

2016 NRI Annual Report of Proposed Research

Back River Project Baseline Studies

Sabina Gold & Silver Corp. (Sabina) is in the process of permitting the proposed Back River Project (the Project), located in the West Kitikmeot region of Nunavut. In past years Rescan conducted baseline studies to support this project on behalf of Sabina. Moving forward Sabina will be taking the lead in coordinating research activities for the project and engage multiple specialists to support research acquisition.

A Final Environmental Impact Statement was submitted to NIRB in November 2015. It is anticipated that all required baseline information has been collected for the proposed Project, but information gaps could be identified during the regulatory process. Additional field studies may also be required to support potential changes and refinements to engineering studies.

A potential study area that encompasses all potential Project infrastructure and access corridors is shown on the map provided with this proposal. If baseline information is collected in 2017-2018, it will focus on specific areas, as regional-type information has already been collected over the years. However, at this early date, it is not possible to define the exact areas where baseline data may be collected from.

The proposed ongoing baseline program would be conducted starting on January 1, 2017 and could continue for a full year until December 31, 2017. However, the same baseline and scientific studies may continue in subsequent years and we are asking for a 3 year multi-year permit.

Baseline studies could include the following environmental components:

- o Site-specific meteorological data collection (meteorological stations at Goose camp, George camp, and Bathurst Inlet)
- o Site-specific air quality data collection
- o Site-specific noise data collection
- o Site-specific deep groundwater sampling
- o Site-specific permafrost data collection
- o Surface hydrology and bathymetric data collection
- o Freshwater sampling for water, sediment, and aquatic biology
- o Freshwater fish and fish habitat sampling
- o Marine sampling for water, sediment, and aquatic biology
- o Marine fish and fish habitat sampling
- o Soil sampling
- o Wildlife and wildlife habitat (vegetation) sampling

The local climate has been and likely will continue to be monitored through 3 meteorological stations that continuously record information on winds, precipitation, humidity, temperature, and other related characteristics.

Air quality and noise have been and may be monitored with the use of dustfall traps and noise monitors.

A deep groundwater well was installed in 2013 and this well may continue to be sampled to collect samples of deep groundwater.

Various thermistors are in place already near the 2 exploration camps. This work may continue, and/or additional thermistors may be installed.

Surface hydrology may be measured at streams in the area by the use of data-loggers installed in the streams before freshet. Lake water level fluctuations and lake bathymetric information may also be collected by data loggers and GPS/boat methods.

Freshwater samples may be collected for water, sediment, and aquatic biology. This could include streams and lakes. Freshwater fish and fish habitat sampling may take place following the protocols of the required DFO permits.

Marine samples may be collected for water, sediment, and aquatic biology. Marine fish and fish habitat sampling may take place following the protocols of the required DFO permits.

Baseline data collection on various wildlife species may occur, and involve a number of methods which would all be outlined in detail in the required GN-DOE wildlife permit. Information may be collected on the following wildlife species: migratory birds, waterbirds, raptors, seabirds, wolverine, caribou, muskox, grizzly bear, wolves, foxes, seals. Non-invasive methods such as remote camera may be used. Additional information on wildlife habitat may be collected which would include vegetation and possibly soil sampling.

Any baseline sampling would be based logically out of the existing Goose or George exploration camps, and could include snowmobiles, helicopters, boats, hiking, or fixed-winged aircraft. Any baseline sampling will be minimized during periods sensitive to wildlife.

Any baseline data obtained would be compiled in to baseline reports and/or incorporated into the the Type A Water License Application where appropriate or in accordance with the annual reporting requirements of any existing licenses, permits or authorizations.

2017 NRI Ayurnaittuq Naittuq Ihivriuqtaunahuarniqmut

Hanningayuqmi Havaakhauhiq Munariniqmut Naunaiyainiq Ihivriuqtamiknik

Sabina Gold unalu Silver Kuapuriisingit (Sabina) havaliqtuq laisiqtigiami uyarakhiurvikhauyumut Hanningayuqmi Havaakhauhiq (tamna Havaakhauhiq), ittuq Uataanit Kitikmeonmi Nunavunmi. Hivuani ukiuni Rescan-kut havagiyai huniumaititlugit ilitquhi naunaiyaqni ikayuqtuqhugu una havanguyuq kivgaqtuqhugit Sabina-kut. Hivunmutitlugin Sabina-kut hivuliqniat kamagininik naunaiyainit huliniit taphumunga havanguyuq piqatiginilu amihuyut havaktiuqpiaqtut ikayuninut naunaiyainiqmun pitaqnit.

Tamna Kingullipaq Avatiliqutitut Aktuanit Uqauhit tuniyauyuq NIRB-kunnut talvani Nuvipa 20150-mi. Ihumagiyauyuq tamaita ihariagiyauyut munariniqmut naunaitkutingit katitiqtauyut piumamayamknut Havaakhauhiq, kihimi naunaitkutut inikharvingit ilitariyauttaaqtut pitillugu munariniqmut havaktillugu. Aatlattaug nunami naunaiyainiq ihivriuqtamiknik ihariagiyauniaqtuq ikayuriami aallanguarniaruknaqhiuqniit ihuarhiniq havaakhanut naunaiyainiq ihivriuqtamiknik.

Naunaiyaivikhaa ilaliutiyuq tamaita piumamayamiknik Havaakhauhiq aulapkaitjutikhat piinarialeqihimayut apqutingit naunaiyarhimayuq nunaayaqmi ittuq uumani tukhiutimi. Munariniqmut naunaitkutut katitiqtaukpat 2017-2018mi, ihumagilluaqniaqtaat ihuatqiyauyut nayugangat, aviktuqhimayutut ittut naunaitkutut katitiqtauhimakmata taimaa qaffiuyuni ukiuni. Kihimi, tatja, naunaiyalimaittuq humilluaqmi ittut talvani munariniqmut nampangit katitiqtaaqtaik from.

Piyumayaminik munagininik aulahimaititlugu ilitquhia havaktauniaq pigiaqlugu Januari 1, 2017 kayuhilunilu ukiumun tikittiqlugu Tisaipa 31, 2017. Kihimik, tamna huli aulahimaititlugu ilitquhia naunaiyautitutlu naunaiyaqni kayuhilaq kinguagut ukiuni apigiyugutlu 3 ukiunut amihunut pilagutmik.

Munariniqmut naunaiyainiq ihivriuqtamiknik ilaliutittaaqtaa hapkuat Avatimut Nakuungiqtailiniq pitjutingit:

- o Uyarakhiurvikmi illuaqtunik hilaup nampangit katitiqtauyut (hilaup munarivingit Goose uyarakhiurvingani, George uyarakhiurvingani, Qingaukmilu)
- o Uyarakhiurvikmi illuaqtunik anirhaaktaptiknik qanuritaakhaanik nampangit katitiqtauyut
- o Uyarakhiurvikmi illuaqtunik nipaaqtunik nampangit katitiqtauyut
- o Uyarakhiurvikmi illuaqtunik itinnaktuq nunami imanga naunaiyaiyuq ihivriuriami
- o Uyarakhiurvikmi illuaqtunik qiqiniq nuna nampangit katitiqtauyut

- o Nunap hilataa ihivriuqninga nunap imanga unalu aktikkulaanga imaup itikninga nampangit katititqtauyut
- o Tariungittumi imaq naunaiyaiyuq ihivriuriami imaqmut, marluk ilakungit, imaqlu avatimut ihuirutautingigiami
- o Tariungittumi imaq iqalut unalu iqalut nayugangit naunaiyaiyuq ihivriuriami
- o Tariuqmi naunaiyaiyuq ihivriuriami imaqmut, marluk ilakungit, imaqlu avatimut ihuirutautingigiami
- o Tariuqmi iqalut unalu iqalut nayugangit naunaiyaiyuq ihivriuriami
- o Nunannganik naunaiyaiyuq ihivriuriami
- o Huratjat unalu huratjat nayugangit (nunami nauhimayut) naunaiyaiyuq ihivriuriami

Nunap hilanga inmat munarihimmaaqniaqmagulu pingahuuyuni hilaup munarivingani titiraqhimmaaqniaqtuq naunaitkutut anuringanik, nipaluk, kinipaninnga, qanuraaluk uunaqutinga, aatlatlu piyut talvunga.

Anirhaaktaptiknik qanuritaakhaanik unalu nipaaqtunik munariyaayut munariyauniaqtutluuniit atuqlutik puyut kataktnik ihivriurutit unalu nipaaqtunik munariyut.

Itinnaktuq nunami imaqqarvinga nunami iliuraimayut 2013mi tamnaluk kayuhilaq naunaiyainit katititqinik naunaitkutut itiniyanut maniqami imaqtait.

Aatlatqiit uunaqninnga naunaitkutut iliuraimayut haniani malruunguyut uyarakhiurviinginni. Una havaaq pihimmaaqniaqtuq, unalu/unaluuniit aatlattauq uunaqninna naunaitkutingit iliurainiaqhimayut.

Nunap hilataa ihivriuqninga nunap imanga naunaiyaqtauqtaqtuq imaup ingilraninngani talvani atuqlugu uuminnganik nampangit-titiraqtumik iliurayut iliuraimayut imaup ingilraninngani kuukkaktinnagu. Tahiup imanga aktikkulaanga aatlangurninngit unalu tahiup aktikkulaanga imaup itikninga naunaitkutut katitittaaqtuq ukunannga nampangit titiraqtumik iliurayut unalu GPS/qayaqtututlu.

Tariungittumi imaq uuktuutigiyayut katititqtaaqtaik imaqmut, marluk ilakungit, imaqlu avatimut ihuirutautingigiami. Una ilauttaaqtuq imaup ingilraninngani tahiitlu. Tariungittumi imaq iqalut unalu iqalut nayugangit naunaiyaiyuq ihivriuriami piniauknaqhiyuq talvannga pikpat maliktakhangit ihariagiyanginnut DFO laisingit.

Tariuqmi uuktuutigiyauyut katitiqtaaqtaik imaqmut, marluk ilakungit, imaq lu avatimut ihuirutautingigiami. Tariuqmi iqalut unalu iqalut nayugangit naunaiyaiyuq ihivriuriami piniaruknaqhiyuq talvannga pikpat maliktakhangit ihariagiyanginnut DFO laisingit.

Munariniqmut nampangit katitiqtauyut aatlatqiini huratjat aatlatqiingillu pittaaruknaqhiyuq, ilaliutiluni qaffinik aatlatqiinik pittaaqtut tamaita naunaiqhimaniaqtut naunaittumik ihariagiyamikni GN-DOE huratjat laisiit. Naunaitkutat katitiqtaaqtaik ukunani huratjat aatlatqiingillu: Tingmianik Manningillu, imarmiutat tingmiat, tingmiat, tariuqmi tingmiat, qalviit, tuktut, umingmait, akhat, amaqut, tiriganniat, nattiit. Qimalattailiutinik havaat ukunatitut mikkannuamik piksaliurut atuqtauniaruknaqhiyuq. Aatlattauq naunaitkutat huratjanutt nayugangit katitiqtaaqtaik ilaliutittaaqtuq nunami nauhimayut nunaluuniitlu naunaiyaiyuq ihivriuriami.

Kitutliqaak munariniqmut naunaiyaiyuq ihivriuriami piniaqtuq kangirhimannaqqtumik atuqtauyumit Goose-mi George-miluuniit uyarakhiurviingit, ilaliutittaaqtuqlu sikiituunik, halikaaptanik, qayarnik, pihuuyaqluniluuniit, tingmitikkutluuniit. Kituliqaak munariniqmut naunaiyaiyuq ihivriuriami ikikliyuumiqniaqtuq qakunnguraikpat pitjutigiyauyut huratjanut.

Kitutliqaak huniumaititlugit ilitquhit katitigauniat tapkununga huniumaititlugit ilitquhi tuhaqhitautil tamnalu/tamnaluuniit ilaliutyaqni taphumunga Qanugittunia A Imaqmun Laisa Tukhigaut aturniqat maliklugitluniit tapkununga ukiumun tuhagakhaliat piyaqaqni kitutliqak tatya atuqtut laisauyut, pilagutit piyungnautailuniit.

[illegible]
$$H \triangleleft^a \sigma^a L \triangleleft^b d^a L \triangleright \underline{a}^b \sigma \triangleleft^c \delta^a \Gamma^b \quad \Delta \sigma \cap \triangleright \sigma^a L \Delta \cap \subset \triangleright \underline{a}^b \sigma^a L$$
[illegible][illegible][illegible][illegible]

ጋላ ሕልክ ሕይወት ጋዖ ለጋራ ጋር ልረከፍና ለግድግዳ ልረጋግጥ በበጋ ልረጋግጥ በጥንቃቄ ልገባለሁ፡፡

- [illegible]

