and are considered to be at low risk of indirect impacts during construction and operations. There are 14 sites between 50 and 150 m from the PDAs that are considered to be at moderate risk of indirect impact through increase human presence during construction and operations. The 34 archaeological sites within 50 m of the PDAs are considered to be at high risk of direct impact during construction.

Typically, site avoidance through Project redesign is the recommended management option and the Project has been designed to minimize effects on archaeological sites. Archaeological site locations were considered during Project design and where possible were avoided. The use of temporary winter roads further limits potential effects to archaeological sites by reducing overland traffic. However, where avoidance is not possible, mitigation of archaeological sites will be conducted prior to construction activities. Any archaeological sites not previously recorded that are discovered during construction, operations, and closure will be inspected by the Project archaeologist, documented, and reported to the Government of Nunavut, Department of Culture and Heritage using the 'Chance Find Procedure'. These sites will be subject to the same level of management and mitigation afforded to the currently known archaeological sites outlined above.

With avoidance and/or mitigation implemented, residual effects on known archaeological sites are anticipated to be **Not Significant**.

6.6.2 Socio-economics

The assessment of potential effects of the Project on socio-economics considers five VSECS: 1) economic development; 2) business opportunities; 3) employment; 4) education and training; and 5) health and community well-being. A total of 10 potential effects were identified, resulting in seven positive residual effects, two negative residual effects, and one effect with both positive and negative residual effects. Positive residual effects were described but were not evaluated for significance or carried in to potential cumulative or transboundary effects assessment. Negative residual effects were further evaluated for determination of significance, and were also included in potential cumulative and transboundary effects assessments.

<u>Economic Development</u>

Project activities have the potential to result in positive changes to economic growth, diversity, and performance. The economic impacts of the Project are a result of direct procurement and workforce employment, which are expected to also have indirect and induced effects to employment, personal income, GDP, and government revenues. The Business Development Plan and Human Resources Plan detail enhancement measures that together aim to increase the benefits of the Project on local and regional development (see Volume 10, Chapters 24 and 28). Benefits will be enhanced through experience with the Project, support for local Inuit and northern businesses, capacity building, and community investment.

Overall, increases to economic diversity are anticipated as a result of the Project and are characterized by: increased local employment, increased incomes, and spending; Project-related expenditures (locally, regionally) with existing businesses located in the Kitikmeot and across Nunavut, increasing the financial resources available to existing businesses; the addition of new businesses or expansion of existing businesses within the Kitikmeot Region that provide goods or services previously unavailable; and/or the development of, or additional investment in, Inuit-owned businesses. Increased economic growth, diversity, and performance are expected to have a positive residual effect on the VSEC economic development. As the residual effect was determined to be positive, the effect was not carried through for further cumulative or transboundary assessment.

Business Opportunities

The Project has the potential to result in changes in the growth and diversity of Inuit and northern businesses. This effect is defined as the potential for new businesses and the ability of existing businesses to expand or diversify and as a result of local Project procurement and the expenditure of Project-related income of workers. Measures to enhance business opportunities are detailed in the Business Development Plan (Volume 10, Chapter 24).

Project activities that are anticipated to promote growth and diversity among Inuit and northern businesses include: provision of contract and sub-contract opportunities, specifically the procurement of goods and services from local suppliers; and contribution to personal incomes, increasing the purchasing power of local residents. The expected increase in local business activity itself is expected to bring about an increase in capital investment (e.g., investment in the expansion of businesses or the creation of new businesses) in anticipation of the Project. Local businesses will be presented with opportunities to bid on Project work, facilitated by the Project through mitigation and management measures established to maximize the benefits of contracting opportunities and the local sourcing of goods and services. Changes to the growth and diversity of Inuit and northern business are anticipated to have a positive residual effect on the VSEC business opportunities. As the residual effect was determined to be positive, the effect was not carried through for further cumulative or transboundary assessment.

Employment

The Project is expected to affect the VSEC employment through: 1) changes to employment and income levels; 2) changes to the capacity of the labour force; and 3) changes to competition for local labour. Mitigation and management measures that focus on training, recruitment, and retention have been developed to enhance the participation of local Inuit in Project employment and are detailed in the Human Resources Plan (Volume 10, Chapter 28). The strategies to enhance Project effects on employment include: a Labour Relations Strategy; a Preferential Recruitment Strategy; a Workforce Training Strategy; and a Workforce Transition Strategy. The targeted recruiting of Inuit employees is expected to reduce the higher than average unemployment rates. The Project will also inform local businesses, organizations, and hamlets of their hiring requirements and procurement practices in advance of the implementation of Construction and Operation and will collaborate to reduce any adverse effects of increased competition for local labour.

Overall, the employment and income effects of the Project are highly beneficial and have the potential to enable increased standards of living for Kitikmeot families. Direct Project employment and procurement are expected to increase the capacity of the labour force, specifically the skills and experience of Kitikmeot workers. Increased capacity is predicted to lower unemployment rates, promote economic growth, and enhance ability of the regional workforce to support future projects.

Changes in income and employment levels, as well as changes in the capacity of the labour force, are anticipated to have positive residual effects on the VSEC employment.

Direct Project employment and procurement may cause negative changes to local competition for labour. That is, the Project creates the potential for individuals currently employed in the Kitikmeot Region to leave their current employment for mine-related employment. However, most Kitikmeot residents employed elsewhere are not expected to leave their current employment to obtain work with the Project. The Project also serves to increase the skills and experience of the local labour force, over time increasing the availability for local employers. In sum, the residual effect of changes to competition for local labour is assessed as being of low magnitude and limited to the socio-economic LSA communities. The duration was determined as medium term (confined to the life of the Project), the equity neutral, and the frequency sporadic. Finally, the effect is determined to be reversible, and a moderate probability and medium confidence are provided. The residual effect is rated as **Not Significant**.

Education and Training

The potential effects of the Project on education and training include changes to the demand for education and training, and changes to youth attitudes and behaviours toward education and training. Sabina expects to partner with local governments, educational institutions, Inuit organizations, and other mine proponents to contribute to the creation of a regional training facility or additional mine employment training programs at the NAC. Further discussion of community investment is provided in the Community Involvement Plan (Volume 10, Chapter 26). The Workforce Training Strategy, as defined in the Human Resources Plan (Volume 10, Chapter 28), specifies actions to enhance the benefits of Project employment within the local communities by developing strategic partnerships; contributing to local programs and training initiatives; providing in-house training and career development; employment of an Inuit Employment and Training Coordinator; and engaging youth through mentorship programs.

In sum, changes to the demand for education and training, as well as changes in youth attitudes toward education and training, are predicted to have positive residual effects on the VSEC education and training. The assessment concluded that the Project would have positive effects on the VSEC education and training.

Health and Community Well-being

The effects of the Project on Health and CWB are anticipated to be both positive and negative and include: changes to the life skills of those employed with the Project; changes to individual and family spending; and changes to family/household function. Engagement in economic productive work, the management of finances, and responsibility associated with employment are expected to assist with or support decision making and increase life skills. Enhancement measures have been developed to promote the retention of positive Project effects locally including those aimed to increase the number of Inuit employed (e.g., EFAP, financial management counselling) as detailed in the Human Resources Plan (Volume 10, Chapter 28).

The Project is anticipated to increase the life skills of individuals who obtain Project-related employment, resulting in a residual positive effect on the VSEC Health and CWB.

Both positive and negative residual effects are predicted on Health and CWB due to changes to individual and family spending. Should local residents that obtain employment with the Project choose to spend their increased incomes unproductively (e.g., on gambling, drugs, and alcohol) and engage in negative social behaviours, this will have a negative effect on CWB. However, income used to improve standards of living (e.g., improvements to housing, food security) coupled with the other numerous positive effects associated with Project employment have the potential to result in substantial increases to CWB. Changes to individual and family spending, whether negative or positive, were determined as moderate in magnitude, short to medium term in duration and neutral in equity. This residual effect was expected to occur mainly within the socio-economic LSA but may extend to the

RSA. This residual effect is reversible and has a sporadic frequency. Overall, negative changes to individual and family spending are determined to be **Not Significant.** This finding is moderately probable and is supported by a medium level of confidence. Overall, changes to family and household structure are expected to result in a negative residual effect. The magnitude of this negative residual effect is considered low as it is estimated to affect a relatively small number of households. The residual effect is reversible, medium term in duration, continuous in frequency, and neutral in equity. The geographic extent of this residual effect is expected to remain within the LSA but may extend to the RSA. Overall, negatives changes to family and household structure are determined to be **Not Significant.** This finding is moderately probable and is supported by a high level of confidence.

6.6.3 Land Use

The assessment of potential effects of the Project on land use considers two VSECS: 1) non-traditional land and resource use; and 2) subsistence economy and land use. A total of three potential effects were identified acting on each VSEC, resulting in a total of six potential effects. All of the potential effects were identified as negative residual effects. Negative residual effects were further evaluated for determination of significance.

Non-traditional Land and Resource Use

The only interaction between the Project and non-traditional land and resource use is predicted for ecotourism activities potentially affected by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. More specifically, there is one operator, the Bathurst Inlet Lodge, known to sometimes use an area adjacent to the Marine Laydown Area (MLA) within the land use LSA, as well as other areas within the RSA, during the summer season. There are several best practice management and mitigation measures in place which serve to reduce potential adverse effects of the Project, while maximizing the potentially beneficial outcomes as they relate to non-traditional land and resource. The management and mitigation measures can be found in both built-in Project design components, as well as specific additional measures that were developed based upon identified needs. Mitigation has been identified as it specifically applies to noise and vibration, and air quality in the Noise Abatement Mitigation and Monitoring Program, within the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), as well as the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17).

The effects assessment identified one residual adverse effect of the Project on the VSEC non-traditional land and resource. This residual effect is predicted to be geographically limited to the land use LSA, primarily in the vicinity of the MLA, and be low in magnitude affecting a small number of users with currently very limited use. This residual effect is characterized as medium-term in duration (confined to the life of the Project), sporadic in frequency, and is reversible with effort. Finally, geographic extent is limited to Project footprint but extends to areas within the northern portion of the land use LSA. Overall, this residual effect is rated as **Not Significant** and likely to occur. A high level of confidence is provided.

Subsistence Economy and Land Use

Subsistence economy and land use is potentially affected by: changes in access to land and resources; changes to the experience of the natural environment; and changes to the abundance and distribution of resources. There are several management and mitigation measures in place which serve to mitigate impacts to the subsistence economy, including mitigation by Project design, best practice management measures, and monitoring. Subsistence land use activities will also be facilitated through the provision of the worker rotation schedule, fly-in/fly-out Project operation, and support of land users and the development of land use knowledge. Mitigation has been identified as it specifically applies to noise and vibration, and air quality in the Noise Abatement Mitigation and Monitoring Program, within the

Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17). Ongoing communication with local individuals and communities will be facilitated by regular public meetings and meeting with the Cambridge Bay and Kugluktuk Community Advisory Groups (CAGs). Feedback will be obtained from mine employees, local land users, the community HTOs and hamlets, as well as from the CAGs themselves in order to provide ongoing updates and make adjustments to management practices as needed.

After the implementation of mitigation and management measures, three residual effects on the VSEC economy and land use were identified: changes in access to land and resources, changes to the experience of the natural environment, and changes to the abundance and distribution of resources. The residual effects are anticipated to be moderate in magnitude, and reversible. Each residual effect is expected to be of medium term (confined to the life of the Project) and will be confined to either the Project footprint or the LSA. Overall, the negative residual effects on the VSEC subsistence economy and land use are rated as **Not Significant**, likely to occur and a high level of confidence is provided. In addition, the benefits of the Project may serve to maintain traditional subsistence land use to a greater extent than would be possible without the economic growth and employment income associated with the Project.

6.6.4 Country Foods

Country foods are animals, plants, and fungi used by humans for nutritional or medicinal purposes that are harvested through hunting, fishing, or gathering of vegetation (Health Canada 2010). These foods are an important part of a healthy diet, have medicinal qualities, and are of high cultural and traditional importance. People obtaining country foods by hunting, trapping, and collecting berries, mushrooms, and medicinal plants from the country foods LSA, and by fishing inside and downstream of the country foods LSA can be affected by the quality of the country foods they consume.

The quality of country foods is directly related to the quality of the surrounding environmental media (e.g., soil, water, and vegetation). Chemicals accumulated from the environment may be present in the edible tissue portions of the country foods consumed by people. The potential for adverse effects in human consumers due to chemicals present in country foods depends on the concentration of the chemical, which type and portion of the country food is eaten (e.g., roots or leaves, muscle tissue or liver), life stage of the consumer (e.g., toddler or adult), quantity of food consumed, and frequency of consumption.

There are no permanent residents living in the country foods LSA; however, some seasonal and temporary use of the area does occur (see Land Use, Volume 8, Chapter 4). Inuit people whose main food source is from harvesting country foods are likely the most frequent users of the area (even though the area is infrequently used) and, therefore, are the focus of the assessment.

There are a number of Contaminants of Potential Concern (COPCs) that may be present in the country foods LSA during the life of the Project including compounds used in mineral processing, chemicals found in treated sewage effluent or blasting residues, and fuels. In addition, by-products of combustion such as PAHs, dioxins, and furans may also be present due to the operation of vehicles or incinerators. These potential contaminants were assessed and potential effects were characterized in a qualitative manner taking into consideration mitigation and management strategies, and using best professional judgment. Metals occur naturally in the country foods LSA, sometimes at concentrations exceeding guideline limits (particularly in soil), due to natural physical and geological processes. Because the proposed Project is a metal mine and metal concentrations in the environment are most likely to change as a result of Project development, metals were selected for quantitative evaluation of their potential to affect the quality of country foods. Extensive mitigation and management measures will be in place to minimize or eliminate potential effects on environmental media (air, water, sediment, soil, and vegetation) and country foods themselves (fish and wildlife). These are detailed in Volume 4

(Atmospheric Environment), Volume 5 (Terrestrial Environment), Volume 6 (Freshwater Environment), Volume 7 (Marine Environment), and Volume 10 (Management Plans).

Based on the country foods baseline screening level assessment results, consumption of country foods from the country foods LSA were shown to not present any health risks from the selected COPCs to local human consumers under baseline conditions. Based on the qualitative and quantitative results of the effects assessment, the quality of country foods is not expected to change substantially from baseline conditions. Therefore, human health due to the consumption of country foods from within the country foods LSA is not expected to change in comparison to the baseline levels. No residual effects were identified and no health effects to human consumers of country foods are expected as a result of the Project activities or infrastructure during any phase of the Project. The overall effect of the Project on the VEC country foods is **Not Significant**.

6.7 TRANSBOUNDARY POTENTIAL EFFECTS

One of the NIRB's 10 minimum EIS requirements is to include a transboundary impact analysis. The requirement states that "where relevant, an EIS must include an assessment of all significant adverse ecosystemic or socio-economic transboundary effects." There have been no significant residual effects identified for the Project. However, all non-significant residual effects were subjected to a transboundary analysis. The following sections provide a summary of the transboundary analyses.

6.7.1 Atmospheric Environment

For the VECs air quality and noise/vibration, residual effects will be a localized phenomenon. As the Project residual effects were confined to the air quality LSA or Project footprint, which reside entirely within Nunavut, there were no potential for transboundary effects.

6.7.2 Terrestrial Environment

For the VEC vegetation and special landscape features, the Project residual effects were confined to the PDAs which reside entirely within Nunavut, so there was no potential for transboundary effects.

For the VEC caribou, the cumulative effects assessment spatial boundary included a portion of the Northwest Territories for both the Bathurst herd and the Beverly herd. The geographical boundary used for the potential cumulative effects assessment was based on the post-calving and summer seasonal ranges of the Bathurst herd and the summer and winter ranges of the Beverly herd. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant.** Please refer to Chapter 8 of this volume for a summary of the caribou cumulative effects assessment, or to Volume 5 Chapter 5 for the detailed assessment.

For the VEC grizzly bear, the cumulative effects assessment spatial boundary included a portion of the Northwest Territories for grizzly bears and is anticipated to be the largest area that any one grizzly bear may be able to interact with the Project. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

For the VEC muskox, the cumulative effects assessment spatial boundary included a portion of the Northwest Territories for muskox and is anticipated to include the largest straight line distance that a muskox may be able to interact with the Project. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

For the VEC wolverine, wolverine that may interact with the Project are not anticipated to travel into the Northwest Territories, thus transboundary effects for wolverine are not anticipated. The cumulative effects assessment spatial boundary for wolves included a portion of the Northwest Territories. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant**.

For the VEC migratory birds, the zone of influence of Project-related effects on migratory birds is expected to be limited to within the Project PDAs. As the PDAs reside entirely within Nunavut, there was no potential for transboundary effects.

For the VEC raptors, the zone of influence of Project-related residual effects on raptors in expected to be limited to within a 12 km radius from the Project infrastructure which corresponds to the maximum expected home range of breeding raptors. This geographical area resides entirely within Nunavut, and therefore no potential transboundary effects are expected.

6.7.3 Freshwater Environment

For the VECs surface hydrology, freshwater water quality, sediment quality, and fish community, residual effects are predicted to be confined to within the freshwater LSA. As the freshwater LSA resides entirely within Nunavut, there were no potential for transboundary effects.

For the VEC freshwater fish/aquatic habitat, no residual effects are anticipated as a result of the Project, and therefore there are no Project-related effects that could have transboundary effects.

6.7.4 Marine Environment

For the VECs marine water quality, sediment quality, and fish community, residual effects are predicted to be confined to within the marine LSA. As the marine LSA resides entirely within Nunavut, there were no potential for transboundary effects.

For the VEC marine fish/aquatic habitat, no residual effects are anticipated as a result of the Project, and therefore there are no Project-related effects that could have transboundary effects.

For the VEC seabirds/seaducks, the Project residual effects were confined to the marine RSA, which resides entirely within Nunavut. Therefore there was no potential for transboundary effects.

For the VEC ringed seals, no residual effects are anticipated as a result of the Project, and therefore there are no Project-related effects that could have transboundary effects.

6.7.5 Human Environment

For the VSEC archaeological sites, due to the spatially localized nature of archaeological sites there are no transboundary effects from the Project.

For socio-economics, the VSECs economic development, business opportunities, and education/training all had positive Project-related residual effects. Positive residual effects were not included in a potential cumulative effects assessment or transboundary analysis.

For the socio-economic VSEC employment, the predicted residual adverse effect was further assessed as part of the potential cumulative effects assessment (CEA). The geographic boundary for the CEA was expanded to include those projects and human activities in the Kitikmeot and NWT considered to have potential effects within the socio-economic RSA that are relevant to current residents. The residual cumulative effect was determined as unlikely and **Not Significant** with a medium level of confidence. As this residual cumulative effect is unlikely, the potential transboundary implications are negligible. Special consideration was given to potential transboundary effects to employment and businesses within the socio-economic RSA. The transboundary effects assessment concluded that competition for local labour is not expected to be substantial outside the Kitikmeot Region but is rather anticipated to provide desired employment. The transboundary effects of the Project were determined as positive and therefore not further characterized.

For the socio-economic VSEC health and community well-being, the residual effects of the Project are expected to be most relevant to small northern communities. Both Project-related residual effects are expected to be negligible outside the Kitikmeot Region. Special consideration was given to potential transboundary effects to health systems in the NWT as a result of Project reliance on medical services. The Project is not expected to have transboundary effects on the health system in the NWT due to the fly-in/fly-out operation of the Project and the provision of required medical services at the Project site. Project employees are expected to continue to utilize health services in their home communities and will have access to health services at the Project site as required.

For the land use VSEC non-traditional land and resource use, a potential cumulative effects assessment (CEA) was conducted because a negative residual Project effect was predicted. The geographic boundary for the land use CEA was expanded to include those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. Overall, this residual cumulative effect is rated as **Not Significant.** The residual cumulative effects of the Project on non-traditional land use do not extend beyond the boundaries of the Nunavut Settlement Area (NSA) and therefore, cannot result in transboundary effects.

For the land use VSEC subsistence economy and land use, a potential cumulative effects assessment was conducted because negative residual Project effects were predicted. As noted earlier, the geographic boundary for the land use CEA was expanded to include those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. Overall, the three residual cumulative effects are each rated as **Not Significant** and likely to occur. Kitikmeot region land users did not report travel outside the NSA for the purpose of subsistence harvesting. As a result, the Project is not expected to result in transboundary effects on subsistence land users.

For the VSEC country foods, no residual effects were identified and no health effects to human consumers of country foods are expected as a result of the Project activities or infrastructure during any phase of the Project. As there are no anticipated Project residual effects, there are no potential transboundary effects.

6.8 SUMMARY OF RESIDUAL EFFECTS AND SIGNIFICANCE

Table 6.8-1 provides a summary of all of the identified Project-related residual effects on the VECs and VSECs. There have been no significant residual effects identified as a result of the proposed Back River Project.

Table 6.8-1. Summary of Project-related Residual Effects and Significance

Description of Residual Effect	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Significance
Air Quality									
TSP	Negative	Moderate	Medium	Continuous	Local	Reversible	Likely	High	Not Significant
PM_{10}	Negative	Moderate	Medium	Continuous	Local	Reversible	Likely	High	Not Significant
Noise and Vibration									
Increased Noise Levels at Onsite Human Receptors	Negative	Moderate	Medium	Sporadic	Project Footprint	Reversible	Likely	High	Not Significant
Vegetation and Special Landscape Features									
Vegetation Loss	Negative	Low	Long	Once	Footprint	Irreversible	Likely	Medium	Not Significant
Special Landscape Feature Loss	Negative	Low	Long	Once	Footprint	Irreversible	Likely	Medium	Not Significant
Caribou									
Habitat Loss	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	Medium	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Grizzly Bear									
Habitat Loss	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	Medium	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Attraction	Negative	Low	Medium	Sporadic	Footprint	Reversible	Moderate	Medium	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Continuous	Regional	Reversible	Unlikely	Medium	Not Significant
Muskox									
Habitat Loss	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	Medium	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Wolverine and Furbearers									
Habitat Loss (Wolverine)	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	Medium	Not Significant
Habitat Loss (Grey Wolf)	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	Medium	Not Significant
Disturbance due to Noise (Wolverine)	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Disturbance due to Noise (Grey Wolf)	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Attraction (Wolverine)	Negative	Low	Medium	Sporadic	Footprint	Reversible	Moderate	Medium	Not Significant
Reduction in Reproductive Productivity (Wolverine)	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant

(continued)

Table 6.8-1. Summary of Project-related Residual Effects and Significance (continued)

Description of Residual Effect	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Significance
Upland Birds and Waterbirds									
Habitat Loss	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	High	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Raptors									
Habitat Loss	Negative	Low	Long	Sporadic	Footprint	Irreversible	Likely	High	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Likely	High	Not Significant
Direct Mortality and Injury	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Attraction	Negative	Low	Medium	Sporadic	Footprint	Reversible with Effort	Likely	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Local	Reversible	Unlikely	High	Not Significant
Surface Hydrology									
Change in streamflows	Negative	Low	Medium	Continuous	Local	Reversible	Likely	High	Not Significant
Change in lake volumes	Negative	Low	Medium	Continuous	Footprint	Reversible	Likely	High	Not Significant
Freshwater Water Quality									
Water Quality changes due to Site Preparation, Construction, and Decommissioning Activities	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Water Quality changes due to Site Contact Water	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Water Quality changes due to Mine Contact Water	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Freshwater Sediment Quality									
Sediment Quality changes due to Site Preparation	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Sediment Quality changes due to Site Contact Water	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Sediment Quality changes due to Mine Contact Water	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Freshwater Fish Community									
Direct Mortality and Population Abundance: Umwelt Lake Arctic Grayling population downstream of Llama Lake	Negative	Moderate	Medium	Continuous	Local	Reversible	Likely	Medium	Not Significant

(continued)

Table 6.8-1. Summary of Project-related Residual Effects and Significance (continued)

Description of Residual Effect	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Significance
Marine Water Quality									
Water Quality changes due to Shipping – Propeller Wash	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Water Quality changes due to Site Preparation	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	High	Not Significant
Water Quality changes due to Site Contact Water	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Marine Sediment Quality									
Sediment Quality changes due to Shipping – Propeller Wash	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Sediment Quality changes due to Site Preparation	Negative	Low	Short	Sporadic	Local	Reversible	Moderate	High	Not Significant
Sediment Quality changes due to Site Contact Water	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Marine Fish Community (Arctic Char)									
Direct Mortality and Population Abundance: Shipping Noise	Negative	Low	Medium	Sporadic	Regional	Reversible	Moderate	High	Not Significant
Seabirds and Seaducks									
Disturbance due to Noise	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Archaeology									
Impact to Known Archaeological Sites	Negative	Low	Long	Once	Local	Irreversible	High	High	Not Significant
Impact to Unknown Archaeological Sites	Negative	Low	Long	Once	Local	Irreversible	Low	Medium	Not Significant
Socio-economics									
Changes to Competition for Local Labour (Employment)	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Changes to Individual and Family Spending (Community Well-being)	Positive/ Negative	Moderate	Short/ Medium	Continuous	Local/ Regional	Reversible	Moderate	Medium	Not Significant
Changes to Family and Household Structure (Community Well-being)	Negative	Low	Medium	Continuous	Local/ Regional	Reversible	Moderate	High	Not Significant

(continued)

Table 6.8-1. Summary of Project-related Residual Effects and Significance (completed)

Description of Residual Effect	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Significance
Land Use									
Changes in Access to Land and Resources (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Footprint	Reversible	Likely	High	Not Significant
Changes to the Experience of the Natural Environment (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Local/ Footprint	Reversible with Effort	Likely	High	Not Significant
Changes to Abundance and Distribution of Resources (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible with Effort	Likely	High	Not Significant
Changes in Access to Land and Resources (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Local/ Footprint	Reversible with Effort	Likely	High	Not Significant
Changes to the Experience of the Natural Environment (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Local/ Footprint	Reversible with Effort	Likely	High	Not Significant
Changes to Abundance and Distribution of Resources (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible with Effort	Likely	High	Not Significant

7. Mitigation and Adaptive Management

7. Mitigation and Adaptive Management

This chapter provides an overview of the mitigation and adaptive management measures proposed as a result of the Project components interfacing with the environment, and the results of effects assessments, and regulatory requirements.

The DEIS supporting Volumes 4 through 8 provide assessments of each major component of the environment by VEC/VSEC, including social/environmental context, baseline setting, potential effects of the proposed Project (i.e., changes to the environment) and mitigation measures designed to avoid or minimize changes.

The assessments presented in these volumes include an evaluation of the effectiveness of proposed mitigation measures, together with an assessment of the risk of mitigation failure and the potential severity of the consequences, where relevant. In the event that significant uncertainty is identified or if a residual risk remains, the Volume 10 management plans outline details regarding further mitigation measures, contingency plans, and the management and monitoring proposed to ensure that problems with the effectiveness of mitigation measures are detected as soon as practically possible.

Mitigation is a means of eliminating, reducing or controlling the Project's potential adverse environmental or social effects, including compensation for any damage to the environment caused by such effects through replacement, restoration, offset or other means. Mitigation measures such as avoidance, minimization, rectification, and compensation were applied as part of Project design or as a means of eliminating or reducing potential negative effects to VECs and VSECs.

Avoidance was one of the key mitigation measures utilized in the design of the proposed Project. Examples of this mitigation measure are locating the TIA and Waste Rock Storage Areas (WRSA) away from fish-bearing waters to avoid adversely affecting fish habitat and the aquatic environment.

Mitigation measures and corrective and preventative actions will be implemented by mine operations and/or contractors with support from Sabina environmental personnel. This could include the evaluation of measures in place and updates to operational procedures. Communication will be maintained with Inuit organizations, authorizing agencies and the general public in describing any observed adverse effect and required corrective actions.

Sabina will employ a cyclical feedback loop where operations are planned and implemented, by monitoring data and adopting practices that can be adjusted to promptly reduce or eliminate any observed negative effects throughout the life of the Project. Continual use of this iterative process will allow adaptive management decisions to be made on a constant basis, and shall lead to improvements to the environmental and socio-economic management system, as necessary over time.

A table listing the individual monitoring and management plans for various aspects, components, and phases of the Project is included in the Environmental Management Plan (Volume 10, Chapter 1). Each individual plan will assess the likely effectiveness of mitigation measures and associated follow-up mechanisms for adaptive management, including, where appropriate, a risk assessment of those economic or other conditions that might impair the implementation or effectiveness of proposed mitigation or management strategies. These plans also outline how results from monitoring will be used to refine or modify the design and implementation of mitigation measures and management plans, and how monitoring results might be included in work reorientation and potential improvements in the implementation of the various components of the Project.

The initial design of monitoring and management plans, data analysis, reporting and integration of results into operational procedures will be carried out by Sabina. This may lead to changes to meet the requirement of other organizations. Sabina will incorporate design elements such as:

- the VECs and VSECs to be monitored, and applicable criteria/thresholds and regulations, including, if relevant, the obligations imposed on contractors by the environmental provisions of their contracts;
- discussion of actions to be taken in case of non-compliance with the law or regulations;
- description of how the efficiency of mitigation measures will be evaluated;
- description of the frequency, duration, and geographic extent of monitoring with justification for each, and identification of personnel who will conduct the collection, analyse and interpretation of data;
- proposed actions in the event that observed results (impacts) differ from those predicted;
- proposed reporting scheme for monitoring results, including format, reporting intervals, and responsible territorial and federal authorities;
- identification of organizations to communicate results of monitoring efforts: Inuit organizations, institutes of public government, territorial and federal authorities; and
- plans for integration of monitoring results with other aspects of the Project, including adjustments of procedures and refinement of mitigation measures.

Sabina plans to use adaptive management measures to address unanticipated adverse environmental effects. Adaptive management is expected to be a valuable tool, if established during the planning phase, for monitoring Project effects and for making adjustments in order to continuously improve and ensure the Project functions as predicted. It is an effective strategy for situations where there is uncertainty with respect to the predicted effects of the Project on the environment.

Monitoring is the fundamental tool in adaptive management that will provide Sabina and evaluators with the information needed to implement change and strive for continuous improvement. Thus monitoring and management are inseparable components to effective adaptive management.

At this stage, the strategy has been identified in concept only and its development will proceed with the permitting phase of the Project. Monitoring programs developed will be part of adaptive management.

An example of an adaptive management strategy is provided below for the conceptual Fish Offsetting Plan and the water quality monitoring portion of the propose Aquatic Effects Monitoring Program. Both plans include specific monitoring provisions. Part of these monitoring provisions may include the following:

- measuring the condition of the system with selected indicators (e.g., numbers, size and health of fish populations; water quality in external receiving bodies);
- identification of goals and setting performance criteria and standards (target numbers of fish in compensation habitat; water quality at or below predetermined thresholds);

- development of monitoring plans with adequate detection limits (temporal and spatial coverage) to identify deficiencies; and
- evaluating root causes and the extent of deficiencies to make a decision on what actions to take: do nothing, implement corrective actions, or change the goal.

Should monitoring show or suggest levels are increasing, the adaptive management will include an "alert" level which could reflect a particular parameter is within X% of the guideline level. The alert level could be tied to more monitoring and an "action level" would be declared if the level were to approach a certain % of the guideline. The action level would initiate corrective actions which might include treatment and/or pumping captured seepage into the TIA. This scenario is presented in a conceptual context only but it is intended to illustrate how adaptive management would be implemented to address uncertainty and manage Project effects to design or acceptable levels.

The concept of alert and action levels could be applied to the following:

- predicted water quality in external receiving waterbodies and tributaries;
- success of habitat offsetting programs;
- survival, growth and health of fish in monitoring sites;
- trophic status and capability of target lakes to support and sustain populations; and
- other Project components not just those related to environmental receptors.

As part of an adaptive management process, the Environmental Management Plan (EMP) fully supports changes and updates by providing regular review of the adequacy of the Environment Policy, Monitoring Programs and Operational Controls in light of concerns or other outcomes. Environmental Management System (EMS) elements in the EMP can then be updated as needed based on results, and associated training programs can then be enhanced to improve the level of environmental protection. In this way, continual improvement of the Project EMS and mitigation programs will be assured.

Sabina has provided information on technically and economically feasible measures to mitigate potentially adverse environmental and social effects of the Project. The following sections provide summaries of these measures applicable to the relevant VECs and VSECs.

7.1 ATMOSPHERIC ENVIRONMENT

7.1.1 Air Quality

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC air quality include: energy efficiency measures, measures to reduce fuel use, the use of water or dust suppression fluids to reduce dust from unpaved roads, transported material and equipment in the crushing facility, and the use of emission control systems such as wet scrubbers, baghouses, and filters.

7.1.2 Noise and Vibration

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC noise and vibration include: ensuring equipment is fitted with appropriate mufflers and silencers, limiting activities such as blasting and take-off and landing of aircraft to certain times of the day, and housing stationary sources in building or using enclosures, berms, acoustic screening and shrouding.

7.2 TERRESTRIAL ENVIRONMENT

7.2.1 Vegetation and Special Landscape Features

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC vegetation and special landscape features include: minimizing the Project footprint, using winter roads, and reducing fugitive dust where possible.

7.2.2 Caribou

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC caribou include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter roads, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.2.3 Grizzly Bear

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC grizzly bear include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.2.4 Musk Ox

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC muskox include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.2.5 Wolverine/Furbearers

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC wolverine/furbearers include: minimization of Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife to waste and avoid exposure to contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.2.6 Migratory Birds

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC migratory birds include: minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste and chemical handling measures to avoid attracting wildlife to wastes and contaminants, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.2.7 Raptors

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC raptors include: minimizing the Project footprint, noise abatement measures, speed control measures, the use of winter access roads only, waste management and chemical handling measures to avoid attracting wildlife, and the implementation of the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20).

7.3 FRESHWATER ENVIRONMENT

7.3.1 Hydrology

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC hydrology include: the design of maximum water use volumes for key waterbodies in order to protect critical fish habitat, following DFO protocols for winter water withdrawal, confinement of infrastructure to local watersheds, and following winter road construction and maintenance DFO operational statements.

7.3.2 Freshwater Water Quality

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC freshwater water quality include: intercepting runoff in ditches and diverting the water to appropriate facilities, using geochemically suitable material for roads and pads, adhering to regulatory guidelines for treated discharges, using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials, using best management practices for dust suppression and incineration, and the implementation of the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.3.3 Freshwater Sediment Quality

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC freshwater sediment quality include: intercepting runoff in ditches and diverting the water to appropriate facilities, adhering to regulatory guidelines for treated discharges, using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials, using best management practices for sediment and erosion control, and the implementation of the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.3.4 Freshwater Fish/Aquatic Habitat

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC freshwater fish/aquatic habitat include: the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible (the TIA and waste rock storage areas have been located to avoid fish-bearing waters), the establishment of maximum water volume uses which have been based on protecting critical life stages of fish in Goose, Propeller, and George lakes, and the compensation of unavoidable losses of fish habitat (e.g., loss of Llama Lake due to Llama Open Pit and loss of high quality Arctic Grayling habitat due to Main Pit) through the implementation of a Conceptual Fish Offsetting Plan (Volume 10, Chapter 21).

7.3.5 Freshwater Fish Community

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC freshwater fish community include: the Project design of siting infrastructure to avoid freshwater fish habitat wherever feasible (the TIA and waste rock storage areas have been located to avoid fish-bearing waters), the establishment of maximum water volume uses which have been based on protecting critical life stages of fish in Goose, Propeller, and George lakes, and the compensation of unavoidable losses of the freshwater fish species Lake Trout and Arctic Grayling (e.g., loss of Llama Lake due to Llama Open Pit and loss of high quality Arctic Grayling habitat due to Main Pit) through the implementation of a Conceptual Fish Offsetting Plan (Volume 10, Chapter 21) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.4 MARINE ENVIRONMENT

7.4.1 Marine Water Quality

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC marine water quality include: minimizing vessel speeds and restricting vessels to deeper waters, intercepting runoff in ditches and diverting the water to a collection pond at the MLA, using geochemically suitable material for roads and pads, adhering to regulatory guidelines for treated discharges, using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials, using best management practices for dust suppression and incineration, and the implementation of the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.4.2 Marine Sediment Quality

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC marine sediment quality include: minimizing vessel speeds and restricting vessels to deeper waters, intercepting runoff in ditches and diverting the water to appropriate facilities, adhering to regulatory guidelines for treated discharges, using best management practices for the storage, transport, and use of fuels, explosives, and hazardous materials, using best management practices for sediment and erosion control, and the implementation of the Site Water Monitoring and Management Plan (Volume 10, Chapter 7) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.4.3 Marine Fish/Aquatic Habitat

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC marine fish/aquatic habitat include: mitigation measures for water quality and sediment quality, and the construction of artificial marine shoals to offset the marine fish/aquatic habitat loss as described in the Conceptual Fisheries Offsetting Plan.

7.4.4 Marine Fish Community

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC marine fish community include: mitigation measures for water quality and sediment quality, limiting the amount of in-water construction, eliminating ballast water exchange, enforcing speed limits for ships navigating through the RSA, and the construction of artificial marine shoals to offset the marine fish/aquatic habitat loss as described in the Conceptual Fisheries Offsetting Plan (Volume 10, Chapter 21) and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.4.5 Seabirds and Seaducks

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC seabirds/seaducks include: the avoidance of sensitive seabird and seaduck staging areas in Project design, the avoidance of disturbing these sensitive staging areas by developing pre-determined flight paths, when possible, to provide horizontal and vertical buffer distances from staging birds, a flight altitude of 650 m will also be maintained above known staging areas where it is safe to do so, and aircraft landing and take-offs will avoid staging areas for the safety of humans and wildlife.

7.4.6 Ringed Seals

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VEC ringed seals include: avoidance of interactions with ringed seals by having shipping occur during the open-water periods only (August 25 to October 31) when ringed seal density in the marine LSA and RSA is anticipated to be very low; avoidance of interactions with ringed seals as the MLA is expected to be active (December through March) during periods when seals are not in the vicinity of the marine LSA or southern RSA (south of Kingoak).

7.5 HUMAN ENVIRONMENT

7.5.1 Archaeology

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VSEC archaeological sites include: site avoidance through Project redesign, the use of winter roads which reduces overland traffic, mitigation of archaeological sites prior to construction activities if sites are identified as being potentially at risk, and the use of the “Chance Find Procedure” for any sites that may be encountered that are currently unknown.

7.5.2 Socio-economics

7.5.2.1 Employment

The main mitigation measures that will be in place to enhance potential effects to the VSEC employment include: a Labour Relations Strategy; a Preferential Recruitment Strategy; a Workforce Training Strategy; and a Workforce Transition Strategy. The targeted recruiting of Inuit employees is expected to reduce the higher than average unemployment rates. The Project will also inform local businesses, organizations, and hamlets of their hiring requirements and procurement practices in advance of the implementation of Construction and Operation and will collaborate to reduce any adverse effects of increased competition for local labour.

7.5.2.2 Health and Community Well-being

The main mitigation measures that will be in place to enhance potential effects to the VSEC health and community well-being include: measures aimed to increase the number of Inuit employed (e.g., EFAP, financial management counselling) as detailed in the Human Resources Plan (Volume 10, Chapter 28).

7.5.3 Land Use

7.5.3.1 Non-traditional Land and Resource Use

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VSEC non-traditional land and resource use include: mitigation and management measures designed to eliminate or reduce potential effects to resources such as wildlife and fish. These specific mitigation and management measures can be found in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17), Noise Abatement Mitigation and Monitoring Program within the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), Site Water Monitoring and Management Plan (Volume 10, Chapter 7), and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.5.3.2 Subsistence Economy and Land Use

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VSEC subsistence economic and land use include: the provision of the worker rotation schedule, fly-in/fly-out Project operation, support of land users and the development of land use knowledge, ongoing communication with local individuals and communities by regular public meetings and meeting with the Cambridge Bay and Kugluktuk Community Advisory Groups (CAGs), obtaining feedback from mine employees, local land users, the community HTOs and hamlets, as well as from the CAGs themselves in order to provide ongoing updates and make adjustments to management practices as needed, and mitigation and management measures designed to eliminate or reduce potential effects to resources such as wildlife and fish. These specific mitigation and management measures can be found in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17), Noise Abatement Mitigation and Monitoring Program within the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), Site Water Monitoring and Management Plan (Volume 10, Chapter 7), and Aquatic Effects Management Plan (Volume 10, Chapter 19).

7.5.4 Country Foods

The main mitigation measures that will be in place to eliminate or reduce potential effects to the VSEC country foods include: mitigation and management measures to minimize or eliminate potential effects on environmental media (air, water, sediment, soil, and vegetation) and country foods themselves (fish and wildlife). These mitigation measures are detailed in the Air Quality Monitoring and Management Plan (Volume 10, Chapter 17), the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20), Site Water Monitoring and Management Plan (Volume 10, Chapter 7), and Aquatic Effects Management Plan (Volume 10, Chapter 19).

8. Potential Cumulative Effects Assessment

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8. Potential Cumulative Effects Assessment

This chapter provides an overview of the methodology used for the potential cumulative effects assessment and presents summaries of the results of the cumulative effects assessments conducted for all Valued Ecosystem Components (VECs) and Valued Socio-economic Components (VSECs). The cumulative effects assessments conducted were consistent with the requirements of Section 12.5.2 of the Nunavut Land Claim Agreement (NLCA) and the Nunavut Impact Review Board (NIRB) final *Guidelines for the Preparation of an Environmental Impact Statement* (EIS guidelines [NIRB 2013]) for the Project.

The potential for cumulative effects to occur arises when the residual effects of a project affect (i.e., overlap and interact with) the same resource/receptor (VECs and VSECs) that is affected by the residual effects of *other* past, existing or reasonably foreseeable projects or activities.

The potential cumulative effects assessment (CEA) was carried out in compliance with Section 7.11 of the final EIS guidelines (NIRB 2013). As per the final EIS guidelines, consideration was given to the following factors when conducting the CEA:

- a larger spatial boundary (RSA rather than LSA);
- a longer temporal scale;
- alternatives analysis;
- consideration of effects on VECs and VSECs; and
- evaluation of significance.

Potential cumulative effects assessments were conducted for each VEC or VSEC that had an identified Project-related residual effect. There were no significant Project-related residual effects identified (see Chapter 6 of this Main Volume), but all non-significant Project-related residual effects were subjected to a potential cumulative effects assessment. The details of all of the assessments can be found in the VEC and VSEC chapters in Supporting Volumes 4 through 8 (Volume 4: Atmospheric Environment; Volume 5: Terrestrial Environment; Volume 6: Freshwater Environment; Volume 7: Marine Environment; and Volume 8: Human Environment).

8.1 METHODOLOGY OVERVIEW

Similar to the Project-related effects assessment methodology, the CEA followed the same steps:

- Establishing the Scope of the CEA, including which past, present, and reasonably foreseeable projects to include, and setting the assessment boundaries;
- Identifying potential interactions with the Project residual effects and potential residual effects from other past, present, and reasonably foreseeable projects within the assessment boundaries;
- Characterizing the potential cumulative effects;
- Identification of mitigation and management measures to eliminate or reduce potential cumulative effects;
- Characterize residual cumulative effects (those effects predicted to remain after the application of mitigation and management measures); and
- Determine the significance of residual cumulative effects.

Table 8.1-1 presents the past, present, and reasonably foreseeable projects that were considered for the CEA. The spatial boundaries were determined individually for each VEC or VSEC, and consisted of that VEC/VSEC's regional study area (RSA) or a larger geographical boundary (e.g. home range of a wildlife species). The same attributes used to characterize and assess Project-related effects were used for potential and residual cumulative effects. The overall significance rating of any residual cumulative effects was determined using the same methods as for the Project-related residual effects.

An additional aspect of the cumulative effects assessment included considering the future with and without the Back River Project as follows:

- Future case without the Project - A consideration of residual effects from all other past, existing, and future projects and activities *without* the Back River Project. This analysis is designed to answer the following question: given the current status of baseline conditions (which already reflects effects from past and existing projects), how significantly will VECs/VSECs be affected by the residual effects from other reasonably foreseeable projects and activities in the absence of the Back River Project?
- Future case with the Project - A consideration of all residual effects from past, existing, and future projects and activities *with* the Back River Project. This scenario is designed to answer the question: when combined with other project and activities, does the Back River Project serve to act as a trigger that pushes a VEC/VSEC beyond critical conditions thereby being responsible for creating a significant, adverse cumulative residual effect?

Only potential cumulative effects for the Future case with the Project are characterized and assessed using the same criteria applied in the Project-related effect assessment methodology: direction, magnitude, duration, frequency, geographic extent, reversibility, probability of occurrence, and confidence in the analyses and conclusions. Areas where insufficient data are available to provide an assessment are highlighted, with the potential cumulative effects being described as uncertain in these instances. Using a weight of evidence and relative ranking approach, combined with best professional judgment, any cumulative residual effects were characterized as either significant (S), not significant (N), or positive (P). The evaluation of significance was be completed by comparing residual cumulative effects against thresholds, standards, trends or objectives relevant to the VEC/VSEC as defined in each assessment chapter.

8.2 ATMOSPHERIC ENVIRONMENT

8.2.1 Air Quality

A potential cumulative effects assessment was conducted because residual Project effects were predicted (elevated TSP and PM_{10} concentrations within the LSA). The Project residual effects are a localized phenomenon confined to the atmospheric LSA. There are no reasonably foreseeable projects within the atmospheric LSA and hence there were no projects that could interact with the Back River Project air quality residual effects. No cumulative effects on the VEC air quality are anticipated.

8.2.2 Noise and Vibration

A potential cumulative effects assessment was conducted because a residual Project effect was predicted (sleep disturbance for humans within the Project footprint). The Project residual effect is a localized phenomenon confined to the Project footprint. There are no reasonably foreseeable projects within the Project footprint (PDA) or atmospheric LSA and hence there were no projects that could interact with the Back River Project noise residual effect. No cumulative effects on the VEC noise and vibration are anticipated.

Table 8.1-1. Past, Existing, and Reasonably Foreseeable Future Projects with the Potential to Interact with the Back River Project

Phase	Location	Project	Development Type	Company /Organization	Location / Coordinates	Distance to Goose Property	Description	Operational Period	Status
Past	Nunavut	Lupin	Gold mine	Elgin Mining	65°46'N; 111o15'W	226 km	Underground mine and mill, tailings containment	1982 to 2005	Surface infrastructure remains in place - potential for this to be used if the Ulu deposit is developed.
	Nunavut	Jericho	Diamond mine	Shear Diamonds Ltd.	65°59'N; 111°28'W	238 km	Former diamond mine located 255 km SSE of Kugluktuk	2006 to 2008	Currently in care and maintenance. All work on project has been halted.
	Nunavut	Roberts Bay and Ida Bay	Silver mine	Quantum Murray LP	68°10'45"N; 106°33'20"W	321 km	Mine openings, equipment, waste rock and tailings pond	1973 to 1975	Remediation work being coordinated by AANDC. Expected to be complete by 2010
	Northwest Territories	Tundra	Gold mine	Indian and Northern Affairs Canada	64°11'N; 111°33'W	290 km	Underground mine workings, mill, tailings containment	1964 to 1968; re-opened briefly in 1990s	Care and maintenance. Remediation plan is being developed.
	Northwest Territories	Salmita	Gold mine	Giant Yellowknife Mines Limited	64°36'N; 114°21'W	297 km	Underground mine workings	1984 to 1989	Remediated.
Existing	Nunavut	Doris North (Hope Bay Belt)	Gold mine	TMAC Resources	68°09'N; 106°40'W	279 km	Airstrip, accommodation buildings, dock for shipping, tailings facility	Mine site construction 2009 to 2011	Currently in care and maintenance
	Northwest Territories	EKATI	Diamond mine	Dominion Diamond Ekati Corporation (Dominion Diamonds, Chuck Fipke and Stu Blusson)	64°44'N	226 km	Canada's first and largest diamond mine, 310 km. NE of Yellowknife. Open pit and underground. Mine life to 2019. Workforce approximately 1,500.	1998 to 2020	News release updated Q1 results for Dominion. Chantal Lavoie appointed new President. Reserves released April 24.
	Northwest Territories	Diavik	Diamond mine	Rio Tinto and Dominion Diamonds	64°30'N; 110°20'W	211 km	Canada's largest diamond producer, 300 km NE of Yellowknife. Mine life to 2023. Became all underground mine in 2012. Workforce approximately 1,000.	2003 to 2025	Diavik produced 1.9 million carats from 0.5 million tonnes of ore in Q4, bringing 2012 production to 7.2 million carats from 2.1 million tonnes of ore processed (up from 6.7 million carats from 2.2 million tonnes of ore processed in 2011. Rio Tinto has cancelled plans to sell diamonds business.
	Northwest Territories	Snap Lake	Diamond mine	De Beers Canada Inc.	63°35'N; 111°15'W	310 km	Canada's first all underground diamond mine. 220 kilometres NE of Yellowknife. Mine life to 2028. Workforce approximately 750.	Construction began in 2005; Mine officially opened on July 25, 2008; 22 year mine life	Commenced commercial production on January 16, 2008 and the Official Mine Opening took place on July 25, 2008.
Future	Nunavut	Bathurst Inlet Port and Road	All-weather road and port facilities (Bathurst Inlet)	BIPR Company	66°50'N; 108°2'W to 65°40'N; 110°40'W	75 km	211 km all-weather road; port facilities for 50,000 tonne ice-vessels and barges	Construction expected to begin in 2017. Operation for 20 years	In NIRB process: updated DEIS to be submitted in 2013
	Nunavut	Hackett River	Base metal mine; ~25 km spur road to BIPR road	GlencoreXstrata	65°55'N; 108°30'W	94 km	Proposed open pit mine. One of largest undeveloped VMS massive sulphide deposits in the world. 104 km SSW of Bathurst Inlet.Access road from BIPR; estimated construction jobs: 900; estimated mine jobs: 500	estimated 15 year mine life	Pre-feasibility and environmental baseline studies; DEIS submission currently on hold
	Nunavut	Hope Bay Belt (Phase 2)	Gold Mine-Extension of Doris North Gold Mine	TMAC Resources	68°09'N; 106°40'W	279 km	Proposed gold mines 130 m S of Cambridge Bay; covers the majority of the Hope Bay Greenstone Belt. Estimated mine jobs: 300	~15 years of operation	Project Description submitted 2011; DEIS guidelines issued 2012; TMAC entered into MOU with DIA, March 14, 2013; NIRB confirms reassignment of Project Certificate for Doris North to TMAC on April 11, 2013
	Nunavut	Izok Corridor Project (with High Lake & Hood River deposits)	Copper, Zinc, Gold, Silver	MMG Resources Inc.	65°27'N; 115°5'W (Izok Lake); 67°22'46"N; 110°50'39"W (High Lake); 67°48'19"N; 110°52'9"W (Dock)	288 km (to Izok Mine and High Lake Mine); 309 km (to Grays Bay Port)	High Lake is 1710 Hectare, copper-zinc-silver-gold property; 190 km ESE of Kugluktuk. Izok is high-grade zinc-copper-lead-silver deposit, 255 km SW of Kugluktuk. Estimated construction jobs: 1,140. Estimated mine jobs: 710.	Estimated 14 + years mine life; 7-10 years of closure and reclamation	Feasibility study initiated in 2012; NIRB process suspended while Project Description updated; MMG is examine alternative designs to reduce costs, add value, and improve economic viability of the project, and will provide a revised project description to BIPR by December 2013.
	Nunavut	Canadian High Arctic Research Station (CHARS)	Arctic science and technology research	Aboriginal Affairs and Northern Development Canada (Government of Canada)	69°7'1.153"N; 105°4'11.132"W	403 km	Proposed world-class research station in Canada's Arctic. To be located in Cambridge Bay. Estimated science and technology program jobs: 33 full-time, up to 150 seasonal.	Design and construction 2011 - 2017. Operations 2017 and onwards	Government of Canada announced commitment to a world class high Arctic research station in November 2007. Feasibility study issued in March 2011. Cambridge Bay community met with the Project architects in June 2013.
	Northwest Territories	Gaucho Kué	Diamond mine	De Beers and Mountain Province	63°30'N; 109°30'W	257 km	Proposed open-pit diamond mine approximately 180 km ENE of Yellowknife, NT. Estimated mine jobs: 360	Construction expected to begin in 2014. Estimated 11 year mine life.	Gaucho Kué Joint Venture and NWT Gov't signed socio-economic agreement June 28.
	Northwest Territories	Courageous Lake (Tundra)	Gold mine	Seabridge Gold	64°11'N	290 km	Proposed open pit mine 240 km northeast of Yellowknife. 6.5 million oz. proven and probable reserves. (Positive Preliminary Feasibility Study July 2012)	Prefeasibility	New 5-year land use permit issued December 28 to allow up to 700 drill holes.

8.3 TERRESTRIAL ENVIRONMENT

8.3.1 Vegetation and Special Landscape Features

A potential cumulative effects assessment was conducted because residual Project effects were predicted (vegetation and special landscape feature loss within the Project footprint). The reasonably foreseeable Hackett River Project and Bathurst Inlet Port and Road (BIPR) project would each have spatial and/or temporal overlap with the terrestrial RSA. In addition to the Project residual effect of vegetation loss within the PDAs, an estimated 370 hectares of cumulative nibbling loss within the terrestrial RSA could result from development of infrastructure and roads associated with the proposed Hackett River Project and BIPR Project. The magnitude of the anticipated cumulative effect is expected to be low (less than 1% of the RSA), the duration long term, the frequency is once but continuous/permanent, and the cumulative effect would be confined to within the project footprints of each project. The significance of the residual cumulative effect (vegetation loss) for the VEC vegetation and special landscape features is predicted to be **Not Significant**.

8.3.2 Caribou

A potential cumulative effects assessment was conducted because residual Project effects were predicted (habitat loss, disturbance, reduction in reproductive productivity). The geographical boundary used for the potential cumulative effects assessment was based on the post-calving and summer seasonal ranges of the Bathurst herd and the summer and winter ranges of the Beverly herd, and included areas within Nunavut and the Northwest Territories. As outlined in the EIS guidelines (NIRB 2013), the Minister of Aboriginal Affairs and Northern Development Canada highlighted the importance of the Bathurst herd caribou in the region and identified the need to conduct a cumulative effects assessment for this herd (letter dated December 17, 2012). There were 10 possible projects (including 4 potential future projects) that could act cumulatively with Project residual effects within the Bathurst herd cumulative assessment area, and 5 possible projects (including 3 potential future projects) that could act cumulatively with Project residual effects within the Beverly herd cumulative assessment area.

In order to support the potential cumulative effects assessment for caribou, a broad-scale Resource Selection Function model was developed for the Bathurst caribou herd on their post-calving and summer ranges. Results of this model were used to determine where caribou are typically found in their ranges, and what types of habitat they use while on these ranges. The model was also used to derive habitat quality ratings for vegetation to determine the extent of cumulative habitat loss and disturbance to Bathurst caribou on their foraging ranges and the remaining predicted condition of these foraging areas, which have been linked to overwinter calf survival. The magnitude of all three of the residual cumulative effects on both caribou herds is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the project footprint, sporadic in nature, confined to local areas for habitat loss and noise disturbance, and potentially the cumulative study area for reduction in reproductive productivity. The residual cumulative effects are also anticipated to be reversible with the possible exception of habitat loss within specific areas of the project footprint. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of residual cumulative effects for caribou is predicted to be **Not Significant**.

8.3.3 Grizzly Bear

A potential cumulative effects assessment was conducted because four residual Project effects were predicted (habitat loss, disturbance due to noise, attraction, reduction in reproductive productivity). The geographical boundary used for the potential cumulative effects assessment was based on a buffer around Project infrastructure using the diameter of the largest area within which a grizzly bear can range and still interact with the Back River Project, and included areas within Nunavut and the

Northwest Territories. There are eleven potential projects (including four potential future projects) that could act cumulatively with Project residual effects within the cumulative assessment area. The magnitude of all four residual cumulative Project effects on grizzly bears in the cumulative effects boundary is low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the project footprint, sporadic in nature, confined to the local areas for habitat loss and noise disturbance, and potentially the cumulative study area for reduction in reproductive productivity. The residual cumulative effects are anticipated to be reversible with the possible exception of habitat loss within specific areas of the project footprints. Contingent on the implementation of mitigation measures outlined in the wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of residual cumulative effects for grizzly bear is predicted to be **Not Significant**.

8.3.4 Musk Ox

A potential cumulative effects assessment was conducted for muskox because three residual Project effects were predicted (habitat loss, disturbance due to noise, reduction in reproductive productivity). The geographical boundary used for the potential cumulative effects assessment was based on a diameter around the Project using the longest straight line distance travelled by a radio-collared muskox in the west Kitikmeot region and included areas in both Nunavut and the Northwest Territories. There were 12 possible projects (including five potential future projects) that could act cumulatively with Project residual effects within the muskox cumulative effects assessment area. The magnitude of all three of the residual cumulative effects on muskox is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the project footprints, sporadic in nature, confined to local areas for habitat loss and noise disturbance, and potentially the cumulative study area for reduction in reproductive productivity. The residual cumulative effects are anticipated to be reversible with the exception of habitat loss within specific areas of the project footprints. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of cumulative effects for muskox is predicted to be **Not Significant**.

8.3.5 Wolverine/Furbearers

A potential cumulative effects assessment was conducted because residual Project effects were predicted (habitat loss, disturbance due to noise, attraction, reduction in reproductive productivity). The geographical boundary used for the potential cumulative effects assessment was based on the movement distances defined for wolverine and wolves that interact with the Project. For wolverine this area was identical to the RSA, but also included a buffer around the TCWR connector. For wolves, this area represents the summer ranges of the Bathurst and Beverly caribou herds as wolves follow caribou for prey when they occur within range of the Project. This spatial boundary included areas in Nunavut and the Northwest Territories. There were three possible projects (including two potential future projects) that could act cumulatively with Project residual effects within the wolverine cumulative effects assessment area, and fifteen possible projects (including six potential future projects) that could act cumulatively with Project residual effects within the wolf cumulative effects assessment area. The magnitude of all residual cumulative effects on wolverine and furbearers is expected to be low, the duration medium term (confined to the life of the Project) with the exception of habitat loss within specific areas of the project footprints, sporadic in nature, confined to local areas for habitat loss, disturbance, and attraction, and potentially the cumulative study area for reduction in reproductive productivity. The residual cumulative effects are anticipated to be reversible with the exception of habitat loss within specific areas of the project footprints. Contingent on the implementation of mitigation measures outlined in the Wildlife Mitigation and Monitoring Plan (Volume 10, Chapter 20) and assuming similar measures for future projects, the significance of cumulative effects for wolverine and furbearers is predicted to be **Not Significant**.

8.3.6 Migratory Birds

A potential cumulative effects assessment was not conducted for migratory birds as the zone of influence of Project-related residual effects on migratory birds in expected to be limited to within the Project PDAs. No additional projects fall inside of the Project PDAs, thus no cumulative effects on migratory birds are anticipated to occur.

8.3.7 Raptors

A potential cumulative effects assessment was not conducted for raptors as the zone of influence of Project-related residual effects on raptors in expected to be limited to within a 12 km radius from the Project infrastructure which corresponds to the maximum expected home range of breeding raptors. No additional projects fall within 12 km of the Project PDAs, thus no cumulative effects of the Project on raptors are anticipated to occur.

8.4 FRESHWATER ENVIRONMENT

8.4.1 Hydrology

A potential cumulative effects assessment was conducted because residual Project effects were predicted (changes in streamflows and lake volumes within the Project footprint or freshwater LSA). Project residual effects are anticipated to be confined to the Project footprint or freshwater LSA. The closest proposed project that could potentially interact with the Project residual effects is the proposed BIPR project, which has a small section of all-weather road proposed at the northwest edge of the George Property freshwater RSA. The small section of proposed all-weather road is not anticipated to result in any effects to hydrology, and given that the Project residual effects were confined to the LSA, there are no expected cumulative effects on hydrology.

8.4.2 Freshwater Water Quality

A potential cumulative effects assessment was conducted because residual Project effects were predicted (water quality changes due to site construction activities, site contact water, mine contact water). Project residual effects are anticipated to be confined to the freshwater LSA. The closest proposed project that could potentially interact with the Project residual effects is the proposed BIPR project, which has a small section of all-weather road proposed at the northwest edge of the George Property freshwater RSA. The small section of proposed all-weather road is not anticipated to result in residual effects to water quality, and given that the Project residual effects were confined to the LSA, there are no expected cumulative effects on freshwater water quality.

8.4.3 Freshwater Sediment Quality

A potential cumulative effects assessment was conducted because residual Project effects were predicted (sediment quality changes due to site construction activities, site contact water, mine contact water. Project residual effects are anticipated to be confined to the freshwater LSA. The closest proposed project that could potentially interact with the Project residual effects is the proposed BIPR project, which has a small section of all-weather road proposed at the northwest edge of the George Property freshwater RSA. The small section of proposed all-weather road is not anticipated to result in residual effects to sediment quality, and given that the Project residual effects were confined to the LSA, there are no expected cumulative effects on freshwater sediment quality.

8.4.4 Freshwater Fish/Aquatic Habitat

A potential cumulative effects assessment was not conducted because there were no residual Project effects anticipated on the VEC freshwater fish/aquatic habitat after the application of mitigation and management measures. As no Project residual effects are anticipated, there are no effects that could act cumulatively with other projects.

8.4.5 Freshwater Fish Community

A potential cumulative effects assessment was conducted because a residual Project effect was predicted (reduction or loss of the Arctic Grayling population downstream of Llama Lake). The Project residual effect is anticipated to be confined to the freshwater LSA. The closest proposed project that could potentially interact with the Project residual effect is the proposed BIPR project, which has a small section of all-weather road proposed at the northwest edge of the George Property freshwater RSA. The small section of proposed all-weather road is not anticipated to result in residual effects to the freshwater fish community, and given that the Project residual effect was confined to the LSA, there are no expected cumulative effects on freshwater fish community/Arctic Grayling.

8.5 MARINE ENVIRONMENT

8.5.1 Marine Water Quality

A potential cumulative effects assessment was conducted because residual Project effects were predicted (water quality changes due to ship propeller wash, site preparation, and site contact water). The Project residual effects are expected to be confined to the marine LSA. There are no past, present, or reasonably foreseeable future projects within the marine LSA and therefore no potential cumulative effects on marine water quality are expected.

8.5.2 Marine Sediment Quality

A potential cumulative effects assessment was conducted because residual Project effects were predicted (water quality changes due to ship propeller wash, site preparation, and site contact water). The Project residual effects are expected to be confined to the marine LSA. There are no past, present, or reasonably foreseeable future projects within the marine LSA and therefore no potential cumulative effects on marine sediment quality are expected.

8.5.3 Marine Fish/Aquatic Habitat

A potential cumulative effects assessment was not conducted because there were no residual Project effects anticipated on the VEC marine fish/aquatic habitat after the application of mitigation and management measures. As no Project residual effects are anticipated, there are no effects that could act cumulatively with other projects.

8.5.4 Marine Fish Community

A potential cumulative effects assessment was conducted because a residual Project effect was predicted (effects of shipping noise on Arctic Char). There are two potential future projects that could act cumulatively with the Project residual effects: the proposed Bathurst Inlet Port and Road Project (BIPR) and the proposed Hackett River Project which would use the same port location as BIPR. If these two proposed projects would proceed, marine Arctic Char would be exposed to noise from shipping within the marine RSA. The total amount of noise that Arctic Char may be exposed to could increase if ships passed close to each other, but the magnitude of the effect is expected to be low, as noise increases would be confined to within approximately 100 m of the ship location and drop to background levels outside of this area. The frequency of noise may increase, but would continue to be sporadic. The cumulative effect would cease once shipping activity has ended for the Project, so the cumulative effect would be of medium duration and would be reversible. Assuming that mitigation measures would be in place for future projects similar to what will be in place for the Back River Project, the significance of the residual cumulative effect of shipping noise on Arctic Char is predicted to be **Not Significant**.

8.5.5 Seabirds and Seaducks

A potential cumulative effects assessment was conducted because residual Project effects were predicted (disturbance, reduction in reproductive productivity). Project residual effects have the potential to interact with the reasonably foreseeable future BIPR and Hackett River projects as they would be located within the marine RSA. The cumulative residual effects were expected to be of low magnitude, of medium duration (confined to the life of the Project), sporadic in nature, confined to within the marine RSA, and reversible. Overall, the significance of the residual cumulative effects is anticipated to be **Not Significant** and a population level effect on seabirds and seaducks is not expected to occur.

8.5.6 Ringed Seals

A potential cumulative effects assessment was not conducted because there were no residual Project effects anticipated on the VEC ringed seals. As no Project residual effects are anticipated, there are no effects that could act cumulatively with other projects.

8.6 HUMAN ENVIRONMENT

8.6.1 Archaeology

A potential cumulative effects assessment was conducted because residual Project effects were predicted (impacts to known and unknown archaeological sites). The Project residual effects are expected to be confined to the Project footprint. There are no past, present, or reasonably foreseeable future projects within the Project footprint and therefore no potential cumulative effects on archaeological sites are expected.

8.6.2 Socio-Economics

For socio-economics, the VSECs economic development, business opportunities, and education/training all had positive Project-related residual effects. Positive residual effects were not included in a potential cumulative effects assessment or transboundary analysis.

8.6.2.1 Employment

A potential cumulative effects assessment was conducted because a negative residual Project effect was predicted (changes to competition for local labour). The geographic boundary for the cumulative effects assessment was expanded to include those projects and human activities in the Kitikmeot and NWT considered to have potential effects within the socio-economic RSA that are relevant to current residents. There was one past, four current, and five future projects that had the potential to result in cumulative changes to the VSEC employment related to competition to local labour for Kitikmeot residents. The CEA concluded that the development of the Project and one or more additional projects would result in residual negative ‘changes to competition for local labour’. The residual cumulative effect is expected to be reversible, of low to moderate magnitude, and be of local geographic extent. The duration is determined as medium term (confined to the life of the Project) the equity neutral, and frequency sporadic. The residual cumulative effect is determined as unlikely and **Not Significant** with a medium level of confidence.

8.6.2.2 Health and Community Well-being

A potential cumulative effects assessment was conducted because negative residual Project effects were predicted (changes to individual and family spending, changes to family and household structure). The geographic boundary for the cumulative effects assessment was expanded to include those projects and human activities in the Kitikmeot and NWT considered to have potential effects within the socio-economic RSA that are relevant to current residents. There was one past, four current, and five future projects that had the potential to result in cumulative changes to the VSEC health and community well-being. The development of one or more additional projects is expected to increase the number of households that may experience a negative outcome as related to changes in family and household structure. This residual cumulative effect is negative, reversible, low in magnitude, medium term in duration, and neutral in equity. The frequency of this residual cumulative effect is continuous and expected to remain mainly within the LSA, although there is potential for the effect to expand to the RSA. The cumulative residual effect is determined to be **Not Significant.**

8.6.3 Land Use

8.6.3.1 Non-traditional Land and Resource Use

A potential cumulative effects assessment was conducted because negative residual Project effects were predicted (changes in access to land and resources, changes to experience of the natural environment, changes to the abundance and distribution of resources). The geographic boundary for the land use CEA was expanded to include those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. The Project residual effects on non-traditional land and resource use could interact with potential residual effects of two past projects, one current project and three future projects. The CEA determined the development of the Project and one or more additional projects may result in one adverse residual cumulative effect on non-traditional land and resource use; specifically, changes to the experience of the natural environment. This cumulative residual effect is characterized as moderate in magnitude, medium term in duration, and reversible. The frequency of the residual cumulative effect is expected to be sporadic and the geographic extent is regional. Overall, this residual cumulative effect is rated as **Not Significant.**

8.6.3.2 Subsistence Economy and Land Use

A potential cumulative effects assessment was conducted because negative residual Project effects were predicted (changes in access to land and resources, changes to experience of the natural environment, changes to the abundance and distribution of resources). The geographic boundary for the land use CEA was expanded to include those projects and human activities in the western Kitikmeot considered to have potential effects within the land use RSA that are relevant to current land use activities. The Project residual effects on the VSEC subsistence economy and land use could interact with potential residual effects of two past projects, one current project and three future projects. The development of the Project and one or more additional projects could result in adverse residual cumulative effects on subsistence harvesters. The residual cumulative effects are characterized as moderate in magnitude, medium term in duration, and reversible. The frequency of the residual cumulative effects is expected to be sporadic and the geographic extent is the RSA. Overall, the three residual cumulative effects are each rated as **Not Significant.**

8.6.4 Country Foods

A potential cumulative effects assessment was not conducted because there were no residual Project effects anticipated on the VEC country foods after the application of mitigation and management measures. As no Project residual effects are anticipated, there are no effects that could act cumulatively with other projects.

8.7 SUMMARY OF RESIDUAL CUMULATIVE EFFECTS AND SIGNIFICANCE

Table 8.7-1 provides a summary of all of the identified cumulative residual effects on the VECs and VSECs. There have been no significant residual Project-related effects and no significant residual cumulative effects identified as a result of the proposed Back River Project.

Table 8.7-1. Summary of Cumulative Residual Effects and Significance

Description of Cumulative Residual Effects	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Rating
Vegetation and Special Landscape Features									
Vegetation Loss	Negative	Low	Long	Once	Footprint	Irreversible	Likely	High	Not Significant
Special Landscape Feature Loss	Negative	Low	Long	Once	Footprint	Irreversible	Likely	Medium	Not Significant
Caribou									
Habitat Loss	Negative	Low	Long	Sporadic	Local	Irreversible	Likely	High	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Grizzly Bear									
Habitat Loss	Negative	Low	Long	Sporadic	Local	Irreversible	Likely	High	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Attraction	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Muskox									
Habitat Loss	Negative	Low	Long	Sporadic	Local	Irreversible	Likely	High	Not Significant
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	Medium	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Wolverine and Furbearers									
Habitat Loss (Wolverine)	Negative	Low	Long	Sporadic	Regional	Irreversible	Likely	High	Not Significant
Habitat Loss (Grey Wolf)	Negative	Low	Long	Sporadic	Local	Irreversible	Likely	High	Not Significant
Disturbance due to Noise (Wolverine)	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Disturbance due to Noise (Grey Wolf)	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Attraction (Wolverine)	Negative	Low	Medium	Sporadic	Local	Reversible	Moderate	High	Not Significant
Reduction in Reproductive Productivity (Wolverine)	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant

(continued)

Table 8.7-1. Summary of Cumulative Residual Effects and Significance (completed)

Description of Cumulative Residual Effects	Significance Criteria			Likelihood of Occurrence			Overall Significance Rating		
	Direction	Magnitude	Duration	Frequency	Geographic Extent	Reversibility	Probability	Confidence	Rating
Marine Fish Community (Arctic Char)									
Direct Mortality and Population Abundance: Shipping Noise	Negative	Low	Short	Sporadic	Regional	Reversible	Moderate	Medium	Not Significant
Seabirds and Seaducks									
Disturbance due to Noise	Negative	Low	Medium	Sporadic	Regional	Reversible	Likely	High	Not Significant
Reduction in Reproductive Productivity	Negative	Low	Medium	Sporadic	Regional	Reversible	Unlikely	Medium	Not Significant
Socio-economics									
Changes to Competition for Local Labour (Employment)	Negative	Low/ Moderate	Medium	Sporadic	Local	Reversible	Unlikely	Medium	Not Significant
Changes to Individual and Family Spending (Community Well-being)	Positive/ Negative	Moderate	Short/ Medium	Continuous	Local/Regional	Reversible	Moderate	Medium	Not Significant
Changes to Family and Household Structure (Community Well-being)	Positive/ Negative	Low	Medium	Continuous	Local/Regional	Reversible	Moderate	Medium	Not Significant
Land Use									
Changes in Access to Land and Resources (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	Medium	Not Significant
Changes to the Experience of the Natural Environment (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	Medium	Not Significant
Changes to Abundance and Distribution of Resources (Non-traditional Land and Resource Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	Medium	Not Significant
Changes in Access to Land and Resources (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	Medium	Not Significant
Changes to the Experience of the Natural Environment (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Regional	Reversible	Likely	Medium	Not Significant
Changes to Abundance and Distribution of Resources (Subsistence Economy and Land Use)	Negative	Moderate	Medium	Sporadic	Local/ Regional	Reversible	Likely	Medium	Not Significant

9. Reclamation and Closure

9. Reclamation and Closure

9.1 OVERVIEW AND SCHEDULE

Mine closure is expected to take 10 years and consist of three phases:

- Phase 1 — approximately two (2) years of active reclamation and active filling of the open pits with lake water.
- Phase 2 — up to seven (7) years of additional active filling of the open pits at the Goose site.
- Phase 3 — a final demobilization at the beginning of Year 10.

A minimum of five (5) years of post-closure monitoring will follow the above phases of mine closure.

Achieving chemical stability will be a key focus of mine closure. This will include encapsulation of mine wastes (PAG waste rock and tailings) with nPAG waste rock and active filling of open pits with water.

WSRAs and the TIA will be covered with nPAG to promote the aggregation of permafrost to encapsulate PAG materials. WRSAs containing PAG will be constructed during operations so that the waste rock stockpiled is allowed to freeze. This is expected to reduce the generation of adverse water quality runoff. The nPAG cap will raise the height of the active layer in the permafrost to ensure that the PAG waste rock remains permanently frozen.

A portion of the walls of the open pits will be comprised of materials expected to generate acid and leach metals. Passive filling times of the pits through runoff and direct precipitation range from approximately 14 to 176 years. Once filled, the water in the pits will seasonally overflow and discharge to nearby surface waters. If the pits were left to fill passively, it is expected that ARD will have progressed and the resultant water quality would not meet effluent limits specified in the MMER. In this case, it would be necessary to treat the pit waters before discharging to local receiving waters.

In order to mitigate water treatment, the open pits will be actively filled with lake water to reduce the generation of acid and the leaching of metals. This is expected to limit acid generation and metal leaching so that the pit water will meet applicable discharge criteria and can be passively discharged to nearby watercourses. The length of time required to fill the Goose Property pits will be based on a water take that protects fish and fish habitat in the nearby lakes.

Prior to actively filling the Umwelt pit, the underground portal at the bottom of the Umwelt pit will be sealed with a concrete plug. Saline groundwater beneath the permafrost has a static water level just below ground surface. The plug will prevent the saline groundwater from filling the Umwelt pit.

Industry standard reclamation methods will be employed to close out the remaining three sites (Goose, George, and the MLA). Hazardous materials will be collected for off-site disposal including hazardous components of vehicles and equipment (i.e., fuel tanks, gear boxes, and hydraulic oil). Equipment stripped of hazardous components will be disposed of in an open pit or within a closure landfill constructed in one of the WRSAs. Buildings will be demolished and disposed of in the same closure landfill. Culverts will be removed from roads and the natural drainage restored, but the roads will otherwise remain intact. The asphalt surfacing will be removed from the Goose site airstrip, but the airstrips will remain functional with a gravel surface to support ongoing closure and post-closure monitoring activities.

Equipment and materials at the MLA will be disposed on-site following the same decontamination procedures. Rockfill used to create the laydown area will be used to create an on-site landfill at the MLA.

The winter roads associated with the Project, including the road between the George and Goose Sites, to the MLA, and the Tibbitt-to-Contwoyto winter road connector are not expected to require any reclamation, but will be inspected prior to completion of the active closure phase to identify any areas of potential physical instability (i.e., erosion).

Logistics is an important consideration in the closure and reclamation of the Project. Due to the relatively high cost to construct and operate the Project's winter roads, the closure strategy involves minimizing winter road use during active closure to the extent possible. Equipment and materials required for mine closure, including the fuel required for the first two years (during which the bulk of earthworks will be carried out), will be brought to site by winter road during the final year of operations or at the start of the closure phase. Sabina will not look to bring salvageable equipment off-site for resale, as it is expected that the cost of removal will exceed salvage value, when the cost of removing the equipment from site is considered. Instead, equipment and materials will be landfilled on-site.

In Year 4 of closure, once reclamation (including pit filling) is completed at the George site and major closure activities (i.e., earthworks) have been completed at the Goose site, a "CAT train" will be operated during the winter to remove any materials and equipment (including hazardous wastes) to the MLA. A sealift will visit the MLA the following summer to remove any hazardous materials and other wastes that have been CAT-trained to the MLA.

From this point (i.e., Closure Year 4 to Closure Year 9), a smaller crew will occupy a small camp at the Goose site to oversee seasonal pit filling. This camp will be supported entirely by airlifts, including the delivery of fuel. At Year 10 when pit filling has been completed, it will be necessary to dispose of the pumping equipment, pipelines, the small fleet of mobile equipment, and the small camp. Any contractor equipment requiring removal from site will be CAT-trained to the MLA for subsequent sealift off-site.

Additional detail regarding mine closure and reclamation measures is provided below. A preliminary Mine Closure and Reclamation Plan, with figures referenced in this chapter, is provided in Volume 10, Chapter 29.

9.2 REGULATORY FRAMEWORK REGARDING MINE CLOSURE

Reclamation and closure of the mine will be carried out in accordance with a Mine Closure and Reclamation Plan (MCRP) to be approved under Sabina's future Type A Water License to be issued by the Nunavut Water Board. Planning for mine closure in Nunavut is guided by the following:

- Nunavut Mine Site Reclamation Policy for Nunavut (Indian and Northern Affairs Canada [INAC] 2002); and
- Mine Site Reclamation Guidelines for the Northwest Territories (INAC 2007).

Financial security is required under Type A Water Licences and is typically posted to the AANDC (previously INAC) for water-related closure costs, and the landowner(s) for land-based reclamation activities. The majority of financial security will likely be held by the KIA as the majority landowner for the Project.

9.3 CLOSURE OBJECTIVES

The Preliminary MCRP is based on the following objectives.

Objective 1: Design the Mine for Closure

This involves identifying the processes and forces that may act upon the mine components after mine closure and reclamation so that they can be factored into the design and operation of the mine. This includes adoption of the objectives outlined by AANDC (2007) as follows:

- Design and construct mine components in such a way that they achieve, or can readily be modified to achieve, the reclamation objectives and closure criteria.
- Determine mine reclamation costs as part of the closure planning and provide adequate security to cover the cost of reclamation over the life of the mine to ensure the closure criteria can be met.
- Include reclamation planning in the development and operation of the mine. This planning will ensure that mine operating activities do not unnecessarily increase the amount of reclamation work or effectively compromise what might otherwise be promising reclamation activities.
- Incorporate progressive reclamation activities into operation of the mine.
- Coordinate among Aboriginal, Federal and Territorial governments; land owners; local communities; regulatory authorities; the mining company; and other impacted parties to ensure that appropriate objectives, closure criteria, and activities are developed.

Objective 2: Achieve Physical Stability

Mine components that will remain after mine closure will be constructed or modified at closure to be physically stable so as to not erode, subside, or move from its intended location under natural extreme events or disruptive forces to which it may be subjected after closure. The objective of physical stability is to not pose a hazard to humans, wildlife, or environment health and safety.

Achieving physical stability includes establishing the conditions post-closure that allow for natural re-vegetation so that the land returns to productive use by wildlife. Active re-vegetation of the site as part of closure is not planned given the cold climate setting of the Project as well as the precedent established for mine closure in Nunavut.

Objective 3: Achieve Chemical Stability

Mine components including wastes remaining after mine closure will be chemically stable. Chemical constituents released from the mine components should not endanger public, wildlife, or impact environmental health and safety. These constituents should not result in the inability to achieve the water quality objectives in the receiving environment and should not adversely affect long-term soil or air quality. If necessary, appropriate long-term management of potentially acid generating/metal leaching materials and any affected waters will be considered.

Objective 4: Consider Future Use and Aesthetics

The site will be compatible with the surrounding lands once reclamation activities have been completed. Consideration of future use and aesthetics involves the following elements:

- naturally occurring biophysical conditions, including any physical hazards of the area (pre- and post-development);

- characteristics of the surrounding landscape pre- and post-development;
- level of ecological productivity and diversity prior to mine development and intended level of ecological productivity and diversity for post-mine closure;
- local community values and culturally significant or unique attributes of the land; and
- level and scale of environmental impact.

An important aspect of northern mine closure is the incorporation of community perspectives on closure. This is a stated requirement of the NWT Mine Closure Guideline (AANDC 2002). It is also a key element of the NIRB environmental review and the NWB water licensing processes.

In the short term, community perspectives are expected to be gathered during the permitting phase through the public environmental review and water licensing processes. Beyond the permitting phase, communities and workers will become more familiar with the Project through the construction and operation phases and will be able to provide input into mine closure through both Sabina's worker and community engagement programs as well as during formal reviews of future interim MCRPs (part of water licence implementation and renewal).

Criteria

Thresholds identified in the DEIS will be adopted and applied to mine closure and reclamation.

9.4 OPEN PITS

As described in Section 9.1, a portion of the walls of the open pits will be comprised of materials expected to generate acid and leach metals and passive filling times of the pits through runoff and direct precipitation range from approximately 14 to 176 years. The open pits will be actively filled with lake water to restrict the generation of acid and the leaching of metals, so that the pit water is expected to meet applicable discharge criteria and can be passively discharged to nearby watercourses. Each pit will take between 1 and 4 years to fill, with pit filling occurring primarily on a seasonal basis from June through October. Pit filling times are based on an annual water take of 4 Mm^3 from Goose, Propeller, and possibly other nearby lakes, up to 0.9 Mm^3 from Lower Long Lake and 500,000 m^3 from George Lake.

Prior to filling the Umwelt pit, the underground portal at the bottom of the Umwelt pit will be sealed with a watertight plug to prevent the saline groundwater from filling the pit.

9.5 WASTE ROCK STOCKPILES

Waste rock stockpiles will be covered with a 4 m cap nPAG material to promote the aggregation of permafrost and encapsulate PAG material. A disposal plan has been developed that maximizes the placement of nPAG waste rock over final PAG lifts as part of mine operations (i.e., by using nPAG waste rock coming directly from the pits) in order to minimize the amount of dedicated capping effort required at closure. The nPAG stockpiles will be re-graded where rock has been extracted to cover the adjacent PAG pile. The nPAG waste rock, to be used as final cover material for each PAG waste rock pile will be sourced as follows:

- Umwelt/Llama waste rock stockpile:
  - A portion of the nPAG cover will be derived from the Llama pit operation.
  - Approximately 2.6 Mm^3 of nPAG waste rock will be transported from the active Goose pit operations in Years 4 and 5.

  - The Umwelt/Llama waste rock stockpile will be capped with approximately 2.4 Mm^3 of stockpiled nPAG waste rock.
- Goose waste rock stockpile:
  - Most of the nPAG cover will be derived from the Goose pit operation.
  - Final capping of the Goose waste rock stockpile will be completed with approximately 2.4 Mm^3 of stockpiled nPAG waste rock.
- LCP-North waste rock stockpile:
  - A portion of the nPAG cover will be derived from the LCP-North pit operation.
  - Approximately 221,000 m^3 of nPAG waste rock will be transported from the active Locale 2 pit operation to the LCP-North waste rock stockpile in Year 8.
  - Approximately 400,000 m^3 of stockpiled nPAG waste rock will be used to complete the nPAG cover of the LCP-North waste rock stockpile.
- Locale 1 waste rock stockpile:
  - A portion of the nPAG cover will be derived from the Locale 1 pit operation.
  - Approximately 175,000 m^3 of nPAG waste rock will be transported from the active LCP-North pit operation to the Locale 1 waste rock stockpile in Year 7.
  - Approximately 100,000 m^3 of stockpiled nPAG waste rock will be used to complete the nPAG cover of the Locale 1 waste rock stockpile.
- Locale 2 Waste Rock Stockpile:
  - A portion of the nPAG cover will be derived from the Locale 2 pit operation.
  - Approximately 400,000 m^3 of stockpiled nPAG waste rock will be used to complete the nPAG cover of the Locale 2 waste rock stockpile (final closure cost).

Once capped, waste rock stockpile runoff is expected to be suitable for discharge without treatment. This assumption will be validated by water quality modelling in the FEIS. On this basis, active management of runoff is planned for the first two years of closure.

9.6 TAILINGS STORAGE FACILITY

The TIA will be closed out by draining off and treating tailings supernatant, constructing a closure spillway and capping the TIA with a 2 m cover of nPAG waste rock. Specific activities include:

- Operate the tailings beach in later years so that the tailings will slope to a future closure spillway along the west embankment.
- Remove tailings discharge infrastructure.
- Treat approximately 3.7 to 6 Mm^3 of tailings supernatant to meet MMER requirements. Treated supernatant will be pumped to the Llama open pit.
- Cap the TIA with a 2 m thick cap of nPAG waste rock.
- Construct a closure spillway along the west embankment so runoff from the TIA will report to collection ditch through the Llama/Umwelt WRSA and report to the Llama open pit.

9.7 BUILDINGS AND EQUIPMENT

The salvage value of equipment and machinery is expected to be limited due to the remoteness of the site. As such, all buildings, machinery and equipment will be disposed of in an on-site landfill after any hazardous material has been removed. Equipment containing hydrocarbons that cannot be readily cleaned will be removed from site for recycling or disposal at a licensed facility. Above grade concrete structures will be broken and reduced to near grade. Rebar will be cut so that it is flush with the surface of the concrete. Concrete structures will be infilled with nPAG waste rock, if needed.

Developed areas at each of the sites will be re-graded and contoured to remove uneven ground for public safety, minimize the potential for erosion, and to blend with the surrounding landscape.

9.8 ROADS AND AIRSTRIPS

Culverts will be removed from roads and the natural drainage restored. Roads will otherwise remain intact to facilitate long-term site access for monitoring and inspection.

Asphalt surfacing, if any, will be removed from the Goose site airstrip, but otherwise all airstrips (Goose, George, MLA) will remain functional with a gravel surface for use during post-closure monitoring.

9.9 PIPELINES AND POWER DISTRIBUTION LINES

Pipelines (such as tailings, freshwater and effluent) will be purged, dismantled, and disposed of in an open pit or a landfill within a waste rock stockpile. On-site power lines and associated materials will be dismantled and deposited in the closure landfill once power is no longer required for reclamation activities including pumping. Decommissioning of pipelines and distribution lines used for active pit filling at the Goose site will not be completed until the final year of closure.

Other power equipment and materials including oil-filled transformers will be drained and disposed of on-site, with the oil removed for off-site disposal with other hazardous wastes.

9.10 WASTE MANAGEMENT SITES

Inert landfills will be established within waste rock stockpiles at each of the Goose and George Sites during the construction and operation phases. These landfills will be used as closure landfills if they have adequate capacity. Additional closure landfills could be established within other waste rock stockpiles, if an alternative location is more suitable or if the operation phase landfills reach capacity. The landfills will be closed by applying a 2 m cover of nPAG waste rock as a final cover.

The closure schedule will allow for substantial closure of landfills and removal of most hazardous materials off site during Year 4 of closure. The Project will continue for another five years as a smaller care and maintenance operation while the Goose Site open pits are filled. After all pits have been actively filled, a final decommissioning and demobilization operation will be required in Year 10. The final camp, mobile equipment, pipelines and pumping systems will require landfilling and any remaining fuel and hazardous wastes will require removal from site by air.

9.11 WATER MANAGEMENT SYSTEMS

9.11.1 Goose Site Water Management during Closure

Water management will be an important element of the active closure phase at the Goose Site. Water management systems associated with the TIA will be decommissioned in the first year of closure. The tailings supernatant pond is expected to be high in arsenic and possibly other metals, and will contain residual concentrations of cyanide. A water treatment plant will be established at the TIA to treat the tailings supernatant water in the first year of closure prior to discharge to the Llama pit.

Active pit filling operations will utilize existing water management systems to the extent possible, with dedicated water management facilities constructed to facilitate active pit filling. To accomplish the pit filling, the following water management measures and systems will be implemented during active closure at the Goose mine site:

- The pump and pipeline system established during the operation phase to transfer water from Propeller Lake to Goose Lake will remain active until pit filling is complete at the end of Year 9.
- The freshwater intake in Goose Lake and a portion of the water supply pipeline to the process plant will be used with a pipeline extension to fill the Llama and Umwelt pits.
- A dedicated pump/pontoon system and pipeline will be established on Goose Lake near to the Goose pit in Year 6 to facilitate active filling of the Goose pit in Years 7 to 9.
- Collection ponds at the Umwelt/Llama WRSA will be decommissioned early in the closure phase once a spillway has been constructed to allow runoff from the TIA and WRSA to report to the Llama pit.

Runoff from the Goose WRSA collection pond will be monitored and transferred by pipeline or truck to the Goose pit until the runoff meets effluent discharge criteria. Once the runoff consistently meets discharge criteria, the pond will be decommissioned and the runoff will be allowed to discharge to the nearby watercourse.

Runoff from the plant site area, including the former ore stockpiles, will be monitored and transferred by pipeline or truck to the Umwelt pit until the runoff meets effluent discharge criteria. Once the runoff consistently meets effluent discharge criteria, the pond will be decommissioned and the runoff will be allowed to discharge over land.

Once pit filling is completed at the Llama pit at the end of Year 3, a portion of the pipeline will be dismantled and flow will be redirected to the Umwelt pit. In Year 7, the pipeline and pumping systems can be dismantled and disposed of in the closure landfill. The intake will be decommissioned by removing piping systems and backfilling with nPAG waste rock (as required).

From Years 7 to 9, closure activities will be limited to the active filling of the Goose pit during the warmer months and the ongoing post-closure monitoring of closed-out facilities. Once the Goose pit has been filled, the dedicated piping, pump, and pontoon system will be dismantled and disposed of in the landfill. The Propeller Lake to Goose Lake supplementation pumping system can also be dismantled and landfilled.

Ditches and berms will remain in place to continue to direct runoff to the identified receiving environment during the post-closure period. However, collection ponds will have been breached, liners removed and landfilled, and the areas recontoured and armoured (if necessary) to allow for passive runoff. Goose mine site conditions and final discharge locations in post-closure are presented in Volume 10, Chapter 29, Figure 4.11-2.

9.11.2 George Site Water Management during Closure

The active closure phase concept for the George Site is shown in Volume 10, Chapter 29, Figure 4.11-3. The following water management measures and systems will be implemented during active closure at the George Site in order to accomplish the pit filling plan described in Volume 10, Chapter 29, Section 4.3.

The collection ponds and water treatment plants will continue to collect and treat runoff from the WRSAs until the effluent quality meets discharge requirements. This is expected to occur once the WRSAs have been capped. Alternatively, the collection ponds could be pumped into the open pits.

The water intake for the camp at George Lake will be used to actively fill Locale 2 pit over a period of three (3) years.

A dedicated pump/pontoon system and pipeline will be established on Long Lake near to the LCP-North pit to facilitate active filling of both the LCP-North and Locale 1 pits over a period of four (4) years.

Once the Locale 1 and Locale 2 pits have filled, the dykes will be breached during winter to allow for the connection of the pit lakes with the adjacent lakes.

If runoff meets effluent discharge criteria, all pumping systems and collection ponds will be dismantled at the same time as the camp and will be disposed of in the landfill. Ditches and berms will remain in place and continue to direct runoff to the identified receiving environment during the post-closure period. However, collection ponds will have been breached, liners removed and landfilled, and the areas recontoured and armoured (if necessary) to allow for passive runoff.

George mine site conditions and final discharge locations in post-closure are presented on Volume 10, Chapter 29, Figure 4.11-4.

9.12 CHEMICALS AND EXPLOSIVES

Hazardous materials will be collected for off-site disposal. Hazardous material will include: unused chemical reagents, unused explosives, unused fuel, used oil, used glycol, and the hazardous components of vehicles and related equipment (i.e., fuel tanks, gear boxes and hydraulic oil).

All petroleum products and chemicals will be removed from the site and transported to a licensed facility for disposal. Fuel tanks will be steam cleaned, cut up and will be landfilled in a pit or waste rock stockpile. The rinse water will be treated before disposal.

9.13 CONTAMINATED SOIL

Soil found to exceed applicable Nunavut Site Remediation criteria will be bioremediated on site within landfarms at the Goose site and MLA. These landfarms will be established during the construction and operation phases. A site investigation will be undertaken during the closure phase to locate any previously unidentified hydrocarbon contaminated materials. Soil will be bioremediated in the landfarms and water (snow and ice) will be treated through an oil-water separator to meet oily water discharge criteria identified in the water licence. The length of time it will take to bioremediate and treat is dependent on the final quantity of contaminated materials at closure.

9.14 PROGRESSIVE RECLAMATION

9.14.1 Definition of Progressive Reclamation

Progressive reclamation is defined as the opportunistic reclamation activities completed during the operational phase of a project (AANDC 2007). Progressive reclamation can increase efficiencies by utilizing available mining resources to conduct reclamation activities during the revenue-generating phase of the project. Progressive reclamation typically reduces the final closure costs as well as the duration of closure and reclamation activities.

9.14.2 Candidate Facilities/Areas and Reclamation Activities

Progressive reclamation activities can take place during either the construction or the operation phases. At both mine sites, reclamation efforts will be focused on any final earthworks opportunities that present themselves, including:

Open Pits

- Establish partial or full boulder fences around open pits and TIA.
- Install proper signage around mine openings and TIA.
- Construct open pit spillways.

WRSAs

- Progressively cap PAG waste rock within the WRSAs using nPAG waste rock derived from adjacent or nearby active pit operations.
- Application of a final cover over PAG waste rock using nPAG waste rock from active pit operations represents the most substantial progressive reclamation effort proposed. This is described further in Section 4.5, which includes a detailed waste rock disposal schedule and the final cover plan to be executed as part of both progressive and final reclamation.

Buildings and Infrastructure

As buildings and infrastructure become unnecessary during the life of the mine, they will be removed and the sites will be reclaimed as much as practicable.

Contaminated Materials and Waste Disposal

Materials (soil, snow, ice) that may become contaminated during construction and operation due to fuel or other spills will be cleaned up immediately following the spill. Soil will be remediated onsite in lined containment areas and final disposal will be in a WRSA once the soil meets Nunavut Site Remediation criteria for industrial land use. Water, snow or ice will be collected in a lined containment area and treated using an oil-water separator during the summer months. Discharge to land (not directly to surface waters) is possible provided that the treated water meets Water Licence discharge limits for oily waste water.

Hazardous wastes will be shipped off-site periodically to minimize the amount of waste requiring removal at closure.

Reclamation Studies

Several areas of study have been identified as part of the preliminary MCRP. Several of these can be addressed during the feasibility study and development of the Final EIS, while others will take longer to conclude. The reclamation studies and proposed implementation schedule are summarized in Table 9.14-1.

9.14.3 Progressive Reclamation Schedule

Progressive reclamation activities at the open pits can be completed as material becomes available to construct boulder fences and spillways. Use of nPAG waste rock as a final cover (as described in Table 9.14-1) closely follows the mine plan and waste rock production schedules.

Table 9.14-1. Proposed Reclamation Studies

Study No.	Description	Completion Timeframe
1	Confirm the available water for pit filling at the Goose site from Goose, Propeller and other lakes.	Feasibility Study and Final EIS
2	Evaluate the potential to backfill any of the pits with waste rock, and the additional option to backfill one of the Goose site pits with tailings (particularly Llama and Umwelt, located close to and downgradient from the process plant and TIA).	Feasibility Study and Final EIS
3	Bathymetric survey of Lower Long Lake to confirm available water for filling of the LCP North pit.	Feasibility Study and Final EIS
4	Additional geochemical characterization and integration of geological block model to characterize the ARD/ML potential of the pit walls that will be above the final pit lake elevations.	2014-2019 (5 years)
5	Community perspectives on closure – to be obtained during the NIRB environmental review and the NWB Type A Water Licence Application processes.	Permitting through life of Project
6	Evaluate the potential for thicker lifts of PAG waste rock, allowing for higher WRSAs with less surface area. If the WRSA footprints can be reduced, the costs to cover the piles may be reduced.	Feasibility Study and Final EIS
7	Confirm cover designs are appropriate through further modelling and monitoring of temperatures, permafrost aggregation, active layer thaw in waste rock stockpiles, etc.	Life of Project

Progressive reclamation measures will be considered successful if they are completed as described in this section and monitoring confirms that the completed work is physically and chemically stable (i.e., there are no signs of erosion or settlement, and downstream water quality meets criteria).

9.15 CLOSURE AND POST-CLOSURE MONITORING PROGRAMS

Monitoring will be carried out during the closure phase and up to 5 years post-closure to ensure that closure activities are being undertaken as identified in the Final Approved MCRP and closure objectives are being met. Specific monitoring will include:

- Supervision of closure activities to confirm conformance with the Final MCRP.
- Geotechnical inspections of TSF embankments, waste rock piles, pit walls and other areas for physical stability. Temperatures within the waste rock stockpiles will be monitored to confirm that the piles are frozen throughout except for the predicted active layer thickness.
- Water quality and aquatic effects monitoring to confirm that discharge water quality meets MMER requirements and water licence discharge and receiving waters criteria. Sabina will seek status as a recognized closed mine from Environment Canada.

10. Monitoring and Management Plans

10. Monitoring and Management Plans

Sabina (the Company) is committed to environmentally responsible and socially acceptable exploration and mining practices. The Company is dedicated to creating and maintaining a safe environment for both the land it occupies and the people that drive its success. Sabina also subscribes to the principles of sustainable development in mining. While mining cannot occur without an impact on the surrounding natural environment and communities, the company's responsibility is to limit negative environmental and social impacts and to enhance positive impacts. The executive and management team will demonstrate to employees, contractors, government and the community that the company regards excellence in environmental performance a priority. This is demonstrated in Sabina's Environmental Policy Statement that commits to:

- ensure that we design our activities and operate in compliance with all environmental regulations to minimize our impact on the environment;
- promote responsibility and accountability of managers, employees and contractors to protect the environment and make environmental performance an essential part of the management/contractor review process;
- provide resources, personnel and training to enable management, employees and contractors to implement programs and policies to protect the environment;
- communicate openly with employees, contractors, local stakeholders and government on our environmental protection and sustainability programs and performance; we will also address any concerns pertaining to potential hazards and impacts;
- promote the development and implementation of systems and technologies to reduce environmental risks;
- establish and maintain appropriate emergency response plans for all activities and facilities;
- maintain a self-monitoring program at each facility to ensure compliance and to proactively address plans to correct potential deficiencies;
- work cooperatively with government agencies, local communities and contractors to develop and enhance systems and technologies to improve environmental and sustainability practices; and
- encourage all employees, contractors or stakeholders to report to management any known or suspected departures from this policy or its related procedures.

This chapter describes how Sabina intends to implement a range of environmental monitoring and management measures throughout the life of the Project. These measures demonstrate how Sabina will avoid, or minimize to an acceptable level, the potential negative environmental effects identified in the environmental impact statement.

10.1 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

Both Sabina's environmental policy and the EMS provide the framework through which the EMPs will be delivered. The EMS is the system through which Sabina will ensure that the conditions set at the time of authorization, and legal requirements are met. They will also ensure that standard operating procedures reflect legal requirements pertaining to the Project. Ownership of the EMS resides with

Sabina's, management team, who will make provision for the resources necessary to assure the successful implementation and sustainability of the process.

The EMS has been based on a continuous improvement model as defined in the internationally recognized standards ISO 14001:2004, Environmental Management Systems. The model is shown in Figure 10.1-1.

Throughout all phases of the cycle community engagement will be an integral part of decision making. As well, the application of the Precautionary Principle will be a fundamental consideration in any action.

The EMS is structured around 10 core elements (Table 10.1-1) with associated sub-elements. Each of the elements is addressed in additional detail below. The EMS elements are interrelated and each one is essential for the effective operation of the process as a whole. As well, environment, health and safety are interrelated and in the EMS process each element describes an essential part of the overall management of matters relating to all three components.

Table 10.1-1. Core Elements of Sabina's Environment Management System

Element	Title
1	Environmental policy and leadership
2	Planning
3	Organization and resources
4	Documents and records
5	Risk management
6	Regulatory requirements
7	Implementation, monitoring and measurement
8	Emergency and crisis management
9	Monitoring and audit
10	Management review

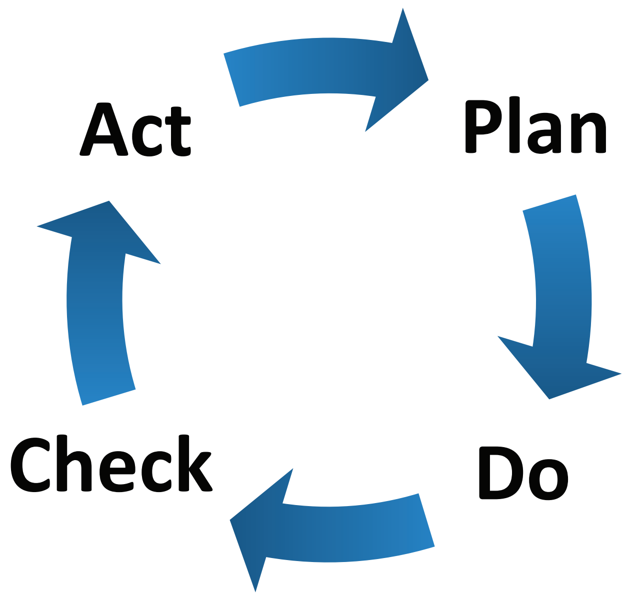
Ownership of the EMS resides with Sabina's management team, who will make provision for the resources necessary to assure the successful implementation and sustainability of the process.

The Key objectives of the EMS are to:

- recognize that social responsibility and environmental management are among the highest corporate priorities;
- establish and maintain relationships with internal and external stakeholders;
- maintain information on legislative requirements and environmental and social aspects associated with the organization's activities;
- assign clear accountability and responsibility for environmental protection and social responsibility to management and employees;
- facilitate environmental planning through project life cycle;
- evaluate environmental performance and social responsibility against Sabina's environmental and other policies, objectives and targets and seek improvement where appropriate;
- establish a management process to audit and review the Sabina EMS and to identify opportunities for improvement of the system and resulting environmental performance; and
- objectives and targets will be reviewed regularly through the operations phase to ensure that there is continuous improvement in environmental performance.

ACT
Ensures that opportunities identified during the assessment are incorporated in the EMS and relevant supporting documents

PLAN
Objectives and targets are set. Plans for implementation are developed to address risks. Performance requirements are established.



CHECK
Provides for auditing and review to ensure the ongoing applicability of the EMS is performing to expectations.

DO
Utilize controls to operate in a systematic manner to manage risk.

Figure 10.1-1

Environmental Management System

10.2 PRECAUTIONARY PRINCIPLE

Sabina is fully committed to acting as a socially responsible steward of the environment throughout the lifetime of the project. To this end, the precautionary approach will be integrated into decision making on all aspects of implementation. In the absence of scientific consensus regarding risk to the public or the environment of a specific action, that action will be assumed harmful unless and until further conclusive scientific evidence determines that no harm shall result.

In gathering data to achieve scientific consensus, Sabina has conducted extensive research to establish baseline data, and where data is not yet available, incorporated examples from other similar, established operations. Extensive consultations with local stakeholders ensures that local and traditional knowledge will be fully evaluated and incorporated in order to support the goal of achieving scientific consensus.

Where there is uncertainty or some plausible risk, conservative approaches, together with a dynamic process of adaptive management will be implemented. A flexible approach will be supported by the design of monitoring programs to address all areas of uncertainty, provide a process for mitigation, and to further support the ongoing collection of scientific data.

10.3 TRADITIONAL KNOWLEDGE

Sabina recognizes that Traditional Knowledge (TK) is an *"indispensable element both as baseline information and as an Inuit lens through which impact analyses can be better understood and can also result in a more active and meaningful community engagement"* (NIRB EIS Guideline – April 2013). Volume 3, Chapter 3 summarizes the efforts undertaken by Sabina to incorporate TK into the Project development.

Consultations with communities and the Hunters and Trapper Organization are effective means of integrating traditional knowledge in planning the Project development and guiding decision making for key elements of the Project. In the development and implementation of its EMPs, Sabina will, to the extent possible, include consideration of traditional knowledge in relevant aspects of environmental planning and monitoring. In gathering and incorporating traditional knowledge, Sabina will:

- respect ownership, source and origins of the TK and the needs and sensitivities of its holders, and obtain their approval to use or disseminate that knowledge;
- establish trusting relationships with those who hold traditional ecological knowledge;
- work on projects of common interest and benefits;
- foster good communications between partners; and
- provide value-added knowledge back to the community.

10.4 ENVIRONMENTAL MANAGEMENT PLANS

Specific environmental monitoring and management plans (EMPs) have been developed for occupational health and safety, risk management and emergency response, spill contingency, the biophysical environment, and, the human environment. These management plans provide Sabina with the tools for managing potential effects of its activities on the environment, as well as providing a structured approach to planning and implementing environmental protection measures.

The EMS and its associated EMPs are developed for the Life of the Project. They apply from the onset of the Exploration Phase, through pre-development activities, construction, operation, closure and post-closure. The application of the continuous improvement principle and adaptive management (Policy – Planning – Checking - Corrective Action) ensure that EMPs are appropriate for the level of activities at the site at all times. Adaptive management is the application of mitigation measures when review processes identify potential adverse effects. Sabina recognizes that the application of adaptive management measures can require the approval of regulatory authorities.

These management plans are the tools used by Sabina to ensure that the Company's objectives and environmental commitment are achieved. The Company acknowledges that the plans will require updating on a regular basis to ensure that they capture/incorporate the requirements outlined in the terms and conditions of the Project Certificate and Type A Water Licence, as well as other commitments made to local communities.

Key elements of these plans are execution and line of accountability within the Company's organization to ensure that the objectives of the plan are met. As the Project advances though its various phases of development (site development, construction, operation and closure), the on-site organizational structure of the site management team will change. However, the fundamental commitments made by the Company as embodied in the management plans will remain. Furthermore, the process of continual improvement (review and adaptive management) may also introduce occasional changes for some components of the management plans. In essence, the management plans are tools designed to manage change while ensuring that the Company's objectives and environmental commitments are achieved.

Sabina does not expect the core content of these management plans to change significantly over the life of the Project. However, certain sections of each plan will be updated regularly:

- changes in regulations affecting the Project;
- roles and Responsibilities - will adapt to the evolving organizational structure on-site and off-site;
- monitoring requirements, objectives and thresholds will be adapted on the basis of annual review of monitoring information collected in previous time period (adaptive management); and
- changes in reporting requirements as directed by the licensing authority.

The list of EMPs and their applicability throughout the Life of the Project are presented in Table 10.4-1.

Table 10.4-1. List of Environmental Management Plans for the Back River Project

Chapter	Document	Site Preparation	Construction	Operation and Ongoing Maintenance	Temporary Closure / Care and Maintenance	Final Closure	Post Closure
1	Environmental Management Plan overview (including EMS and follow-up)	x	x	x	x	x	x
Risk Management and Emergency Response Plans							
3	Risk Management and Emergency Response Plan	x	x	x	x	x	
4	Fuel Management Plan	x	x	x	x	x	
5	Spill Contingency Plan	x	x	x	x	x	
6	Oil Pollution Emergency Plan	x	x	x	x	x	

(continued)

Table 10.4-1. List of Environmental Management Plans for the Back River Project (completed)

Chapter	Document	Site Preparation	Construction	Operation and Ongoing Maintenance	Temporary Closure / Care and Maintenance	Final Closure	Post Closure
Biophysical Monitoring and Mitigation Plans							
2	Environmental Protection Plan (outline)	x	x	x	x	x	x
7	Site Water Monitoring and Management Plan	x	x	x			
8	Ore Storage Management Plan			x	x		
9	Mine Waste Rock and Tailings Management Plan			x	x		
10	Landfill and Waste Management Plan	x	x	x	x	x	
11	Incineration Management Plan	x	x	x	x	x	
12	Hazardous Materials Management Plan	x	x	x	x	x	
13	Road Management Plan	x	x	x	x	x	
14	Shipping Management Plan	x	x	x	x	x	
15	Borrow Pits and Quarry Management Plan	x	x	x	x	x	
16	Explosives Management Plan	x	x	x	x	x	
17	Air Quality Monitoring and Management Plan	x	x	x	x	x	
18	Noise Abatement Plan	x	x	x	x	x	
19	Aquatic Effects Management Plan	x	x	x	x	x	
20	Wildlife Mitigation and Monitoring Plan	x	x	x	x	x	
21	Fish Offsetting Plan	x	x	x			
22	ML/ARD Management Plan	x	x	x	x	x	x
Socio-economic Management Plans							
23	Socio-economic Monitoring Plan	x	x	x	x	x	
24	Business Development Plan	x	x	x	x	x	
25	Occupational Health and Safety Plan	x	x	x	x	x	
26	Community Involvement Plan	x	x	x	x	x	
27	Cultural and Heritage Resources Protection Plan	x	x	x	x	x	
28	Human Resources Plan	x	x	x	x	x	
Mine Closure							
29	Mine Closure and Reclamation Plan (includes Care and Maintenance Plan)				x	x	x

10.4.1 Occupational Health and Safety Plan

This plan aims at protecting the safety and health of its employees and contractors, and the communities in which Sabina operates. The Company's vision is to achieve:

- an accident/incident free culture; and
- a sustainable and competitive business advantage through leadership and excellence in environmental, health and safety.

Key objectives of the Occupational Health and Safety Plan include:

- protect worker health;
- prevent incidents or workplace accidents and injuries;
- maintain productivity by directly or indirectly enhancing social conditions to positively affect the wellbeing of workers;
- provide a safe and healthy workplace for all employees, contractors and visitors;
- ensure all people understand that "no task is so important that time cannot be taken to complete work safely";
- identify and make provisions to address the needs of all individuals with respect to health and safety; in a manner that their ability to do work is not compromised;
- provide a process for achieving targeted performance levels; and
- provide appropriate and sufficient resources, including training, to achieve targeted performance levels on an ongoing basis.

Sabina is focused on everyone's safety each and every day. Business success will not be possible without a safe workplace and safe workers. Implementing the processes and systems for safety excellence and integrating them into everyday activities, develop safe behaviour and ensure a safe place for its employees are Sabina objectives.

10.4.2 Risk Management and Emergency Response Plan

Accidents and malfunctions, emergencies and unforeseen events that could result in an accident or incident causing injuries, illnesses or environmental impacts, or that could cause health and safety risks or environmental impacts, need to be considered within the EMS. Management plans focusing on the prevention and response to accidents and malfunction include:

- Risk Management and Emergency Response Plan (Volume 10, Chapter 3);
- Fuel Management Plan (Volume 10, Chapter 4),
- Spill Contingency Plan (Volume 10, Chapter 5), and,
- Oil Pollution Emergency Plan (Volume 10, Chapter 6).

Sabina develops and maintains operational controls to identify the potential for and responses to accidents, incidents and emergency situations, and to prevent and mitigate the likely injury, illness and adverse environmental impacts that may be associated with such accidents or incidents.

Due to the remoteness of the Project site and the lack of infrastructure, Sabina has committed to be self- sufficient in terms of emergency response capabilities. Each emergency response plan is adapted to the level of activities taking place at the Back River site.

Diesel fuel is an essential commodity for the ongoing operation of the Project and many accidents and malfunctions may result in fuel spills. Sabina has developed a specific management plans dealing with transportation and storage of fuel as well as field refuelling activities.

Sabina will also operate a fuel handling and storage facility at the Marine Laydown Area. In accordance with regulations, the Company has developed a draft Oil Pollution Emergency Plan (OPEP) which addresses the potential spills scenarios associated with refuelling of tank farms and ship to shore transfer of fuel. OPEP are requirements of the Canada Shipping Act and the associated Oil Handling Facility Regulations. The OPEP must be reviewed and approved by Transport Canada on an annual basis.

Finally, the Spill Contingency Plan focuses on likely spill scenarios and outlines the required response for each type of spills.

10.4.3 Biophysical Monitoring and Management Plans

The biophysical monitoring and management plans focus on the VECs identified in the DEIS. Each biophysical EMP identifies:

- the targeted VEC(s) by the EMP;
- the regulatory requirements related to the targeted VEC(s);
- the potential effects and proposed mitigation measures to minimize or avoid adverse effects on the targeted VEC(s);
- the objective of the EMP, the indicators of potential effects or changes, and the monitoring requirements for these indicators;
- the roles and responsibilities of individuals responsible for the implementation and follow-up of the EMP; and
- the auditing, review and reporting requirements.

Table 10.4-1 presents a list of the EMPs development for the Back River project. Each EMP is described in a specific chapter in Volume 10. These plans will be used to provide the overarching direction for environmental management for the Project and form the basis for the ongoing development of further detailed environmental documentation through permitting and the different phases of the Project.

Monitoring programs are designed to provide early warning of changes in the receiving environmental that might be of concern. With these early warnings, additional mitigation measures can be implemented and the appropriate EMP modified. This process is a continuous one and will occur through all phases of the project with changes to environmental management made when required.

10.4.4 Socio-economic Monitoring Plans

Sabina is committed to managing the social and economic effects of the Project in such a way so as to maximize potential positive and beneficial outcomes and reduce, or where possible eliminate, negative or adverse effects. The Socio-economic monitoring program (SEMP) was developed to respond to, manage and/or mitigate the potential social and economic effects identified in the EIS. The SEMP includes plans developed for the Back River Project is presented in Table 10.4-1. The primary SEMP plans include:

- Socio-Economic Monitoring Plan (Volume 10, Chapter 23);
- Business Development Plan (Volume 10, Chapter 24);
- Community Involvement Plan (Volume 10, Chapter 26);
- Cultural and Heritage Resources Protection Plan (Volume 10, Chapter 27); and
- Human Resources Plan (Volume 10, Chapter 28).

The SEMP is organized according to the VSECs established for the EIS and, where possible, aligned with reporting practices used by the Kitikmeot Region Socio-Economic Monitoring Committee. The SEMP outlines the methods that will be used to support the specific management plans listed above. The SEMP contains 'living documents' and as such will be updated as required based on management reviews, incident investigations, regulatory changes, or other Project-related changes. The SEMP may be revisited and updated or adapted on an annual basis.

10.4.5 Mine Closure and Reclamation Plan

Consistent with best management practices, is the development of closure and reclamation plans for the Back River Project and integrated in the planning phase of the Project. The Preliminary Mine Closure and Reclamation Plan (MCRP, Volume 10, Chapter 29) identifies measures to be taken during the operations phase that are aimed at progressive reclamation of disturbed areas of the mine sites.

Mine closure will be carried out in a way that prevents or minimizes impacts and risks to the environment and human health after closure. Closure plans identify site-specific objectives for mine closure and the intended post-closure land use for the site. The MCRP details the processes that will be used to decommission and reclaim all aspects of the mining facility, including:

- mining and ore processing facilities;
- site infrastructure; and
- water and waste management facilities, including waste rock piles and tailings management facilities.

The MCRP should be reviewed and revised as necessary throughout the mine life cycle. The plan will become more detailed, incorporating to a greater degree all activities related to the mine and taking into greater consideration site conditions and monitoring results as the project evolves through the Operations Phase.

10.5 ADAPTIVE MANAGEMENT

The mitigations incorporated in the Project are based on best management practices and are expected to prevent or minimize adverse effects on the receiving environment. Ongoing monitoring will inform Sabina regarding the effectiveness of these mitigation measures. If any unforeseen adverse effects are identified during the life of the project, measures will be taken to correct them and prevent them from occurring in the future. Adaptive management is an iterative approach based on a learning process gained from monitoring which improves long-run management outcomes. The approach to adaptive management is presented in Chapter 7 of this volume.

11. Summary of Commitments

11. Summary of Commitments

Sabina has prepared an Environmental Impact Statement (EIS) to identify and assess potential environmental and social effects resulting from the Project, and is consistent with the requirements outlined in the Nunavut Land Claim Agreement (NCLA) and the Nunavut Impact Review Board (NIRB) Guidelines for the Preparation of an Environmental Impact Statement for the Back River Project (NIRB File No. 12MN036; NIRB 2013).

As part of the EIS, mitigation and management measures have been identified to eliminate or reduce the potential for adverse effects to the Valued Ecosystem Components (VECs) and Valued Socio-Economic Components (VSECs) assessed in this EIS.

Appendix V1-6 of this Main Volume provides a table listing all of the individual commitments that Sabina will adhere to as part of the planning, construction, operation, and closure of the proposed Project.

Sabina intends to build a mine with integrity—one that is safe, environmentally responsible, and beneficial to all parties involved. Sabina believes that its record in Nunavut demonstrates how it has learned to incorporate environmental and socio-economic considerations successfully into the exploration activities to date. Sabina has demonstrated its ability to adaptively protect the environment and minimize the adverse impacts of its operations on the land, water, and wildlife of the area. Sabina has also fostered relationships such that it has learned to work with local communities, Inuit organizations, and government agencies in a cooperative manner to minimize, where possible, the adverse social impacts of its activities while maximizing the socio-economic benefits to the residents of the Kitikmeot region and Nunavut as a whole.

12. Conclusions

12. Conclusions

Sabina has prepared an Environmental Impact Statement (EIS) to identify and assess potential environmental and social effects resulting from the Project, and is consistent with the requirements outlined in the Nunavut Land Claim Agreement (NCLA) and the Nunavut Impact Review Board (NIRB) *Guidelines for the Preparation of an Environmental Impact Statement for the Back River Project* (NIRB File No. 12MN036; NIRB 2013).

The selection of potential Valued Ecosystem Components (VECs) and Valued Socio-Economic Components (VSECs) was based on the NIRB scoping process which involved consultation with all potentially affected communities. The scoping and refining of the potential VEC/VSEC list was based on Sabina-led public consultation (where a potential list of VECs/VSECs was presented to the communities for feedback and input), the TK report (KIA 2012), consultation with regulatory agencies, and regulatory considerations. The final list was provided to NIRB for inclusion in the draft EIS guidelines, so that they were available for review and comment by all interested parties. The final list as indicated in the Sabina submission of April 8, 2013 for the final EIS guidelines are the VECs/VSECs included in this DEIS.

The significance of residual effects of the Project is based on a comparison of the current environment (as documented by comprehensive baseline studies; see Chapter 5 of this Main Volume) without the Project with the predicted state of the environment with the Project, after mitigation measures are applied. Identified Project-related residual effects were described using the defined attributes direction, magnitude, geographic extent, duration, frequency, reversibility, resiliency, ecological context, and probability (refer to Table 1.2-4 in Chapter 1 of Volume 9 for further details) along with attributes outlined in the EIS guidelines. The ratings assigned to the attributes, along with the likelihood of occurrence, were used to determine the overall significance rating of a residual effect. Definitions of each of the attributes may be VEC/VSEC specific and may vary accordingly. Quantitative thresholds were used when available to assist with evaluating the significance of residual effects.

Project-related Effects Assessment Conclusions

Results from the Project-related effects assessment identified non-significant residual effects, but no significant residual effects. All identified residual effects were either of low magnitude, confined to a localized area, reversible, or short term once mitigation and management measures were considered. Offsetting was also considered as a mitigation measure for the assessment. Positive residual effects were identified for the VSECs economic development, business opportunities, employment, and education and training.

Hence, the overall effect of the Project on the atmospheric, terrestrial, freshwater, marine, and human environments is determined to be Not Significant.

Cumulative Effects Assessment Conclusions

Cumulative effects assessments were carried out in compliance with Section 7.11 of the final EIS guidelines (NIRB 2013). As per the final EIS guidelines, consideration was given to the following factors when conducting the assessments:

- a larger spatial boundary (RSA rather than LSA);
- a longer temporal scale;

- alternatives analysis;
- consideration of effects on VECs and VSECs; and
- evaluation of significance.

Potential cumulative effects assessments were conducted for each VEC or VSEC that had an identified Project-related residual effect. There were no significant Project-related residual effects identified (see Chapter 6 of this Main Volume), but all non-significant Project-related residual effects were subjected to a potential cumulative effects assessment.

Results from the cumulative effects assessment identified non-significant residual cumulative effects, but no significant residual cumulative effects. All identified residual cumulative effects were either of low magnitude, confined to a localized area, reversible, or short term once mitigation and management measures were considered. Positive residual effects were not included in a potential cumulative effects assessment or transboundary analysis.

Hence, the overall effect of the Project to act cumulatively with other past, present or reasonably foreseeable future projects on the atmospheric, terrestrial, freshwater, marine, and human environments is determined to be Not Significant.

<u>Transboundary Assessment Conclusions</u>

One of the NIRB's 10 minimum EIS requirements is to include a transboundary impact analysis. The requirement states that "where relevant, an EIS must include an assessment of all significant adverse ecosystemic or socio-economic transboundary effects." There are no significant residual effects identified for the Project. However, all non-significant negative residual effects were subjected to a transboundary analysis. Positive residual effects were not included in a transboundary analysis.

The transboundary nature of residual effects was addressed as part of the cumulative effects assessments. No significant residual cumulative effects are anticipated. Details for caribou and socio-economics are summarized below.

For caribou, the cumulative effects assessment spatial boundary included a portion of the Northwest Territories for both the Bathurst herd and the Beverly herd. The geographical boundary used for the potential cumulative effects assessment was based on the post-calving and summer seasonal ranges of the Bathurst herd and the summer and winter ranges of the Beverly herd. As such, the potential transboundary effects are accounted for in the cumulative effects assessment and are predicted to be **Not Significant.**

Special consideration was given to potential transboundary effects to employment and businesses within the socio-economic RSA. The transboundary effects assessment concluded that competition for local labour is not expected to be substantial outside the Kitikmeot Region but is rather anticipated to provide desired employment. The transboundary effects of the Project were determined as positive and therefore not further characterized.

Hence, the Project is not expected to result in significant transboundary effects to the atmospheric, terrestrial, freshwater, marine, and human environments.

References

an ERM company

References

Definitions of the acronyms and abbreviations used in this reference list can be found in the Acronyms and Abbreviations section.

1. INTRODUCTION

1985. *Fisheries Act*, RSC. C. F-14.

1985. *Territorial Lands Act*, RSC. C. T-7.

2002. *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, SC. C. 10.

Government of Nunavut. 2007. *Nunavut Mineral Exploration and Mining Strategy*. http://www.edt.gov.nu.ca/docs/parnautit_eng.pdf (accessed November 2013).

NIRB. 2013. *Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN03*6). Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

NPC. 2007. *Nunavut Planning Commission Broad Planning Policies, Objectives and Goals*. http://www.nunavut.ca/files/Approved%202007%20Broad%20Planning%20Policies%20Objectives%20and%20Goals.pdf (accessed November 2013).

2. PUBLIC CONSULTATION AND ENGAGEMENT AND GOVERNMENT ENGAGEMENT

NBS. 2012. *Engage your Community Stakeholders*. http://nbs.net/wp-content/uploads/Community-Engagement-Guide.pdf (accessed November 2013).

3. PROJECT DESCRIPTION

Mining Association of Canada. 2005. Developing and Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities. Prepared by the Mining Association of Canada: Ottawa, ON.

NIRB. 2013. Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036). Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

4. TRADITIONAL KNOWLEDGE

KIA. 2012. *Inuit Traditional Knowledge of Sabina Gold & Silver Corp. Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project (NTKP)*. Prepared for Sabina Gold & Silver Corp. by Kititkmeot Inuit Association: Kugluktuk, NU.

5. EXISTING ENVIRONMENT AND BASELINE INFORMATION

1985. *Canada Wildlife Act*, RSC. C. W-9.

1993. *Nunavut Act*, SC. C. 28.

1994. *Migratory Birds Convention Act, 1994*, SC. C. 22.

2002. *Species at Risk Act*, SC. C. 29.

2003. *Wildlife Act*, SNu. C. 26.

Bertulli, M. 1991. *Archaeological Inspections at George Lake, District of Mackenzie, Northwest Territories 3-4 July 1991*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Blower, D. 2003. *Heritage Resources Studies Mitigation and Assessment 2002 — Bathurst Inlet Port and Road Project, Nunavut Permit 02-035A*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Campbell, F. H. A. 1975. *Archaeological Report, Bathurst Inlet Area*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Campbell, F. H. A. 1977. *Observations in the Bathurst Inlet Area, 1977*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

CESCC. 2010. *Wild Species 2010: The General Status of Species in Canada*. Canadian Endangered Species Conservation Council. http://www.wildspecies.ca/searchtool.cfm?lang=e (accessed November 2011).

COSEWIC. 2003. *COSEWIC assessment and update status report on the wolverine Gulo gulo in Canada*. Committee on the Status of Endangered Wildlife in Canada: Ottawa, ON.

COSEWIC. 2012. *Canadian Wildlife Species at Risk*. October 2012.

CWS and USFWS. 1987. *Standard Operating Procedures for Aerial Waterfowl Breeding Ground Population and Habitat Surveys in North America*; revised. United States Fish and Wildlife Service and Canadian Wildlife Service. Unpublished report.

Dumond, M. 2007. *Muskoxen distribution and abundance in the area between Bathurst Inlet and the Coppermine River, Kitikmeot Region, Nunavut (MX19 and west of MX14)*. Government of Nunavut, Department of Environment, Status Report: 35: Iqaluit, NU.

Fedirchuk, G. 1997. *Heritage Resources Impact Assessment: Kit Resources NWT Ltd., Goose Lake Project*. Permit 97-844. Report prepared for Norecol, Dames & Moore by Fedirchuk McCullough & Associates Ltd.

Fedirchuk, G. 2001. *Heritage Resources Studies, Bathurst Inlet Port and Road Project, Nunavut Permit 01-019A*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Frame, P. F., H. D. Cluff, and D. S. Hik. 2008. Wolf reproduction in response to caribou migration and industrial development on the central barrens of mainland Canada. *Arctic*, 61 (2): 134-42.

Gunn, A. 1990. *Distribution and Abundance of Muskox between Bathurst Inlet and Contwoyto Lake, 1986*. Department of Renewable Resources, Government of the Northwest Territories. File Report No. 100: Yellowknife, NT.

Gunn, A. 2005. *The Decline of Caribou on Northwest Victoria Island 1980–93*. Yellowknife, NWT: File Report No. 133, Department of Environment and Natural Resources, Government of the Northwest Territories.

Hayes, R. D. and J. R. Gunson. 1995. Status and management of wolves in Canada. . In *Canadian Circumpolar Institute Occasional Publication No 35: Ecology and conservation of wolves in a changing world*. 21-33.

Health Canada. 1999. *National Ambient Air Quality Objectives for Ground-Level Ozone*.

Health Canada. 2010. *Useful Information for Environmental Assessments*. Prepared by Health Canada: Ottawa, ON.

INAC. 2010. Nunavut: Mineral Exploration, Mining and Geoscience Overview 2010. Indian and Northern Affairs Canada: n.p.

Inman, R. M., A. J. Magoun, J. Persson, and J. Mattisson. 2012. The wolverine's niche: linking reproductive chronology, caching, competition, and climate. *Journal of Mammology*, 93 (3): 634-44.

Keith, D. and A. M. Stewart. 2005. *Kiluhiqturmiut Nunaa: Inuinnaqtun Immersion, Oral History and Archaeology Project, Tahikaffaaluk Site (McNk-3), Bathurst Lake Nunavut*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Lemmen, D. S., Warren, F. J., Lacroiz, J. and Bush, E., editors. 2008. *From Impacts to Adaptation: Canada in a Changing Climate 2007*. Government of Canada, Ottawa, ON.

Mathiassen, T. 1927. *Archaeology of the Central Eskimos*. Report of the Fifth Thule Expedition 1921-24. Vol. 4. Copenhagen: Glydendalske Boghandell, Nordisk Forlag.

McLoughlin, P. D., S. H. Ferguson, and F. Messier. 2000. Interspecific Variation in Home range overlap with habitat quality: a comparison among brown bear populations. *Evolutionary Ecology*, 14: 39-60.

McLoughlin, P. D., H. D. Cluff, and F. Messier. 2002. Denning ecology of barren-ground grizzly bears in the central Arctic. *Journal of Mammalogy*, 83 (1): 188-98.

Menge, C. W., J. C. Ross, and R. L. Ernenwein. 2002. Noise Data from Snowmobile Pass-bys: The Significance of Frequency Content. Society of Automotive Engineers.

Morrison, D. 1978. *Archaeological Survey of Southern Bathurst Inlet, N.W.T.* Report on file with the Canadian Museum of Civilization, Gatineau, QC.

Morrison, D. 1979. *The Archaeology of Bathurst Inlet, N.W.T.: Literature Search*. Report prepared for the National Museum of Canada, National Museum of Man, Archaeological Survey of Canada. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

NPC. 2012. Draft Nunavut Land Use Plan. http://www.nunavut.ca/en/draft-plan (accessed January 2013).

Nunavut Geoscience. 2012. Nunavut Geoscience Home Page. http://nunavutgeoscience.ca/eo/YrRgn/8/19_e.html (accessed April 2013).

Nunavut Tourism. 2011. Nunavut Tourism Home Page. http://www.nunavuttourism.com/explore/operator.aspx?o=228&l=0,2,4,6 (accessed April 2011).

Persson, J., P. Wedholm, and P. Segerstrom. 2010. Space use and territoriality of wolverines (Gulo gulo) in northern Scandinavia. *European Journal of Wildlife Research*, 56 (1): 49-57.

Poole, K. G. and R. G. Bromley. 1988. Interrelationships within a raptor guild in the central Canadian Arctic. *Canadian Jounal of Zoology*, 66: 2275 - 82.

Rescan. 2008. *2007 Archaeology Baseline Report, Hackett River Project – Nunavut Territory Archaeologist Permit No. 2007-022A*. Report prepared for Sabina Silver Corporation by Rescan Environmental Services Ltd.: Vancouver, BC.

Rescan. 2012a. *Back River Project: 2006 to 2012 Meteorology Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services. November 2012.

Rescan. 2012b. *Back River Project 2011 - 2012 Air Quality Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd.: Vancouver, BC.

Rescan. 2012c. *Back River Project: 2012 Back River Socio-economic and Land Use Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd.: Vancouver, BC.

Rescan. 2012d. *Back River Project: Final Report for Nunavut Territory Archaeologists Permit 11-022A*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd.: Vancouver, BC.

Rescan. 2012e. *Back River Project: 2012 Fish and Fish Habitat Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd.: Vancouver, BC.

Rescan. 2012f. *Back River Project 2012 Freshwater Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd., Vancouver, BC, December 2012.

Rescan. 2013a. *Back River Project: 2012 Noise Baseline Report*. Prepared for Sabina Gold & Silver Corp. by Rescan Environmental Services Ltd. Vancouver, BC.

Rescan. 2013b. *Hackett River Project: Final Report for Nunavut Territory Archaeologist Permit 2012-22A*. Prepared for Xstrata Zinc Canada by Rescan Environmental Services Ltd.: Vancouver, BC.

Reynolds, P. E. 1998. Seasonal distribution, activity and habitat use of muskoxen in northeastern Alaska. PhD diss., University of Alaska, Fairbanks AK.

RIC. 2001. *Inventory Methods for Raptors*. Prepared by the Ministry of Sustainable Resource Management Environmental Inventory Branch for the Terrestrial Ecosystems Task Force Resources Inventory Committee: Victoria, BC.

Ross, P. I. 2002. *Update COSEWIC status report on the grizzly bear Ursus arctos in Canada*. Committee on the Status of Endangered Wildlife in Canada: Ottawa.

Statistics Canada. 2012. *Census of Canada 2011*. http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E (accessed January 2013).

Statistics Canada. 2007. *2006 Aboriginal Population Profile: Cambridge Bay and Nunavut*. http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-594/details/page.cfm?Lang=E&Geo1=CSD&Code1=6208073&Geo2=PR&Code2=62&Data=Count&SearchText=Cambridge%20Bay&SearchType=Begins&SearchPR=01&B1=All&Custom= (accessed January 2013).

Slough, B. 2007. Status of the wolverine Gulo gulo in Canada. p76-82. On file with BC Geological Survey, Ministry of Energy, Mines, and Petroleum Resources.

Tischer, J.C. 2010. *Archaeological Impact Assessment 2010: Bathurst Inlet Port and Road Project Nunavut Permit 10-023A*. Report on file with the Canadian Museum of Civilization, Gatineau, QC.

6. POTENTIAL EFFECTS ASSESSMENT

1985. *Fisheries Act*, RSC. C. F-14.

1994. *Migratory Birds Convention Act, 1994*, SC. C. 22.

2002. *Species at Risk Act*, SC. C. 29.

2003. *Wildlife Act*, SNu. C. 26.

BC MOE. 2009. *British Columbia Ambient Air Quality Objectives*. Prepared by the British Columbia Ministry of Environment: Victoria, BC.

CCME. 1999. *National Ambient Air Quality Objectives*. Prepared by the Canadian Council of Ministers of the Environment: Winnipeg, MB.

CCME. 2012. *Canadian Ambient Air Quality Standards*. http://www.ccme.ca/assets/pdf/caaqs_and_azmf.pdf (accessed November 2013).

EUB. 2007. *Alberta Noise Directive 038*. Prepared by the Alberta Energy and Utilities Board: Calgary, AB.

Government of Nunavut. 2011. *Nunavut Ambient Air Quality Standards*. Prepared by the Department of Environment, Government of Nunavut: Iqaluit, NU.

Health Canada. 2010. *Useful Information for Environmental Assessments*. Prepared by Health Canada: Ottawa, ON.

KIA. 2012. *Inuit Traditional Knowledge of Sabina Gold & Silver Corp. Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project (NTKP)*. Prepared for Sabina Gold & Silver Corp. by Kititkmeot Inuit Association: Kugluktuk, NU.

NIRB. 2013. Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036). Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

US EPA. 1974. *Information on Levels of Environmental Nose Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. Prepared by the US Environmental Protection Agency Office of Noise Abatement and Control: Washington, DC.

WHO. 1999. *Guidelines for Community Noise*. Prepared by the World Health Organization: Geneva.

WHO. 2000. *Air Quality Guidelines for Europe. Second Edition*. Prepared by the World Health Organization Regional Office for Europe: Copenhagen.

8. POTENTIAL CUMULATIVE EFFECTS ASSESSMENT

NIRB. 2013. Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036). Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

9. RECLAMATION AND CLOSURE

INAC 2002. *Mine Site Reclamation Policy for Nunavut*. Prepared by Indian Affairs and Northern Development Canada: Ottawa, ON.

INAC 2007. *Mine Site Reclamation Guidelines for the Northwest Territories*. Prepared by Indian Affairs and Northern Development Canada: Yellowknife, NWT.

11. SUMMARY OF COMMITMENTS

NIRB. 2013. Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036). Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

12. CONCLUSIONS

NIRB. 2013. *Guidelines for the Preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036)*. Issued April 2013 by the Nunavut Impact Review Board: Cambridge Bay, NU.

KIA. 2012. *Inuit Traditional Knowledge of Sabina Gold & Silver Corp. Back River (Hannigayok) Project, Naonaiyaotit Traditional Knowledge Project (NTKP)*. Prepared for Sabina Gold & Silver Corp. by Kititkmeot Inuit Association: Kugluktuk, NU.