



April 2014

## VOLUME 3.0 - DATA COLLECTION

### Final Environmental Impact Statement (FEIS) – Meliadine Gold Project, Nunavut

REPORT



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### EXECUTIVE SUMMARY

#### *Purpose*

The purpose of Volume 3 of the Final Environmental Impact Statement (FEIS) for the Meliadine Gold Project (Project) is to address the Guidelines issued by the Nunavut Impact Review Board specifically relating to the methodology used for data collection in the areas of public consultation, traditional knowledge, and baseline information, as well as the use of existing information.

#### *Public Consultation*

Various forms of public consultation activities involving the general public, local and regional communities, Inuit organizations and government departments and agencies have occurred since 1995. Public consultations have occurred mainly in Rankin Inlet, and secondarily in Chesterfield Inlet; however, activities were also held in other communities. These activities took the form of meetings, interviews, site visits and open houses.

A series of open houses and meetings with hamlet councils and communities were held in 2011 and 2012. At each, a presentation with up to date Project and baseline information and anticipated Project effects was given. The purpose of the consultations was to provide information to, and answer questions and solicit feedback from the communities on the Project. Topics brought forward by the communities mainly centered on the broader topics of caribou, fish, water, jobs, training and different cultures working together. A number of commitments and/or changes to Project design or development were made based on concerns raised during the public consultations, or to minimize potential impacts or enhance potential benefits according to community values, perceptions and way of life.

#### *Traditional Knowledge*

Inuit possess traditional knowledge (TK) based upon oral history and a direct relationship to the land and its resources. Traditional knowledge is an important complement to scientific studies and can provide a deeper understanding of the potential effects of a Project.

Traditional knowledge about the physical, biological and human components of the Project area was collected through interviews and consultation with Elders and other knowledge-holders. Initial TK field studies for the Project were undertaken in 1997 and 1998 in Rankin Inlet and Chesterfield Inlet. Follow-up TK studies in Rankin Inlet, Whale Cove, and Chesterfield Inlet were done in 2010 and 2011. Separate TK studies relating to plant use, and marine wildlife and the marine environment, were completed in 2010 and 2012, respectively. Further details on each of the TK studies are provided, including the study format and design, composition of participants, and topics discussed. The study reports themselves are included in other Volumes of the FEIS.

#### *Baseline Information Collection*

Current baseline conditions (i.e., pre-development conditions) for the Project area were established based on literature review, interviews, consultations or field work. Baseline information on various environmental and socio-economic components has been collected between 1998 and 2012. The methodology and baseline data collected vary from component to component as described in Volumes 5 through 10 of the FEIS.



### *Use of Existing Information*

Collected baseline information together with existing information collected in literature reviews, during public consultations, and TK studies form the basis to understand the environmental and social environments of the Project area. Where applicable, existing information and available results of surveys and studies completed in the Project region by others have been incorporated and clearly referenced within the FEIS. This includes information relating to previous and/or currently active projects in Nunavut, including the Meadowbank mine.



## Abbreviation and Acronym List

AEM	Agnico Eagle Mines Limited
FEIS	Final Environmental Impact Statement
HTO	Hunters and Trappers' Organization
IQ	Inuit Qaujimajatuqangit
NIRB	Nunavut Impact Review Board
Project	Meliadine Gold Project
TK	Traditional knowledge
VEC	Valued ecosystem component
VSEC	Valued socio-economic component



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### 3.0 DATA COLLECTION

The purpose of Volume 3 of the Final Environmental Impact Statement (FEIS) for the Meliadine Gold Project (Project) is to address the Guidelines issued by the Nunavut Impact Review Board for the Project (NIRB 2012) specifically relating to the methodology used for data collection in the areas of public consultation, traditional knowledge, and baseline information, as well as the use of existing information. The Guidelines for the Project, including FEIS section and page number referencing, are summarized in the main FEIS concordance table (FEIS Volume 1, Appendix 1.0-A).

Current baseline conditions (i.e., pre-development conditions) are established based on data collected, whether through literature review, interviews, consultations or field work. Potential impacts are then assessed by determining how the Project is likely to change these baseline conditions.

Public consultation and traditional knowledge (TK) contribute to collecting baseline information, identifying key issues and concerns, and providing an Inuit lens through which impacts are assessed. Public consultation is geared toward all stakeholders whether the general public, local, and regional communities, Inuit organizations or government departments and agencies.

Public consultation allows for collecting and transmitting information as well gathering stakeholders' concerns and responses. For public consultation to be effective it must be based on an open and honest dialogue between the proponent and the stakeholders. In addition, public consultation must reach as many people as possible, and accurate and current information must be presented to maximize the usefulness of the stakeholders' input. The format and tools used to transmit the information must take the audience and its heterogeneity in gender, language, age and life experiences into consideration.

Inuit possess TK based upon oral history and a direct relationship to the land and its resources, which in turn contribute to a comprehensive understanding of the area's ecology. This TK is an important complement to scientific studies and can provide a deeper understanding of the potential effects of a Project. An understanding of TK and traditional land use ensures that design modifications and mitigation measures have the desired effect; minimizing the anticipated effects or enhancing the benefits for those most likely to be affected. Effective involvement and participation of the Inuit can lead to minimizing impacts, addressing potential concerns, and developing a more acceptable/integrated Project.

Being aware of the stakeholders' concerns and understanding the traditional knowledge and traditional land use is important to effectively minimize potential impacts either through mitigation measures or Project design, and to enhance potential positive effects.

This section gives an overview of how data was collected with a focus on how the stakeholders were consulted and engaged, and how TK was collected. In addition, this section provides an overview of how these dialogues helped shape the Project that is presented in this FEIS. The actual information collected is presented throughout the FEIS where applicable.

### 3.1 Public Consultation

Various forms of public consultation activities involving the general public, local, and regional communities, Inuit organizations and government departments and agencies began under previous owners of the Project and have been recorded since 1995. The details of these activities are provided in SD 3-1 Public Engagement and





Consultation Baseline Report, including a list and summary of all the activities, which is presented in Appendix B of that report. Since its purchase of the Project in July 2010, AEM has actively engaged and consulted stakeholders throughout the Kivalliq region and adjacent jurisdictions to allow the general public and potentially affected communities to become knowledgeable about the Project and to provide input to its development. It also allowed AEM to gather information and traditional knowledge relating to land and resource use. Consultation efforts included meetings and discussions with, among others, the following:

- Kivalliq Inuit Association;
- Hunters and Trappers' Organization (HTO) in Rankin Inlet;
- Community Land and Resources Committee;
- hamlet councils;
- Nunavut Water Board;
- NIRB;
- Kivalliq Socio-economic Monitoring Committee;
- Government of Nunavut;
- Fisheries and Oceans Canada;
- Environment Canada;
- Etc.

Public consultations happened mostly in communities in close proximity to the Project; mainly in Rankin Inlet, 25 kilometres south of the Project, and secondarily Chesterfield Inlet, 70 kilometres to the northeast. However, activities were also held in other communities. These activities took the form of meetings, interviews, site visits and open houses.

### 3.1.1 Open Houses

This section focuses on 2 series of public consultation activities held by AEM in various Kivalliq communities in 2011 and 2012 as follows:

- Open house and hamlet council meeting in Rankin Inlet on 17 October 2011;
- Open house and hamlet council meeting in Chesterfield Inlet on 18 October 2011;
- Open house and hamlet council meeting in Baker Lake on 19 October 2011;
- Open house and hamlet council meeting in Arviat on 20 October 2011;
- Open house and hamlet council meeting in Coral Harbour on 1 November 2011;
- Open house and hamlet council meeting in Repulse Bay on 2 November 2011;
- Open House in Rankin Inlet on 1 October 2012;
- Open House in Chesterfield Inlet on 2 October 2012;
- Open House in Whale Cove on 3 October 2012; and
- Open House in Arviat on 4 October 2012.



It should be noted that in June 2012, AEM wrote to the following jurisdictions offering to meet with them at their convenience but as of December 2012, none had replied:

- Lutsel K'e Dene First Nation;
- Akaitcho Interim Measures Agreement;
- North Slave Métis;
- Sayisi Dene Nation;
- Northlands Dene First Nation; and
- Makivik Corporation.

The first series of open houses were held in October and November 2011. In each visited community, a meeting with the hamlet council was held in the morning and an open house was held in the evening. A PowerPoint presentation with up to date Project and baseline information and anticipated impacts was given at each of the hamlet council meetings and open houses. Large paper maps were placed on the walls at both the council meetings and the open houses. Typically, the hamlet council meetings were attended by 6 to 10 council members including often times the mayor of the respective hamlets. The open houses were attended by between 40 and 75 people with the exception of one open house attended by over 100 people in Baker Lake. This high attendance is likely due to the door prizes given at AEM's last activity in Baker Lake linked to AEM's Meadowbank mine.

As the purpose of these consultations were to provide the communities with information on the proposed Project that is accurate and up to date, and to take in the communities' questions and concerns, people were free to ask questions or make comments on any topic of their choice after the presentation. In the future, AEM is committed to continuing to provide up-to-date information describing the Project to communities affected by the Project.

The presentation used plain language as well as more technical terms.

To encourage good public outcome and representation, the open houses were advertised in advance through radio, local papers, and posters and by invitation. As much as possible, these activities were scheduled to avoid times when people are likely to be out on the land, times of celebration or sorrow, and times when other important community events were being held.

Care was also given to have some consistency in AEM representatives at these events to encourage trust building and providing a feeling of familiarity, continuity and accountability.

Communication was facilitated by a translator. Wherever possible, local translators, in combination with a translator from the Kivalliq region travelling with AEM, were used to accommodate regional dialects. .

Consultation activities included a meeting with the Hamlet Council and an open house in each community that was visited. In most cases, a translator from the community was present at the meetings so that local dialects were used.

The details of issues brought forward by the public during the 2011 and 2012 public consultations are available in Appendix C and D of SD 3-1, respectively. Topics brought forward by the public mainly centered along the broader topics of caribou, fish, water, jobs, training and different cultures working together.



Most people don't speak explicitly in terms of valued ecosystem components (VECs) or valued socio-economic components (VSECs) although topics mentioned by the public during consultations are considered valuable components. In fact, no additions to the valued components suggested in the NIRB Guidelines were brought up during public consultations or other engagement efforts. Nonetheless, the presentation used in the 2012 open houses explicitly listed the Project VECs and VSECs to allow people to review them and identify any potentially missed elements.

People also don't communicate along the lines of environmental or social components such as terrestrial wildlife and habitat, TK and land use, and economic development and opportunities, nor do they speak in terms of levels of significance for the anticipated impacts. Care was taken so that the most important and relevant information presented in this FEIS and its outcomes do not come as a surprise or different than what was presented during the consultations. Generally, effort was made to guide the discussions along these terms but without over directing the conversation along terms that are not naturally used or even understood by the participants. People were encouraged to speak freely on the topics of their choice during all consultation activities. The presentation delivered during the open houses in 2012 discussed the anticipated levels of significance of potential Project effects at that time for the following components:

- caribou;
- gray wolf;
- polar bear;
- birds;
- raptors;
- water quality;
- fish;
- traditional and community harvesting;
- land use and mobility;
- employment;
- education;
- criminal activity; and
- archaeology.

These components were mainly chosen for the presentation based on the value placed on them by the communities as made evident during previous consultations.



### 3.1.2 Commitments and Responses

While a more extensive list is available in Table 7-1 of SD 3-1, this section provides some examples of commitments made or changes made to Project by AEM to address the communities' concerns raised during the public consultations, or when possible to minimize potential impacts or enhance potential benefits along the lines of their values, perceptions and way of life. It is worth noting that the commitments presented below come from all consultations activities and are not limited to those made during or following the open houses discussed in Section 3.1.1.

General commitments include the following:

- Continue to resource and staff AEM's Rankin Inlet office to provide a place where people can easily drop off resumes for a job, ask questions, express concerns, get information on the Project, lodge grievances and attend meetings with Project staff. This office has been open since late 2010, is open from early in the morning to late in the afternoon, and is staffed with people speaking Inuktitut, English and French. It is seen as the place to go when looking for work, to exchange information between the community and the Project, to explore business opportunities and provide feedback on the Project.
- Keep holding formal meetings, such as open houses, at regularly intervals with the affected communities. The timing and delivery of the meetings will be determined in consultation with the affected communities.
- Provide training to managers and supervisors, including contractors, on communication and engagement with Inuit employees and people in the community to address a concern with regards to having different cultures working together.
- Maintain a database with issues raised at various meetings and public consultation activities, and undertakings to resolve them.
- Continue to hold quarterly meetings with the Project Community Liaison Committee based in Rankin Inlet and made up of representatives from various community groups and AEM representatives.
- Hire locally and give preference to Inuit in filling positions at the mine to address the desire of Inuit to have training and job opportunities so they can participate in the benefits generated from the Project.
- Allow all opportunities made available to men working at the Project also be available to women, and allow women to have the same opportunities for training as men to address the concern of opportunities for women to work at the mine.

Below are specific examples of commitments made or changes that were made in the Project design or development in response to public consultation, going above and beyond good practices:

- A facility to store country food at the mine site for Inuit workers in response to a concern that Inuit way of life may be lost;
- Caribou will have the right-of-way on all roads and vehicle access will be limited when large numbers of caribou are crossing the road to address public's concern about the potential effect of the Project on caribou; this will occur in consultation with the local HTO.
- Although the 2 week rotation will be the norm, different schedules are being explored for Rankin Inlet workers to address the concern of workers being away from their families for a 2 week period.



- To address the concern of snowmobile trails and access to the sea ice, AEM will maintain a dedicated snowmobile trail on the east side of the laydown area for access to the sea ice from the hamlet, and where new roads cross established snowmobile trails advisory signs will be placed along the road so snow from snow clearing will not be pushed onto the trail.
- Once the mine is approved and all permits received, the All-weather Access Road will be expanded to 2 lanes and will have unrestricted access to address the desire that the All-weather Access Road be open to all Inuit to use.
- Ships will remain at least 2 kilometres from Marble Island to avoid disturbing seals and walrus that might be in the vicinity. This would act to significantly reduce interactions between mammals and vessels, and also reduce the noise in near-shore areas to address the concern that Marble Island is an important area for whales, seals and, on occasion, walruses.
- AEM raised the designed height of the bridge above the Meliadine River to ensure that overflow and flooding do not compromise the bridge and the use of the road after the Kangiqliniq HTO pointed out during consultations that there was significant overflow at the location selected for the bridge. The HTO noted that on occasion, overflow could be as high as 2 metres and, in combination with high tides, can lead to flooding at the bridge location.
- Pistol Bay was explored and retained as a potential fish compensation option after informal discussions with the HTO in 2010 and 2011 indicated that Josephine Falls and Pistol Bay Falls were potential barriers to fish passage and were preventing Arctic char from overwintering in upstream lakes. There was support from the Rankin Inlet HTO to remove these barriers so to enhance the fishery for which commercial fisheries licences exist. As a result, AEM conducted reconnaissance visits at both Josephine Falls and Pistol Bay in late September 2011. Reconnaissance visits at both sites and a follow-up visit to Pistol Bay in August 2012 with AEM and Fisheries and Oceans Canada representatives, indicated that Pistol Bay may provide the best opportunity for opening up access for arctic char to upstream areas that are otherwise limited due to a natural barrier.

### 3.2 Summary of Traditional Knowledge Studies

The FEIS adopts the definition of traditional knowledge as described by NIRB's Guide to terminology and definitions as follows:

*[Traditional Knowledge is the] [c]umulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission (NIRB 2007).*

The guide further indicates that specific Inuit Traditional Knowledge is referred to as Inuit Qaujimajatuqangit (IQ), which represents the *[g]uiding principles of Inuit social values including: respecting others, relationships, and caring for people; development of skills through practice, effort and action; working together for a common cause; fostering good spirit by being open, welcoming, and inclusive; serving and providing for family and/or community; decision making through discussion and consensus; being innovative and resourceful; and respect and care for the land, animals and the environment (NIRB 2007).*

For consistency and ease of understanding, this section refers to the more general term of TK when referring to either TK and/or IQ. Traditional knowledge was included in baseline data collection; determining valued



ecosystem components and valued socio-economic components; portions of the impact assessment (i.e., where applicable); and in assigning significance. Traditional knowledge will also be incorporated into monitoring programs. Details are provided in Volumes 5 through 10.

Through interviews and consultation with Elders and other knowledge-holders, information about the study area related to the physical, biological and human components was collected.

Below are the main studies undertaken to formally collect TK specifically for the Project:

- Nanuk Enterprises Ltd. (Nanuk Enterprises), Traditional Ecological Knowledge Study, 1999;
- Nanuk Enterprises, Inuit Qaujimajatuqangit Interviews and Focus Groups, 2011 (FEIS Volume 9, Appendix 9.3-A);
- P. Burt, Traditional Ecological Knowledge of Plant Use, 2010 (FEIS Volume 9, Appendix 9.3-B);
- P. Burt and J. Hickes, Traditional Knowledge, Marine Approaches to Rankin Inlet, 2012 (FEIS Volume 9, Appendix 9.3-C);
- Nunami Stantec, Marine Baseline Report, Itivia Harbour, 2012 (FEIS Volume 8, Appendix 8.2-A).

This section offers an overview of the activities undertaken to collect TK and in what manner these efforts were conducted. More detailed information on the results is found mainly in FEIS Volume 9, Section 9.3; FEIS Volume 8, Section 8.3.3; and the corresponding appendices listed above.

### 3.2.1 Nanuk Enterprises, Traditional Ecological Knowledge Study, 1999

In late 1997 and early 1998, WMC International Ltd. retained Nanuk Enterprises to undertake a TK study for its West Meliadine Gold Project. This study was overseen by a committee of 11 residents of Rankin Inlet and Chesterfield Inlet. The purpose of the committee was to review and comment on work plans, methods, and schedules; direct the studies to address subjects and issues of concerns; and identify potential participants for interviews (Nanuk Enterprises 1999). A total of 18 male and 11 female elders from Rankin Inlet and Chesterfield Inlet participated in the study. Interviews were conducted in Inuktitut and audio-taped (Nanuk Enterprises 1999).

A non-directive approach was used, meaning that participants could speak freely about topics that were important to them (Nanuk Enterprises 1999). Interviews mainly focused on land use, past and present and on concerns of the local people regarding mining development (Nanuk Enterprises 1999). Additional community input was sought during an open meeting (Nanuk Enterprises 1999). The results of this study are discussed in FEIS Volume 9, Section 9.3.

### 3.2.2 Nanuk Enterprises, Inuit Qaujimajatuqangit Interviews and Focus Groups, 2011

Nanuk Enterprises was retained by Golder Associates Ltd. to undertake an additional TK study for the Project in 2010 and 2011 (Nanuk Enterprises 2011). The report of this study is available in FEIS Volume 9, Appendix 9.3-A. Nanuk Enterprises sought to replicate the same methodology used for the study in 1997 and 1998. Of the participants in the earlier studies, 2 were available to participate in the more recent study.



The TK study carried out in 2010 and 2011 took the form of focus groups, meetings and interviews. Focus groups bring people of common experience together to discuss specific topics. Usually comprised of 6 to 8 participants, focus groups are generally directed toward people with specialized knowledge, such as elders and hunters, or toward people who may not be as well represented during other consultation activities, such as women and young adults. Information is offered by the participants sharing their knowledge, histories and expectations.

Focus groups and interviews were expanded to include participants from Whale Cove in addition to Rankin Inlet and Chesterfield Inlet, and to include young adults in addition to elders.

Local governments and the HTOs assisted the organisation of the focus groups and interviews that were held as indicated below:

- one focus group with elders and 5 interviews with either a male or female elder were held in Chesterfield Inlet in October 2010;
- three focus groups with hunters and trappers, elders, and young adults and one interview with a male elder were held in Rankin Inlet in February, May, and June 2011; and
- one focus group with elders and three interviews with a male elder were held in Whale Cove in January and May 2011.

During the focus groups and interviews, participants reviewed the information contained in the earlier TK study completed for WMC International Ltd., added new information where applicable, and also made comments related to concerns about or support for the Project.

A semi-structured approach was used during the interviews through the use of questions that allowed participants an opportunity to provide additional information. An interview guide that generally focused on topics related to the participants' use of the land and water, understanding the land and water, and perceptions of potential impacts of proposed mining activities on the communities, was prepared to facilitate the discussion while avoiding over-directing the discussions. Paper maps were used in all events.

While most in younger generations were able to freely communicate in English, there is also important data to be collected from unilingual Inuit speakers. Therefore, care was taken to ensure that people were able to speak in Inuktitut if they chose to, either directly to Inuit data collectors or through translators.

Participation was anonymous and participants were advised that there was no obligation to participate and no obligation to speak to any particular subject. They were also advised that they were free to leave at any time and that neither their names nor any direct quotes would be reproduced in public EIS documents. Consent forms were signed by all participants.

The guides used to conduct the interviews, focus groups and community meetings are available in Attachment A of FEIS Volume 9, Appendix 9.3-A. These guides offer information on the agenda, methods and lists of questions used to facilitate the discussions.





The purpose of these meetings, interviews, and focus groups was to let elders and others who use the land and its resources within the potentially impact area to:

- identify past uses;
- identify sites of historic and cultural importance;
- identify locations of importance to various types of wildlife;
- identify locations of importance to plants;
- identify the location and uses of cabins and outpost camps;
- identify important landmarks;
- describe their concerns with the present and proposed exploration and mine development and operations; and
- describe their concerns with AEM projects - present and planned.

Although the extensive lists of questions are available in Attachment A of FEIS Volume 9, Appendix 9.3-A, they revolved around the following topics:

- personal and family history;
- traditional land use;
- animal habits and migrations;
- water and fish;
- weather;
- AEM as an operator; and
- past and current mining activities.

### 3.2.3 P. Burt, Traditional Ecological Knowledge of Plant Use, 2010

A separate study of plant use TK was undertaken in 2010 (Burt 2010). This work was done on the land and the main focus was to identify traditional uses of plants. Two elders from Rankin Inlet, one elder from Chesterfield Inlet, and one elder from Whale Cove participated in the study. The elders were selected based on their familiarity with the traditional use of plants by Inuit. An interpreter was on-site and the studies were videotaped. The report is available in FEIS Volume 9, Appendix 9.3-B and the results are discussed in FEIS Volume 9, Section 9.3.

Plants were collected by the elders in the Meliadine River valley during a half day workshop. The site was selected based on the available range of species. Discussions were held about the plants' use while out on the land and the following day, discussions were held inside with the plants laid out and names written beside the specimens with scientific name, Inuktitut name in syllabics, Inuktitut name in Roman orthography and English common name. The use of each plant and their Inuktitut names were discussed.





Below are examples of questions asked regarding each plant:

- What do you call this plant?
- What parts do you use?
- At what time of year?
- Is it used at any other time of year?
- Is there another name for the part of the plant that is used?
- Can you share some stories about the use of this plant?

### 3.2.4 P. Burt and J. Hickes, Traditional Knowledge, Marine Approaches to Rankin Inlet, 2012

A TK study relating to marine wildlife and the marine environment through Hudson Bay and the marine approaches to Rankin Inlet was undertaken in 2012 (Burt and Hickes 2012). The study was based on interviews with experienced hunters, fishers, boat tour guides, and people who spend a lot of time on the water in the Rankin Inlet area. The report is available in FEIS Volume 9, Appendix 9.3-C and the results are discussed in FEIS Volume 8, Section 8.3.3.

Members of the HTO in Rankin Inlet were asked to recommend participants who currently hunt marine mammals and/or spend a lot of time on the water during the open-water season.

Two participants were interviewed in May and October 2012; in addition to interviews with representatives with the HTOs of Whale Cove and Chesterfield Inlet. The participants signed release forms for the use of the information and the recordings of the interviews. Paper maps were used in the interviews. Although the extensive list of questions is available in Appendix 1 of FEIS Volume 9, Appendix 9.3-C, the interview questions revolved around the following topics:

- changes in abundance or location of marine mammals, in use of the marine sea lanes and the sea ice;
- hunted and observed species near Rankin Inlet;
- important marine mammals in local people's diet;
- areas of importance to marine mammals;
- areas most used by boaters around Rankin Inlet; and
- areas that should be avoided by vessels.

### 3.2.5 Nunami Stantec, Marine Baseline Report, Itivia Harbour, 2012

As part of Nunami Stantec Ltd's (Nunami) baseline study of marine fish and mammals in the area of the proposed floating spud barge, a Nunami biologist met with members of the HTO in Rankin Inlet in July 2011 (Nunami Stantec 2012). The purpose of this meeting was to obtain TK about Rankin Inlet and the local fishery including presence and relative abundance of fish, invertebrates, marine plants, marine mammals and birds; harvest timings and locations; and, the community's areas of interest. Maps were reviewed during the meeting. Nunami's complete Itivia Harbour marine baseline is available in FEIS Volume 8, Appendix 8.2-A, and the list of



questions is available in Appendix G of that same report. The results of this meeting are also presented in FEIS Volume 8, Section 8.3.3.

General topics of the meeting were as follows:

- fishing and hunting around Rankin Inlet, species, locations and timing;
- Arctic char;
- commercial fishing;
- seaweed harvest;
- ice freeze up and ice break, tides; and
- observed changes in Itivik Harbour.

### 3.3 Baseline Information Collection

Baseline information has been collected between 1998 and 2013 on various environmental and socio-economic components. The methodology and baseline data collected vary from component to component. However, sufficient baseline data were collected to reflect time, depth and geographic broadness of both temporal and spatial scale for environmental and socio-economic components. The methodologies and results of baseline data collection are provided for each component in Volumes 5 through 10 of the FEIS. Traditional knowledge baseline data was incorporated into each of the sections, where applicable. The level of certainty with the collected baseline data was also incorporated into each of the sections, where applicable.

Methods for baseline data collection; evaluation of the adequacy of the data; confidence levels associated with the data; gaps in knowledge and understanding; and uncertainties are presented in Volumes 5 through 10 and SD 6-1 Permafrost Baseline Report, SD 6-2 2009 Terrestrial Synthesis Baseline Report, SD 6-3 Geochemistry Baseline Report, SD 7-1 2009 Aquatics Synthesis Baseline, and SD 7-2 2011 Aquatics Baseline. Data sources used to further define baseline conditions included published literature, technical scientific reports, and peer-reviewed scientific literature.

Baseline data was collected on components that would contribute to biophysical environmental monitoring programs and provide a useful understanding of the relationship between the natural ecological conditions and the potential Project impacts on these conditions. Proposed biophysical monitoring programs are provided in SD 5-1 Air Quality Monitoring Plan, SD 5-2 Noise Monitoring Plan, SD 6-4 Terrestrial Environment Management and Monitoring Plan, and SD 7-3 Aquatic Effects Monitoring Plan.

A summary of baseline information collected is provided in Table 5 of FEIS Volume 1, Appendix 1-C. Baseline information has been collected for the following components:

- noise;
- permafrost;
- vegetation;
- terrestrial wildlife;
- birds;
- hydrogeology and groundwater quality;



- ice thickness;
- surface water and sediment quality;
- aquatic habitat;
- lower trophic communities;
- fish;
- marine water and sediment quality;
- marine depth soundings;
- marine biology; and
- socio-economics, heritage resources, and TK.

### 3.4 Use of Existing Information

Where applicable, existing information and available results of surveys and studies completed in the Project region by others have been incorporated and clearly referenced within the FEIS. Other available information containing baseline data related to the Project region, including a review of published literature, technical scientific reports, and peer-reviewed scientific literature was also included to present a clear picture of baseline conditions.

Information relating to AEM's Meadowbank Mine as well as other previous and/or currently active projects in Nunavut and Northwest Territories was also consulted, either to complement baseline information or to gather information on the experiences learnt from these similar projects and/or projects in a similar geographical setting. Where applicable, gathered information from these sources have been clearly referenced within the FEIS. The projects include:

#### Nunavut

- Doris North Project, Miramar Mining Corporation;
- Jericho Diamond Mine, Tahera Diamond Corporation;
- Kiggavik Project, AREVA Resources Canada Inc.;
- Mary River Project, Baffinland Iron Mines Corporation; and
- Meadowbank Mine, Agnico Eagle Mines Limited.

#### Northwest Territories

- Diavik Diamond Mine, Rio Tinto and Harry Winston Diamond Corporation;
- Ekati Diamond Mine, BHP Billiton Diamonds Inc.;
- NICO Project, Fortune Minerals Limited; and
- Snap Lake Mine, De Beers Canada Inc.

Collected baseline information together with information collected in literature reviews, during public consultations, and TK studies form the basis to understand the environmental and social environments of the Project area. Volume 4 presents the methodology used to assess how Project activities are likely to alter the baseline conditions as presented in the FEIS.



### 3.5 Use of Traditional Knowledge

As described in Section 3.2, data collection for the IQ Baseline included literature review and field studies. Initial IQ field studies for the Project were first undertaken in 1997 and 1998 in Rankin Inlet and Chesterfield Inlet (Nanuk Enterprises 1999). Follow-up IQ studies in Rankin Inlet, Whale Cove, and Chesterfield Inlet were done in 2010 and 2011 (FEIS, Volume 9, Appendix 9.3-A). A Traditional Knowledge of Plant Use study was also undertaken for the Project (Volume 9, Appendix 9.3-B).

A literature review was undertaken prior to submission of the Draft Environmental Impact Statement and additional literature was reviewed for the FEIS, including information on climate change. A synthesis of IQ data collected for the Project is provided in FEIS Volume 9, Section 9.3.

The IQ used throughout the main volumes of the FEIS is highlighted using the letters “IQ” in the margins. The amount of IQ in each chapter is not consistent because the technical disciplines assessed in the FEIS are not consistently important to community members. Much of the IQ collected for the Project focused on wildlife and fish species, as well as land use. This includes baseline data collected through TK studies, current and past traditional practices, as well as concerns about the Project from Elders and other community members, including women and youth.

The IQ collected on the Project included knowledge on the existing condition, concerns on the various project impacts, and recommendations for the Project. Knowledge of the existing conditions is included in baseline reports or environmental setting portions of the FEIS. Concerns on the various project impacts are included as part of the effects assessments, and recommendations were considered in developing the Project Description (Volume 2) and when developing mitigation and monitoring plans in Volumes 5 through 10, where appropriate. The pre-hearing conference concerns have also been considered in Volumes 5 through 10. In the effects assessment, IQ was used to identify VECs and VSECs by the value placed on the valued component, to identify the Project impacts that may affect VECs or VSECs, and to assess significance on those VECs or VSECs (see FEIS, Volume 4, Sections 4.2, 4.3 and 4.5.5). Volume 4, Section 4.13 provides additional information on incorporation of IQ in the FEIS.

### 3.6 References

#### 3.6.1 Literature Cited

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## MELIADINE FEIS – VOLUME 3 DATA COLLECTION

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