



## **Section H**

### **Aboriginal Groups Consultation and Assessment**

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## H. ABORIGINAL GROUPS CONSULTATION AND ASSESSMENT

### H.1 INTRODUCTION

This section of the application provides a description of key consultation activities and results of the consultation program for the Grassy Mountain Coal Project (the Project), background information on Aboriginal groups that may be affected by the Project, and an assessment of potential effects on Aboriginal valued components. In addition, this section documents how views and concerns of Aboriginal groups are incorporated into the EIA.

Aboriginal groups that are potentially affected by the Project are defined in the *Terms of Reference for Environmental Impact Assessment Report* (Alberta Energy Regulator [AER] 2015) and the *Guidelines for the Preparation of the Environmental Impact Statement* (Canadian Environmental Assessment Agency [CEAA] 2015). Aboriginal groups identified as potentially affected by the Project are:

- Blood Tribe (Kainai Nation);
- Piikani Nation;
- Siksika Nation;
- Stoney Nakoda Nation:
  - Bearspaw;
  - Chiniki; and
  - Wesley.
- Tsuut'ina Nation.

Benga Mining is engaging with Aboriginal groups included in the Environmental Impact Assessment (EIA) process that are expected to be less affected by the Project. Views and information provided by these Aboriginal groups are incorporated into the assessment. These Aboriginal groups identified in the *Guidelines for the Preparation of the Environmental Impact Statement* (CEAA 2015) are:

- Ktunaxa Nation
  - St. Mary's Indian Band;
  - Lower Kootenay Indian Band;
  - Tobacco Plains Indian Band; and
  - Akisq'nuk First Nation.
- Samson Cree Nation;
- Shuswap Indian Band;

- Foothills Ojibway First Nation;
- Métis Nation of Alberta; and
- Métis Nation of British Columbia.

[Section H.1.0](#) provides an overview of the consultation program for the Project with Aboriginal groups identified by AER and CEAA. The overview includes a summary of the consultation for the EA process, opportunities for capacity building, and approach for incorporating Traditional Ecological Knowledge (TEK) and Traditional Land Use (TLU) information into the EIA. Further information regarding the Aboriginal consultation program is available in the *Grassy Mountain Project First Nations Consultation Plan* in [Appendix 7a](#).

[Section H.2](#) identifies the assessment methods used to assess the Valued Components (VCs) with respect to Aboriginal peoples. The VCs refer to features that may be impacted by the project. For Aboriginal peoples, the assessment focused on an effect of any change caused to the environment on health and socio-economic conditions; physical and cultural heritage; the current use of lands and resources for traditional purposes; and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. The methods used in the assessment of potential effects of the Project on VCs are informed by the methods used in the assessment of potential effects on VCs in [Section D](#) of the Application.

[Sections H.3](#) to [H.13](#) contains background information, potential effects of the Project, proposed mitigation measures, residual effects and a discussion of cumulative effects for each potentially affected Aboriginal group. In addition, views, concerns and recommendations provided by Aboriginal groups are included. Maps of asserted or established traditional territories are referenced for each Aboriginal group. The maps identify areas of use and Indian Reserves based on information from Aboriginal groups and publicly available sources.

### **H.1.1 Aboriginal Consultation**

Benga has been consulting and engaging with Aboriginal groups that may be affected by the Project since June 2013. The First Nations Consultation Plan ([Appendix 7a](#)) describes consultation activities for the EA process. Consultation activities such as sharing project information, site tours, field work, Traditional Knowledge and Traditional Use (TK/TU) studies, workshops, and open houses are reported in this section and are ongoing and will continue through the EA process.

Consultation activities conducted by Benga with Aboriginal groups are guided by key objectives that satisfy regulatory requirements and help develop relationships with Aboriginal groups who may be affected by the Project. Benga is committed to the following key consultation objectives:

- respectful and meaningful consultation with Aboriginal groups including meeting in the early stages of Project planning;
- sharing important and relevant information about the Project and facilitating site-specific discussions with Aboriginal groups in a timely manner regarding Project updates, baseline information, and assessment results;
- working collaboratively with Aboriginal groups to develop work plans and to include Aboriginal groups in field work opportunities;
- including feedback and important information from Aboriginal groups by conducting TK studies, seeking input on potential effects, and including recommendations on ways to mitigate potential effects; and
- ongoing and open communication with Aboriginal groups through the life of the Project to address issues and concerns.

Effective consultation with Aboriginal groups is an important part of the Project as collaboration with Aboriginal groups can enhance the quality of an EIA in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment.

#### **H.1.1.1 Treaty 7 First Nations**

Treaty 7 First Nations have expressed interests in the Project and Benga has been engaging with them on coal exploration and planning activities since June 2013. On October 15, 2014, Aboriginal Consultation Office (ACO) directed Benga to consult with the Treaty 7 First Nations at consultation Level 3: extensive consultations for projects with EIAs.

Throughout the Project, Benga shared Project information and solicited input from Treaty 7 First Nations to develop a greater understanding of, and to address, potential impacts to their Treaty rights and traditional uses. This input is considered and incorporated, as appropriate, into the EIA. The following sub-sections describe the consultation objectives and tools to be used to support the three phases of the EA process: initial, pre-application and panel review.

##### **H.1.1.1.1 Early Consultation with Treaty 7 First Nations**

Benga began engaging Treaty 7 First Nations in June 2013, prior to acquisition of the Grassy Mountain coal leases. Through early discussions with Treaty 7 First Nations on coal exploration activities and future plans, Benga set out to engage each First Nation in the Project in a way that is respectful and meaningful.

The following engagement activities and initiatives have been conducted with Treaty 7 First Nations to date to develop good relationships with the Treaty 7 First Nations.

- provision of Project information and updates. Benga sends detailed information about its planned activities, including permit applications, to Treaty 7 First Nations' designated consultation representatives via email followed by email and telephone requests for meetings to discuss the information provided. During in-person meetings, Benga provides relevant scale maps and hard copies of documents provided earlier by email. In email, telephone and in-person discussions, Benga requests input on known or potential concerns and issues from Treaty 7 First Nations;
- meetings and Project presentations to Treaty 7 First Nations Leadership and Staff. Benga meets regularly with the Treaty 7 First Nations to share Project information and updates; seek views and input; and develop detailed work plans for EIA-related studies and communication activities. This includes:
  - project updates;
  - project site-specific discussions and field visits on environmental and traditional use data;
  - information on the provincial and federal EIA processes; and
  - information on the mining sector and development processes.
- Benga implemented an information management system (StakeTracker) to organize and ensure the team addresses any comments or concerns raised by Treaty 7 First Nations;
- historic resources. Benga engaged Arrow Archaeology to conduct archaeological and other heritage assessments for the project, on the recommendation of the Aboriginal groups that Arrow is their preferred service provider. Arrow worked with the Treaty 7 First Nations to plan their participation to ensure appropriate engagement; and
- collaboration on consultation schedule/work plans. Benga worked with each of the five Treaty 7 First Nations on developing Nation-specific work plans for the EIA and consultation process.

#### H.1.1.1.2 Pre-Panel and Panel Phases For Treaty 7 First Nations

In addition to the initial engagement activities, key consultation activities for the Pre-Panel/Environmental Impact Assessment (EIA) phases have included:

- Benga provided notice to Treaty 7 First Nations of upcoming EIA milestones throughout the Pre-Panel phase and will continue to do so during the Panel phase. Public notices will be provided by email, and advertised in the Windspeaker and/or the Alberta Sweetgrass, and if publication deadlines of these do not align with timing requirements, they will be posted in the Treaty 7 First Nations' community newsletters;
- project information/updates, environmental baseline studies, and integration of traditional use information were made available to Treaty 7 First Nations throughout the Pre-Panel phase.

Information/updates and EIA related documents will be made available to Treaty 7 First Nations throughout the Panel phase of the process. Information will continue to be provided by email and/or post, and followed up by telephone and in-person with the designated consultation representatives;

- community information sessions have been offered for each Treaty 7 First Nation with the intent of increasing awareness and knowledge of the various Project components, timelines and the EIA process. The information sessions also provide an opportunity for community members to speak with Benga representatives about Project-related questions, and for Benga to obtain comments, issues and concerns regarding potential effects of the Project; and
- Benga has worked with Treaty 7 First Nations designated contacts to determine the most appropriate ongoing processes for consultation activities, schedules and Project timelines, including regulatory process timeframes for comment. Consultation activities may include community meetings, workshops, Elder and youth meetings, and focused communication on traditional uses of the Project area. Details about engagement for each group are located in the individual sections ([H.3](#) to [H.13](#)).

Benga has worked with the Treaty 7 First Nations to integrate traditional and local knowledge with biophysical and human environment assessments, and to consider approaches to avoid, mitigate or manage potential impacts to Treaty rights and traditional uses.

#### **H.1.1.2 Other Aboriginal Groups**

On June 24, 2015, CEAA published the Project's Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) wherein CEAA identified six Aboriginal groups that may be less affected by the Project: Ktunaxa Nation, Samson Cree Nation, Shuswap Indian Band, Foothills Ojibway First Nation, Metis Nation of Alberta – Region 3, and Metis Nation of British Columbia – Region 4.

After the Final Guidelines were published, Benga promptly distributed Project information to each Aboriginal group identified as potentially affected by the Project. Benga contacted Aboriginal groups to propose a plan for consultation. As part of this initial consultation process, Benga solicited input from each Aboriginal group to develop a greater understanding of, and to address, potential impacts to communities, activities, and potential or established Aboriginal Interests in the Project area. Any information that Benga receives through consultation with Aboriginal groups will be considered and incorporated, as appropriate, into the EA process. The following sub-sections describe the consultation objectives and tools to be used to support the two phases of the EIA process: pre-panel and panel phase.

#### H.1.1.2.1 Pre-Panel Phase

Key consultation activities for the pre-panel phase include:

- provision of Project information including upcoming EIA milestones and updates. Benga plans sent detailed information about its planned activities to Aboriginal groups via email;
- information packages that included valued components, baseline information, identified Aboriginal Interests, and potential adverse impacts were shared. This information package included Benga's understanding of traditional and current use of the Project area by the Aboriginal groups and a figure of Benga's understanding of the traditional territory based on available information. Benga sought feedback from each Aboriginal group and considered suggested approaches to avoid, mitigate, or manage potential impacts to communities, activities, and potential or established Aboriginal interests where suggested; and
- Benga has implemented an information management system (StakeTracker) to organize and ensure the team addresses any comments or concerns raised by Aboriginal groups.

#### H.1.1.2.2 Panel Phase

In addition to the pre-panel phase consultation activities, during the panel phase, Benga will:

- work with Aboriginal groups' designated contacts to determine the most appropriate ongoing processes for consultation activities, schedules, and project timelines, including regulatory process timeframes for comment; and
- provide information related to the Project such as updates, technical reports, effects assessments, and results of integration of Traditional Use information will be made available to Aboriginal groups throughout the panel phase as appropriate. Aboriginal groups will have an opportunity to provide input throughout the EIA process. Information will be provided by email and/or post and followed up by telephone with the designated consultation representatives.

#### H.1.1.3 Capacity Funding

Benga offered capacity funding for EIA-related consultation activities to each of the Treaty 7 First Nations, in addition to funding their TK/TU studies. The approach has been to offer to provide capacity funding based on work plans and budget estimates developed between Benga and the Aboriginal groups to enable participation in the regulatory process as described in the First Nations Consultation Plan.

#### H.1.1.4 Traditional Ecological Knowledge and Traditional Land Use

Treaty 7 First Nations were provided the opportunity to conduct TK/TU studies related to the Project. Public versions of the TK/TU studies are appended to this report in [Appendix 7b](#); the confidential reports were retained by the respective Treaty 7 First Nations for their use and information. Documents and other deliverables generated as part of the TK/TU studies include summaries, reports, presentations, videos, maps, work plans, and budgets. Many of these documents and deliverables are the confidential intellectual property of the participating Aboriginal groups and were not provided to Benga. TK Specialists worked with the Aboriginal groups to ensure that information that is made public or released to Benga and its consultants was authorized for dissemination.

Five Treaty 7 First Nations potentially affected by the proposed Project conducted TK/TU studies in 2014 with financial support from Benga. Independent TK specialists worked with each Treaty 7 First Nation to develop customized work plans and budgets for each phase. Methods were discussed and developed collaboratively with Treaty 7 First Nations with several draft work plans going back and forth between each Treaty 7 First Nation and the TK specialists. Benga was provided with budgets before each phase for approval.

A two-phased approach was carried out from May to December 2014, and a third phase was added to the program based on a change to the Project footprint:

- Phase 1 – Preliminary Site Visit (June/July 2014): Collected initial TK/TU when Benga initiated studies for the environmental assessment process in December 2013 and developed a plan for more detailed TK/TU data collection as part of the next phase. This phase focused primarily on mapping exercises and field visits to accessible private lands owned by Benga. Locations visited on the site visit were guided by the project map that was available at the time;
- Phase 2 – Ground-truthing (August – October 2014): Identified and ground-truthed TK/TU sites and information in areas identified during the preliminary site visit for a more detailed understanding of the areas in and around the proposed Project. This phase focused on areas proposed for development on Crown lands based on revised site disturbance maps. All Treaty 7 First Nations with the exception of Stoney Nakoda Nation conducted Phase 2 ground-truthing; and
- Phase 3 – In October 2014 and July through August 2015, the Treaty 7 First Nations conducted supplementary TK/TU work in areas that were added to the mine footprint.

There was an average of six stops made during each tour, mostly on Benga private lands. At each site, TK Specialists as well as some Aboriginal group representatives took video, photos, Global Positioning System (GPS) waypoints, and recorded discussions and observations of Treaty 7 First Nations Elders. Challenging road conditions and access issues prevented more investigations on

Crown land further north and west of Benga private lands. However, these areas were covered in the subsequent field work during ground-truthing in Phase 2 of the TK/TU study.

#### H.1.1.4.1 Workshops

In addition to field work, Piikani Nation and Kainai Nation each held two workshops, and Piikani held two ceremonies. Piikani Elders and members of the Brave Dog Society conducted two ceremonies, site specific to the Grassy Mountain Project with representatives of Benga in attendance. About twenty people were a part of the ceremonial activities. The morning ceremony entailed prayers, smudging, and offering tobacco to the land on the south side of the Grassy Mountain Project. The latter was held at the Benga Office and included blessing of the Piikani effigy, smudging, granting of names, and face painting. The remainder of the ceremony occurred at the summit of Grassy Mountain, where the Piikani effigy remains secured to a tree. It should be noted that the effigy must be removed prior to any disturbance at this location.

#### H.1.1.4.2 Phase 2 – Ground Truthing

After the preliminary site tour, Aboriginal groups and TK specialists reviewed maps of possible areas of disturbance on Crown lands and collaboratively developed plans for the detailed field work for ground-truthing. Besides the field work, Piikani and Kainai Nation elected to follow up the field work with a workshop to debrief with their Elders and integrate site interpretation and analysis.

A total of 30 days were spent in the field in and around Grassy Mountain on both private and Crown lands or in workshops with 202 TK/TU sites recorded by Aboriginal groups. Piikani Elders and technicians conducted their field work and workshop efforts over 10 days with 52 TK/TU sites recorded. Kainai Elders and technicians completed their field work in a total of 7 days with 28 TK/TU sites recorded. Siksika undertook their site tour and ground-truthing efforts in 6 days with the identification of 46 TK/TU sites. Tsuut'ina conducted their field program over 5 days with 61 TK/TU sites identified. Finally, Stoney technicians recorded 15 sites during their 1-day preliminary site tour but did undertake subsequent ground-truthing of the Grassy Mountain Project.

## H.2 ASSESSMENT METHODS

The analysis provided in [Sections H.3 to H.13](#) is based on the requirements set out in the CEAA EIS Guidelines and the AER TOR. Section 6.0 of the EIS Guidelines requires an effects assessment of the Project on VCs as outlined in Section 6.3 of the EIS Guidelines. The following sections explain the approach for the assessment of effects of the Project on Aboriginal groups.

### H.2.1 Project Setting and Background Information

Pursuant to [Section 6.1](#) of the CEAA EIS Guidelines, background information for each Aboriginal group listed in the EIS Guidelines is required based on the spatial and temporal scope selected for the assessment. The purpose of the background information sections is to inform the assessment of potential effects on VCs. For each Aboriginal group, an assessment of potential effects and a characterization of residual effects to the VCs are provided.

### H.2.2 Potential Effects on Aboriginal Valued Components

As outlined in [Section 6.3](#) of the EIS Guidelines, Benga Mining is required to provide a description and analysis of how the Project will affect Aboriginal peoples. VCs for the assessment of potential effects to Aboriginal groups have been identified based on guidance provided by AER and CEAA, information provided by Aboriginal groups during consultation activities, knowledge of generally established Aboriginal interests, environmental assessments for similar projects, and publicly available sources.

The identification of potential effects is based on information provided during consultation, known use in the Project area as understood by Benga Mining, project activities during construction and operation, and results of the assessments for related VC sections in the Application. Views on the selection of VCs, identification of potential effects, and perspectives related to the assessment of potential effects on VCs are included where provided by Aboriginal groups. [Sections H.3 to H.13](#) provides an assessment of potential effects on VCs as summarized in [Table H.2-2-1](#).

<b>Table H.2.2-1 Aboriginal Valued Components and Potential Effects</b>		
<b>Aboriginal Valued Components and Sub-Components</b>	<b>Potential Effects to Aboriginal Interests</b>	<b>Associated Valued Component<sup>1</sup></b>
<b>Current Use of Lands and Resources for Traditional Purposes</b>		
Hunting	Change in identified hunted species and habitat Change in use or access to identified hunting locations Change in preferred harvesting method	Wildlife Land and Resource Use
Trapping	Change in identified trapped species and habitat Change in use or access to identified trap lines or trapping locations	Wildlife Land and Resource Use
Fishing	Change in identified fishing species and habitat Change in use or access to identified fishing locations	Aquatics/Fisheries Land and Resource Use

**Table H.2.2-1 Aboriginal Valued Components and Potential Effects**

Aboriginal Valued Components and Sub-Components	Potential Effects to Aboriginal Interests	Associated Valued Component <sup>1</sup>
<b>Current Use of Lands and Resources for Traditional Purposes</b>		
	Change in preferred harvesting method	
Plant Gathering	Change in use or access to identified vegetation species and habitat Change in use or access to identified plant harvesting locations Change in preferred plant harvesting method	Vegetation Land and Resource Use
Trails and Travelways	Change in use or access to identified trails and travelways Disturbance to features associated with trails and travelways	Land and Resource Use Historical Resources
<b>Aboriginal health</b>		
	Change in human health from disturbance to air quality Change in human health from disturbance to water quality Change in human health from consumption of country foods Change in human health from noise	Human Health
<b>Aboriginal Socio-Economic Conditions</b>		
	Disturbance to Aboriginal commercial activity Disturbance to Aboriginal forestry and logging operations Disturbance to Aboriginal recreational use	Socio-Economics Land and Resource Use
<b>Aboriginal Physical and Cultural Heritage</b>		
	Disturbance to physical and cultural heritage Change in access to physical and cultural heritage Change to cultural value or importance associated with physical and cultural heritage	Historical Resources Land and Resource Use

<sup>1</sup> Results of the assessments to other associated VCs in the Application including any relevant mitigation measures and discussion of potential residual and cumulative effects and follow-up programs will be referenced as appropriate

### H.2.2.1 Boundaries

The spatial boundaries for the assessment include a local study area (LSA), which is the area of direct disturbance by construction activities such as the open pit mine, coal handling and processing plant, overland conveyor and train load-out facility, and associated infrastructure (e.g., rail system, equipment and explosives storage facilities, fueling station, water management structures,

construction camp, coal conveyor and powerline, access roads). While the assessment of effects focuses on interactions occurring within the Project footprint ([Figure A.1.0-2](#)), discussion of effects from associated VC sections of the EIA are included in the assessment on Aboriginal VCs. A regional study area (RSA) is used in the discussion of potential interactions of the Project with other projects and cumulative effects on Aboriginal VCs. The RSA was selected based on the largest extent of potential effects identified.

The temporal boundaries for the assessment are:

- construction: the overall construction phase of the Project is anticipated to be two years pending all necessary approvals and permits;
- operation: operation is anticipated to commence in 2019. The lifespan of the Project is anticipated to be 24 years; and
- reclamation and closure: progressive reclamation will commence in Year 5 and extend to Year 24 of mine operations. Final closure will consist of an additional three years.

### **H.2.3 Mitigation Measures**

Benga mitigation measures are identified to avoid or reduce potential effects to Aboriginal VCs. Mitigation measures developed in the biophysical assessment are applied where they are applicable to the VCs, and where they address potential effects to traditionally harvested species and access to important sites. Recommendations for mitigation measures by Aboriginal groups through TK Studies and the consultation program are referenced and considered in each Aboriginal group's section of this assessment. Recommendations and views expressed about the effectiveness of proposed mitigation measures are included where available.

### **H.2.4 Characterization of Residual Effects**

Residual effects are effects that are anticipated to remain after proposed mitigation measures are implemented. Residual effects on Aboriginal VCs are characterized for each Aboriginal group based on criteria identified in [Section D](#) and are summarized in [Table H.2.4-1](#). Results from related VC sections are included in the assessment of residual effects. In addition, the characterization of residual effects considers potential effects identified by Aboriginal groups.

**Table H.2.4-1 Characterization of Residual Effects on Aboriginal Valued Components**

Residual Effects Characterization Criteria	Description	Definition
Magnitude	Magnitude describes the amount of change associated with the residual adverse effect to Aboriginal Interests within the spatial boundaries.	<p>N=Negligible – no change in the ability to exercise an Aboriginal Interest</p> <p>L=Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA.</p> <p>M=Moderate – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability to exercise the Aboriginal Interest in the RSA.</p> <p>H=High – a change in the ability to exercise an Aboriginal Interest outside of normal annual variability. May affect the ability to exercise the Aboriginal Interest within the RSA.</p>
Geographic extent	Geographic extent refers to the spatial scale within which a residual adverse effect is predicted.	<p>LSA – Group specific local study area</p> <p>RSA – Group specific regional study area</p>
Duration	Duration is the length of time that the potential residual effect could last.	<p>S=Short term – limited to the construction phase</p> <p>M=Medium term – construction to operation</p> <p>L=Long term – beyond the project lifespan</p>
Frequency	Frequency is related to duration and it refers to how often the residual effect is expected to occur.	<p>O – occurs once</p> <p>R – occurs regularly</p> <p>C – occurs continuously</p>
Reversibility	Reversibility refers to whether the residual adverse effect can be reversed to baseline conditions.	<p>R – reversible</p> <p>N – not reversible</p>
Ecological and social context	Context refers to the sensitivity and resilience of the Aboriginal Interest to change caused by the Project.	<p>S=Sensitive – the Aboriginal Interest is sensitive or has low resiliency to disruption</p> <p>R=Resilient – the Aboriginal Interest is not sensitive or has high resiliency to disruption, i.e. species can adapt to new habitats</p>

A determination of the significance of residual adverse effects on Aboriginal VCs is not provided. However, where residual adverse effects are identified, a description of probability is included to describe how likely the effect is to occur and the degree of uncertainty related to data and methods used. Likelihood is influenced by existing conditions, activities and physical works, project effects and the implementation of proposed mitigation measures. This information is used to determine qualitatively whether there is a low, moderate, or high likelihood of there being a residual effect.

### **H.2.5 Cumulative Effects Assessment**

The cumulative effects assessment provides a qualitative discussion of potential cumulative effects on Aboriginal VCs that have not been fully mitigated or accommodated based on the relevant project effects identified for associated VCs. Establishing other project activities that may interact cumulatively with the effects of the Project is done in consideration of views of Aboriginal groups and assessment in [Section E](#). As described in Section 6.6 of the EIS Guidelines (CEAA 2015), cumulative effects occur where interactions between Project activities combined with the existence of other past, present, and reasonably foreseeable physical activities result in direct residual effects on VCs. There are three steps involved in the discussion of cumulative effects:

- Is there a project residual effect?
- Does the project residual effect overlap spatially and temporally with other past, present, or future physical activities within the spatial and temporal boundaries?
- Is there a reasonable expectation that the combination of residual effects of the Project with other past, present, or reasonably foreseeable future activities will result in a cumulative effect?

Determining which VCs are included in the discussion of cumulative effects is based on input from Aboriginal groups and the residual effects assessment for associated VCs. Identifying the spatial and temporal overlap of the residual effects with those of other project activities is focused on interactions with projects and activities that are in proximity to the Project. These activities are described and shown in corresponding maps. The discussion of whether there is a reasonable expectation for the occurrence of a cumulative effect is based on a qualitative interpretation of how cumulative effects may affect Aboriginal people. Cumulative effects may be minimized through the implementation of project-specific mitigation measures and regional level management by government.

### **H.2.6 Follow-up and Monitoring Programs**

The purpose of follow-up and monitoring programs is to verify the accuracy of the effects assessment and to determine the effectiveness of mitigation measures identified for the Project. Follow-up and monitoring programs related to Aboriginal VCs are described where residual effects are likely and the

effectiveness of proposed mitigation measures is uncertain. The focus of follow-up and monitoring programs is on VCs that are characterized as not resilient. In addition, views provided by Aboriginal groups on monitoring and reclamation are discussed.

### H.2.7 Aboriginal Issues and Concerns

Pursuant to Section 1 of the AER TOR ([Appendix 1](#)) and Section 5 of the CEAA EIS Guidelines ([Appendix 2](#)), issues and concerns of Aboriginal groups are provided in the EIA and considered throughout the assessment. Comments, specific issues, and concerns raised by Aboriginal groups and responses from Benga Mining are summarized for each Aboriginal group. This includes any additional issues and concerns raised in relation to the assessment and potential effects of the Project on Aboriginal interests.

## H.3 ASSESSMENT OF POTENTIAL EFFECTS – BLOOD TRIBE (KAINAI NATION)

### H.3.1 Introduction

Blood Tribe is referred to as Kainai Nation in the assessment because Kainai Nation is identified by Blood Tribe as the preferred term. Kainai Nation is a member nation of the Treaty 7 Management Corporation which acts as a tribal council for Treaty 7 First Nations including Siksika Nation, Piikani Nation, Tsuut'ina Nation, and Stoney Nakoda Nation. Siksika Nation, Piikani Nation, and Kainai Nation share a common culture and language known as Blackfoot. The Kainai Nation traditional territory is located in southern Alberta and includes Crowsnest Pass and surrounding areas ([Figure H.3.1-1](#)). There are two reserves and the main community is located on the reserve called Blood 148. The proximity of Kainai Nation reserves in relation to the Project is summarized in [Table H.3.1-1](#).

<b>Table H.3.1-1 Proximity of Kainai Nation Reserves to the Project</b>		
<b>Reserve/s</b>	<b>Distance to the Project LSA (km)</b>	<b>Distance to the Project RSA (km)</b>
Blood 148	69.08	44.49
Blood Timber Limit 148A	78.60	53.60

There are 12,103 registered Kainai Nation members (AANDC 2015a). The number of Kainai Nation members who live on their own reserve is 8,176 and a total of 3,721 live off-reserve (AANDC 2015a). Kainai Nation is governed by an elected Chief and Council which operates through an appointment term of four years as summarized in [Table H.3.1-2](#).

<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Chief	Charles Weasel Head	11/28/2012	11/27/2016
Councillor	Frankie Black Plume	11/28/2012	11/27/2016
Councillor	Aloysius Black Water	11/28/2012	11/27/2016
Councillor	Dexter Bruised Head	11/28/2012	11/27/2016
Councillor	Michael D. Bruised Head	11/28/2012	11/27/2016
Councillor	Kyla Crow Spreads His Wings	11/28/2012	11/27/2016
Councillor	Myron Eagle Speaker	11/28/2012	11/27/2016
Councillor	Dorothy First Rider	11/28/2012	11/27/2016
Councillor	Nolan Little Bear	11/28/2012	11/27/2016
Councillor	Lance Tail Feathers	11/28/2012	11/27/2016
Councillor	William Wadsworth	11/28/2012	11/27/2016
Councillor	Marcel Weasel Head	11/28/2012	11/27/2016
Councillor	Franklyn White Quills	11/28/2012	11/27/2016

The Blackfoot Confederacy is composed of the Aapatohsippiikani (Northern Piikani Nation), Kainai (Blood Tribe), Siksika Nation, and Aamsskaapipiikani (Blackfeet Nation located in Montana). While each of these Nations is an independent political entity, they cooperate in numerous ways and are a single ethnic group. The Blackfoot Nations share a common language, culture, and history (Piikani Nation 2015b).

Blackfoot is a language of the Algonquian linguistic family which is the most widespread indigenous language family in North America. The majority of Algonquian speakers are in eastern North America. Based on the National Household Survey (Statistics Canada 2011), 24.3% of Kainai Nation members speak an Aboriginal language at home and 37% have knowledge of Aboriginal language (AANDC 2015b).

Prior to the arrival of European settlers in the region of southern Alberta beginning in the late 19th century, the economy of the Kainai Nation was based primarily on the acquisition of naturally occurring resources as well as commodity exchange with European fur-traders who had been present in the area for at least 100 years. Groups of Aboriginal people moved to seasonal resource procurement locations, such as the Grassy Mountain area, at particular times of the year to take advantage of abundant plant or animal resources. Procured resources would be either used for

ceremonial, medicinal, or food purposes or traded with neighbouring groups or Europeans (Kainai Nation 2015c).

### **H.3.2 Aboriginal Consultation**

#### **H.3.2.1 Consultation Summary**

Benga initiated engagement with Kainai Nation in June 2013 with a meeting at Kainai Nation council chambers to introduce the company, key members of its team, and express Benga's interest in developing a project in the Crowsnest Pass. In the meeting, Kainai Nation, provided a background on the area, their Aboriginal Interests, their administrative structure, and expressed interest in continued engagement.

Early on, Benga shared updates on the Project as they became available, and by February 2014, Benga and Kainai Nation began to develop a framework for consultation. Through a series of meetings and emails, this framework was drafted into a First Nations Consultation Plan, which Kainai Nation reviewed before it was finalized for submission to the Alberta government. Benga and Kainai Nation then developed a work plan and budget, based on the First Nations Consultation Plan, to outline the tasks and schedules associated with continued engagement, and to ensure that Kainai Nation's resource needs for continued participation were met as the Project progressed through EIA process. The consultation work plan and budget were revised, as necessary, to accommodate unanticipated changes to the Project or the regulatory process such as Project changes leading it to come under CEAA purview, and CEAA's referral of the Project to Review Panel.

In accordance with the First Nations Consultation Plan, Benga provided a copy of the Proposed Terms of Reference (PTOR) to Kainai Nation in December 2014 and followed-up with emails and in-person as well as teleconference meetings to discuss the PTOR in detail. In late January 2015, Benga provided Kainai Nation's comments to the ACO and AER. Similarly, Benga provided information and reviewed the CEAA process starting in February 2014, and met with Kainai Nation in April 2015 to discuss the CEAA Draft EIS Guidelines. Benga followed up in July 2015 to provide an update on information on funding opportunities for participation in the CEAA review process.

Consultation and engagement activities with Kainai Nation include:

- capacity funding for participation in consultation process;
- meetings to discuss Project updates;
- provision of key regulatory documents, such as:
  - proposed terms of reference;
  - First Nations Consultation Plan;

- draft EIS guidelines;
- final EIS Guidelines Project Description; and
- information packages.

A chronology of key consultation activities with Kainai Nation can be found in [Table H.3.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
June 17, 2013	Meeting	Benga introduced the company and expressed interest in the Grassy Mountain area.
November 21, 2013	Email	Benga provided information about Project phases, permit requirements, and site information.
January 22, 2014	Email	Benga inquired about Kainai Nation’s protocols or process for engaging with industry.
February 27, 2014	Meeting	Discussed Project update, consultation process, TLUS, and Kainai Nation’s preferred archaeological consultant.
March 14, 2014	Email	Developed TLUS work plan, budget and engagement-related activities.
May 22, 2014	Email	Benga submitted to Kainai Nation a job posting for field assistant positions for mid-June field work.
March 24, 2014	Meeting	Discussed Project updates and timelines. Benga inquired about time and resource requirements for Kainai Nation participation.
March 31, 2014	Email	TLUS study purpose and methodology drafted by Kainai Nation staff and TU consultant for review.
March 31, 2014	Email	Benga provided lists of potential employment and contracting opportunities to Kainai Nation.
April 8, 2014	Email	Benga provided a joint draft TLUS work plan.
May 30, 2014	Meeting	Joint planning of TLUS work, including field work, workshop, and budget.
June 4, 2014	Email	Kainai Nation expressed interest in a site visit.
June 11, 2014	Email	Established plan for Kainai Nation’s involvement for developing the consultation plan for the EIA.
June 17, 2014	Email	Benga provided draft First Nations Consultation Plan for review.
July 2, 2014	Email	Kainai Nation advised Benga that the draft First Nations Consultation Plan was under review.

**Table H.3.2-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic of Communication
July 4, 2014	Site tour	Benga provided a site tour to Kainai Nation key representatives.
July 14, 2014	Meeting	Discussion of project updates, the draft Aboriginal group Consultation Plan. Benga met with Blood Tribe Resource Development and Blood Tribe Employment Services to discuss employment and business opportunities.
August 19, 2014	Email	Benga requested comments on the draft First Nations Consultation Plan prior to its submission to the ACO.
September 16-19, 2014	Field work	Kainai Nation participated in ground-truthing activities related to the collection of TK/TU information.
October 9, 2014	Meeting	Discussed Project updates, revised map and sample work plan.
October 22, 2014	Email	Kainai Nation provided a budget for additional TLUS work.
October 23, 2014	Email	Discussed details related to TLUS.
October 28-29, 2014	Field work	Kainai Nation participated in ground-truthing activities related to the collection of TK/TU information.
November 25, 2014	Email	Provided a summary of key milestones for the Environmental impact assessment Application.
December 2, 2014	Workshop	Workshop and discussion with Kainai Nation consultation staff and Elders concerning the TK/TU report.
December 3, 2014	Meeting	Discussed the TLUS.
December 9, 2014	Email	Benga provided the PTOR and confirmed that notice had been placed in newspapers.
January 12, 2015	Email	Distributed meeting agenda, copy of PTOR and Project activities.
January 13, 2015	Meeting	Discussed PTOR and all project activities in detail.
January 26, 2015	Teleconference	Reviewed transcript of discussion of Kainai Nation's comments on PTOR and Project activities.
January 26, 2015	Email	Submitted transcript of Kainai Nation's comments on the PTOR to ACO.

<b>Table H.3.2-1 Chronology of Key Consultation Activities with Kainai Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
February 16, 2015	Email	Submitted interview transcript and terms requiring translation for inclusion in TK/TU Report.
February 19, 2015	Meeting	Provided TK/TU materials to Kainai. Discussed further TU work, matters of confidentiality and access to lodge pole pine from the project area.
February 25, 2015	Email	Benga submitted meeting minutes for review. In acknowledgement of Kainai Nation's stated preference to communicate directly with the CEAA.
March 6, 2015	Email	Submitted the Communication Summary Record (from June 2013 to present) to Kainai Nation.
March 10, 2015	Email	Benga provided a draft consultation work plan and budget for EIA-related tasks.
March 17, 2015	Email	To facilitate Kainai Nation's preference to provide information directly to the CEAA, Benga provided CEAA contact information to Kainai Nation.
March 19, 2015	Email	Benga advised that the AER had finalized the TOR for the provincial EIA.
March 19, 2015	Email	Benga re-submitted a draft consultation work plan and budget for the EIA-related tasks to Kainai.
March 26, 2015	Email	Benga provided information related to contracting opportunities.
March 26, 2015	Email	Benga inquired about status of Kainai Nation's TK/TU Report review.
March 30, 2015	Teleconference	Benga discussed process of generating public version of TK/TU Report.
April 22, 2015	Meeting	Discussed the CEAA Draft EIS Guidelines and the process for negotiating an Impact Benefit Agreement (IBA).
April 22, 2015	Email	As requested by Kainai, Benga re-sent information about contracting opportunities.
April 27, 2015	Email	Benga followed up on original contracting email by providing notice of contracting opportunities.
May 1, 2015	Email	Benga's consultant requested meeting to provide and review large TK/TU maps.

**Table H.3.2-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic of Communication
May 4, 2015	Email	Benga distributed proposed IBA negotiation plan.
May 6, 2015	Email	Kainai confirmed that the TK/TU Report had been reviewed and no issues were raised.
May 12, 2015	Email	Benga's consultant outlined plans for completing and submitting TK/TU Report, asking for Kainai Nation confirmation.
May 15, 2015	Meeting	Benga's Managing Director, CFO and consultant provided a project update and offered to initiate discussion toward a Project Agreement (IBA).
June 1, 5 & 17, 2015	Email	Benga's consultant provided the public version of the TK/TU Report and requested a meeting to provide large TK/TU maps and to discuss next steps.
June 19, 2015	Teleconference	Benga's consultant resent the Kainai TK/TU Report, as requested. Kainai Nation inquired about access to lodge pole pine on Project site.
June 23, 2015	Meeting	Benga provided Project maps, EIS guidelines, TK/TU maps and the public version of the TK/TU Report, which Kainai Nation confirmed was ready for distribution.
July 8, 2015	Letter	Benga provided a Project Environmental Assessment update.
July 14, 2015	Email	Provided final design map on Crown land overlapped with TK/TU field work routes.
July 16, 2015	Meeting	Project update and discussion of IBA.
July 16, 2015	Email	Agreed on process for finalizing and incorporating TK/TU Report.
July 16, 2015	Email	Benga's consultant provided the Kainai TK/TU Report (Microsoft Word version) to Kainai Nation.
July 16, 2015	Email	By request of Kainai Nation, Benga's TK/TU Consultant provided the Public TK/TU Report to Benga.
July 16, 21 & 23 2015	Email	Established budget and logistics for additional fieldwork necessitated by a footprint change. Benga provided spatial data to Kainai Nation.
July 29, 2015	Letter	Benga provided Project update and reference to funding opportunities for participation in the CEAA review process.
July 28-30, 2015	Field Work	Kainai Nation field crew ground-truthed additional Crown land sites for TK/TU.
August 27,	Email	Benga provided an information package to allow Kainai Nation an

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
2015		opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 23, 2015	Teleconference	Benga’s consultant phoned to inquire about the status of Kainai Nation’s review of the TK/TU report, which Kainai Nation indicated would begin shortly. Kainai Nation further requested meetings to discuss the IBA and the environmental assessment.
September 24, 2015	Email	Benga offered to set up a meeting (in person or by telephone) to review the EIA report with Kainai Nation when it is completed.
September 25, 2015	Email	Benga sent Kainai Nation additional mapping, including site specific spatial data with an accompanying spreadsheet and route map.
September 30 & October 5, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Kainai Nation’s format preference for receiving the report.

### **H.3.2.2 Traditional Use and Traditional Knowledge Studies**

Kainai Nation’s TK/TU study of the Grassy Mountain area served as an instrument for Kainai Nation to record traditional knowledge and land uses, to identify potential effects of the proposed Project, and to give Kainai knowledge holders an opportunity to provide ideas for mitigation of potential effects. This study is a vital component of the consultation process because TK/TU studies enhance the quality of an environmental assessment in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment. The information gathered in the TK/TU research with Kainai Nation is the intellectual property of Kainai Nation and is confidential. The Kainai Nation TK/TU study is a summary of outcomes of the fieldwork and information related to the Project that is approved by Kainai Nation for use in the EA process. The Kainai Nation TK/TU study is available in [Appendix 7b](#).

Initial planning for the TK/TU study began in February 2014 to develop work plans, schedules and budgets to fund Kainai Nation’s participation in the study. The study was completed in two phases – the first of which was a preliminary site tour completed in July 2014. The preliminary site tour involved visiting five sites with Kainai Nation technicians and Elders to record data via video, photos, and GPS records. The objectives of the preliminary site tour were to collect initial TK/TU data and to identify next steps for the second phase of the study. The second phase of the TK/TU study built on findings from the first phase and involved ground-truthing field work which was completed over six

days in September and October 2014. This field work focused on eight key areas in the Project's original footprint. Over the course of the all phases of the field work, Kainai Nation technicians and Elders identified and recorded 28 TK/TU sites.

Following completion of the field work, Kainai Nation held a workshop during which the TK specialists and representatives of Kainai Nation's consultation team and Elders discussed thoughts, information, observations, stories, and additional Traditional Knowledge from Kainai Elders based on the information collected during ground-truthing.

### **H.3.2.3 Economic Opportunities**

Since the Project's initiation, Benga has, and will continue to work collaboratively with Kainai Nation to develop opportunities for Kainai Nation to derive direct and long-lasting benefits from the Project. To demonstrate a commitment to supporting the Project area's rich cultural heritage, Benga contributed to the 15<sup>th</sup> Annual Blackfoot Confederacy Conference. Benga is in the process of working with Kainai Nation to further define the benefits as part of the process of negotiating an Impacts and Benefits Agreement with Kainai Nation.

Kainai Nation has demonstrated interest in being involved in economic opportunities throughout the life of the Project and has participated in ongoing discussions with Benga and its consultants to offer insights as to Kainai Nation's areas of particular interest. As part of these discussions, Benga provided to Kainai Nation a comprehensive list detailing the contracting opportunities that will be made available during mine construction and operations, and has engaged in subsequent discussions of these opportunities. In 2014, Benga also submitted postings to Kainai Nation for field technician employment opportunities in support of the EIA process. Benga has further provided detailed information on all direct and contracted employment positions that will be available during construction and operations.

In supporting the TK/TU study of the Project area, Benga provided funding for the services of independent Traditional Studies consultants, as well as funding for Kainai Nation to carry out the study. The Traditional Use Study involved a preliminary site visit, two field programs, interviews, and workshops which were documented in a confidential report for Kainai Nation's exclusive use, as well as a public report documenting Kainai TK/TU of the Grassy Mountain Area used for this assessment.

In accordance with the consultation work plan and budget developed collaboratively with Kainai Nation, Benga offers funding in support of Kainai Nation's continued engagement on the Project's EIA process.

### H.3.3 Background

#### H.3.3.1 Traditional Use of Lands and Resources

Kainai Nation participated in, and continues to practice, a seasonal round that involves travel throughout their territory for hunting and gathering resources based on an annual cycle. Kainai Nation people have close connections to the alpine part of their land. They hunt large game animals while harvesting plant resources for spiritual and subsistence purposes throughout Crowsnest Pass. Kainai Nation people were nomadic and hunted in areas where they travelled and moved to including through neighboring territories (Kainai Nation 2015). In the past, buffalo were available in Crowsnest Pass during the winter when they concentrated in the bottom of the valley at Crowsnest River. With the arrival of Euro-Canadian settlers, the once abundant buffalo herds went extinct in the late 1800s resulting in pervasive starvation among Blackfoot groups, forcing Kainai Nation members to shift into ranching to sustain their livelihoods (Kainai Nation 2015). Traditionally, Kainai members hunted deer, moose, sheep, and elk for sustenance as well as for spiritual and ceremonial purposes. Hunting for birds was not a primary source of food. The exception is hunting for ducks, geese, swan and prairie chicken during times when buffalo were not available (Dempsey 2001). During the Grassy Mountain TK/TU Program, one Elder explained the Blackfoot ethos of hunting as well as species of importance, including mountain sheep:

*Hunting is part of a larger system. We do not hunt for trophies. This time of year (December), we are hunting sheep because they have the highest fat content now. Buffalo meat is lean. We make pemmican, which is dried meat mixed with Saskatoon berries. In fact, Saskatoon berries are a culturally important resource to Kainai. During seasonal rounds, we harvested big horn sheep in their wintering grounds.*  
~ Kainai Elder (Workshop, December 2, 2014)

The bow and arrow were used in hunting among Blackfoot people. With the introduction of trade among newly arrived settlers, Blackfoot adapted their hunting practices to include horses and rifles. Kainai Nation, like other Blackfoot groups, also used buffalo jumps to harvest large numbers of buffalo. These jumps were cliffs on the prairie near buffalo wintering grounds where herds were corralled into driving lanes lined with shrubs and driven off the cliffs (Dempsey 2001:606).

Wild game were also used traditionally for attire and tool making. Kainai Nation reported a preference for making clothing from elk hide because it is thicker than deer hide and easier to process than bison hide (Kainai Nation 2015). After contact with Euro-Canadian settlers, Kainai traded surplus goods from their territory, including: “[B]uffalo robes and meat as well as fox and wolf skins” at Rocky Mountain House (approximately 300 km north of Grassy Mountain, see [Figure H 3.1-1](#)) (Parks Canada 2008).

Kainai Nation Elders described their traditional practices of trapping golden eagles in mountainous areas to use their feathers in ceremonial headdresses and clothing. Trapping eagles occurs in March when they migrate back into the area from the south. Kainai construct mounds of earth with a hollow centre and lay wolf liver on top of the trap to lure eagles (Kainai Nation 2015). Other species identified for trapping are muskrat, beaver and mink (Kainai Nation 2015). Kainai members traditionally fished for trout in September each year due to ease of harvest (Kainai Nation 2015). The methods of fishing include use of sticks with wires to scoop trout out of the water (Kainai Nation 2015).

In the past, plant harvesting was an important undertaking among the Kainai Nation people, including alpine fir, juniper, fireweed, bearberry, spikemoss, and lodge pole pines in the forests in the foothills of Kainai Nation traditional territory (Galileo 2014). They targeted a diverse range of 62 plants available throughout their territory in the spring and summer months (Galileo 2014). The mountainous areas of their territory provided important medicinal and ceremonial plants that were not available on the plains, including sweet pine, yarrow, ochre, and bearberry (Kainai Nation 2015). According to Dempsey, “serviceberries and chokeberries were the most widely used, particularly for making pemmican. The dish consisted of a mixture of pulverized dried meat, pounded dried berries, and hot marrow fat. It would keep for many months, stored in rawhide sacks...” (Dempsey 2001). According to another secondary source, “the first thunderclap of spring tells us that the Thunder Medicine Bundle may be opened. *Spiatsimo* (or sweetgrass) and *aakiika'kismii* (or sage), our most sacred healing herbs of mind and spirit grow here at the Belly Butte, our sacred Sundance site” (Galileo 2014).

Blackfoot moved freely through the Project area in pursuit of wild game and in defense of their territory. During the TK/TU program, Kainai Nation members did not provide any specific information about traditional trails and travel corridors and spoke more generally about navigation methods through the mountains. Kainai Nation members spoke about using natural phenomena and the night sky as navigational tools for travel. According to one of the Elders, the Dipper is used among Blackfoot to assist with navigation and denotes the period of wildlife reproduction. The Dipper is used by Blackfoot people like a clock to tell the time of night and the season (Kainai Nation 2015). Kainai Nation also utilized other indicators for navigational purposes, such as sap on trees typically occurs on north facing side. Another navigational technique is reading which way trees lean to determine prevailing winds (Kainai Nation 2015). The Blackfoot people have used Crowsnest Pass as an east-west travel corridor to hunt buffalo and harvest plants in times of peace and to defend their territory against the Kootenay to the west in times of war. McClintock describes his travels through Kainai Nation territory on his way to meet the Piikani chief Brings-down-the-Sun and describes the trail and travel between Kainai and Piikani group to the west in relation to the Rocky Mountains:

*“We left the [Kainai] camp soon after sunrise, riding along the Okoan [Belly] River, and through groves of large cottonwoods. After fording the river, we turned toward the mountains and the country of the North Piegans. Heavy clouds covered the plain, completely hiding the sun. But the snow-clad summits of the Rockies in the west, glowed in the rays that shone above the clouds. We followed an old Indian trail known to Kionama and Onesta, a short cut, that took us across a broad plain” (McClintock 1910:375)*

Blackfoot traveled by horse and foot supported by travois and dogs. Kainai Nation members would also travel in the spring and autumn to the north at Rocky Mountain House and Fort Edmonton for trading meat, robes made of buffalo, horses, and a limited supply of furs (Dempsey 2001).

### **H.3.3.2 Current Use of Lands and Resources for Traditional Purposes**

This section provides a description of Kainai Nation’s current use of lands and resources for traditional purposes. In addition, this section fulfills the requirements of the TOR by providing background information on traditional use.

#### **H.3.3.2.1 Hunting**

Kainai Nation members hunt in their territory with a focus on deer and elk. During ground-truthing efforts at Grassy Mountain, the Kainai Nation Consultation Team documented signs (e.g., tracks, scat, or fur) and sightings of several important wildlife species, including moose, elk, deer, cougar, wolf, rabbit, squirrel, woodpecker, wild turkey, crows, and golden eagle (Kainai Nation 2015). A key Kainai Nation hunting location is the timber limits (No 148B), located approximately 90 km southeast of the Project as shown in [Figure H3.1-1](#). Kainai hunters target several important species in this area, including moose, elk, deer, bear, cougar (Kainai Nation 2015).

#### **H.3.3.2.2 Trapping**

The Kainai Nation Consultation Team did not provide information about current trapping practices among Kainai Nation members.

#### **H.3.3.2.3 Fishing**

Kainai Nation Elders report that current methods of fishing are adaptations to western practice undertaken on reservoirs near communities. This includes fishing in the fall as well as ice fishing in the winter (Kainai Nation 2015). Information provided by Kainai Nation did not identify species or locations in the LSA for fishing.

#### **H.3.3.2.4 Plant Gathering**

Kainai Nation members follow protocols associated with gathering plants for medicinal, ceremonial, and consumption purposes. According to the seasonal round, plants are generally gathered in the

spring with the exception of lodge pole pine, which is harvested in the fall for making tipis. Five locations associated with plant gathering overlap the Project area on Crown land (Kainai Nation 2015). Plants identified for plant gathering in the LSA are lodge pole pine, sweet pine, wild licorice, horsetail, thimbleberry, and aspen. Kainai Nation technicians undertook active harvesting of these important plants during ground-truthing efforts in preparation for Sundances, other cultural ceremonies, and medicinal purposes. Other areas in the mountains that Kainai Nation members use to harvest important plant resources include their timber limits where they harvest spruce, poplar, aspen, black cottonwood, willow, and balsam fir (Kainai Nation 2015).

#### H.3.3.2.5 Trails and Travelways

The Kainai Nation TK/TU study did not identify any trails or travelways or features associated with navigation within the Project LSA. In addition, no information in secondary sources provided information about trails and travelways in the Project LSA.

#### H.3.3.3 Aboriginal Health

The Kainai Nation Health Centre provides services and programs to Kainai Nation members. Environmental public health services are provided by Kainai Nation and Treaty 7 Management Corporation including safe drinking water testing which is a mandatory program (HCOM 2015).

Kainai Nation members continue to harvest resources for subsistence, medicinal, and ceremonial purposes. Resources used by Kainai Nation are located within the Project LSA (Kainai Nation 2015). Plant species include lodge pole pine, sweet pine, wild licorice, horsetail, thimbleberry, aspen, spruce, poplar, black cottonwood, willow, and balsam fir. Animal species include moose, elk, deer, bear, and cougar (Kainai Nation 2015).

Kainai Nation identified 3 water sites that are partially or fully overlapping the Project LSA (Kainai Nation 2015). During TK fieldwork, it was noted by a Kainai Elder that there are hot springs in the Project area and that the water in hot springs is considered by Blackfoot people to be holy.

#### H.3.3.4 Aboriginal Socio-Economic Conditions

Timber Limits No. 148A is 4,795 acres and is located in the foothills of the Rocky Mountains and has been allocated for public use including recreation and hunting and gathering (Magzul 2009). There are several Kainai Nation businesses identified by the Treaty 7 Business Directory (2013) including building and construction services, recreation, and hospitality. The Treaty 7 Business Directory (2013) for Kainai Nation identifies several businesses located in the vicinity of the Project including recreation and commercial activities. However, none of these businesses operate in the area overlapped by the Project LSA. Based on the National Household Survey (Statistics Canada 2011), the

participation rate for Kainai Nation members is 36.9%, the employment rate is 26.9% and the unemployment rate is 27.2%.

### H.3.3.5 Aboriginal Physical and Cultural Heritage

There are many well-known and documented sacred places and gathering areas throughout the Kainai territory. According to Kainai Nation (Kainai Nation 2015), these sacred sites are unifying symbols and provide evidence for cultural continuity and establish and reinforce national and personal connections to the landscape. In particular, Kainai noted Crowsnest Mountain (approximately 10 km west of the Grassy Mountain LSA, see [Figure H 3.1-1](#)) as an important landscape marker and associated with Blackfoot myths and traditional religion and is still referenced in ceremonial purposes. Another important sacred site, Chief Mountain (approximately 100 km southwest of the Project LSA), is known as the home of Thunder (*Ksiistsikomm*) (Glenbow Museum 2015). Vision quests in the mountains are also important element of the Blackfoot culture. A vision quest is a spiritual undertaking where Kainai went to isolated high ground with a view to a sacred mountain (Kainai Nation 2015). The seeker usually remained several days waiting and praying for the vision (Kainai Nation 2015). Crowsnest Pass is known to have numerous remains of former vision questing areas and these locations have both historic and religious significance (Kainai Nation 2015). During the Kainai TK/TU Program in 2014, one of the Kainai Elders shared the importance of the Grassy Mountain area and the effects of historical mining on these sites:

*There are stories about eagles and vision quest sites. These sites were probably destroyed at Grassy Mountain during historic mining in the 1940s and 50s. My ancestors occupied that area, especially during the winter. ~ Kainai Elder (Kainai Nation 2015)*

Blackfoot people used tipis as shelters, consisting of “12-14 buffalo skins and between 20-30 poles” (Dempsey 2001:610). Lodge pole pine was used primarily in the construction of the tipis. This type of shelter supported the semi-nomadic ways of the Blackfoot people, which was easily transported by travois to the next camp. After contact with Euro-Canadian settlers and the signing of Treaty 7, “most [Blackfoot] selected reserves near favourite wintering places: ... the Blackfoot at the Blackfoot Crossing of the Bow River, the [Kainai] on the Belly River, the North Peigan near the Porcupine Hills, and the Sarcee – part of the confederacy – west of Fort Calgary “as shown in [Figure H 3.1-1](#) (Dempsey 2001:619). Other secondary sources indicate Kainai movement between two main areas, including hunting grounds in the east around Sweetgrass Hills and wintering grounds in the west, especially around Highwood River (most proximate to the Grassy Mountain Project approximately 75 km north of the Project as shown in [Figure H 3.1-1](#)):

Early in the 1800s, the Kainai Nation people lived and hunted primarily in southern and southeastern Alberta, and in northern Montana. ... [T]he favourite hunting places for the Kainai Nation people

were in the region of the Hand Hills near Drumheller, in the Sweetgrass Hills regions, and in the present Lethbridge district. Some of their best wintering grounds were along the Belly River, the Highwood River, and for the northern bands, along the Battle River (Treaty 7 Management Corporation 2015).

Given the history of the travel pass system, one Kainai Nation Elder spoke about mixed emotions regarding current access to the Project area:

*We also need to acknowledge that there are a lot of emotions and feelings that come up when we talk about these areas. We say to ourselves: "Look at what we lost." There is a lot of anger and sadness when we finally get to see these areas again. We get to follow in the footsteps of our ancestors. ~ Kainai Elder (Kainai Nation 2015)*

During the TK/TU program, the Kainai Nation Consultation Team spoke extensively about their strong and historically-rooted cultural and spiritual connection to the land and animals surrounding the proposed mine site. One of the Kainai Nation Elders articulated Kainai Nation spiritual connection to the land by indicating the location of rock art in two caves, one 15 km west of the proposed Project and another 8 km east of Grassy Mountain (Kainai Nation 2015).

### **H.3.4 Potential Effects and Mitigation Measures**

#### **H.3.4.1 Current Use of Lands and Resources for Traditional Purposes**

The assessment of potential effects of the Project on current use of lands and resources for traditional purposes focuses on the availability of lands and resources identified by Kainai Nation. Based on the background information, there may be potential effects to current use for hunting and plant gathering.

##### **H.3.4.1.1 Hunting**

Kainai Nation continues to hunt throughout their traditional territory as shown in [Figure H 3.1-1](#) and described in the Kainai Nation TK/TU report (Kainai Nation 2015). Species targeted for hunting include moose, elk, deer, bear, and cougar (Kainai Nation 2015). Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife [Section E.9.3](#) and Consultant Report #9 ([CR #9](#)), and land and resource use [Section E.10.3](#) and [CR #10](#).

The potential effects described in these sections could change identified hunted species and habitat, use or access to identified hunting locations, and preferred harvesting method. Input provided by Kainai Nation during consultation is considered in the identification of potential effects and proposed mitigation measures.

[Section E.9.3](#) Wildlife addresses potential effects on key species and habitat for wildlife species including moose, elk and bear. Potential direct and indirect effects from the Project that were assessed include:

Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- habitat fragmentation and loss of connectivity.

Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions ([Section E.1, CR #1](#)); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

[Section E.10.3](#) Land and Resource Use addresses potential effects to land use activities related to hunting and recreational uses. A majority of the land within the proposed development footprint is privately owned by Benga. However, access for land use activities by Kainai Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure. Benga also will continue to consult with Kainai Nation, including discussion of options to facilitate access for land use activities where they may be affected by the Project.

Wildlife assessment methods contained in [CR #9, Section 3.2](#) included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The input provided by Kainai Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.3.4-1](#).

<b>Potential Effects Identified by Kainai Nation</b>	<b>Recommended Mitigation Measures by Kainai Nation</b>	<b>Benga Mining Response</b>
The Project will make some land inaccessible for hunting, which will impose cumulative effects on Kainai Nation’s land base which has already been reduced due to the inaccessibility of private land and reduced acreage of Crown land (Kainai Nation 2015c).	Direct and indirect impacts to plants and animals must be avoided to the extent practicable (Kainai Nation 2015c).	Potential effects to vegetation and wildlife are described in <a href="#">Section E.8.3</a> and <a href="#">Section E.9.3</a> , respectively. Mitigation measures for vegetation and wildlife including access management are identified in <a href="#">Section A</a> .

Mitigation measures identified in [Section E.9.5](#) Wildlife and [Section E.11.5](#) Land and Resource Use apply to the effects described in this section. The pertinent mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor;
- access management within the Project footprint to reduce effects to wildlife; and
- wildlife and wildlife habitat reclamation.

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;
- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.3.4.1.2 Plant Gathering

The Project will intersect or be in proximity to habitat and species that are identified for plant gathering by Kainai Nation. These include lodge pole pine, sweet pine, wild licorice, horsetail, thimbleberry, and aspen. Spruce, poplar, black cottonwood, willow, and balsam fir are also important species to Kainai Nation. Plant gathering activities typically take place in the spring. Several VC sections are relevant to the assessment on plant gathering such as the assessment sections for Vegetation ([Section E.8.3](#)), and Land and Resource Use ([Section E.10.3](#)).

[Section E.8.3](#) Vegetation addresses potential effects on key species and habitat including the species identified by Kainai Nation. A summary of species identified by Kainai Nation for the Project with the occurrence of species within the LSA is available in the Vegetation [CR #8](#). Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project’s mine pit and associated waste rock disposal areas and infrastructure.

The potential effects described in these sections could result in a change in identified plant species and habitat, change in use or access to identified plant gathering locations, and change in preferred harvesting method. Input provided by Kainai Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Kainai Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.3.4-2](#).

<b>Potential Effects Identified by Kainai Nation</b>	<b>Recommended Mitigation Measures by Kainai Nation</b>	<b>Benga Mining Response</b>
Kainai Nation did not identify a project effect associated with the recommended mitigation measure.	Timely harvest of medicinal and ceremonial plants prior to impact by the Project (Kainai Nation 2015c).	Benga will provide lodge pole pine that is cleared for the Project to Kainai Nation, Piikani Nation and Tsuut’ina Nation. Benga will continue to work with Kainai Nation to identify other species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan.
Dust particulates may render the soil more acidic, which may cause a change to the species of vegetation that can grow in the area (Kainai Nation, 2015b).	Kainai Nation did not recommend a mitigation measure related to the potential effect described.	Soil sensitivity to acid depositions is discussed in <a href="#">Section 4.4</a> of the soil assessment report ( <a href="#">CR #7</a> ). All soils were rated for sensitivity to acids deposition based upon soil characteristics. Vast majority of soils in the Project area were rated as having low to moderate sensitivity to acid depositions. This means they have a good buffering capacity and can absorb a significant amount of acid depositions without long-term harmful changes in their properties. No area was found where acid

<b>Potential Effects Identified by Kainai Nation</b>	<b>Recommended Mitigation Measures by Kainai Nation</b>	<b>Benga Mining Response</b>
		depositions values exceed critical, target or monitoring load for the soils within the LSA or the RSA. The potential effects of the Project with respect to potential soil acidification is negligible at the local and regional scale.

Mitigation measures identified in [Section E.8.5 Vegetation](#) and [Section E.10.5 Land and Resource Use](#) apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation;
- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation;
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species;
- the provision of opportunities to identify and collect suitable lodge pole pine for traditional uses;
- where practicable, utilize locally collected seed to preserve the legacy of species and of place ; and
- access control policy to facilitate access to the Project site by authorized users.

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations;
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and

- consultation will include sharing information about construction timing.

#### H.3.4.2 Aboriginal Health

The Project is located within the Kainai Nation traditional territory in proximity to areas currently used by Kainai Nation members. Kainai Nation identified three water sites that are partially or fully overlapping the Project LSA (Kainai Nation, 2015). Kainai Nation continues to use the area for hunting and plant gathering foods for consumption. The Human Health Risk Assessment (Section E.12) includes an Aboriginal receptor type in the assessment and documents health concerns identified by Aboriginal groups regarding impacts of existing development and of the Project specifically on their traditional lifestyle. The Aboriginal receptor types consider the potential for local residential communities, Aboriginal residential areas, Aboriginal land use areas (such as hunting and plant gathering) and recreational areas.

Section E.12 Human Health assesses potential effects to health including acute inhalation risks, chronic inhalation risks, chronic multimedia exposure risks, and a wildlife risk assessment. In order for Aboriginal health receptors to be exposed to emissions from the Project, they must come into contact with chemicals of potential concern (COPCs). The potential exposure pathways related to Aboriginal groups are summarized in CR #12 Table 5.1.4-1 and include direct contact with COPCs through air inhalation, soil, ingestion of local vegetation, ingestion of wildlife, and contact with surface water or fish ingestion. The results of the human health risk assessment indicate risk quotients within the Mine Permit Boundary which will be inaccessible during construction and operation (Section E.12). It is predicted that there will be no effects of the Project on Aboriginal health.

Input provided by Kainai Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The recommendations made by Kainai Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in Table H.3.4-3.

Mitigation measures identified in Section E.12.5 - Human Health apply to the effects described in this section. The results of the HHRA suggest that short-term predicted risks to human health will be limited to the LSA and within the project footprint. None of the remaining human receptor locations are predicted to have unacceptable levels of risk. Assuming public access within the Mine Permit Boundary is restricted and the mitigation measures assumed by the other disciplines are implemented (Section A.10); there is no need for further mitigation of emissions based on the results of the HHRA.

<b>Table H.3.4-3 Feedback Provided by Kainai Nation</b>		
<b>Potential Effects Identified by Kainai Nation</b>	<b>Recommended Mitigation Measures by Kainai Nation</b>	<b>Benga Mining Response</b>
Coal dust emissions' impact on wildlife that is subsequently harvested for Kainai Nation consumption (Kainai Nation 2015b).	Kainai Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Kainai Nation will be considered through the EA process.	Air quality monitoring and water quality appear in <a href="#">Section E.1</a> and <a href="#">E.5</a> , respectively. A first nation receptor is included in air quality.
Mining in the area may cause an array of long-term health effects, including lung disorders (Kainai Nation 2015b).		The assessment of potential effects to Aboriginal health includes potential impacts of air quality and air emissions. The assessment shows that residual effects of the Project on Aboriginal health are not anticipated.
Particulate matter from the mine may settle in nearby towns, including Nanton and Cardston (Kainai Nation 2015b).		<a href="#">Section E.1.3</a> provides an assessment of potential effects of the Project including the potential for effects on air quality in the region especially related to dust and particulates. Mitigation measures are proposed in <a href="#">Section E.1.5</a> including measures for dust management.

### H.3.4.3 Aboriginal Socio-Economic Conditions

The Project will involve the construction of facilities within a mine permit boundary that is 45.16 km<sup>2</sup> of land within the traditional territory of Kainai Nation. The Treaty 7 Business Directory (2013) for Kainai Nation identifies several businesses located in the vicinity of the Project including recreation and commercial activities although these are located outside of the Project LSA and therefore no direct impacts of the Project are anticipated to Kainai Nation's socio-economic conditions. Further information regarding benefits of the Project is described in [Section E.11](#) – Socio-Economics.

The Project and associated project activities are not expected to have an adverse effect on Kainai Nation commercial activity, forestry and logging operations, and recreation use. Input regarding potential effects to socio-economic conditions and mitigation measures has not been provided by Kainai Nation during consultation. Kainai Nation expressed an interest in community investments and employment opportunities on the Project. Benga Mining will continue to work with Kainai Nation and will consider mitigation measures proposed by Kainai Nation during the EA process.

#### H.3.4.4 Aboriginal Physical and Cultural Heritage

The Project will intersect or be in proximity to sacred, gathering, and habitation sites identified by Kainai Nation. The Grassy Mountain area is used for ceremonies and there are three sacred sites identified by Kainai Nation as fully or partially overlapping the Project LSA. Several VC sections are relevant to the assessment on sacred, gathering and habitation sites such as the assessment sections for land and resource use (E.10) and historical resources (E.13).

[Section E.13](#) - Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure or object. There are 32 recorded archaeological or historic era resources located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, 10 overlap the Project footprint. Kainai Nation identified 3 sacred sites in their TU/TK study that are within the Project LSA however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in use or access or disturbance to features associated with sacred, gathering, or habitation sites. The importance or value to sites identified by Kainai Nation may change as a result of the Project. Input regarding potential effects to sacred, gathering, and habitation sites and mitigation measures has not been provided by Kainai Nation during consultation. Benga Mining will continue to work with Kainai Nation and will consider mitigation measures proposed by Kainai Nation.

Mitigation measures identified throughout the application in [Section E.10.5](#) - Land and Resource Use and [Section E.13](#) - Historical Resources apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- if avoidance of any unnamed pre-contact period sites is not possible based on size, location, and complexity, a mitigation excavation will be conducted in advance of Project development;
- if avoidance of any structures is not possible, mitigation will include a 20 m<sup>2</sup> excavation plot with full documentation of the remaining building structures including mapping and related detailed recordings; and
- a mitigation plan will be developed and implemented for mitigation excavation including sites located by the south disposal area land alteration activities.

Additional measures are recommended to avoid or minimize potential effects to sacred, gathering, and habitation sites. These are outlined below:

- consultation will continue to further identify sites or cultural and sacred importance that warrant site-specific or situational mitigation (sites within 100 m of Project activity including additional sites identified by Kainai Nation will be flagged prior to construction);
- consultation will include sharing information about construction timing;
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction; and
- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate land use locations.

### H.3.5 Characterization of Residual Effects

#### H.3.5.1 Current Use of Lands and Resources for Traditional Purposes

The assessment of residual effects of the Project on current use of lands and resources for traditional purposes focuses on the potential effects remaining after mitigation measures are implemented. Based on the potential effects and mitigation measures described in [Section H.3.4.1](#), there may be residual effects to current use for hunting and plant gathering.

##### H.3.5.1.1 Hunting

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9.3 - Wildlife](#) and [Section E.10- Land and Resource Use](#) and input provided by Kainai Nation. [Section E.9.3 - Wildlife](#) characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and residual in duration. The Project will affect the 10 wildlife VCs including moose, elk and bear through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#) of the Wildlife section. Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be not significant for all assessed VCs. ([CR #9, Table 5.3-26](#) in the Wildlife section).

[Section E.10.3 – Land and Resource Use](#) characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in

Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species hunted by Kainai Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to hunting are characterized as:

- low magnitude;
- local geographic extent;
- short-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.3.5.1.2 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section 8.3 - Vegetation](#), [Section 10.3 - Land and Resource Use](#), and input provided by Kainai Nation. Removal of ecosite phases and ecological land classifications (ELCs) that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

[Section E.8.3 -Vegetation](#) characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to valued species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

[Section E.10.3 - Land and Resource Use](#) characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately

owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species used for plant gathering by Kainai Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to plant gathering are characterized as:

- moderate magnitude;
- local geographic extent;
- long-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### **H.3.5.2 Aboriginal Health**

The characterization of residual effects to Aboriginal health includes consideration of residual effects described in [Section E.12.3](#) - Human Health and input provided by Kainai Nation. The Project is not expected to have measurable effects on Aboriginal health. As there are no predicted effects to Aboriginal receptors and no mitigation measures have been proposed, it is not anticipated that there will be residual effects of the Project on Aboriginal health.

#### **H.3.5.3 Aboriginal Physical and Cultural Heritage**

The characterization of residual effects to sacred, gathering and habitation sites includes consideration of residual effects described in [Section E.10.3](#) - Land and Resource Use, and input provided by Kainai Nation.

[Section E.10.3](#) - Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

The Project could result in measurable effects on sacred, gathering, and habitation sites used by Kainai Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly

disturbed or removed. As a result, residual effects to sacred, gathering, and habitation sites are characterized as:

- moderate magnitude;
- local in geographic extent;
- long term duration;
- regular frequency;
- not reversible; and
- sensitive in ecological and social context.

#### H.3.5.4 Summary of Residual Effects Characterization

Overall, the Project is not anticipated to measurably affect Kainai Nation’s ability to continue hunting or plant gathering practices within their traditional territory. If avoidance is not possible, the Project may damage or disturb sites that are identified by Kainai Nation as sacred sites (Kainai Nation, 2015). With the implementation of mitigation measures, potential residual effects may be reduced but not fully mitigated if sites are physically disturbed. A summary of residual effects of the Project to Kainai Nation is provided in [Table H.3.5-1](#).

Valued Components	Residual Effects Characterization					
	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Ecological and Social Context
Hunting	Low	Local	Short-term	Continuous	Reversible	Resilient
Plant Gathering	Moderate	Local	Long-term	Continuous	Reversible	Resilient
Aboriginal Physical and Cultural Heritage	Moderate	Local	Long-term	Regular	Not reversible	Sensitive

**Magnitude** Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA. Moderate – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability to exercise the Aboriginal Interest in the RSA.

**Duration** Short term – limited to the construction phase; Long term – beyond the project lifespan

**Ecological and Social Extent** Sensitive – the Aboriginal Interest is sensitive or has low resiliency to disruption; Resilient – the Aboriginal Interest is not sensitive or has high resiliency to disruption

### H.3.6 Cumulative Effects

#### H.3.6.1 Potential Contribution to Cumulative Effects

The cumulative effects assessment considers cumulative environmental effects that are likely to result from the Project in combination with the environmental effects of other physical activities and have been or will be carried out. This subsection provides a description of the contribution of the Project to cumulative effects that may have effects on the Aboriginal or Treaty Rights of Kainai Nation.

The scientific rationale for the selection of spatial boundaries for each of the disciplines, and the discipline specific LSA and RSA spatial and temporal scales for each of the disciplines are provided in detail in [Section D](#). The spatial boundaries of each of the disciplines are shown in [Figure D.2.4-1](#) (LSA) and [Figure D.2.4-2](#) (RSA). The temporal boundaries have been defined as lasting approximately 24 years, concomitant with the life of the Project. Segments of the temporal boundaries include the duration of the construction, operation and abandonment phases of the Project.

The Local Study Area (LSA) is established based on the zone of the Project influence, beyond which the potential environmental, cultural and socio-economic effects of the Project are expected to be non-detectable. The Regional Study Area (RSA) is established based on the extent to which it would be expected that the interaction of residual effects of the Project with the residual effects of other projects would be detectable. It is also the area in which socio economic effects are expected to be detectable. VC-specific boundaries are established for both the LSA, for Project-specific effects, and the RSA, for cumulative effects. Effects on those VCs that have impacts more directly tied to the footprint of the Project are also assessed at the spatial scale of the Project footprint.

#### H.3.6.2 Other Projects and Activities

Existing, approved and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) of Section D and are shown relative to Kainai Nation Traditional Territory on [Figure H 3.3-1](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within the largest RSA (i.e., wildlife – grizzly bear RSA) ([Figure D.2.4-3](#)).

Most of the resource development currently occurring within the GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to

2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the GBRSA will be associated with forestry activities at Year 14 and Year 27.

### **H.3.6.3 Potential for Cumulative Effects to Impact Aboriginal or Treaty Rights and Interests**

#### **H.3.6.3.1 Cumulative Effects on Current Use of Land and Resources for Traditional Purposes**

As described in this section, the contribution of the Project's residual effects are unlikely to cause a change in cumulative effects that could affect the viability or sustainability of traditional use by Aboriginal people of lands and resources within the RSA. Details on mitigation measures can be found in the references for each valued component listed below.

#### **H.3.6.3.2 Cumulative Effects on Wildlife and Plant Harvesting**

As described in [Section E.9.4 - Wildlife](#), the incremental effects of the Project to cumulative effects on wildlife habitat availability, fragmentation/connectivity, mortality risk, and abundance are insignificant and no significant cumulative effects to wildlife population persistence are predicted. Therefore, no cumulative effects from the Project are predicted to impact Aboriginal or Treaty rights or interests related to wildlife populations. [CR #9, Table 6.4-1 - Wildlife](#) contains a summary of residual cumulative effects ratings.

As described in [Section E.8.4 - Vegetation](#), while the Project will result in some loss of traditional use vegetation within the LSA these losses represent very small proportions of the total amount of these vegetation communities within the RSA. Neither the project-specific residual effects, nor the Project's residual effects acting cumulatively with other projects would threaten the regional sustainability of traditional use plants or other vegetation resources, wetlands, biodiversity or fragmentation identified in this assessment.

#### **H.3.6.3.3 Cumulative Effects on Traditional Use Locations, Access Routes**

Approximately one half of the Project footprint is located on privately held land. Combined with other private land ownership in the LSA and challenging terrain, it is probable that the Project's contribution to cumulative residual effects on traditional use locations and access routes will not be significant. Benga has offered to work with affected Aboriginal groups on an Access Management Plan to both control access to authorized persons, and to facilitate access to traditional use locations where feasible.

#### H.3.6.3.4 Cumulative Effects on Water, Aquatic Resources, Soil, Terrain and Vegetation

##### Hydrogeology

Groundwater effects associated with surface facilities, mining operation, mine spoil and pit dewatering are insignificant. No other planned or reasonably foreseeable projects within the RSA are expected to act in cumulative manner with these effects, so a cumulative effects assessment is not required, and was not completed.

##### Water Quality and Aquatic Resources

There are no other planned or reasonably foreseeable projects within the RSA that are expected to act in cumulative manner with identified Water Quality or Aquatic Resources effects, so a cumulative effects assessment is not required, and was not completed, for this Project.

##### Soil and Terrain

There are no anticipated significant cumulative effects on any of the soil and terrain valued components: soil quality, soil biodiversity and ecological integrity, alteration of terrain, land capability effects.

##### Vegetation

Cumulative impacts were assessed for terrestrial vegetation, wetlands, and biodiversity and fragmentation. With mitigation, cumulative impacts to all three VCs were assessed as being insignificant.

#### H.3.6.3.5 Cumulative Effects on Human Health

As the Air Quality Assessment did not identify any planned projects in the area, a cumulative effects assessment was not required, and not completed, for the current assessment. At the local scale, the emissions from the Project are not predicted to cause significant adverse effects to human health at all human receptor locations accessible to the general public. Assessed health risks at the local scale included acute inhalation, chronic inhalation, and chronic multimedia exposure.

#### H.3.6.3.6 Cumulative Effects on Air Quality, Noise, and Socio-economic Conditions

##### Air Quality

No significant cumulative effects are anticipated for any chemicals of potential concern assessed in the Air Quality assessment. Overall, residual air quality effects related to the Project were considered to be not significant.

## Noise

The noise modelling results indicate that the Project noise levels during the night-time and day-time, with the addition of the average ambient sound levels, will be below the permissible sound levels for all residential and theoretical 1,500 m receptors. Therefore, no cumulative effects on noise are expected.

## Socio-Economic

The Project will create positive economic and fiscal effects on the socio-economic regional study area (RSA) and of affected Aboriginal Groups. The Project is estimated to create:

- 910 person years of on- and off-site employment related to the construction of the plant, facilities and infrastructure for the mine between 2017 and 2019; and
- 385 long-term operations positions to be hired by 2020.

Benga has provided detailed information on Project-related economic opportunities to all affected First Nations and is actively developing plans with them to maximize the successful uptake of the available opportunities.

The Project will contribute an estimated \$140 million (NPV 2015) and \$210 million (NPV 2015) to provincial and federal corporate income taxes respectively as well as approximately \$195 million (NPV 2015) in provincial royalties over the 23-year operating life of the project, assuming a \$140/tonne average real price of coal.

### **H.3.7 Follow-up and Monitoring**

Monitoring programs will be implemented to verify the effectiveness of mitigation measures. Kainai Nation has expressed interest in participating in monitoring including wildlife monitoring programs. Elements of the follow-up and monitoring program includes:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

### H.3.8 Aboriginal Issues and Concerns

Category	Description of Issue/Concern	Response
Hunting	Insufficient consideration of the effect to Kainai hunting during wildlife surveys, as Kainai Nation technicians did not participate in the fieldwork (Kainai Nation 2015b).	In 2014, Benga submitted postings to Kainai Nation for field technician opportunities to support the EA process. No applications were received by Kainai Nation. Information provided in the Kainai Nation Traditional Use Study, including information about wildlife, is considered in the EIA under potential effects to wildlife and potential effects to hunting.
Plant Gathering	Plan project footprint and activities so as to limit impact to medicinal and ceremonial plants in the vicinity of the Project site (Kainai Nation 2015c).	Potential effects of the Project on vegetation including medicinal and ceremonial plants are described in <a href="#">Section E.8.3</a> . A discussion of proposed mitigation measures is provided in <a href="#">Section E.8.5</a> . Mitigation measures include opportunities to transplant to limit potential impacts to identified medicinal and ceremonial plants. Benga will continue to work with Kainai Nation during the pre-construction phase to address this concern.
Plant Gathering	Continued and/or improved access to ceremonial plants (Kainai Nation 2015c).	Benga proposes to develop and implement an Aboriginal Access Management Plan with groups that are affected by access restrictions from the Project.
Plant Gathering	Removal of native vegetation such as lodge pole pine in the vicinity of the Project may cause non-native species such as willow or sweet pine to invade, rendering the area more susceptible to forest fire (Kainai Nation 2015b).	Potential impacts to vegetation are described in <a href="#">Section E.8.3</a> including the potential for invasive species.
Plant Gathering	A ceremony should be performed in advance of ground or vegetation disturbance (Kainai Nation 2015b).	Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project.
Plant Gathering	Requested that Benga provide lodge pole pine to Kainai Nation community members (Kainai Nation 2015c).	Benga will provide lodge pole pine cleared from the site to Kainai Nation, Piikani Nation and Tsuut'ina Nation.

Category	Description of Issue/Concern	Response
Consultation Process	Kainai community members' participation in environmental monitoring (including wildlife monitoring) before, during and after the project (Kainai Nation 2015b).	Benga is open to ongoing discussion with Kainai Nation through the pre-construction phase regarding opportunities to participate in follow-up and monitoring programs.
Aboriginal Socio-Economic Conditions	Inquired about the type of community investments that Benga would contribute (Benga Mining 2015).	Benga and Kainai Nation are working together to discuss opportunities as part of the Project Agreement.
Aboriginal Socio-Economic Conditions	Kainai Nation expressed interest in employment opportunities (Kainai Nation 2015a).	Benga provided a detailed list of employment opportunities that will be available for construction and operations phases, and received guidance from Blood Tribe Employment Services on how to inform Kainai of opportunities in advance.
Consultation Process	Traditional Knowledge (TK) must influence all aspects of the environmental assessment, rather than simply be considered as a step in the TU process (Kainai Nation 2015b).	Benga is committed to working with Kainai Nation to incorporate TK into the EIA and the EA process. Benga looks forward to continued consultation with Kainai Nation on the Project.
Consultation Process	To ensure that the Reclamation Plan satisfies their needs and expectations, Kainai Nation expressed interest in participating in its development (Kainai Nation 2015a).	Kainai Nation will have an opportunity to participate in the development of the Reclamation Plan in addition to Project activities taking place through the decommissioning phase.
Consultation Process	Concerns that field work did not sufficiently cover TK which should be used together with western science to manage environmental and cultural impacts (Kainai Nation 2015b).	Benga appreciates the information provided to date by Kainai Nation regarding TK and TU. This information has been used throughout the application to inform the biophysical assessment and to assess potential impacts to Kainai Nation. Importantly, the information provided by Kainai Nation has enhanced the quality of the assessment results. Benga looks forward to receiving input from Kainai Nation regarding the assessment and use of TK and TU through the EA process.

Category	Description of Issue/Concern	Response
Consultation Process	Concerns that none of the non-Blackfoot Aboriginal groups included by the CEAA have a legitimate claim on the area (Kainai Nation 2015b).	Benga thanks Kainai Nation for their comment and has forwarded the concern to CEAA. Benga is committed to adhering to consultation and engagement requirements as identified by ACO and CEAA.
Emergency Response	Prepare an Emergency Preparedness Plan in the event of leak, spill, or other unanticipated release. This plan is to address concerns about effects to water quality and species that depend on water quality (Kainai Nation 2015c).	Benga will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment. In addition, an emergency plan will be developed for worker safety preparedness.
Aquatics	The Project's direct and indirect impacts to water quality impose a cumulative effect to aquatic life in streams already carrying an increased phosphorous load from farming and sewage (Kainai Nation 2015b).	No other planned or reasonably foreseeable projects are located within the RSA that are expected to act in cumulative manner with identified aquatic resources.
Plant Gathering	Request for trees slated for removal at the Project site be replanted on the Blood Reserve or added to riparian areas (Kainai Nation 2015c).	Benga will continue to work with Kainai Nation regarding potential effects and proposed mitigation measures for plant gathering. Lodge pole pine removed for the Project will be provided to Kainai Nation, Piikani Nation and Tsuut'ina Nation.
Reclamation	Concerns that the Project's reclamation program may not achieve objectives (Kainai Nation 2015c).	Kainai Nation will have an opportunity to participate in the development of the Reclamation Plan in addition to Project activities taking place through the decommissioning phase.

## H.4 ASSESSMENT OF POTENTIAL EFFECTS - PIIKANI NATION

### H.4.1 Introduction

Piikani Nation is a member nation of the Treaty 7 Management Corporation which acts as a tribal council for Treaty 7 First Nations including Siksika Nation, Kainai Nation, Tsuut'ina Nation, and Stoney Nakoda Nation. Several Treaty 7 First Nations share a common culture and language known as Blackfoot. The Piikani Nation traditional territory is located in southern Alberta and includes Crowsnest Pass and surrounding areas ([Figure H.4.1-1](#)). There are two reserves and the town site is

located at the main reserve called Piikani (Piikani Nation 2015a). The proximity of Piikani Nation reserves in relation to the Project is summarized in [Table H.4.1-1](#).

<b>Table H.4.1-1 Proximity of Piikani Nation Reserves to the Project</b>		
<b>Reserve/s</b>	<b>Distance to the Project LSA (km)</b>	<b>Distance to the Project RSA (km)</b>
Peigan Timber Limit B	28.50	3.50
Piikani	43.37	18.37

There are 3,675 registered Piikani Nation members (AANDC 2015a). The number of Piikani Nation members who live on their own reserve is 2,369 and a total of 1,271 live off-reserve (AANDC 2015a). Traditionally, the basic unit of social organization was the band and there were many Blackfoot bands as they share a common culture and language. An individual band could consist of approximately 100 to 300 and was considered a residential group rather than a kin group. People would enter and leave a band depending upon personal circumstances. Today, the Piikani continue to live in bands. Societies are another important Blackfoot cultural group that were and continue to be non-kin and pan-national groups serving specific functions. Societies function to keep traditional ways alive through their gatherings, story-telling, ceremonies, and more (Piikani Nation 2015b). Piikani Nation is governed by an elected Chief and Council which operates through an appointment term of 4 years as summarized in [Table H.4.1-2](#).

<b>Table H.4.1-2 Piikani Nation Elected Leadership</b>			
<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Chief	Stan Grier	01/09/2015	01/08/2019
Councillor	Doane Crow Shoe	01/09/2015	01/08/2019
Councillor	Ferlin Crow Shoe	01/09/2015	01/08/2019
Councillor	Keith Grier	01/09/2015	01/08/2019
Councillor	Brian Jackson	01/09/2015	01/08/2019
Councillor	Troy Knowlton	01/09/2015	01/08/2019
Councillor	Fabian North Peigan	01/09/2015	01/08/2019
Councillor	Barnaby Provost	01/09/2015	01/08/2019
Councillor	Lowell Yellow Horn	01/09/2015	01/08/2019

The Blackfoot Confederacy is composed of the Aapatohsippiikani (Northern Piikani Nation), Kainai (Blood Tribe), Siksika Nation, and Aamsskaapiikani (Blackfeet Nation, located in Montana). While each of these Nations is an independent political entity, they cooperate in numerous ways and are a single ethnic group. The Blackfoot Nations share a common language, culture, and history (Piikani Nation 2015b).

Blackfoot is a language of the Algonquian linguistic family which is the most widespread indigenous language family in North America. Piikani Nation Secondary School offers Blackfoot language and culture courses to its students (Peigan Board of Education 2015). The majority of Algonquian speakers are in eastern North America. Based on the National Household Survey (2011), 22% of Piikani Nation members speak an Aboriginal language at home and 32.1% have knowledge of Aboriginal language (AANDC 2015b).

The economy of Piikani prior to contact was based primarily on the acquisition of naturally occurring resources based on a seasonal round. People moved to seasonal resource procurement locations, such as the Grassy Mountain area, at particular times of the year to take advantage of abundant plant or animal resources. The arrival of European settlers in the region of southern Alberta began in the late 19<sup>th</sup> century and started the commodity exchange between European fur-traders and Aboriginal groups, significantly shifting First Nation traditional use and cultural customs. In 1877, Aboriginal groups negotiated a treaty with the Government of Canada known as Treaty 7 (Government of Canada, 1877). The written treaty provided Aboriginal groups with reserve lands, health and education services, the right to hunt and trap in their territories, and recurring annuities to tribal members.

The interpretations and understandings of the treaty were and continue to be different between its signatories. Following the signing of the treaty, there was a pervasive and long-term system of repression and control of Piikani as delineated in the Indian Act in 1876 and amendments, which prohibited many aspects of Piikani culture, identity, and ways of life (Government of Canada 1906). Furthermore, local and regional administrative policies and practices were implemented to further restrict and assimilate Piikani members into Euro-Canadian culture and way of life, such as the residential school system and the travel pass system. During the work carried out for the proposed Project in 2014, Piikani Elders repeatedly shared stories about colonial practices requiring passes for off-reserve travel at the end of the 19<sup>th</sup> century until the 1930s, which resulted in imprisonment for any Aboriginal groups leaving their reserve areas without a pass (Barron 1988). This caused disconnect of Piikani members from many parts of their territories, especially those areas further away from reserves, such as Grassy Mountain.

## H.4.2 Aboriginal Consultation

### H.4.2.1 Consultation Summary

Benga initiated engagement with Piikani Nation in June 2013 with a meeting at the Piikani Traditional Knowledge Services offices to introduce the Project, describe the Environmental Assessment process and to discuss economic opportunities related to the Project. In this meeting, Piikani Nation provided a background on their Aboriginal Interests and expressed interest in continued engagement on the Project. Through 2013 and early 2014, Benga provided periodic updates and, at Piikani Nation's invitation, returned in March 2014 to provide a Project update and an overview of upcoming environmental studies to Piikani Chief and Council. At that time, the parties agreed to develop a framework for continued consultation.

Through April and May 2014, Benga and Piikani Nation met and exchanged emails in the process of drafting a Consultation Work Plan and Capacity Funding Agreement. Due to the administrative transition occurring at the time, and in the lead-up to Piikani Nation elections, the Capacity Funding Agreement was not ultimately executed – a detail that did not impede continued consultation. Indeed, Benga and Piikani Nation continued to discuss employment opportunities for the upcoming fieldwork and establish a framework for continued consultation. This framework was drafted into a First Nations Consultation Plan which Piikani Nation reviewed before it was finalized for submission to the Alberta government. Benga and Piikani Nation then developed a work plan and budget, based on the framework for the First Nations Consultation Plan, to outline the tasks and schedules associated with continued engagement, and to ensure that Piikani Nation's resource needs for continued participation were met as the Project progressed through EIA process. The consultation work plan and budget were revised, as necessary, to accommodate unanticipated changes to the Project or the regulatory process such as a decision by CEAA that the project requires a federal assessment.

In accordance with the First Nations Consultation Plan, Benga provided a copy of the PTOR to Piikani Nation in December 2014. Benga followed-up with emails and an in-person meeting to discuss the PTOR in detail and then advised Piikani Nation when the AER finalized the TOR in March 2015. To ensure that Piikani Nation remained informed about the Project's status in the federal regulatory process, Benga provided information by email, letters and in-person meetings with Piikani Nation. These updates included reference to funding opportunities for participation in the federal review process.

In late February 2015, Benga and Piikani Nation Chief, Council, and department managers began the process of developing a plan for the Piikani Socio-economic and Community Wellbeing Study (Socio-economic Study). This study, conducted by independent consultants funded by Benga,

employed workshops and interviews with Piikani managers and community members to gather information for planning purposes related to the Project. The findings of this report, along with environmental and economic considerations related to the Project were presented at an open house for Piikani Nation community members in August 2015.

Benga and Piikani Nation are in the process of negotiating an IBA. Discussions include community development topics contained in the Socio-economic Study.

Consultation and engagement activities with Piikani Nation include:

- review of provincial and federal environmental assessment processes and role of traditional studies in the assessment;
- capacity funding for participation in consultation process;
- meetings to discuss Project updates;
- provision of key regulatory documents, such as:
  - proposed terms of reference;
  - First Nations Consultation Plan;
  - Draft EIS guidelines;
  - Project Description for the EA Process; and
  - information packages.
- Piikani Socio-economic Study; and
- community open house meetings.

A chronology of key consultation activities with Piikani Nation can be found in [Table H.4.2-1](#).

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
June 17, 2013	Meeting	Benga introduced the Project. The ensuing discussion covered project timelines, the EIA process, employment opportunities, and the TLUS. Piikani expressed interest in engagement on the Project, highlighting the consultation process, traditional hunting rights and water rights as important priorities.
October 9, 2013	Meeting	Benga provided an overview of the Project and notified Piikani Nation of its intent to pursue a permit for exploration activities.
February 3, 2014	Email	Following notice from Benga that the company intends to advance the Project, Piikani Nation staff advised that Piikani Chief and Council had requested a meeting with Benga to discuss the Project, and that staff would resume

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		engagement after the meeting.
March 6, 2014	Meeting	Benga met with Piikani Chief and Council to provide an update on the Project and an overview of baseline and upcoming environmental studies. Piikani Nation discussed engagement protocol and expressed interest in conducting the TLUS. The parties agreed to develop a draft work plan with guidelines, tasks and timelines for review, and to conduct a site visit.
March 25, 2014	Meeting	Benga provided an overview of the EIA process and invited Piikani Nation to participate in a Community Advisory Committee established to discuss issues related to the Project and self-sustaining community benefits. The parties discussed Piikani participation in socio-economic baseline data collection and agreed to cooperate on drafting an engagement protocol and Memorandum of Understanding (MOU).
March 31, 2014	Email	Benga provided a list of potential employment and contracting opportunities to Piikani Nation.
April 7, 2014	Email	Benga's consultant sent Piikani Nation a joint plan for the TLUS and supporting documents.
April 10, 2014	Email	Piikani Nation and Benga mining completed the Draft Capacity Funding Agreement for presentation to Piikani Nation Chief and Council.
April 11, 2014	Meeting	Benga met with Piikani nation Chief and Council to discuss the proposed Capacity Funding Agreement and future training and employment opportunities associated with the Project.
April 22, 2014	Email	Benga's consultant sent Piikani Nation a revised joint plan for the TLUS and supporting documents.
April 30, 2014	Email	Benga's consultant sent the draft Traditional Study work plan, Elder letters, and inventory forms to Piikani Nation.
May 5, 2014	Email	Benga and Piikani Nation exchanged emails to confirm mutual understanding of the draft Capacity Agreement including payment for Project-related activities and signing amount.
May 22, 2014	Meeting	Benga provided Piikani Nation with an early rough draft of the First Nations Consultation Plan for Piikani Nation's review, and a map showing future potential exploration areas.
May 22, 2014	Meeting	Benga's consultant met with Piikani Nation Elders to plan for the TLUS site visit and workshop.
June 4, 2014	Email	Benga advised of intent to resume exploration work that was initiated in 2013 but later interrupted due to weather conditions.
June 9 -10, 2014	Site Visit / Workshop	Benga's consultant and Piikani Nation engaged in a Project site visit and TLUS workshop.

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
June 12, 2014	Email	Benga wrote to Piikani Nation regarding the hiring of Piikani members as field assistants to participate in the 2014 baseline studies.
July 14, 2014	Email	Benga provided information on the EIA process and the timing of the Project's EIA submission.
August 6, 2014	Email	Benga provided an updated Project footprint map.
August 12 - September 10, 2014	Email	Benga's consultant and Piikani Nation corresponded about the plans, logistics, schedule, and budget for the upcoming TLUS workshop and field work.
September 2-5, 2014	Field work	Piikani Nation participated in ground-truthing activities related to the collection of TK/TU information.
October 14, 2014	Email	Benga provided an updated site map, the First Nations Consultation Plan, the Project Description.
October 30, 2014	Field work	Piikani Nation participated in ground-truthing activities related to the collection of TK/TU information.
November 25, 2014	Email	Benga provided an overview of key milestone dates for the EIA Application, the Aboriginal Consultation process, and Traditional Use and Historical Resources studies.
December 3, 2014	Meeting	Benga's consultant and Piikani Nation discussed Traditional Knowledge integration into the EIA with discipline leads.
December 9, 2014	Meeting	Benga met Piikani Nation Elder Society to discuss the Project, as well as the archaeological and TK/TU programs. Benga fielded questions about the Project from Piikani Elders.
December 9, 2014	Email	Benga provided the PTOR and confirmed that notice had been placed in newspapers.
January 13, 2015	Meeting	Benga and Piikani Nation reviewed the PTOR and all project activities in detail.
January 19, 2015	Email	Benga distributed the draft minutes for the January 13 <sup>th</sup> meeting, requesting comments.
February 20, 2015	Meeting	Benga provided an overview of the processes for development of confidential and public versions of maps and reporting, and the opportunities for incorporating Piikani TK/TU into the EIA. Benga discussed the Alberta and the CEAA TOR. Benga and Piikani Nation reviewed the proposed work plan and schedule for the Piikani Health and Socio-economic Study.
February 25, 2015	Email	Benga's consultant submitted for Piikani Nation's review an overview of Piikani TK/TU that, once finalized, could be submitted to CEAA to inform development of the TOR. Benga distributed draft minutes of the February 20 <sup>th</sup> meeting for review.

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
February 26, 2015	Meeting	Benga introduced the Project to the new Chief and members of Council. The parties agreed on next steps for the EIA process and planning for economic opportunities.
March 18, 2015	Meeting	Benga presented economic opportunities and the socio-economic study for the EIA to Piikani Nation Chief, Council and Department Managers. Benga followed up with consultation managers to discuss details of the study.
March 19, 2015	Email	Benga advised that the AER had finalized the TOR for the provincial EIA
March 19, 2015	Email	Benga sought input from Piikani Nation on a Request for Quotations (RFQ) for feasibility study costing and placement on future bid lists. Piikani responded affirmatively.
March 20, 2015	Meeting	Discussed plans for economic opportunities, including employment training.
March 25, 27 & 30, 2015	Teleconference / Meeting	Benga and Piikani Nation discussed the work plan and budget for the socio-economic study TK/TU studies.
March 31, 2015	Email	Benga outlined types of business services and products that will be required for the Project, requesting information on potential Piikani Nation suppliers.
March 31, 2015	Email	Benga inquired about Blackfoot terms requiring translation in the TK/TU Report.
April 14, 2015	Meeting	Reviewed employment, training, business development and the negotiation plan for the IBA.
April 15, 2015	Meeting	Discussed details related to the socio-economic study and the CEAA Project Description. Benga provided copies of the draft public version of the TK/TU Report.
April 23 & May 1, 2015	Email	Benga's consultant emailed copies of the draft public TK/TU Report for Piikani Nation's review and comment.
April 27-May 1, 2015	Workshop / Interviews	Benga conducted interview with Piikani managers and community members regarding the services, interests, needs, and issues in the community and Nation to inform the socio-economic baseline.
May 7-8, 2015	Meeting	Benga and Piikani Nation met to discuss the sections of the IBA related to human resources and business development.
May 5, 2015	Email	Benga provided a summary of the themes and next steps that emerged from the socio-economic study.
May 12, 2015	Email	At Piikani Nation's request, Benga submitted re-submitted the TK/TU Report as well as geographic information about a potentially important site in proximity to the Project footprint.
May 14, 19 & 20, 2015	Email / Teleconference	Benga provided transcripts of interviews from the socio-economic study workshops for review and discussed next steps to finalize the report.
May 25 & 26,	Email /	Benga's consultant and Piikani Nation discuss edits to the TK/TU Report.

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
2015	Teleconference	
May 27, 2015	Email	Benga's consultant provided Piikani Nation with the updated public version of the draft TK/TU Report.
May 27-28	Meeting	Discussion of economic sections of Impacts & Benefits Agreement.
June 1, 2015	Meeting	Benga and Piikani Nation meet to review the details of the socio-economic workshop and interviews.
June 2, 2015	Workshop	Benga provided an overview of the main issues arising from the socio-economic interviews and facilitated discussions about the potential effects and mitigation measures.
July 8, 2015	Letter	Benga provided a project Environmental Assessment update.
July 8, 2015	Teleconference	Piikani Nation provided final edits to the TK/TU Report.
July 9, 2015	Email	Benga provided Piikani Nation with links containing information about EIA participation funding from CEAA.
July 9, 2015	Email	Benga's TK/TU consultant provided the finalized TK/TU Report for direct submission to Benga.
July 14, 2015	Email	Piikani Nation submitted their final TK/TU for use in the Environmental impact assessment.
July 15, 2015	Meeting	Benga reviewed the Project schedule and business opportunities.
July 29, 2015	Letter	Benga provided a Project update and reference to funding opportunities for participation in the CEAA review process.
August 5, 2015	Email	Benga provided the remaining socio-economic interview transcripts for verification.
August 11, 2015	Meeting	Benga and Piikani Nation discussed business opportunities and project needs.
August 12, 2015	Open House	Benga hosted an open house for Piikani Nation community members featuring information about Benga, the Project, the EIA process and objectives, flora, fauna, water, air, traditional use, socio-economics, employment & business opportunities.
August 27, 2015	Email	Benga provided an information package to allow Piikani Nation an opportunity to provide feedback on Benga's understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 2, 2014	Email	Benga's consultant sent the Socio-economic report for Piikani Nation's review and comment, and asked that a draft of the report be released for incorporation into the IBA and EIA.
September 8, 2015	Email	Benga's consultant sent a summary of the information provided by a Piikani Elder, asking Piikani Nation how they would like to see the information used.

<b>Table H.4.2-1 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 8, 2015	Meeting	Benga met with Piikani Nation Chief and Council to discuss the IBA. Piikani Nation tabled a new Engagement Agreement they want to be finalized and executed prior to finalizing the IBA.
September 10, 2015	Phone Call	Benga's consultant and Piikani Nation discussed the review of the TK/TU and socio-economic reports and the process for finalizing the documents and making non-confidential versions of the documents available to Benga.
September 11, 2015	Letter	Benga emailed a letter to Piikani Nation Chief and Council outlining the Project, the IBA currently under negotiation, employment and training opportunities, and contracting opportunities.
September 15, 2015	Email	Piikani Nation's lawyer tabled a new Project Agreement (IBA) for comment.
September 2, 2015, September 29, 2015	Email	Benga sought a meeting with Piikani Resource Development Corp. to discuss working toward a Power Purchase Agreement.
September 23, 2015	Teleconference	Benga's consultant followed-up on Piikani Nation's review of the updated TK/TU report and the socio-economic report.
September 29, 2015	Email	Benga's consultant followed-up on Piikani Nation's review of the updated TK/TU report and the socio-economic report.
September 30, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Piikani Nation's format preference for receiving the report. Piikani Nation replied on October 5 <sup>th</sup> .
October 2, 2015	Email	Benga's consultant emailed Chief Grier to provide information about a reported coal wash and impact on Gold Creek, noting that the release is from historic mining operations and that Riversdale had installed mitigation measures. Benga further noted that Riversdale will continue to monitor and maintain these sites.
October 2, 2015	Email	A Piikani Nation councillor responded, noting that it is an unfortunate incident made more unfortunate by the media coverage. He requested that Piikani Nation be kept informed as progress is made on long and short-term mitigation measures. Benga responded with commitment to keep Piikani Nation informed.
October 13, 2015	Teleconference	Piikani Nation advised that the IBA was in the process of being edited with information from Piikani Nation's consultants. Benga explained that the EIA writing was nearing completion and a copy would be provided for Piikani Nation's review upon completion. Benga and Piikani Nation agreed to postpone the open house scheduled for October 27, 2015 until after the Application is submitted

#### H.4.2.2 Traditional Use and Traditional Knowledge Studies

Piikani Nation's TK/TU study of the Grassy Mountain area served as an instrument for Piikani Nation to record traditional knowledge and land uses, to identify potential effects of the proposed Project, and to give Piikani knowledge holders an opportunity to provide ideas for mitigation of potential effects. This study is a vital component of the consultation process because TK/TU studies enhance the quality of an environmental assessment in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment. The information gathered in all stages of TK/TU research by Piikani Nation is the intellectual property and is retained solely by Piikani Nation. The Piikani Nation TK/TU report used in this assessment is a summary of outcomes of the fieldwork and information related to the Project that was approved by Piikani Nation for use in the EA process. The Piikani Nation TK/TU study is available in [Appendix 7b](#).

Initial planning for the TK/TU study began in March 2014 to develop work plans, schedules, and budgets to fund Piikani Nation's participation in the study. The study was completed in two phases – the first of which was a preliminary site tour completed in June 2014. The preliminary site tour involved visiting six sites with representatives from Piikani Nation's consultation team as well as Elders to record data via video, photos, and GPS records. The objectives of the preliminary site tour were to collect initial TK/TU data and to identify next steps for the second phase of the study. Following the site tour, Piikani Nation held a workshop wherein Piikani technicians and the TK specialists provided an overview of the data collected during the site tour from which resulted a discussion of initial thoughts, information, observations, and stories from Piikani Elders.

The second phase of the TK/TU study built on findings from the first phase and involved ground-truthing field work which was completed over four days in September and October 2014. Piikani Nation followed the first part of the phase 2 field work with a workshop on September 8 and 9, 2014 to share the results of ground-truthing efforts with the Piikani Elder Society, to further explore and expand upon Piikani stories of the area, and to develop consensus around the types of sites located during the field work.

Over the course of all phases of the field work, Piikani Nation technicians and Elders identified and recorded 52 TK/TU sites.

#### H.4.2.3 Economic Opportunities

Since the Project's initiation, Benga has, and will continue to work collaboratively with Piikani Nation to develop opportunities for Piikani Nation to derive direct and long-lasting benefits from the Project. To demonstrate a commitment to supporting the Project area's rich cultural heritage, Benga contributed to the Piikani 58<sup>th</sup> Annual Celebrations. Benga and Piikani Nation are in the process of

negotiating an IBA, which will include commitments related to: Environmental Management; Culture and Traditional Resources; Human Resources; and Business Development.

Piikani Nation has demonstrated a strong interest in being involved in economic opportunities throughout the life of the Project and has participated in numerous planning sessions to jointly develop strategies to advance Piikani Nation's contribution to the human resource and supply chain aspects of the Project. As part of these discussions, Benga provided detailed information to Piikani Nation staff, leadership and community members on all employment positions (both direct and contract), as well as supply chain opportunities that will be available during construction and operation of the Project. These contract and employment opportunities were presented at a leadership and department manager meeting in March 2015 and again at a community open house in August 2015. To further advance opportunities for Piikani businesses to contribute to the Project, Piikani Nation and Benga jointly established a shortlist of contract opportunities for further assessment. An independent consultant was then engaged, funded by Benga, to support an assessment of Piikani business opportunities and plans to pursue them. This assessment included funding a visit in June 2015 by Piikani Nation Chief and Council and key staff to visit the Osoyoos Indian Band to learn about how they achieved community economic development successes. Although a majority of contracting and employment decisions on the Project have yet to be made, Benga has already had an opportunity to employ four qualified members of Piikani Nation, with two individuals contributing to the exploration program, and two individuals contributing to the vegetation and soils studies for the EIA.

The Project's EIA consultation work plan and budget developed collaboratively with Piikani Nation outline the terms by which Benga provides financial support for Piikani Nation's continued engagement on the Project's EIA process. To this end, a draft Capacity Funding Agreement was developed in the spring of 2014, however Chief and Council were unavailable to consider it for approval at the time. Benga continues, however, to offer to fund Piikani Nation's Project-related activities in accordance with the work plan. To help facilitate their EIA review, Benga also offered to provide funding for Piikani Nation to contract an independent review of the EIA.

In supporting the TK/TU Study of the Project area, Benga provided funding for the services of independent Traditional Studies consultants, as well as funding for Piikani Nation to carry out the study. The TK/TU Study, which involved a preliminary site visit, field studies, interviews, and workshops were documented in a confidential report for Piikani Nation's exclusive use, and a public report documenting Piikani TK/TU of the Grassy Mountain Area for use in the assessment.

#### **H.4.2.4 Chronology of Key Consultation Activities**

### H.4.3 Background

#### H.4.3.1 Traditional Use of Lands and Resources

Piikani Nation people were nomadic and hunted in areas where they travelled and moved through including neighboring territories (Piikani Nation 2015b). In the past, buffalo were available in Crowsnest Pass during the winter where they concentrated in the bottom of the valley at Crowsnest River (Figure H.4.1-1). Traditionally, Piikani members hunted deer and elk for spiritual, ceremonial, and subsistence purposes. Past hunting methods included bow and arrow followed by a later use of horses and rifles due to trade and contact with Euro-Canadian settlers. A common hunting technique was the use of buffalo jumps comprised of cliffs near buffalo wintering grounds with herds systematically corralled using V-shaped lanes lined with shrubs and driven off the cliffs by hunting parties (Dempsey 2001:606). The most famous of these are the Head Smashed In and Old Woman's Buffalo Jumps north and east of the Porcupine Hills (Figure H.4.1-1). Buffalo hunting occurred primarily in the fall and winter months. Piikani people considered fish to be survival food compared to their preferred diet of buffalo. In comparison to buffalo, fish were rarely harvested and considered to be less substantial (Crowsnest Highway 2004). However, buffalo went extinct in the late 1800s with extensive starvation, forcing Piikani members to shift into farming and eventually ranching for a livelihood (Piikani Nation 2015b).

Trapping among Blackfoot people has been for the primary purpose of obtaining eagle feathers that are important for ceremonial and war regalia. The method of trapping entailed building a mound of earth with a hollow centre covered by branches on a high point, typically in the foothills. Using bison or coyote bait, young Blackfoot men would lure eagles to the mound and pull the eagle into the centre and kill it. One recorded location of a permanent eagle trapping site is in the southwest part of the Piikani Timber Limit 147B that was last used in the 1960s. Trapping of furbearers was limited to wolves and foxes. Blackfoot taboo prevented trapping of beaver due to its role in the bison hunt (Colpitts 2014:64). Other secondary sources indicate that Blackfoot people primarily hunted bison but during the early 1800s there was a period of intensive trapping for beaver that played a role in the success of the Rocky Mountain House posts (Parks Canada 2008).

In the past, plant harvesting was an important undertaking among the Piikani people. They targeted a variety of plants available in different parts of their territory. "Aspen, poplar, and birch were the main trees that managed to survive in the coulees. ... [T]o the west, the tree-covered foothills of the Rocky Mountains were a primary source of lodge pole pine [for constructing tipis]" (Dempsey 2001:604). The mountainous areas also provided important medicinal and ceremonial plants that were not available on the plains, including sweet pine, yarrow, ochre, and bearberry (Piikani Nation 2015b). Serviceberries and chokeberries were the most widely used, particularly for making pemmican (Dempsey 2001:607). According to Piikani Elders, Crowsnest Pass was an important east-

west travel corridor for Blackfoot people both for harvesting of buffalo and plants in times of peace and to defend their territory in times of war. Methods of travel were by horse and foot with the support of travois and dogs. After introduction of the horse in the early 1700s, there was an increase in warfare with groups west of the Rocky Mountains (Dempsey 2001:608). Another reason for travel in the spring and autumn was to trade to the north at Rocky Mountain House and Fort Edmonton with goods such as meat, robes made of buffalo, horses, and a limited supply of furs (Dempsey 2001). More specifically in Crowsnest Pass, Piikani Nation Elders noted that the Blackfoot trail steered north to avoid the area that is currently covered by the Frank Slide because they knew the instability of the mountains in this area. There were also smaller trails throughout the Grassy Mountain area connecting lookout or scouting sites on top of rock outcrop occupied for brief periods of time by men who sent messages between ridges. Along these trails were rocks cairns used for navigational purposes. During consultation, Piikani Nation identified specific locations of rock cairns and smaller trails connecting scouting sites in relation to the Project however this information was identified as confidential and cannot be used in this assessment.

#### **H.4.3.2 Current Use of Lands and Resources for Traditional Purposes**

This section provides a description of Piikani Nation's current use of lands and resources for traditional purposes. In addition, this section fulfills the requirements of the TOR by providing background information on traditional use.

##### **H.4.3.2.1 Hunting**

Piikani Nation members continue to hunt with a focus on deer and elk in their territory. Other species of importance to Piikani Nation are moose, grouse, badger, mountain sheep, mountain goat, rabbit, squirrel, black bear, grizzly bear, beaver, badger, owl, elk, gopher, otter, and porcupine for subsistence, medicinal and ceremonial purposes such as for use in bundle and Sundance ceremonies (Piikani Nation 2015b; Dempsey 2001). Piikani Nation identified wildlife in the Project area including golden eagles and grouse (Piikani Nation 2015b). During consultation, Piikani Nation identified locations partially or fully overlapping the LSA – there are eight wildlife sites and four harvest sites that are used for hunting and plant gathering (see Figure H.4.1-1). However, the specific locations are identified as confidential by Piikani Nation.

##### **H.4.3.2.2 Trapping**

The practice of trapping has declined among Piikani people. Hannis explains the reason for this decline as follows:

*Eagle trapping is not a thriving practice among the Piikani today. The fact that eagle trapping survived into the reserve era, until the 1960s speaks to the loyalty of Piikani people to their traditions despite the pressure*

*to conform to Canadian life. The end of eagle trapping coincides with the removal of medicine bundles from the Piikani community (Hannis 2006).*

Based on information provided by Piikani Nation, there are no trap lines currently in use by Piikani Nation within the LSA.

#### H.4.3.2.3 Fishing

Current fishing among Piikani Nation members occurs in streams and lakes near the reserve and is primarily for sport (i.e., catch and release) due to concerns about water quality, especially near the Old Man River dam (Figure H.4.1-1). These areas are outside of the Project LSA.

#### H.4.3.2.4 Plant Gathering

A variety of plants continue to be gathered for medicinal and ceremonial uses with protocols followed by those who gather plants. According to the seasonal round, plants are generally gathered in the spring. In the fall, lodge pole pine is gathered for constructing tipis. Plants identified during ground-truthing and currently harvested by Piikani Nation members include sweet pine, poplar, bearberry, sweet pine, juniper, yarrow, tree lichen, lodge pole pine, willow, poplar, cottonwood, and birch (Piikani Nation 2015b). Sweet pine was a consistent focus of harvest during the site tour and ground-truthing efforts (Piikani Nation 2015b). Piikani Nation did not disclose specific uses of these plants. The importance of plants is not isolated to people; they are also considered by Piikani Nation as vital for the survival of wildlife. During ground-truthing, Piikani Nation field crew members recorded four harvest sites for plant gathering and hunting that partially or fully overlap the LSA (Figure H.4.1-1). However they did not disclose the specific locations in the public report (Piikani Nation 2015b).

#### H.4.3.2.5 Trails and Travelways

During consultation, no trails and travelways were identified for current use but four features associated with travel were identified by Piikani Nation that overlap the LSA (Figure H.4.1-1). The specific locations of the features were not disclosed in the public report.

### H.4.3.3 Aboriginal Health

The Piikani Nation Health Centre provides services and programs to Piikani Nation members. Environmental public health services are provided by Piikani Nation and Treaty 7 Management Corporation including safe drinking water testing which is a mandatory program (HCOM 2015).

Piikani Nation members continue to harvest resources for subsistence, medicinal, and ceremonial purposes. Resources used by Piikani Nation are located within the Project LSA. Plant species include sweet pine, poplar, bearberry, sweet pine, juniper, yarrow, tree lichen, lodge pole pine, willow,

poplar, cottonwood, and birch. Animal species include moose, grouse, badger, mountain sheep, mountain goat, rabbit, squirrel, black bear, grizzly bear, beaver, badger, owl, elk, gopher, otter, eagles, grouse, and porcupine.

During consultation, Piikani Nation members identified four important sites associated with water that are partially or fully overlapping the LSA ([Figure H.4.1-1](#)). Specific locations and uses of the sites were not provided by Piikani Nation (Piikani Nation 2015b).

#### H.4.3.4 Aboriginal Socio-Economic Conditions

Piikani Nation submitted a Socio-economic and Health summary report after the time when it could be integrated into this section and has been provided in [Appendix 7b](#).

The Treaty 7 Business Directory (2013) for Piikani Nation identifies several businesses located in the vicinity of the Project including recreation and commercial activities. One of the Piikani Nation reserves, No. 147, was established as a timber limit for Piikani Nation to use as an area for hunting, plant gathering, and general resource harvesting. Based on the National Household Survey (Statistics Canada 2011), the participation rate for Piikani Nation members is 49.7%, the employment rate is 39.5%, and the unemployment rate is 19.3%.

#### H.4.3.5 Aboriginal Physical and Cultural Heritage

Traditionally, Piikani Nation habitation sites such as camps were located along Crow Lodge or Oldman River, Crowfoot, and Blackfoot Crossing on the plains east of Crowsnest Pass as shown in [Figure H.4.1-1](#) (Piikani 2015). Typical Blackfoot shelters consisted of tipis, including “12-14 buffalo skins and between 20-30 poles” (Dempsey 2001). A winter camp was located along the Old North Trail at Maycroft ([Figure H.4.1-1](#)) where there was also a sacred place and a Sundance Lodge. The Old Women’s Buffalo Jump is “one of the most important archaeological sites in southern Alberta... was identified in Blackfoot mythology as the place where the first marriage of men and women took place” (Dempsey 2001, Piikani 2015). The valley where Crow Lodge Creek flows into the Oldman River ([Figure H.4.1-1](#)) was an important wintering area and became a permanent habitation area for Piikani Nation.

After contact with Euro-Canadian settlers and the signing of Treaty 7, “most [Blackfoot] selected reserves near favourite wintering places: ... the North Peigan near the Porcupine Hills” (Dempsey 2001:619). Many of the traditional sites and habitation areas continue to have importance to the Piikani Nation, including Oldman River, Crowsnest Mountain, Napi’s Playground, Crowlodge Mountain and Creek, Chief Mountain, Little Bow River, Sweetgrass Hill, and Porcupine Hills ([Figure H.4.1-1](#)). They are located throughout Piikani Nation traditional territory, interconnected through patterns of use and travel and associated with stories and harvesting (Piikani Nation 2015b).

Crowsnest Mountain is a sacred site used for ceremonial and religious purposes and is part of Blackfoot myths and tradition (Piikani Nation 2015b). Crowlodge Mountain is a location used as a vision quest site and red ochre is gathered there, which is described as a sacred activity by Piikani Nation (Piikani Nation 2015b). Vision quest sites are defined by Piikani Nation as sacred places to stay for an extended period of time for spiritual purposes often in an isolated environment with a view at a higher elevation such as a mountain (Piikani Nation 2015b). Crowsnest Pass is known for vision quest areas that are significant in a historical and religious way. During consultation, four sacred sites and three habitation sites were identified as partially or fully overlapping the LSA (Figure H.4.1-1). The specific locations of these physical and cultural sites were not provided by Piikani Nation.

#### **H.4.4 Potential Effects and Mitigation Measures**

##### **H.4.4.1 Current Use of Lands and Resources for Traditional Purposes**

The assessment of potential effects of the Project on current use of lands and resources for traditional purposes focuses on the availability of lands and resources identified by Piikani Nation. Based on the background information described, there may be potential effects to current use for hunting, plant gathering, and features associated with trails and travelways.

###### **H.4.4.1.1 Hunting**

Piikani Nation continues to hunt throughout their traditional territory. There are no specific hunting sites identified by Piikani Nation in the Project LSA. However, project activities will intersect or be in proximity to habitat and species that are identified for hunting by Piikani Nation. These species are deer, elk, moose, grouse, badger, mountain sheep, mountain goat, rabbit, squirrel, black bear, grizzly bear, beaver, and porcupine. Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife (E.9.3), and land and resource use (E.10.3).

Section E.9.3 Wildlife addresses potential effects on key species and habitat for wildlife species including moose, elk, bighorn sheep, mountain goat, and grizzly bear. Potential direct and indirect effects from the Project that were assessed include:

###### Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- habitat fragmentation and loss of connectivity.

###### Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions (assessed in MEMS 2015b); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

Section E.10.3 Land and Resource Use addresses potential effects to land use activities related to hunting including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga.

However, access for land use activities by Piikani Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure. Benga also will continue to consult with Piikani Nation, including discussion of options to facilitate access for land use activities where they may be affected by the Project.

Wildlife assessment methods contained in CR #8, Section 3.2 included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The potential effects described in these sections could result in a change in identified hunted species and habitat, change in use or access to identified hunting locations, and change in preferred harvesting method. Input provided by Piikani Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Piikani Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in Table H.4.4-1.

<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
The Project will adversely affect wildlife by increasing animal-vehicle collisions (Piikani Nation 2015b).	Piikani Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Piikani Nation will be considered through	Habitat connectivity and movement is assessed in Section E.9.3 including potential impacts to wildlife from traffic. Proposed mitigation measures related to managing this potential effect include access management and

Table H.4.4-1 Feedback Provided by Piikani Nation		
Potential Effects Identified by Piikani Nation	Recommended Mitigation Measures by Piikani Nation	Benga Mining Response
	the EA process.	enforcing speed limits along the main access road and utility corridors. In addition, wildlife crossing signs will be used to minimize wildlife-vehicle collisions.
The Project will adversely affect wildlife by diminishing their access to clean water (Piikani Nation 2015b).		Habitat connectivity and movement is assessed in <a href="#">Section E.9.3</a>
Restriction of access to traditional land for hunting now, and for future generations (Piikani Nation 2015b).		Access to hunting locations is included in the assessment of potential effects to hunting. Benga will develop and implement an Aboriginal Access Management Plan.
Reduction in hunting effectiveness in the area as the Project will alter migration routes and dissuade from its vicinity (Piikani Nation 2015b).		<a href="#">Section E.9.3</a> Wildlife assessment potential effects including habitat fragmentation and the disruption of natural movement patterns of wildlife. The results of the wildlife assessment are included in the assessment of potential effects to hunting.

Mitigation measures identified in [Section E.9.5](#) Wildlife and [Section E.10.5](#) Land and Resource Use apply to the effects described in this section. The pertinent mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor;
- access management within the Project footprint to reduce effects to wildlife; and
- wildlife and wildlife habitat reclamation.

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;

- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.4.4.1.2 Plant Gathering

There are plant gathering areas that overlap the Project LSA. The Project will intersect or be in proximity to habitat and species that are identified for plant gathering by Piikani Nation. These include sweet pine, poplar, bearberry, sweet pine, juniper, yarrow, tree lichen, lodge pole pine, willow, poplar, cottonwood, and birch. Several VC sections are relevant to the assessment on plant gathering such as the assessment sections for Vegetation (E.8.3), and land and resource use (E.10.3).

Section E.8.3 Vegetation addresses potential effects on key species and habitat including the species identified by Piikani Nation. A summary of species identified by Piikani Nation for the Project with the occurrence of species within the LSA is available in Section E.8.2 Vegetation. Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project’s mine pit and associated waste rock disposal areas and infrastructure. In addition, air emissions released into the atmosphere during Project construction and operations may result in direct and indirect effects on vegetation arising from acid deposition. The potential effects described in these sections could result in a change in identified plant species and habitat, change in use or access to identified plant gathering locations, and change in preferred harvesting method. Input provided by Piikani Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Piikani Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in Table H.4.4-2.

<b>Table H.4.4-2 Feedback Provided by Piikani Nation</b>		
<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
Piikani Nation has not identified additional potential effects to plant gathering.	Timely harvest of medicinal and ceremonial plants prior to impact by the Project (Piikani Nation 2015b).	Benga will provide lodge pole pine that is cleared for the Project to Kainai Nation, Piikani Nation and Tsuut’ina Nation. Benga will continue to work with Piikani Nation to identify other species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan.

Mitigation measures identified throughout the application in [Section E.8.5](#) Vegetation and [Section E.10.5](#) Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation ;
- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation ;
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species ;
- the provision of opportunities to identify and collect suitable lodge pole pine for TU ceremonies, and
- where practicable, utilize locally collected seed to preserve the legacy of species and of place ; and
- access control policy to facilitate access to the Project site by authorized users.

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations;
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.4.4.1.3 Trails and Travelways

The Project will intersect or be in proximity to areas that are identified for trails and travelways by Piikani Nation. Although specific locations are not identified, it is possible that current use and features associated with trails and travelways may interact with Project activities during construction. Several VC sections are relevant to the assessment on trails and travelways such as the assessment sections for land and resource use ([E.10.3](#)) and historical resources ([E.13](#)).

[Section E.10.3](#) – Land and Resource Use addresses potential effects to land use activities. A majority of the land within the proposed development footprint is privately owned by Benga. However, construction activities may impact the ability to access the Project area. The Project may also impact the availability of resources and opportunities for recreational activities.

[Section E.13](#) – Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure or object. There are 32 recorded archaeological or historic era resources located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, there are 10 that are overlapping the Project footprint. Piikani Nation identified four sites associated with trails and travelways that are fully or partially within the Project LSA however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in use or access to trails and travelways or disturbance to features associated with trails and travelways. Input regarding potential effects to trails and travelways and mitigation measures has not been provided by Piikani Nation during consultation. Benga Mining will continue to work with Piikani Nation and will consider mitigation measures proposed by Piikani Nation.

Mitigation measures identified in [Section E.10.5](#) Land and Resource Use apply to the effects described in this section. In particular, access control policy to facilitate access to the Project site by authorized users. Additional measures are recommended to avoid or minimize potential effects to trails and travelways. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate trails and travelways;
- consultation will continue to further identify trails and travelways that warrant site-specific or situational mitigation;
- consultation will include sharing information about construction timing; and
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction.

#### H.4.4.2 Aboriginal Health

The Project is located within the Piikani Nation traditional territory in proximity to areas currently used by Piikani Nation members. The Human Health Risk Assessment ([Section E.12](#)) includes an Aboriginal receptor type in the assessment and documents health concerns identified by Aboriginal groups regarding impacts of existing development and of the Project specifically on their traditional lifestyle. The Aboriginal receptor types consider the potential for local residential communities, Aboriginal residential areas, Aboriginal land use areas (such as hunting and plant gathering) and recreational areas.

[Section E.12.3](#) – Human Health assesses potential effects to health including acute inhalation risks, chronic inhalation risks, chronic multimedia exposure risks, and a wildlife risk assessment. In order for Aboriginal health receptors to be exposed to emissions from the Project, they must come into contact with chemicals of potential concern (COPCs). The potential exposure pathways related to Aboriginal groups are summarized in [CR #12 Table 5.1.4-1](#) and include direct contact with COPCs through air inhalation, soil, ingestion of local vegetation, ingestion of wildlife, and contact with surface water or fish ingestion. The results of the human health risk assessment indicate risk quotients within the Mine Permit Boundary which will be inaccessible during construction and operation ([Section E.12](#)). Therefore, it is predicted that there will be no effects of the Project on Aboriginal health. Input provided by Piikani Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Piikani Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.4.4-3](#).

<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
The Project will decrease water quality in waterbodies in the vicinity of the Project by clearcutting forested areas (Piikani Nation 2015b).	Piikani Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Piikani Nation will be considered through the EA process.	Potential effects to water quality are described in <a href="#">Section E.5.3</a>
Waterbodies in the vicinity of the Project risk contamination through contact with mining by-products (Piikani Nation 2015b).		Potential impacts of mine spoil and mine operations on groundwater are assessed in <a href="#">Section E.4.3 Hydrogeology</a> . Potential impacts to surface water quality from the release of deleterious substances are assessed in <a href="#">Section E.5 Surface Water Quality</a> .

Mitigation measures identified in [Section E.12.5 Human Health](#) apply to the effects described in this section. The results of the HHRA suggest that short-term predicted risks to human health will be limited to the LSA and within the project footprint. None of the remaining human receptor locations are predicted to have unacceptable levels of risk. Assuming public access within the Mine Permit Boundary is restricted and the mitigation measures assumed by the other disciplines are implemented ([Section A.10](#)); there is no need for further mitigation of emissions based on the results of the HHRA.

#### H.4.4.3 Aboriginal Socio-Economic Conditions

Piikani Nation submitted a Socio-economic and Health summary report after the time when it could be integrated into this section. The report appears as [Appendix 7b](#).

The Project will involve the construction of facilities within a mine permit boundary that is 45.16 km<sup>2</sup> of lands within the traditional territory of Piikani Nation. Several VC sections are relevant to the assessment on Aboriginal socio-economic conditions such as the assessment sections for land and resource use ([E.10.3](#)) and socio-economics ([E.11.3](#)).

The potential effects described in these sections could result disturbance to Piikani Nation commercial activity, forestry and logging operations, and recreation use. Input provided by Piikani Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Piikani Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.4.4-4](#).

<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
Aboriginal Socio-Economic Conditions	Historic mining operations did not provide economic opportunity to Piikani Nation (Piikani Nation 2015b).	Benga is committed to providing economic opportunities and benefits to Piikani Nation.
Aboriginal Socio-Economic Conditions	In recognition of their traditional role of providing security, Benga should consider employing members of the Piikani Nation Brave Dog Society in a similar role on the project (Piikani Nation 2015b).	Benga and Piikani Nation are discussing a potential joint-venture opportunity for provision of security services to the Project

<b>Table H.4.4-4 Feedback Provided by Piikani Nation</b>		
<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
Aboriginal Socio-Economic Conditions	Expressed interest in employment opportunities connected to the Project, particularly those for young Piikani (Piikani Nation 2015b).	Benga and Piikani Nation are committed and working together to provide employment opportunities for Piikani Nation members. Human Resources development is included in IBA discussions.
Aboriginal Socio-Economic Conditions	Expressed interest in job-readiness programs to ensure that Piikani community members are prepared to take advantage of employment opportunities related to the project (Piikani Nation 2014).	Discussions on a job-readiness program are underway between Benga and Piikani Nation.
Aboriginal Socio-Economic Conditions	Concern about negative socio-economic effects caused by the potential for increased spending among Piikani Nation community members (Piikani Nation 2015b).	Project Agreement (IBA) discussions include potential provisions for socio-economic transition measures.
Aboriginal Socio-Economic Conditions	Concern that Piikani businesses may be invited to bid on contracts, being led along through the process, and then not awarded contracts (Piikani Nation 2014).	Benga and Piikani Nation are developing a plan and processes, as part of the Project Agreement (IBA) discussions to enhance contracting opportunities to Piikani Nation businesses.

Mitigation measures identified in [Section E.10.5](#) Land and Resource Use and [Section E.11.5](#) Socio-Economics apply to the effects described in this section.

#### **H.4.4.4 Aboriginal Physical and Cultural Heritage**

The Project will intersect or be in proximity to sacred, gathering, and habitation sites identified by Piikani Nation. The Grassy Mountain area is used for ceremonies and there are additional sites in proximity of the Project LSA. Several VC sections are relevant to the assessment on sacred, gathering and habitation sites such as the assessment sections for Land and Resource Use ([E.10.3](#)), and Historical Resources ([E.13](#)).

[Section E.13](#) Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or

natural site, structure or object. Thirty-two recorded archaeological or historic era resources are located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, 10 overlap the Project footprint. Piikani Nation identified four sacred sites and three habitation sites in their TU/TK study that are fully or partially within the Project LSA however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in use or access or disturbance to features associated with sacred, gathering, or habitation sites. The importance or value to sites identified by Piikani Nation may change as a result of the Project. Input provided by Piikani Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The recommendations made by Piikani Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.4.4-5](#).

<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
Impacts to culturally-important sites that are wholly or partially located within the Project’s footprint including locations identified at waypoint sites (Piikani Nation 2015b).	Piikani Nation did not recommend mitigation measures related to this potential effect.	Potential effects of the Project to Piikani Nation physical and cultural heritage sites that are wholly or partially within the Project footprint were identified as confidential and not to be used in the assessment. Benga will continue to work with Piikani Nation to better understand potential effects to these sites as more information is provided by Piikani Nation through the EA process.
Inadvertent impact to culturally-important and sacred sites (Piikani Nation 2015b).	To prevent this Piikani Nation recommends a well flagged buffer around all sacred sites (Piikani Nation 2015b).	Sites of cultural and sacred importance within 100 m of project activity that are identified by Piikani Nation will be flagged prior to construction.

<b>Potential Effects Identified by Piikani Nation</b>	<b>Recommended Mitigation Measures by Piikani Nation</b>	<b>Benga Mining Response</b>
Inadvertent impact to as-of-yet undetected culturally-important sites (Piikani Nation 2015b).	To prevent this, Piikani Nation recommends developing a Chance Find Procedure (Piikani Nation 2015b).	<a href="#">Section E.13</a> considers potential effects to large polygon areas identified by Piikani Nation during field visit where specific sites have not been identified but may still occur within the general area. If culturally-important sites are identified during construction, a Cultural Site Discovery Contingency Plan will be implemented. Piikani Nation will have an opportunity to contribute to the Plan.
The project may impose a loss of culture for present and future generations (Piikani Nation 2015b).	Piikani Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Piikani Nation will be considered through the EA process.	Benga is committed to working with Piikani Nation to better understand potential effects of the Project to Piikani Nation’s physical and cultural heritage. Benga will continue to work with Piikani Nation to discuss ways in which to mitigation potential effects to Piikani Nation.

Mitigation measures identified throughout the application in [Section E.10.5](#) Land and Resource Use and [Section E.13](#) Historical Resources apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- if avoidance of any unnamed pre-contact period sites is not possible based on size, location, and complexity, a mitigation excavation will be conducted in advance of Project development;
- if avoidance of any structures is not possible, mitigation will include a 20 m<sup>2</sup> excavation plot with full documentation of the remaining building structures including mapping and related detailed recordings; and
- a mitigation plan will be developed and implemented for mitigation excavation including sites located by the south disposal area land alteration activities.

Additional measures are recommended to avoid or minimize potential effects to sacred, gathering, and habitation sites. These are outlined below:

- consultation will continue to further identify sites or cultural and sacred importance that warrant site-specific or situational mitigation (sites within 100 m of Project activity including additional sites identified by Piikani Nation will be flagged prior to construction);
- consultation will include sharing information about construction timing;
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction; and
- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate land use locations.

#### **H.4.5 Characterization of Residual Effects**

##### **H.4.5.1 Current Use of Lands and Resources for Traditional Purposes**

The assessment of residual effects of the Project on current use of lands and resources for traditional purposes focuses on the potential effects remaining after mitigation measures are implemented. Based on the potential effects and mitigation measures described, there may be residual effects to current use for hunting, plant gathering and trails and travelways.

###### **H.4.5.1.1 Hunting**

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9 Wildlife](#) and [Section E.10 Land and Resource Use](#) and input provided by Piikani Nation. [Section E.9.3 Wildlife](#) characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and long-term in duration. The Project will affect the 10 wildlife VCs including moose, elk, bear and special status wildlife species such as mountain goat and eagles through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#). Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be insignificant for all assessed VCs. ([CR #9, Table 5.3-26](#)).

[Section E.10.3 Land and Resource Use](#) characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species hunted by Piikani Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to hunting are characterized as:

- low magnitude;
- local geographic extent;
- short-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.4.5.1.2 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section E.8.3](#) Vegetation, [Section E.10.3](#) Land and Resource Use, and input provided by Piikani Nation. Removal of ecosite phases and ELCs that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

[Section E.8.3](#) – Vegetation characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to TEK species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

[Section E.10.3](#) – Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species used for plant gathering by Piikani Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to plant gathering are characterized as:

- moderate magnitude;
- local geographic extent;
- long-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.4.5.1.3 Trails and Travelways

The characterization of residual effects to trails and travelways includes consideration of residual effects described in [Section E.10.3 Land and Resource Use](#), and input provided by Piikani Nation.

[Section E.10.3 Land and Resource Use](#) characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

The Project could result in measurable effects on trails and travelways and features associated with trails and travelways used by Piikani Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed. As a result, residual effects to trails and travelways are characterized as:

- moderate in magnitude;
- local in geographic extent;
- long term duration;
- continuous frequency;
- not reversible; and
- sensitive in ecological and social context.

#### **H.4.5.2 Aboriginal Health**

The characterization of residual effects to Aboriginal health includes consideration of residual effects described in [Section E.12.3](#) Human Health and input provided by Piikani Nation. The Project is not expected to have measurable effects on Aboriginal health. As there are no predicted effects to Aboriginal receptors and no mitigation measures have been proposed, it is not anticipated that there will be residual effects of the Project on Aboriginal health.

#### **H.4.5.3 Aboriginal Socio-Economic Conditions**

The characterization of residual effects to Aboriginal socio-economic conditions includes consideration of residual effects described in [Section E.11.3](#) Socio-Economics, [Section E.10.3](#) Land and Resource Use, and input provided by Piikani Nation.

The Project is not expected to have measurable effects on Aboriginal socio-economic conditions. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is/is not expected to affect. As a result, residual effects to Aboriginal socio-economic conditions are characterized as:

- magnitude;
- geographic extent;
- duration;
- frequency;
- reversibility; and
- ecological and social context.

#### **H.4.5.4 Aboriginal Physical and Cultural Heritage**

The characterization of residual effects to Aboriginal physical and cultural heritage includes consideration of residual effects described in [Section E.10.3](#) Land and Resource Use and input provided by Piikani Nation.

[Section E.10.3](#) Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

The Project could result in measurable effects on sacred, gathering, and habitation sites used by Piikani Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed. As a result, residual effects to sacred, gathering, and habitation sites are characterized as:

- moderate magnitude;
- local geographic extent;
- long term duration;
- regular frequency;
- not reversible; and
- sensitive in ecological and social context.

#### H.4.5.5 Summary of Residual Effects Characterization

Overall, the Project is not anticipated to measurably affect Piikani Nation’s ability to continue hunting or plant gathering practices within their traditional territory. If avoidance is not possible, the Project may damage or disturb sites that are identified by Piikani Nation for trails and travelways and sacred sites (Piikani Nation 2015b). With the implementation of mitigation measures, potential residual effects may be reduced but not fully mitigated if sites are physically disturbed. A summary of residual effects of the Project to Piikani Nation is provided in [Table H.4.5-1](#).

<b>Table H.4.5-1 Summary of Residual Effects to Piikani Nation</b>						
<b>Valued Components</b>	<b>Residual Effects Characterization</b>					
	<b>Magnitude</b>	<b>Geographic Extent</b>	<b>Duration</b>	<b>Frequency</b>	<b>Reversibility</b>	<b>Ecological and Social Context</b>
Hunting	Low	Local	Short-term	Continuous	Reversible	Resilient
Plant Gathering	Moderate	Local	Long-term	Continuous	Reversible	Resilient
Trails and Travelways	Moderate	Local	Medium	Continuous	Not reversible	Sensitive
Aboriginal Physical and Cultural Heritage	Moderate	Local	Long-term	Regular	Not reversible	Sensitive

**Magnitude** Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA.

Moderate – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability

Table H.4.5-1 Summary of Residual Effects to Piikani Nation						
Valued Components	Residual Effects Characterization					
	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Ecological and Social Context

to exercise the Aboriginal Interest in the RSA.

**Duration** Short term – limited to the construction phase; Long term – beyond the project lifespan

**Ecological and Social Extent** Sensitive – the Aboriginal Interest is sensitive or has low resiliency to disruption;

Resilient – the Aboriginal Interest is not sensitive or has high resiliency to disruption.

## H.4.6 Cumulative Effects

### H.4.6.1 Potential Contribution to Cumulative Effects

The cumulative effects assessment considers cumulative environmental effects that are likely to result from the Project in combination with the environmental effects of other physical activities and have been or will be carried out. This subsection provides a description of the contribution of the Project to cumulative effects that may have effects on the Aboriginal or Treaty Rights of Piikani Nation.

The scientific rationale for the selection of spatial boundaries for each of the disciplines, and the discipline specific LSA and RSA spatial and temporal scales for each of the disciplines are provided in detail in [Section D](#). These boundaries have been defined as lasting approximately 24 years, concomitant with the life of the Project. Segments of the temporal boundaries include the duration of the construction, operation and abandonment phases of the Project.

The Local Study Area (LSA) is established based on the zone of the Project influence, beyond which the potential environmental, cultural, and socio-economic effects of the Project are expected to be non-detectable. The Regional Study Area (RSA) is established based on the extent to which it would be expected that the interaction of residual effects of the Project with the residual effects of other projects would be detectable. It is also the area in which socio economic effects are expected to be detectable. VC-specific boundaries are established for both the LSA, for Project-specific effects, and the RSA, for cumulative effects. Effects on those VCs that have impacts more directly tied to the footprint of the Project are also assessed at the spatial scale of the Project footprint.

### H.4.6.2 Other Projects and Activities

Existing, approved and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) and are shown relative to Piikani Nation Traditional Territory on [Figure H 4.1-2](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within

the largest RSA (*i.e.*, wildlife RSA). As can be seen on [Figure D.2.4-3](#), not all Projects are contained within the study areas of each of the respective disciplines.

Most of the resource development currently occurring within the GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to 2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the GBRSA will be associated with forestry activities at Year 14 and Year 27.

#### **H.4.6.3 Potential for Cumulative Effects to Impact Aboriginal or Treaty Rights and Interests**

##### **H.4.6.3.1 Cumulative Effects on Current Use of Land and Resources for Traditional Purposes**

As described in this section, the contribution of the Project's residual effects are unlikely to cause a change in cumulative effects that could affect the viability or sustainability of traditional use by Aboriginal people of lands and resources within the RSA. Details on mitigation measures can be found in the references for each valued component listed below.

##### **H.4.6.3.2 Cumulative Effects on Wildlife and Plant Harvesting**

As described in [Section E.9.4 Wildlife](#), the incremental effects of the Project to cumulative effects on wildlife habitat availability, fragmentation/connectivity, mortality risk, and abundance will be small and no significant cumulative effects to wildlife population persistence are predicted. Therefore, no cumulative effects from the Project are predicted to impact Aboriginal or Treaty rights or interests related to wildlife populations. [CR #9, Table 6.4-1](#) contains a summary of residual cumulative effects ratings.

As described in detail in [Section E.8.4 Vegetation](#), while the Project will result in some loss of traditional use vegetation within the LSA these losses represent very small proportions of the total amount of these vegetation communities within the RSA. Neither the project-specific residual effects, nor the Project's residual effects acting cumulatively with other projects would threaten the regional sustainability of traditional use plants or other vegetation resources, wetlands, biodiversity, or fragmentation identified in this assessment.

##### **H.4.6.3.3 Cumulative Effects on Traditional Use Locations, Access Routes**

Approximately one half of the Project footprint is located on privately held land. Combined with other private land ownership in the LSA and challenging terrain, it is probable that the Project's contribution to cumulative residual effects on traditional use locations and access routes will not be

significant. However, Benga has offered to work with affected Aboriginal groups on an Access Management Plan to both control access to authorized persons, and to facilitate access to traditional use locations where feasible.

#### H.4.6.3.4 Cumulative Effects on Water, Aquatic Resources, Soil, Terrain and Vegetation

##### Hydrogeology

Groundwater effects associated with surface facilities, mining operation, mine spoil and pit dewatering have low to moderate impact ratings and are all local in extent within the LSA. No other planned or reasonably foreseeable projects within the RSA are expected to act in cumulative manner with these effects; subsequently, a cumulative effects assessment is not required, and was not completed.

##### Water Quality and Aquatic Resources

There are no other planned or reasonably foreseeable projects within the RSA that are expected to act in cumulative manner with identified Water Quality or Aquatic Resources effects; subsequently, a cumulative effects assessment is not required, and was not completed.

##### Soil and Terrain

There are no anticipated significant cumulative effects on any of the soil and terrain valued components: soil quality, soil biodiversity and ecological integrity, alteration of terrain, land capability effects.

##### Vegetation

Cumulative impacts were assessed for terrestrial vegetation, wetlands, and biodiversity and fragmentation. With mitigation, cumulative impacts to all three VCs were assessed as being insignificant.

#### H.4.6.3.5 Cumulative Effects on Human Health

As the Air Quality Assessment did not identify any planned projects in the area, a cumulative effects assessment was not required, and not completed, for the current assessment. At the local scale, the emissions from the Project are not predicted to cause significant adverse effects to human health at all human receptor locations accessible to the general public. Assessed health risks at the local scale included acute inhalation, chronic inhalation, and chronic multimedia exposure.

#### H.4.6.3.6 Cumulative Effects on Air Quality, Noise, and Socio-economic Conditions

##### Air Quality

No significant cumulative effects are anticipated for any chemicals of potential concern assessed in the Air Quality assessment. Overall, residual air quality effects related to the Project were considered to be not significant.

##### Noise

The noise modelling results indicate that the Project noise levels during the night-time and day-time, with the addition of the average ambient sound levels, will be below the permissible sound levels for all residential and theoretical 1,500 m receptors. Therefore, no cumulative effects on noise are expected.

##### Socio-Economic

The Project will create positive economic and fiscal effects on the socio-economic regional study area (RSA) and of affected Aboriginal Groups. The Project is estimated to create:

- 910 person years of on- and off-site employment related to the construction of the plant, facilities and infrastructure for the mine between 2017 and 2019; and
- 385 long-term operations positions to be hired by 2020.

Benga has provided detailed information on Project-related economic opportunities to all affected First Nations and is actively developing plans with them to maximize the successful uptake of the available opportunities.

The Project will contribute an estimated \$140 million (NPV 2015) and \$210 million (NPV 2015) to provincial and federal corporate income taxes respectively as well as approximately \$195 million (NPV 2015) in provincial royalties over the 23-year operating life of the project, assuming a \$140/tonne average real price of coal.

#### **H.4.7 Follow-up and Monitoring**

Monitoring programs will be implemented to verify the effectiveness of mitigation measures.

Elements of the follow-up and monitoring program include:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

#### H.4.8 Aboriginal Issues and Concerns

<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Hunting	Piikani Nation expressed concern that the Project is an infringement on Piikani Nation's hunting rights (Piikani Nation 2013).	An assessment of potential effects to hunting is provided in <a href="#">Section H.3.8</a> including a description of proposed mitigation measures.
Plant Gathering	Requested that Benga provide lodge pole pine cleared from the site to Piikani Nation community members (Piikani Nation 2015b).	Benga will provide lodge pole pine cleared from the site to Piikani Nation, Kainai Nation and Tsuut'ina Nation.
Aboriginal Physical and Cultural Heritage	A ceremony should be performed with Piikani Elders and youth in advance of ground disturbance (Piikani Nation 2015b).	Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project. This will include moving the effigy.
Aboriginal Physical and Cultural Heritage	A ceremony must be conducted prior to moving the effigy that was placed on the Project site in 2014 (Piikani Nation 2015b).	Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project.
Aboriginal Physical and Cultural Heritage	To help create cultural awareness among non-Native Benga employees and sub-contractors, Benga is urged to support a cultural orientation program on Piikani cultural practices and sacred sites (Piikani Nation 2015b).	Benga will support a cultural orientation program as described in the Project Agreement (IBA) being negotiated.
Aboriginal Physical and Cultural Heritage	The Project may introduce disturbance to areas that have not been previously-disturbed instead of keeping disturbance confined to the areas that had been disturbed by historic mining activities (Piikani Nation 2015b).	To the extent possible on Crown land, Benga will use areas that are already disturbed during construction and operations of the Project.
Aboriginal Physical and Cultural Heritage	Particularly where it impacts Crown Land, the Project will result in the loss of access to, and use of, traditional lands (Piikani Nation 2015b).	Benga proposes to develop and implement an Aboriginal Access Management Plan with groups that are affected by access restrictions from the Project.

<b>Table H.4.8-1 Piikani Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Consultation Process	Changes to the Project may be made on a schedule that prevents meaningful participation by Piikani Nation (Piikani Nation 2015b).	Benga is committed to meaningful and ongoing consultation with Piikani Nation. Benga will continue to share project information with Piikani Nation in a manner that provides sufficient time, and encourages input from Piikani Nation.
Consultation Process	Piikani Nation expressed an interest in additional TK/TU fieldwork (Piikani Nation 2015b).	Benga will agree to additional field work that could be funded through the provisions in the Project Agreement (IBA) currently under development.
Consultation Process	Piikani Nation urges that Benga commit to continuing transparent and meaningful communications with Piikani Nation over the long-term (Piikani Nation 2015b).	Benga has demonstrated and remains committed to transparent and meaningful communication with Piikani Nation over the long-term.
Decommissioning	Concerns that the Project’s reclamation program may not achieve objectives (Piikani Nation 2015b).	Benga will continue to work with Piikani Nation and share project information. Piikani Nation will have an opportunity to contribute to the development of the Reclamation Plan, and review and provide comments on Project activities taking place through the decommissioning phase.
Water	Piikani Nation expressed concern that the project is an infringement on Piikani Nation’s water rights (Piikani Nation 2013).	Benga is committed to ongoing consultation with Piikani Nation and will work with Piikani Nation through the EA process to better understand potential impacts of the Project on Piikani Nation.

## **H.5 ASSESSMENT OF POTENTIAL EFFECTS – SIKSIKA NATION**

### **H.5.1 Introduction**

Siksika Nation is a member nation of the Treaty 7 Management Corporation which acts as a tribal council for Treaty 7 First Nations including Piikani Nation, Blood Tribe (Kainai Nation), Tsuut’ina Nation, and Stoney Nakoda Nation. Several Treaty 7 First Nations share a common culture and language known as Blackfoot. The Siksika Nation traditional territory is located in southern Alberta and includes Crowsnest Pass and surrounding areas ([Figure H.5.1-1](#)). The proximity of the Siksika Nation reserve in relation to the Project is summarized in [Table H.5.1-1](#).

<b>Table H.5.1-1 Proximity of Siksika Nation Reserves to the Project</b>		
<b>Reserve</b>	<b>Distance to the Project LSA (km)</b>	<b>Distance to the Project RSA (km)</b>
Siksika 146	142.44	117.44

There are 7,130 registered Siksika Nation members (AANDC 2015a). The number of Siksika Nation members who live on their own reserve is 3,925 and a total of 3,004 live off-reserve (AANDC 2015a). Siksika Nation is part of the Blackfoot Confederacy along with Piikani Nation, Kainai Nation, and Blackfeet Nation (in Montana). While each of these Nations is an independent political entity, they cooperate in numerous ways and are a single ethnic group. Siksika Nation is in the process of developing a self-government framework (Siksika Nation 2015e). Siksika Nation is governed by an elected Chief and Council which operates through an appointment term of 3 years as summarized in [Table H.5.1-2](#).

<b>Table H.5.1-2 Siksika Nation Elected Leadership</b>			
<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Chief	Vincent Yellow Old Woman	11/28/2013	11/27/2016
Councillor	Jason Doore	11/28/2013	11/27/2016
Councillor	Warren Drunken Chief	11/28/2013	11/27/2016
Councillor	Casey Macguire	11/28/2013	11/27/2016
Councillor	Guy Medicine Shield	11/28/2013	11/27/2016
Councillor	Stewart Old Chief	11/28/2013	11/27/2016
Councillor	Kendall Panther Bone	11/28/2013	11/27/2016
Councillor	Karen Running Rabbit	11/28/2013	11/27/2016
Councillor	Gerald Sitting Eagle	11/28/2013	11/27/2016
Councillor	Wesley Water Chief	11/28/2013	11/27/2016
Councillor	Hector Winnipeg	11/28/2013	11/27/2016
Councillor	Marsha Wolf Collar	11/28/2013	11/27/2016
Councillor	Barry Yellowfly	11/28/2013	11/27/2016

The Blackfoot Nations including Siksika Nation, Piikani Nation, and Kainai Nation share a common language, culture, and history (Piikani Nation 2015b). While each of these Nations is an independent political entity, they cooperate in numerous ways and are a single ethnic group. Blackfoot is a language of the Algonquian linguistic family which is the most widespread indigenous language family in North America. The majority of Algonquian speakers are in eastern North America. Based on the National Household Survey (Statistics Canada 2011), 18.9 % of Siksika Nation members speak an Aboriginal language at home and 34.8% have knowledge of Aboriginal language (AANDC 2015b).

Prior to the 1800s, the governance structure was made up of 36 Clans that were grouped into three main tribes (Siksika Nation 2015): the North Blackfoot located along the North Saskatchewan River, the South Blackfoot along the Missouri River, and the Middle Blackfoot between the Rocky Mountains and Cypress Hills (Siksika Nation 2015f). In 1877, Aboriginal groups negotiated a treaty with the Government of Canada known as Treaty 7 (Government of Canada, 1877). The written treaty provided Aboriginal groups with reserve lands, health and education services, the right to hunt and trap in their territories, and recurring annuities to tribal members.

## **H.5.2 Aboriginal Consultation**

### **H.5.2.1 Consultation Summary**

Benga initiated engagement with Siksika Nation in June 2013 with a meeting at the Siksika Resource Development offices to introduce the company, key members of its team, and express Benga's interest in developing a project in the Crowsnest Pass. In this meeting, Siksika Nation provided a background on the area, their Aboriginal Interests, and expressed interest in economic opportunities related to the Project.

Early on, Benga shared updates on the Project as they became available, and by February 2014, Benga and Siksika Nation had agreed to move forward with planning for the negotiation of an IBA. In early April 2014, Siksika Nation sought to verify that consultation and the negotiation of an IBA could proceed regardless of whether Siksika Nation filed a Statement of Concern (SOC) with the AER on a coal exploration permit application, to which Benga responded affirmatively. On April 10, 2015, Siksika Nation filed a SOC, to which Benga responded on April 14, 2015. In the days following, Benga and Siksika Nation discussed the issues surrounding the SOC by email, teleconference and in an in-person meeting, and on April 28, 2014, Siksika Nation advised Benga that the SOC had been withdrawn.

Prior to the ultimate resolution of the SOC, Benga and Siksika Nation continued to discuss employment opportunities for the upcoming fieldwork and lay the groundwork for establishing a framework for consultation. This framework was drafted into a First Nations Consultation Plan

which Siksika Nation reviewed before it was finalized for submission to the Alberta government. Benga and Siksika Nation then developed a work plan and budget, based on the First Nations Consultation Plan, to outline the tasks and schedules associated with continued engagement, and to ensure that Siksika Nation's resource needs for continued participation were met as the Project progressed through EIA process. The consultation work plan and budget were revised, as necessary, to accommodate unanticipated changes to the Project or the regulatory process such as Project changes leading it to come under CEAA purview, and CEAA's referral of the Project to Review Panel.

In accordance with the First Nations Consultation Plan, Benga provided a copy of the PTOR to Siksika Nation in December 2014. Benga followed-up with emails and an in-person meeting to discuss the PTOR in detail and advised Siksika Nation when the AER finalized the TOR in March 2015. To ensure that Siksika Nation remained informed about the Project's status in the federal regulatory process, Benga provided updates by email, letters and in-person meetings with Siksika Nation. These updates included reference to funding opportunities for participation in the federal review process.

Having discussed a framework for negotiating an IBA since February 2014, Siksika Nation and Benga began IBA negotiations in June 2015. These negotiations are ongoing.

Consultation and engagement activities with Siksika Nation include:

- capacity funding for participation in consultation process;
- meetings to discuss Project updates;
- provision of key regulatory documents, such as:
  - proposed terms of reference;
  - First Nations Consultation Plan;
  - Draft EIS guidelines;
  - project description for the EA Process; and
  - information packages.

A chronology of key consultation activities with Siksika Nation can be found in [Table H.5.2-1](#).

**Table H.5.2-1 Chronology of Key Consultation Activities with Siksika Nation**

Date	Method of Communication	Topic of Communication
June 14, 2013	Meeting	Benga introduced itself and its interest in the Grassy Mountain area. Siksika Nation introduced its priorities.
October 7, 2013	Meeting	Benga provided an overview of the Project and notified Siksika Nation of its intent to pursue a permit for exploration activities.
November 21, 2013	Email	Benga provided an information package about Project phases, permit requirements, and site information including photographs.
December 11, 2013	Email	Benga provided information about the exploration plan, exploration permit application, description of activities and environmental mitigation measures.
February 24, 2014	Email	Benga and Siksika Nation reviewed technical and regulatory processes and discussed the intent for conducting a TUS.
February 27, 2014	Meeting	As part of the initial TUS discussions, Benga reviewed Project activities, permitting, timelines and Siksika Nation discussed their interests.
February 28, 2014	Email	Benga and Siksika agreed to move forward with planning for an IBA.
April 9, 2014	Email	Siksika inquired if consultation, including TUS and the IBA, would be affected if Siksika chooses to file a SOC in relation to the exploration permit application filed in December 2013. Benga indicated that that engagement would continue regardless of Siksika's filing of a SOC.
April 16-24, 2014	Teleconference / Email	Addressing the SOC filed by Siksika Nation on April 10, 2014, Benga noted that it must file a formal response to the AER on each issue raised by Siksika Nation. Benga expressed a wish to move forward planning the TUS and consultation work with Siksika Nation.
April 25, 2014	Meeting	Siksika Nation advised that it would withdraw the SOC. The parties discussed the EIA and Benga's reclamation responsibilities to address the existing, historic disturbance land at the project site. Benga discussed economic opportunities including on project construction as well as short-term opportunities during environmental studies.
April 28, 2014	Email	Benga received written notification from Siksika Nation that the SOC was withdrawn.
May 1-17, 2014	Email	Benga and Siksika Nation exchanged emails to establish the work plan, budget and logistics of the TUS.
May 22, 2014	Meeting	Benga and Siksika Nation met to discuss the consultation plan, TUS, upcoming site visit and recent changes to the exploration program. Benga noted potential employment opportunity for assistants during the upcoming fieldwork.
May 29, 2014	Email	Benga provided draft minutes from the May 22 meeting for review and comment.
May 22-June 14, 2014	Email	Benga's consultant and Siksika Nation exchanged emails regarding employment opportunities for community members in the Summer 2014 baseline study field

<b>Table H.5.2-1 Chronology of Key Consultation Activities with Siksika Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		programs, discussing hourly rates and candidate selection criteria.
June 6-20, 2014	Email	Benga and Siksika Nation exchanged emails to work out logistics and research protocol for the TU Site Tour. Benga provided supporting documents for Siksika Nation's review.
June 24, 2014	Site Tour	Preliminary Site Tour.
July 8, 2014	Email	Benga provided the Draft First Nations Consultation Plan to Siksika Nation for review.
July 15, 2014	Email	Benga's consultant provided all Site Tour photos, maps, and supporting materials to Siksika Nation.
July 20, 2014	Meeting	Benga and Siksika Nation reviewed the Draft First Nations Consultation Plan, the EIA process, Project timelines, as well as heritage resources and Traditional Use (TU).
July 20, 2014	Meeting	Benga's consultant provided a 'virtual site tour' using Google Earth and showing locations and photos of Each waypoint visited, providing hard copies of maps to Siksika Nation.
July 22, 2014	Email	Benga provided a template for a work plan and budget outline for EIA consultation and negotiation of a project agreement. Benga also described the development of a First Nations Consultation Plan.
July 28-August 7, 2014	Emails	Siksika Nation and Benga exchange emails to work out questions of access, logistics, and timing for field work. Benga provided site maps, photos and supporting materials.
August 19, 2014	Meeting	Discussed TUS work plan and schedule.
August 19 & 21, 2014	Email	Benga's consultant provided a draft of the TUS work plan and map to Siksika Nation for review. Parties discussed logistics for the field work.
September 9, 2014	Meeting	Benga's consultant provided an update on the TU program and parties discussed logistics, schedule and budget for field work, as well as data sharing protocols.
September 19, 2014	Meeting	Benga provided a 'virtual site tour' using Google Earth, project maps, and ground disturbance maps to assist with planning field work.
September 24, 2014	Email	Siksika Nation provided a budget for field work and report writing.
October 2, 2014	Email	Benga's consultant provided revised budget to Siksika Nation to cover additional time for planning and debrief meetings.
October 6-10, 2014	Field Work	Field work conducted.
October 10, 2014	Meeting	At Siksika Nation's request, Benga's Operation Manager met with Siksika to address a number of questions.

**Table H.5.2-1 Chronology of Key Consultation Activities with Siksika Nation**

Date	Method of Communication	Topic of Communication
October 15, 2014	Email	Benga's consultant provided the TUS data collected during the field work.
October 17, 2014	Meeting	Benga's consultant provided to Siksika Nation a PowerPoint presentation and all photos, GPS waypoints and tracks and a summary of field notes from the field work.
November 3, 2014	Email	Benga provided draft meeting notes from the September 19 and October 10 meetings for Siksika Nation's review.
November 25, 2014	Email	Benga provided an overview of key milestone dates for the EIA for Aboriginal consultation, TU and historical resources.
December 9, 2014	Email	Benga sent Siksika Nation the PTOR and confirmed that notice had been placed in newspapers.
December 9, 2014	Meeting	Benga's consultant provided photos to Siksika Nation and all digital files collected during field work. Parties discussed 2015 TUS program.
December 11, 2014	Email	Siksika Nation indicated the schedule for completing the TUS Report and expressed concerns that the budget was insufficient to cover administrative costs and the time allotted for field work was insufficient for meaningful TUS work.
December 18, 2014	Email	Benga provided the minutes from the December 9 meeting for Siksika Nation's review.
January 7 & 14, 2015	Email	Benga's consultant and Siksika Nation coordinated on completing and presenting the TUS Report.
January 14, 2015	Meeting	Benga and Siksika Nation met to discuss the Project update, the EIA process, the PTOR, and the process for negotiating an IBA.
January 19, 2015	Email	Benga provided draft minutes for the January 14 <sup>th</sup> meeting, samples of work contracts and a framework for preparing for an IBA.
January 21, 2015	Email	Siksika Nation advised that the TUS Report was nearly finished but that they considered it incomplete as it only covered a few acres.
February 19, 2015	Email	Siksika Nation sought information on providing comments on the PTOR to the AER. Benga indicated that it could pass the comments to the AER, if requested, or that Siksika could provide their comments directly to Alberta
February 24, 2015	Email	In response to a request from Siksika, Benga provided a comprehensive list of regulatory requirements for the project.
February 25, 2015	Meeting	Discussed EIA consultation work plan, schedule, and budget, as well as the TUS.
March 5, 2015	Email	Siksika Nation submitted an interim TUS Report.
March 6, 2015	Email	Benga provided copies of the new Alberta Aboriginal Consultation Procedures, and Operating Procedures between the ACO and the AER, for information.

<b>Table H.5.2-1 Chronology of Key Consultation Activities with Siksika Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
March 14, 2015	Meeting	Benga and Siksika Nation reviewed the project and discussed employment and contracting opportunities, noting how the information from the 2014 TUS would be used to help inform the EIA.
March 19, 2015	Email	Benga advised that AER had finalized the TOR for the provincial EIA.
March 31, 2015	Email	Benga outlined types of services and products required for construction and operations stages of the project, requesting information on potential Siksika Nation suppliers.
April 10, 2015	Teleconference	Siksika Nation inquired if Benga had comments on the TUS Report.
April 15, 2015	Meeting	Discussed the technical and regulatory status of the Project, the TUS, and the negotiation plan for the IBA.
April 22, 29 & May 4 2015	Teleconference / Emails	Siksika Nation and Benga discussed funding for request to conduct additional TU work.
May 4, 2015	Email	Benga provided TUS files and addressed the possibility of adding information contained in the fieldwork notes to supplement the interim report that Siksika Nation submitted.
May 13, 2015	Email	At Siksika Nation's request, Benga provided the most recent EIA update report provided to the ACO.
May 14, 2015	Meeting	Benga and Siksika Nation met to discuss Project and regulatory process updates. The ensuing discussion addressed questions of the vegetation in the project area, projected water use, inclusion of streams and creeks in the EIA, construction effect on ungulates, and business opportunities.
May 29, 2015	Email	Siksika Nation and Benga discussed the pricing and contracting process for the Project.
June 16, 2015	Email	Benga provided materials for upcoming Site Tour. A draft research protocol outlining the working relationship between Benga's TK/TU consultant and Siksika Nation was also provided for Siksika Nation's consideration.
June 20, 2015	Email	Siksika Nation submitted a Term Sheet describing the structure and content of a possible IBA.
June 23, 2015	Meeting	Benga and Siksika Nation discussed the proposed Term Sheet.
June 29, 2015	Email	Siksika Nation provided a proposal and budget for additional TU work.
July 8, 2015	Letter	Benga provided a Project Environmental impact assessment update.
July 9, 2015	Teleconference	Discussed the work plan, area of coverage, responsibilities, logistics, and budget for the 2015 TU field work.
July 9-14, 2015	Email	Siksika Nation and Benga's consultant exchange emails to finalize the scope of work and budget for the upcoming field work to Benga.

<b>Table H.5.2-1 Chronology of Key Consultation Activities with Siksika Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
July 11, 13, & 14, 2015	Email	Benga submitted geographic information and waypoint descriptions in preparation for upcoming fieldwork.
July 13, 2015	Email	Benga provided notice regarding contracting opportunities on construction and operations phases of the Project.
July 15, 2015	Meeting	Discussed priorities and logistics for TU field work.
July 17, 2015	Email	Benga's consultant provided the photos, videos, and spatial files from the field work. Siksika Nation confirmed that the report would be submitted as an addendum to the interim report that was already submitted.
July 29, 2015	Letter	Benga provided Project update and reference to funding opportunities for participation in the CEAA review process.
August 27, 2015	Email	Benga provided an information package to allow Siksika Nation an opportunity to provide feedback on Benga's understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 25, 2015	Email	Siksika Nation emailed a link to a Globe and Mail article which describes an investigation into a release of coal into Gold Creek which was possibly linked to mining activities. Siksika Nation's accompanying note indicates that Siksika Nation has expressed concerns about the streams mentioned in the article.
September 28, 2015	Email	Benga responded to Siksika Nation's email dated September 25, 2015 to provide background on the incident referenced in the article and attached an excerpt from Benga's Incident Monitoring Report which notes that the exposed coal that was released by heavy rain is from historic mining operations and that Benga installed mitigation measures. Benga further noted that the water studies will be provided to Siksika Nation upon their completion.
September 30, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Siksika Nation's format preference for receiving the report.
September 30, 2015	Email	Siksika Nation responded to Benga's inquiry about their preferred format to receive the EIA report and requested funds to cover the cost of reviewing the document with an expert.
September 30, 2015	Email	Responding to Siksika Nation's request for funds, Benga inquired if Siksika Nation had applied to CEAA for funding, indicating that Benga would be better able to determine what is required based on CEAA's response.

### H.5.2.2 Traditional Use and Traditional Knowledge Studies

Siksika Nation's TK/TU study of the Grassy Mountain area served as an instrument for Siksika Nation to record traditional knowledge and land uses, to identify potential effects of the proposed Project, and to give Siksika knowledge holders an opportunity to provide ideas for mitigation of potential

effects. This study is a vital component of the consultation process because TK/TU studies enhance the quality of an environmental assessment in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment. The information gathered in all stages of TK/TU research with Siksika Nation is the intellectual property of Siksika Nation and was not provided to Benga. The Siksika Nation TK/TU study is a summary of outcomes of the fieldwork and information related to the Project that is approved by Siksika Nation for use in the EA process. Siksika Nation's Interim Traditional Use Study (TUS) Assessment and Report is available in [Appendix 7b](#).

Initial planning for the TK/TU study began in February 2014 to develop work plans, schedules and budgets to fund Siksika Nation's participation in the study. The study was completed in two phases – the first of which was a preliminary site tour completed in June, 2014. The preliminary site tour involved visiting sites with Siksika Nation technicians and Elders to record data via video, photos, and GPS records. The objectives of the preliminary site tour were to collect initial TK/TU data and to identify next steps for the second phase of the study. The second phase of the TK/TU study built on findings from the first phase and involved ground-truthing field work which was completed over five days in October 2014. This field work focused on key areas in the Project's original footprint. Over the course of the all phases of the field work, Siksika Nation technicians and Elders identified and recorded 46 TK/TU sites.

### **H.5.2.3 Economic Opportunities**

Since the Project's initiation, Benga has, and will continue to work collaboratively with Siksika Nation to develop opportunities for Siksika Nation to derive direct and long-lasting benefits from the Project. Benga and Siksika Nation are now in the process of negotiating an Impacts and Benefits Agreement to further define these benefits.

Siksika Nation has demonstrated a strong interest in being involved in economic opportunities throughout the life of the Project and has participated in ongoing discussions with Benga and its consultants to offer insights as to Siksika Nation's areas of particular interest and expertise. As part of these discussions, Benga provided to Siksika Nation a comprehensive list detailing the contracting opportunities that will be made available during mine construction and operations, and continues to engage in subsequent discussions of these opportunities. In 2014, Benga also submitted postings to Siksika Nation for field technician employment opportunities in support of the EIA process. Benga has further provided detailed information on all direct and contracted employment positions that will be available during construction and operations.

In supporting the Traditional Use Study of the Project area, Benga provided funding for the services of independent Traditional Studies consultants, as well as funding for Siksika Nation to carry out the

study. The Traditional Use Study, which involved a preliminary site visit, two field programs, interviews, and workshops were documented for Siksika Nation's exclusive use. Siksika provided a public report documenting Siksika Traditional Use of the Grassy Mountain Area for use in the EIA.

In accordance with the consultation work plan and budget developed collaboratively with Siksika Nation, Benga offers funding in support of Siksika Nation's continued engagement on the Project's EIA process.

### H.5.3 Background

#### H.5.3.1 Traditional Use of Lands and Resources

Traditionally, Siksika Nation people relied primarily on buffalo which followed an annual migration where buffalo would locate on the prairies in summer and move to the foothills in winter. The Siksika Nation and Blackfoot culture and history developed around the life cycle of the buffalo (Blackfoot Crossing 2015). Siksika Nation people travelled to various hunting grounds using jumps and runs to trap and harvest buffalo (Dempsey 2005). Buffalo jumps were used primarily in the fall and winter seasons around the Rocky Mountains such as at Head-Smashed-In Buffalo Jump (Alberta Culture and Tourism 2015). The Head-Smashed-In Buffalo Jump Museum provides more detail about the wintering grounds of the buffalo in the foothills compared to their spring movement in the prairies:

*The Blackfoot bands were nomadic. ... The structure of their movements was dictated by the location of the bison herds, the weather and the season. ... Bison wintered in treed areas where snow is less deep. Brushing snow aside with winter's thick facial hair, grazing in shadow of forests, they did not move quickly in deep drifting snow and made easier targets for hunters. In spring the bison moved out onto the Plains where the new spring grasses provided forage (Alberta Culture and Tourism 2015).*

Siksika Nation, like other Blackfoot people, hunted other wildlife species for food and clothing, including elk, deer, antelope, and mountain sheep (Blackfoot Crossing 2015). Ducks, geese, swans, and prairie chickens were hunted for food when buffalo was not available although birds were generally not a primary source of subsistence (Dempsey 2001). Buffalo meat and wolf skins were used for trade at locations such as Rocky Mountain House, and hunting grounds were located in the mountains approximately 175 km northwest of Grassy Mountain (Parks Canada 2008). Preferred hunting tools included the bow and arrow; however, upon introduction of trade with Euro-Canadian settlers, hunting practices adapted to the use of horses and rifles (Dempsey 2001). During consultation, Siksika Nation did not provide information about past trapping or fishing practices. Secondary sources reported various levels of participation by Siksika Nation in trapping activities and also report that generally the Blackfoot people viewed fish as unclean sources of food (Kidd 1986).

Dempsey describes that because of Siksika Nation's geographic location, it is possible that Siksika Nation people were the first of the Blackfoot tribes to be involved in trapping with the recent arrival of Euro-Canadian settlers (Dempsey 2008). Other secondary sources note Siksika Nation's disinterest in trapping (Blackfoot Crossing 2015, Kidd 1986).

According to secondary sources, plants were highly important for survival and traditional purposes. A variety of plants were gathered traditionally during all seasons for subsistence, ceremonial and medicinal purposes such as chokecherry, Saskatoon berry, wild turnip, sweetgrass, sage, and bearberry (Blackfoot Crossing 2015). Dempsey adds to the list by reporting, "serviceberries and chokeberries were the most widely used, particularly for making pemmican. The dish consisted of a mixture of pulverized dried meat, pounded dried berries, and hot marrow fat. It would keep for many months, stored in rawhide sacks..." (Dempsey 2001).

Siksika Nation identify historic Blackfoot trails or traveling in the mountainous areas of Blackfoot territory (Siksika Nation, 2015). The report depicted archival photos of Blackfoot camps and travel in the area east of Crowsnest Mountain in the pass. Traditionally, Siksika Nation people traveled throughout the prairies and mountains in a seasonal round. According to secondary sources, the method of travel entailed the use of travois: "Like other Plains peoples, Siksika used the travois — a sled-like apparatus usually pulled by domesticated dogs — to transport their goods, including their highly mobile tipi dwellings" (Dempsey 2005). Dempsey notes the shift in relationships between Blackfoot and Kootenay to the west after the introduction of the horse in the early 1700s, including increased conflict (Dempsey 2001). Blackfoot people also traveled in spring and autumn to trade at Rocky Mountain House, including meat, robes made of buffalo, horses, and a limited supply of furs (Dempsey 2001).

### **H.5.3.2 Current Use of Lands and Resources for Traditional Purposes**

This section provides a description of Siksika Nation's current use of lands and resources for traditional purposes. In addition, this section fulfills the requirements of the TOR by providing background information on traditional use.

#### **H.5.3.2.1 Hunting**

Siksika Nation identify wildlife and plants located in the Project area that are important for traditional use of lands and waters (Siksika Nation, 2015). However, information such as species used, locations, harvesting methods and seasonal round was not provided. In addition, no information regarding hunting by Siksika Nation in the project area is identified in the literature.

#### H.5.3.2.2 Trapping

Siksika Nation did not identify an interest in trapping within the LSA or in the Project area. Siksika Nation did not provide information about current trapping practices nor is information available in the literature.

#### H.5.3.2.3 Fishing

The Siksika Interim TUS Assessment and Report (Siksika Nation 2015) did not provide information about current fishing practices among Siksika members nor is information available in the literature.

#### H.5.3.2.4 Plant Gathering

The Siksika Interim TUS Assessment and Report (Siksika Nation 2015) noted “[m]edicinal and ceremonial plants were found in several locations on the project site [Grassy Mountain], particularly in fertile micro-systems and other sunny slopes” that support current plant gathering among Siksika members” (Siksika Nation 2015). The report did not, however, provide a list of the types of plant species or their uses.

#### H.5.3.2.5 Trails and Travelways

The Siksika Interim TUS Assessment and Report (Siksika Nation 2015) did not provide information about current trails or traveling in and around the LSA. According to secondary sources, travel to Crowsnest Pass changed dramatically due to limitations imposed on Siksika Nation travel by government policies and laws after the signing of Treaty 7.

### **H.5.3.3 Aboriginal Health**

The Siksika Nation Health Centre provides services and programs to Siksika Nation members. Environmental public health services are provided by Siksika Nation and Treaty 7 Management Corporation including safe drinking water testing, which is a mandatory program (HCOM 2015).

Siksika Nation members continue to harvest plants for subsistence, medicinal, and ceremonial purposes in the Project area. However, Siksika Nation did not identify specific plant species used for harvesting in the Project area.

### **H.5.3.4 Aboriginal Socio-Economic Conditions**

Based on the National Household Survey (Statistics Canada 2011), the participation rate for Siksika Nation members is 47.9%, the employment rate is 39.1%, and the unemployment rate is 17.9%. There are several Siksika Nation businesses identified by the Treaty 7 Business Directory (2013) including building and construction services, recreation, and hospitality.

### H.5.3.5 Aboriginal Physical and Cultural Heritage

The Siksika Interim TUS Assessment and Report (Siksika Nation, 2015) provides archival photos of camps east of Crowsnest Mountain in the pass. The Siksika Consultation Team further notes that:

*The previous owners [of Grassy Mountain Project] paid little attention to remediation of the property desecrating a sacred site of the Blackfoot people proximate to Crowsnest Mountain, with little regard to our rights, interests and heritage sites protected by the Constitution of Canada” (Siksika Nation, 2015:1).*

According to secondary sources, many of the Siksika Nation sacred sites were located in the Oldman River Valley which flows from the Rocky Mountains north of the Grassy Mountain Project, as shown in [Figure H 5.1-1](#) (Parks Canada 2008). Dempsey notes the location of Siksika Nation habitation sites north of the Grassy Mountain area around the Battle, North Saskatchewan, and Red Deer rivers as shown in [Figure H 5.1-1](#) (Dempsey 2005). Grinnell reports Blackfoot people originally occupied forested areas of the foothills prior to 1800 and in the autumn would move to forested areas and remain through the winter season (Grinnell 1892).

After contact with Euro-Canadian settlers and the signing of Treaty 7, “most [Blackfoot] selected reserves near favourite wintering places (Dempsey 2001). Exhibits at the Head-Smashed-in Buffalo Jump Museum describe Blackfoot winter camps in the woods of the foothills much like the area in and around Grassy Mountain: “For almost half the year, the Blackfoot bands lived in winter camps. Bands located along a wooded river valley, perhaps a day’s march apart; in areas with adequate wood and game resources, some bands might camp together all winter. From about November to March, the people would not move camp unless food supplies, firewood or pasture for the horses became depleted” (Alberta Culture and Tourism 2015). Blackfoot people used tipis as shelters, consisting of buffalo skins and lodge pole pine (Dempsey 2001). Lodge pole pine was used primarily in the construction of the tipis. This type of shelter supported the semi-nomadic ways of the Blackfoot people, which was easily transported by travois to the next camp.

The Siksika Interim TUS Assessment and Report (Siksika Nation 2015) did not provide information about current sacred sites, gathering sites, and habitation areas in and around Grassy Mountain.

## H.5.4 Potential Effects and Mitigation Measures

### H.5.4.1 Current Use of Lands and Resources for Traditional Purposes

The assessment of potential effects of the Project on current use of lands and resources for traditional purposes focuses on the availability of lands and resources identified by Siksika Nation. Based on the background information described, there may be potential effects to current use for hunting and plant gathering.

#### H.5.4.1.1 Hunting

Siksika Nation members continue to hunt throughout their traditional territory. No specific hunting sites were identified by Siksika Nation in the Project LSA. Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife, and land and resource use.

[Section E.9](#) – Wildlife addresses potential effects on key species and habitat for wildlife species. The majority of Project-related wildlife habitat loss or fragmentation will result from land clearing, surface mining, and construction of infrastructure and roads.

Potential direct and indirect effects from the Project that were assessed include:

#### Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- habitat fragmentation and loss of connectivity.

#### Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions (assessed in MEMS 2015b); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

[Section E.10](#) – Land and Resource Use addresses potential effects to land use activities related to hunting including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga. However, access for land use activities by Siksika Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure. Benga also will continue to consult with Siksika Nation, including discussion of options to facilitate access for land use activities where they may be affected by the Project.

Wildlife assessment methods contained in [Section E.9.3](#) included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The potential effects described in these sections could result in a change in identified hunted species and habitat, change in use or access to identified hunting locations, and change in preferred harvesting method. Input provided by Siksika Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Siksika Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.5.4-1](#).

<b>Table H.5.4-1 Feedback Provided by Siksika Nation</b>		
<b>Potential Effects Identified by Siksika Nation</b>	<b>Recommended Mitigation Measures by Siksika Nation</b>	<b>Benga Mining Response</b>
The Project will impact the movement and well-being of animals by displacing them for many years and blocking their migratory routes (Siksika Nation 2015).	Siksika Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Siksika Nation will be considered through the EA process.	The assessment of potential effects to wildlife includes potential impacts to migration and movement with a discussion of proposed mitigation measures in <a href="#">Section E.9.5</a> .
The waterbodies adjacent to the Project site seem likely to be impacted by run-off from the mine, causing wildlife deaths. (Siksika Nation 2015).		All toxic materials, including those used for blasting will be stored in secure areas that are inaccessible to wildlife (e.g., buildings, storage areas surrounded by wildlife-proof fencing). In addition, proper handling and storage of industrial materials and debris within the Project footprint will be maintained to minimize potential risks to wildlife.

Mitigation measures identified by the Wildlife and Land and Resource Use disciplines apply to the effects described in this section. The pertinent mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor;
- access management within the Project footprint to reduce effects to wildlife; and
- wildlife and wildlife habitat reclamation.

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;
- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.5.4.1.2 Plant Gathering

There are plant gathering areas that overlap the Project LSA. The Project will intersect or be in proximity to habitat and species that are identified for plant gathering by Siksika Nation. Siksika Nation did not identify specific species for harvesting. Several VC sections are relevant to the assessment on plant gathering such as the assessment sections for Vegetation and land and resource use.

[Section E.8.3](#) – Vegetation addresses potential effects on key species and habitat including the species identified by Siksika Nation. A summary of species identified by Siksika Nation for the Project with the occurrence of species within the LSA is available in [CR #8 -Vegetation](#). Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project’s mine pit and associated waste rock disposal areas and infrastructure. In addition, air emissions released into the atmosphere during Project construction and operations may result in direct and indirect effects on vegetation arising from acid deposition.

The potential effects described in these sections could result in a change in identified plant species and habitat, change in use or access to identified plant gathering locations, and change in preferred harvesting method. The input provided by Siksika Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.5.4-2](#).

<b>Potential Effects Identified by Siksika Nation</b>	<b>Recommended Mitigation Measures by Siksika Nation</b>	<b>Benga Mining Response</b>
Construction and operation of the Project may directly or indirectly disturb medicinal and ceremonial plants. Mitigation strategies must be devised jointly with Siksika Elders and Consultation Office to protect, and avoid disturbance these	Siksika Nation recommends harvesting pre-construction, replanting, and green housing activities as ways to mitigate potential effects (Siksika Nation 2015).	Benga is committed to ongoing consultation with Siksika Nation. Plants identified for use by Aboriginal groups are included in the assessment to plant gathering and vegetation. Mitigation measures recommended to date by Siksika Nation have been considered and incorporated where

<b>Potential Effects Identified by Siksika Nation</b>	<b>Recommended Mitigation Measures by Siksika Nation</b>	<b>Benga Mining Response</b>
plants (Siksika Nation 2015).		possible throughout the assessment. Benga will work with Siksika Nation to discuss access for plant harvesting activities through the Aboriginal Access Management Plan. As stated in the <a href="#">Section E.8.5</a> for vegetation, seedlings will be planted in areas where reclamation and revegetation have been completed. Benga will continue to consider recommendations provided by Siksika Nation.
	Timely harvest of medicinal and ceremonial plants prior to impact by the Project (Siksika Nation 2014b).	Benga will continue to work with Siksika Nation to identify species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan. Currently, Siksika Nation has not identified locations or species that may be impacted.

Mitigation measures identified throughout the application for Vegetation and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation;
- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation;
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species;
- the provision of opportunities to identify and collect suitable lodge pole pine for TU ceremonies, and
- where practicable, utilize locally collected seed to preserve the legacy of species and of place; and

- access control policy to facilitate access to the Project site by authorized users.

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations;
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.5.4.2 Aboriginal Health

The Project is located within the Siksika Nation traditional territory in proximity to areas currently used by Siksika Nation member to hunt and gathering plants.

The Human Health Risk Assessment ([Section E.12](#)) includes an Aboriginal receptor type in the assessment and documents health concerns identified by Aboriginal groups regarding impacts of existing development and of the Project specifically on their traditional lifestyle. The Aboriginal receptor types consider the potential for local residential communities, Aboriginal residential areas, Aboriginal land use areas (such as hunting and plant gathering) and recreational areas.

The Human Health Risk Assessment assessed potential effects to health including acute inhalation risks, chronic inhalation risks, chronic multimedia exposure risks, and a wildlife risk assessment. In order for Aboriginal health receptors to be exposed to emissions from the Project, they must come into contact with chemicals of potential concern (COPCs). The potential exposure pathways related to Aboriginal groups are summarized in [CR #12 Table 5.1.4-1](#) and include direct contact with COPCs through air inhalation, soil, ingestion of local vegetation, ingestion of wildlife, and contact with surface water or fish ingestion. The results of the human health risk assessment indicate risk quotients within the Mine Permit Boundary which will be inaccessible during construction and operation. Therefore, it is predicted that there will be no effects of the Project on Aboriginal health.

Mitigation measures identified in [Section E.12.5 – Human Health](#) apply to the effects described in this section. The results of the HHRA suggest that short-term predicted risks to human health will be limited to the LSA and within the project footprint. None of the remaining human receptor locations are predicted to have unacceptable levels of risk. Assuming public access within the Mine Permit

Boundary is restricted and the mitigation measures assumed by the other disciplines are implemented ([Section A.10](#)); there is no need for further mitigation of emissions based on the results of the HHRA.

#### H.5.4.3 Aboriginal Socio-Economic Conditions

The Project will involve the construction of facilities within a mine permit boundary that is 45.16 km<sup>2</sup> of lands within the traditional territory of Siksika Nation. There are several Siksika Nation businesses identified by the Treaty 7 Business Directory (2013) including building and construction services, recreation, and hospitality although these are located outside of the Project LSA. No direct impacts of the Project are anticipated to Siksika Nation's socio-economic conditions. Further information regarding benefits of the Project is described in [Section E.11](#), Socio-Economics.

The Project and associated project activities are not expected to have an adverse effects on Siksika Nation commercial activity, forestry and logging operations, and recreation use. Input regarding potential effects to socio-economic conditions and mitigation measures has not been provided by Siksika Nation during consultation. Benga Mining will continue to work with Siksika Nation and will consider mitigation measures proposed by Siksika Nation if identified through the EA process.

#### H.5.4.4 Aboriginal Physical and Cultural Heritage

The Project will intersect or be in proximity to physical and cultural heritage sites. The Siksika Nation TK study did not identify physical or cultural heritage values in the Project area. However, through consultation Siksika Nation identified that the Project would adversely affect sacred ceremonial sites, archaeological sites, and cultural heritage areas ([Table H.5.4-3](#)). Siksika Nation also identified that the Project would affect access and use of cultural areas at Southern Gate and Crowsnest Mountain ([Table H.5.4-3](#)). Several VC sections are relevant to the assessment on sacred, gathering and habitation sites such as the assessment sections for land and resource use, and historical resources.

Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure, or object. There are 32 recorded archaeological or historic era resources located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, there are 10 that are overlapping the Project footprint. Siksika Nation identified four sacred sites and three habitation sites in their TK study that are fully or partially within the Project LSA however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in use or access or disturbance to features associated with sacred, gathering, or habitation sites. The importance or value

to sites identified by Siksika Nation may change as a result of the Project. Input provided by Siksika Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The recommendations made by Siksika Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.5.4-3](#).

<b>Table H.5.4-3 Feedback Provided by Siksika Nation</b>		
<b>Potential Effects Identified by Siksika Nation</b>	<b>Recommended Mitigation Measures by Siksika Nation</b>	<b>Benga Mining Response</b>
Non-Native Benga employees and sub-contractors may not understand the sacred nature of the Project area (Siksika Nation 2015).	Benga is urged to develop and implement a cultural training program in collaboration with Siksika Nation (Siksika Nation 2015).	Benga will support a cultural orientation program as described in the Project Agreement being negotiated.
Potential effects to the continued traditional use of the Southern Gate and Crowsnest Mountain by Siksika hunters, herbalists, ceremonialists, and Elders (Siksika Nation, 2015).	To support the continued traditional use of the Southern Gate and Crowsnest Mountain by Siksika hunters, herbalists, ceremonialists, and Elders, Benga is encouraged to provide support for Siksika ceremonies and community events (Siksika Nation 2015).	The Southern Gate and Crowsnest Mountain are outside the Project area and not affected by the Project-related activities. Benga will develop and implement an Aboriginal Access Management Plan for the Project area in collaboration with Siksika Nation. Benga will continue to work with Siksika Nation to mitigate potential effects of the Project on their traditional use of the Project area.

Mitigation measures identified throughout the application for Land and Resource Use and Historical Resources apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users ;
- if avoidance of any unnamed pre-contact period sites is not possible based on size, location, and complexity, a mitigation excavation will be conducted in advance of Project development;
- if avoidance of any structures is not possible, mitigation will include a 20 m<sup>2</sup> excavation plot with full documentation of the remaining building structures including mapping and related detailed recordings ; and
- a mitigation plan will be developed and implemented for mitigation excavation including sites located by the south disposal area land alteration activities.

Additional measures are recommended to avoid or minimize potential effects to Aboriginal physical and cultural heritage. These are outlined below:

- consultation will continue to further identify sites of cultural and sacred importance that warrant site-specific or situational mitigation (sites within 100 m of Project activity including additional sites identified by Siksika Nation will be flagged prior to construction);
- consultation will include sharing information about construction timing;
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction; and
- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate land use locations.

## H.5.5 Characterization of Residual Effects

### H.5.5.1 Current Use of Lands and Resources for Traditional Purposes

The assessment of residual effects of the Project on current use of lands and resources for traditional purposes focuses on the potential effects remaining after mitigation measures are implemented. Based on the potential effects and mitigation measures described in [Section H.4.1.1](#), there may be residual effects to current use for hunting and plant gathering.

#### H.5.5.1.1 Hunting

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9](#) Wildlife and [Section E.10](#) Land and Resource Use and input provided by Siksika Nation. [Section E.9.3](#) Wildlife characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and long-term in duration. The Project will affect the 10 wildlife VCs including moose, elk, bear and special status wildlife species such as mountain goat and eagles through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#). Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be insignificant for all assessed VCs. ([CR #9, Table 5.3-26](#)).

[Section E.10.3](#) – Land and Resource Use characterizes residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in

Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species hunted by Siksika Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to hunting are characterized as:

- low magnitude;
- local geographic extent;
- short-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.5.5.1.2 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section E.8.3](#) Vegetation, [Section E.10.3](#) Land and Resource Use, and input provided by Siksika Nation. Removal of ecosite phases and ELCs that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

[Section E.8.3](#) – Vegetation characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to TEK species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

Land and Resource Use characterizes residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and

the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species used for plant gathering by Siksika Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to plant gathering are characterized as:

- moderate magnitude;
- local geographic extent;
- long-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### **H.5.5.2 Aboriginal Health**

The characterization of residual effects to Aboriginal health includes consideration of residual effects described in [Section E.12](#) Human Health and input provided by Siksika Nation. The Project is not expected to have measurable effects on Aboriginal health. As there are no predicted effects to Aboriginal receptors and no mitigation measures have been proposed, it is not anticipated that there will be residual effects of the Project on Aboriginal health.

#### **H.5.5.3 Aboriginal Physical and Cultural Heritage**

The characterization of residual effects to Aboriginal physical and cultural heritage includes consideration of residual effects described in [Section E.10](#) Land and Resource Use and input provided by Siksika Nation.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated. The Project could result in measurable effects on sacred, gathering, and habitation sites used by Siksika Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed. As a result, residual effects to sacred, gathering, and habitation sites are characterized as:

- moderate magnitude;
- local geographic extent;
- long term duration;
- regular frequency;
- not reversible; and
- sensitive in ecological and social context.

#### H.5.5.4 Summary of Residual Effects Characterizations

Valued Components	Residual Effects Characterization					
	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Ecological and Social Context
Hunting	Low	Local	Short-term	Continuous	Reversible	Resilient
Plant Gathering	Moderate	Local	Long-term	Continuous	Reversible	Resilient
Aboriginal Physical and Cultural Heritage	Moderate	Local	Long-term	Regular	Not Reversible	Sensitive

**Magnitude** Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA.

**Moderate** – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability to exercise the Aboriginal Interest in the RSA.

**Duration** Short term – limited to the construction phase; Long term – beyond the project lifespan

**Ecological and Social Extent** Sensitive – the Aboriginal Interest is sensitive or has low resiliency to disruption; Resilient – the Aboriginal Interest is not sensitive or has high resiliency to disruption.

### H.5.6 Cumulative Effects

#### H.5.6.1 Potential Contribution to Cumulative Effects

The cumulative effects assessment considers cumulative environmental effects that are likely to result from the Project in combination with the environmental effects of other physical activities and have been or will be carried out. This subsection provides a description of the contribution of the Project to cumulative effects that may have effects on the Aboriginal or Treaty Rights of Siksika Nation.

The scientific rationale for the selection of spatial boundaries for each of the disciplines, and the discipline specific LSA and RSA spatial and temporal scales for each of the disciplines are provided in detail in [Section D](#). These boundaries have been defined as lasting approximately 24 years, concomitant with the life of the Project. Segments of the temporal boundaries include the duration of the construction, operation and abandonment phases of the Project.

The Local Study Area (LSA) is established based on the zone of the Project influence, beyond which the potential environmental, cultural, and socio-economic effects of the Project are expected to be non-detectable. The Regional Study Area (RSA) is established based on the extent to which it would be expected that the interaction of residual effects of the Project with the residual effects of other projects would be detectable. It is also the area in which socio economic effects are expected to be detectable. VC-specific boundaries are established for both the LSA, for Project-specific effects, and the RSA, for cumulative effects. Effects on those VCs that have impacts more directly tied to the footprint of the Project are also assessed at the spatial scale of the Project footprint.

#### **H.5.6.2 Other Projects and Activities**

Existing, approved, and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) and are shown relative to Siksika Nation Traditional Territory on [Figure H 5.6-1](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within the largest RSA (i.e., wildlife grizzly bear RSA). As can be seen on [Figure D.2.4-3](#), not all Projects are contained within the study areas of each of the respective disciplines.

Most of the resource development currently occurring within the GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to 2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the GBRSA will be associated with forestry activities at Year 14 and Year 27.

#### **H.5.6.3 Potential for Cumulative Effects and Impacts to Aboriginal or Treaty Rights and Interests**

##### **H.5.6.3.1 Cumulative Effects on Current Use of Land and Resources for Traditional Purposes**

As described in this section, the contribution of the Project's residual effects are unlikely to cause a change in cumulative effects that could affect the viability or sustainability of traditional use by Aboriginal people of lands and resources within the RSA. Details on mitigation measures can be found in the references for each valued component listed below.

#### H.5.6.3.2 Cumulative Effects on Wildlife and Plant Harvesting

As described in [Section E.9.4 Wildlife](#), the incremental effects of the Project to cumulative effects on wildlife habitat availability, fragmentation/connectivity, mortality risk, and abundance will be small and no significant cumulative effects to wildlife population persistence are predicted. Therefore, no cumulative effects from the Project are predicted to impact Aboriginal or Treaty rights or interests related to wildlife populations. [CR #9, Table 6.4-1](#) contains a summary of residual cumulative effects ratings.

As described in detail in [Section E.8.4 Vegetation](#), while the Project will result in some loss of traditional use vegetation within the LSA these losses represent very small proportions of the total amount of these vegetation communities within the RSA. Neither the project-specific residual effects, nor the Project's residual effects acting cumulatively with other projects would threaten the regional sustainability of traditional use plants or other vegetation resources, wetlands, biodiversity, or fragmentation identified in this assessment.

#### H.5.6.3.3 Cumulative Effects on Traditional Use Locations, Access Routes

Approximately one half of the Project footprint is located on privately held land. Combined with other private land ownership in the LSA and challenging terrain, it is probable that the Project's contribution to cumulative residual effects on traditional use locations and access routes will not be significant. However, Benga has offered to work with affected Aboriginal groups on an Access Management Plan to both control access to authorized persons, and to facilitate access to traditional use locations where feasible.

#### H.5.6.3.4 Cumulative Effects on Water, Aquatic Resources, Soil, Terrain and Vegetation

##### Hydrogeology

Groundwater effects associated with surface facilities, mining operation, mine spoil and pit dewatering have low to moderate impact ratings and are all local in extent within the LSA. No other planned or reasonably foreseeable projects within the RSA are expected to act in a cumulative manner with these effects, so a cumulative effects assessment is not required, and was not completed.

##### Water Quality and Aquatic Resources

There are no other planned or reasonably foreseeable projects within the RSA that are expected to act in a cumulative manner with identified Water Quality or Aquatic Resources effects, so a cumulative effects assessment is not required, and was not completed.

##### Soil and Terrain

There are no anticipated significant cumulative effects on any of the soil and terrain valued components: soil quality, soil biodiversity and ecological integrity, alteration of terrain, land capability effects.

#### Vegetation

Cumulative impacts were assessed for terrestrial vegetation, wetlands, and biodiversity and fragmentation. With mitigation, cumulative impacts to all three VCs were assessed as being insignificant.

##### H.5.6.3.5 Cumulative Effects on Human Health

As the Air Quality Assessment did not identify any planned projects in the area, a cumulative effects assessment was not required, and not completed, for the current assessment. At the local scale, the emissions from the Project are not predicted to cause significant adverse effects to human health at all human receptor locations accessible to the general public. Assessed health risks at the local scale included acute inhalation, chronic inhalation, and chronic multimedia exposure.

##### H.5.6.3.6 Cumulative Effects on Air Quality, Noise, and Socio-economic Conditions

#### Air Quality

No significant cumulative effects are anticipated for any chemicals of potential concern assessed in the Air Quality assessment. Overall, residual air quality effects related to the Project were considered to be not significant.

#### Noise

The noise modelling results indicate that the Project noise levels during the night-time and day-time, with the addition of the average ambient sound levels, will be below the permissible sound levels for all residential and theoretical 1,500 m receptors. Therefore, no cumulative effects on noise are expected.

#### Socio-Economic

The Project will create positive economic and fiscal effects on the socio-economic regional study area (RSA) and of affected Aboriginal Groups. The Project is estimated to create:

- 910 person years of on- and off-site employment related to the construction of the plant, facilities and infrastructure for the mine between 2017 and 2019; and
- 385 long-term operations positions to be hired by 2020.

Benga has provided detailed information on Project-related economic opportunities to all affected First Nations and is actively developing plans with them to maximize the successful uptake of the available opportunities.

The Project will contribute an estimated \$140 million (NPV 2015) and \$210 million (NPV 2015) to provincial and federal corporate income taxes respectively as well as approximately \$195 million (NPV 2015) in provincial royalties over the 23-year operating life of the project, assuming a \$140/tonne average real price of coal.

### H.5.7 Follow-up and Monitoring

Monitoring programs will be implemented to verify the effectiveness of mitigation measures.

Elements of the follow-up and monitoring program includes:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

### H.5.8 Aboriginal Issues and Concerns

<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Mitigation Measures	Mitigation strategies must be devised jointly with Siksika Elders and Consultation Office to protect, and avoid disturbance to wildlife (Siksika Nation 2015).	Benga is committed to ongoing consultation with Siksika Nation. Mitigation measures recommended to date by Siksika Nation have been considered and incorporated where possible throughout the assessment. Benga will continue to consider recommendations provided by Siksika Nation.

<b>Table H.3.3-8 Siksika Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Field Studies	Siksika Consultation Office needs to revisit the site in the Spring and Summer growing seasons to obtain the full list of medicinal and ceremonial plants found at the project site that will require protection. The project site needs to be assessed in detail by the SCO team using a grid system, to ensure no key plants or animal habitat is overlooked (Siksika Nation 2015).	Benga provided additional funding for Siksika to revisit the Project site, which occurred in the summer of 2015.
Decommissioning	Remediation of the Project site is insufficient to restore traditional use rights and interests to the Project area. To remedy this, at the end of Project's life, the site must be returned to Alberta Crown land (Siksika Nation 2015).	The proposed mitigation measures for the Project are developed with input from Siksika Nation. The results of the assessment show that potential residual effects of the Project to Siksika Nation traditional use are low. Benga will continue to consult with Siksika Nation through the life of the Project and there will be opportunity to discuss steps for decommissioning and reclamation.
Decommissioning	To ensure that the Reclamation Plan satisfies Siksika Nation's needs and expectations, A TU mitigation and remediation strategy and plan funded by Riversdale should be prepared with the meaningful participation of SCO and Siksika Elders and Societies' representatives:  -The plan needs to be informed by further TU work to cover the seasonality and detail of our traditional use there;  -Siksika Nation must also have meaningful participation in the implementation of the TU mitigation and remediation strategy and plan  - The plan should be integrated with, and implemented as part of, the Grassy Mountain mine plan  -Siksika Nation must have meaningful participation in implementation (Siksika	Benga will continue to work with Siksika Nation and share project information. Siksika Nation will have an opportunity to review and provide comments on Project activities taking place through the decommissioning phase including reclamation.

<b>Table H.3.3-8 Siksika Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
	Nation 2015).	
Consultation Process	Siksika Nation is at a disadvantage in reviewing the Project’s EA because of a lack of expertise related to coal mining (Siksika Nation 2014c).	There will be an opportunity for Siksika Nation to review the EIA with support is provided by CEAA and, if required, Benga to fund participation and to seek guidance of a qualified professional. Benga would be happy to review any information on the Project with Siksika Nation if requested.
Consultation Process	Concerned that participating in the consultation process may be seen to contradict the Siksika position of not wanting any ceremonial lands destroyed (Siksika Nation 2014c).	Benga appreciates the participation to date by Siksika Nation. Information shared is important in the process of identifying potential effects to Siksika Nation ceremonial lands. Benga looks forward to receiving any additional feedback from Siksika Nation on how the Project may impact ceremonial lands and will work with Siksika Nation to identify appropriate ways to mitigate potential effects. In addition, a Reclamation Plan will be included in the application and Aboriginal groups will have an opportunity to review and provide comments.
Water	Siksika Nation expressed concerns regarding Gold Creek and Crowsnest River in relation to an article reporting an incident of coal wash and possible environmental infractions at the Project location (Siksika Nation 2015).	The incident involved exposed coal that was released – or ‘washed’ - by heavy rain. The exposed coal is from historic mining operations. Benga implemented mitigation measures and further noted that the water assessment will be provided to Siksika Nation upon completion. Riversdale’s mine development plans include permanent reclamation of the mine site which it anticipates will result in a positive impact to water resources relative to their current state.

## **H.6 ASSESSMENT OF POTENTIAL EFFECTS – STONEY NAKODA NATION**

### **H.6.1 Introduction**

Stoney Nakoda Nation is a member nation of the Treaty 7 Management Corporation, which acts as a tribal council for Treaty 7 First Nations including Siksika Nation, Blood Tribe (Kainai Nation),

Tsuut’ina Nation, and Piikani Nation. The Stoney Nakoda Nation traditional territory is located in southern Alberta and includes Crowsnest Pass and surrounding areas (Figure H.6.1-1). The Stoney Nakoda Nation population is located in three communities – Eden Valley, Big Horn reserve and Morley (RMN 2015). The proximity of Stoney Nakoda Nation reserves in relation to the Project is summarized in Table H.6.1-1.

<b>Reserve/s</b>	<b>Distance to the Project LSA (km)</b>	<b>Distance to the Project RSA (km)</b>
Big Horn 144A	317.23	292.23
Eden Valley 216	74.45	49.45
Stoney 142, 143, 144	147.90	122.91
Stoney 142B	172.91	147.91

Stoney Nakoda Nation includes three bands that share the same reserves and traditional territory. These are Bearspaw Band, Chiniki Band, and Wesley Band. The total registered population for Bearspaw is 1,900 members. The number of Bearspaw members who live on one of the Stoney Nakoda Nation reserves is 1,702. The number of Bearspaw members who live off-reserve is 143 members. The total registered population for Chiniki is 1,741 members. The number of Chiniki members who live on one of the Stoney Nakoda Nation reserves is 1,535. The number of Chiniki members who live off-reserve is 153. The total registered population for Wesley is 1,795 members. The number of Wesley members who live on one of the Stoney Nakoda Nation reserves is 1,548. The number of Wesley members who live off-reserve is 180 members. Stoney Nakoda Nation Bands are governed by elected Chiefs and Councils that serve an appointment term of four years as summarized in Table H.6.1-2.

<b>Stoney Nakoda Nation Member Band</b>	<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Chiniki <sup>1</sup>	Chief	Aaron Young	12/09/2014	12/08/2018
	Councillor	Frank Kaquitts	12/09/2014	12/08/2018
	Councillor	Ian Mark	12/09/2014	12/08/2018
	Councillor	Clifford Powerface	12/09/2014	12/08/2018
	Councillor	Lional Wildman	12/09/2014	12/08/2018
Bears paw <sup>2</sup>	Chief	Darcy Dixon	unknown	unknown
	Councillor	Rod Hunter	unknown	unknown
	Councillor	Narvil Kootenay	unknown	unknown
	Councillor	Rex Daniels	unknown	unknown
	Councillor	Larry Daniels	unknown	unknown
Wesley <sup>3</sup>	Chief	Ernest Wesley	unknown	unknown
	Councillor	Hank Snow	unknown	unknown
	Councillor	Watson Kaquitts	unknown	unknown
	Councillor	Marlin Poucette	unknown	unknown
	Councillor	Shane Crawler	unknown	unknown

<sup>1</sup> AANDC. 2015. Chiniki Governance. Website available at: [http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNGovernance.aspx?BAND\\_NUMBER=433&lang=eng](http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNGovernance.aspx?BAND_NUMBER=433&lang=eng)

<sup>2</sup> Rocky Mountain Nakoda. 2015. Background. Website available at: <http://www.rockymountainnakoda.com/governance>

<sup>3</sup> Wesley First Nation. 2015. Chief and Council. Website available at: <http://www.wesley-nation.ca/message-from-chief/chief-and-council/>  
and Rocky Mountain Nakoda. 2015. Background. Website available at: <http://www.rockymountainnakoda.com/governance>

Stoney Nakoda Nation members are descendants of Sioux Nations who speak Dakota Siouan language, also known as Nakoda, Stoney, or Nakoda Sioux (RMN 2015). Limited information is available regarding the number of Stoney Nakoda Nation people who speak their language. However, it is reported that at the Eden reserve there are 355 Stoney speakers; and at Stoney 142, 143, and 144, there are 2,355 Stoney speakers (Statistics Canada 2014a and 2014b). The language remains an important part of cultural and traditional learning at culture camps (Wesley 2015). Historically, Stoney Nakoda Nation people maintained a semi-nomadic lifestyle, traveling throughout the traditional territory to harvest various resources (RMN 2015). The arrival of European settlers in the region of southern Alberta began in the late 19<sup>th</sup> century and started the commodity exchange between European fur-traders and Aboriginal groups, significantly shifting First Nation traditional use and cultural customs. In 1877, Aboriginal groups negotiated a treaty with the Government of Canada known as Treaty 7 (Government of Canada 1877). The written treaty provided Aboriginal groups with reserve lands, health and education services, the right to hunt and trap in their territories, and recurring annuities to tribal members. With increasing settler presence and the resulting loss of buffalo on the plains, Stoney Nakoda members increasingly relied on resources in the eastern Rocky Mountain region (Parlee 2011).

## **H.6.2 Aboriginal Consultation**

### **H.6.2.1 Consultation Summary**

Benga initiated engagement with Stoney Nakoda Nation in June 2013 with an introduction to the company and a description of Benga's interest in developing a project in the Crowsnest Pass. Benga followed up in October 2013 with an in-person meeting to provide Project updates and offer an overview of the technical and regulatory processes. As the project progressed through early 2014, Benga completed the administrative functions necessary to initiate the project in Stoney Nakoda Nation's consultation system, shared periodic updates on Project details, and provided further information on the EIA process.

This early consultation laid the groundwork for Benga and Stoney Nakoda Nation to develop a framework for consultation which was drafted into the First Nations Consultation Plan and reviewed by Stoney Nakoda Nation before it was finalized for submission to the Alberta government. Benga then developed a draft proposal for a work plan and budget, based on the First Nations Consultation Plan, to outline the tasks and schedules associated with continued engagement, and to ensure that Stoney Nakoda Nation's resource needs for continued participation were met as the Project progressed through EIA process. The consultation work plan and budget were revised, as necessary, to accommodate unanticipated changes to the Project or the regulatory process such as Project changes leading it to come under CEAA purview, and CEAA's referral of the Project to Review Panel.

In accordance with the First Nations Consultation Plan, Benga provided a copy of the PTOR to Stoney Nakoda Nation in December 2014 and followed-up with an in-person meeting to discuss the PTOR in detail. In late January 2015, Benga provided Stoney Nakoda Nation’s comments to the ACO and AER. To ensure that Stoney Nakoda Nation remained informed about the Project’s status in the federal regulatory process, Benga met with Stoney Nakoda Nation in April 2015 to discuss the CEAA Project Description and followed up in July 2015 to provide an update on information on funding opportunities for participation in the CEAA review process.

Consultation and engagement activities with Stoney Nakoda Nation include:

- capacity funding for participation in consultation process;
- meetings to discuss Project updates;
- provision of key regulatory documents, such as:
  - proposed terms of reference;
  - First Nations Consultation Plan;
  - Draft EIS guidelines;
  - project description for the EA process; and
  - information packages.

A chronology of key consultation activities with Stoney Nakoda Nation can be found in [Table H.6.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
June 3, 2013	Email	Benga introduced the company and expressed interest in the Grassy Mountain area.
October 10, 2013	Meeting	Benga provided an update on the Project and discussed the drilling and permitting processes.
November 21, 2013	Email	Benga provided information package about Project phases, permit requirements, and site information.
February 3, 2014	Email	Benga provided an update on the Project and informed Stoney Nakoda Nation that Benga wishes to advance the Project, and is preparing for the EIA process.
February 10, 2014	Meeting	Benga provided a Project update and provided an overview of the Alberta and Federal environmental impact assessment processes. Stoney Nakoda Nation indicated that it would open a file for the Project.

**Table H.6.2-1 Chronology of Key Consultation Activities with Stoney Nakoda Nation**

Date	Method of Communication	Topic of Communication
February 11, 2014	Email	Stoney Nakoda sent Benga a letter of acknowledgment regarding the proposed Project, along with a Stoney Information Letter (SIL) template form for Benga to complete, and fee.
February 28, 2014	Email	Benga returned the completed SIL form and the associated cheque, as requested, accompanied by maps.
April 24, 2014	Meeting	Benga provided an overview of the EIA process and Consultation process and expressed desire to collaborate with Stoney Nakoda Nation to build the consultation and TLUS plans and budgets. Stoney Nakoda Nation conveyed their experience carrying out their own environmental and TLUS-related work.
May 22 & June 16, 2014	Meetings	Discussed TK/TU program, schedule, and budget.
June 25, 2014	Site Tour	Site tour conducted.
July 8, 2014	Email	Benga provided an early draft of the First Nations Consultation Plan for review.
July 14, 2014	Email	Benga's consultant provided a draft of the Site Tour Report for review.
July 16, 2014	Meeting	Benga provided an early draft of the First Nations Consultation Plan, schematic of the EIA process, and overview of the site tour waypoints, photos and maps. Benga's consultant inquired about comments on the Draft Site Tour Report.
August 7, 2014	Email	Benga's consultant sent an updated TK/TU work plan, schedule and budget for consideration.
October 15, 2014	Email	Benga's consultant resent the updated TK/TU work plan, schedule and budget for consideration.
December 9, 2014	Email	Benga sent Stoney Nakoda the PTOR and confirmed that notice had been placed in newspapers.
January 15, 2015	Meeting	Reviewed PTOR in detail and an overview of all project activities. Benga provided a template to create a work plan and budget for consultation on the EIA.
January 19, 2015	Email	Benga distributed the draft minutes for the January 15 <sup>th</sup> meeting and an electronic version of the work plan and budget templates discussed in the January 15 <sup>th</sup> meeting, requesting comments.
March 6, 2015	Email	Benga submitted the Communication Summary Record to Stoney Nakoda Nation.

**Table H.6.2-1 Chronology of Key Consultation Activities with Stoney Nakoda Nation**

Date	Method of Communication	Topic of Communication
March 10, 2015	Meeting	Discussion of timeline and work required to finalize the Site Tour Report in order of key information to be considered in the EIA. Stoney Nakoda Nation requested that the field crew be included in finalizing the report.
April 2, 2015	Email	Benga provided the CEAA Project Description for Stoney Nakoda Nation's input and discussion.
April 13, 2015	Teleconference / Email	Discussed reviewing the Site Tour Report and next steps, including deadlines for inclusion in the EIA. Benga followed up by email to provide maps and a review of the process discussed by phone.
April 24-May 6, 2015	Email	Benga's consultant and Stoney Nakoda Nation exchanged emails to finalize the Site Tour Report and clarify the differences between the public and confidential versions of the Report.
April 27, 2015	Email	Benga provided a letter from its contractor outlining contracting opportunities for the Project.
June 18, 2015	Email	Benga's consultant revised Site Tour Report according to Stoney Nakoda Nation's recommendations and notes that with Stoney's approval, results can be integrated into the EIA.
July 8, 2015	Letter	Benga provided a Project Environmental impact assessment update.
June 25 & July 9, 2015	Email	Benga's consultant inquired about approval status of the public version of the Site Tour Report, noting that the deadline for inclusion in the EIA is approaching.
July 13, 2015	Email	Stoney Nakoda Nation confirmed that the public version of the Site Tour Report is approved.
July 14, 2015	Email	Benga's TK/TU consultant provided the final version of the public Site Tour Report, indicating Stoney Nakoda Nation's direct submission of the report to Benga would allow for integration into the EIA.
July 17 & August 15, 2015	Email	Benga's TK/TU consultant checked whether Stoney Nakoda Nation would submit the final, public Site Tour Report in time for inclusion in the EIA.
July 29, 2015	Letter	Benga provided Project update and reference to funding opportunities for participation in the CEAA review process.
August 27, 2015	Email	Benga provided an information package to allow Stoney Nakoda Nation an opportunity to provide feedback on Benga's understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.

**Table H.6.2-1 Chronology of Key Consultation Activities with Stoney Nakoda Nation**

Date	Method of Communication	Topic of Communication
September 30 & October 5, 2015	Email	L. Whyte advised that the Environmental Impact Assessment report is scheduled for completion in mid-October and requested Stoney Nakoda Nation’s format preference for receiving the report.

**H.6.2.2 Traditional Use and Traditional Knowledge Studies**

Stoney Nakoda Nation’s TK/TU study of the Grassy Mountain area served as an instrument for Stoney Nakoda Nation to record traditional knowledge and land uses, to identify potential effects of the proposed Project, and to give Stoney Nakoda knowledge holders an opportunity to provide ideas for mitigation of potential effects. This study is a vital component of the consultation process because TK/TU studies enhance the quality of an environmental assessment in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment. The information gathered in the TK/TU research by Stoney Nakoda Nation is the intellectual property of Stoney Nakoda Nation. The Stoney Nakoda Nation TK/TU study provided to Benga is a summary of outcomes of the fieldwork and information related to the Project that is approved by Stoney Nakoda Nation for use in the EA process. The Stoney Nakoda Nation TK/TU study is available in [Appendix 7b](#).

Initial planning for the TK/TU study began in April 2014 to develop work plans, schedules, and budgets to fund Stoney Nakoda Nation’s participation in the study. The fieldwork component of Stoney Nakoda Nation’s TK/TU study was limited to the phase one site tour, which was conducted on June 25, 2014 and attended by three Stoney Nakoda Nation representatives. The site tour recorded data via video, photos, and GPS records at 16 stops throughout the Project area and resulted in the identification and recording of 15 TK/TU sites.

**H.6.2.3 Economic Opportunities**

Since the Project’s initiation, Benga has, and will continue to work collaboratively with Stoney Nakoda Nation to develop opportunities for Stoney Nakoda Nation to derive direct and long-lasting benefits from the Project.

Stoney Nakoda Nation has expressed interest in being involved in economic and training opportunities associated with Project and has participated in discussions with Benga and its consultants to offer insights on how best to coordinate with their administration to develop job readiness among Stoney Nakoda community members. As part of these discussions, Benga provided to Stoney Nakoda Nation a comprehensive list detailing the contracting opportunities that will be

made available during mine construction and operations. In 2014, Benga also submitted postings to Stoney Nakoda Nation for field technician employment opportunities in support of the EIA process. Benga has further provided detailed information on all direct and contracted employment positions that will be available during construction and operations.

In support of a study of the Traditional Use of the Project area, Benga provided funding for the services of independent Traditional Studies consultants, as well as funding for Stoney Nakoda Nation to carry out the study. Although Benga offered to provide funding for a more comprehensive Traditional Use Study, Stoney Nakoda Nation did not conduct Phases 2 or 3, but rather prepared their public report based on Phase 1.

In accordance with the draft consultation work plan and budget proposed to Stoney Nakoda Nation, Benga provides offers funding in support of Stoney Nakoda Nation's continued engagement on the Project's EIA process.

### **H.6.3 Background**

#### **H.6.3.1 Traditional Use of Lands and Resources**

According to secondary sources, Stoney Nakoda Nation hunted buffalo from the plains to the foothills of the Rocky Mountains and through southeastern British Columbia (Getty and Gooding, 2001:596). Hunting activities took place in the summer and fall months along the foothills (Snow 1977). Getty and Gooding provide additional detail about the groups along the foothills: "To the south of Rocky Mountain House, the Bearspaw, Chiniki, and Wesley groups occupied the foothills and headwaters along the front range of the Rocky Mountains (Figure H.6.1-1). They relied mainly on big game such as moose, elk, deer, bighorn sheep, and wood buffalo, supplemented by beaver and muskrats (Getty and Gooding 2001). George Ear summarized the generally recognized land-use areas of the Mountain Stoneys as: "Wesley [and Goodstone] people migrated north to the North Saskatchewan River ... Bearspaw moved down to Chief Mountain area ... Chiniki stayed along Bow River" (Treaty 7 Elders and Tribal Council 1996:141). Stoney Nakoda Nation people traditionally hunted in areas that are now part of the United States and British Columbia (Snow 1977). It became more difficult to continue hunting in the United States due to political boundaries (Snow 1977).

Stoney Nakoda Nation members hunted and consumed primarily buffalo; however, since their extinction in 1877, they shifted to harvesting other types of large game, including deer and elk. The consequences of this extinction on Stoney Nakoda Nation people were decades of challenges finding and securing food in the early 1900s (Snow 1977, Getty and Gooding 2001). The availability of hunting areas and species changes with the introduction of the railway system in southern Alberta which drove wildlife from the area (Snow 1977).

The Stoney Nakoda Nation Consultation Team did not mention traditional trapping of furbearers during the Stoney TK/TU program. According to secondary sources, Stoney Nakoda Nation people trapped furbearers along the Rocky Mountain foothills (Getty and Gooding, 2001). Chief John Snow notes that trapping among Stoney increased with the migration of Euro-Canadian settlers into their territory: “Trading had changed our way of life a little because of the need to trap fur-bearing animals for barter, over and above what was needed for daily use. But trade with the whiteman never became the basis of our economy as it did for some tribes” (Snow 1977).

There was no discussion about traditional harvest and/or use of fish or aquatic species during the Stoney Nakoda Nation TK/TU program. According to secondary sources, “unlike most Plains tribes, fish were important to the Stoney diet. They were caught using three-tined spears, arrows, hooks, and lines of bone and twisted inner bark of willow, and fish traps” (Getty and Gooding, 2001:597). Chief John Snow confirms this by stating that “our diet was mainly meat and fish, supplemented by wild vegetables and fruit” (Snow 1977). Fish were particularly important for subsistence during times of starvation due to a decline in availability of buffalo and other large game (Snow 1977).

*There was no discussion about traditional harvest and/or use of plant species during the Stoney Nakoda Nation TK/TU program. However, secondary sources refer to plant species of importance to Stoney Nakoda Nation for sweat lodges in preparation of vision quests in the mountains: The sacred lodge was erected by a chosen few who were appointed by the elders; its construction was vigilantly and prayerfully observed by everyone. The lodge’s frame was usually made from willow wood and branches shaped into a dome-roofed, circular building about eight or ten feet across and five feet high; this was usually covered in animals skins and hides, although sometimes spruce bark and branches and poplar leaves were used (Snow 1977).*

Plants were used for ceremonial purposes, medicinal and subsistence purposes. Within the sacred lodge, they built a fire using sweet grass, cedar branch needles, and other plants. In addition, Stoney Nakoda tipis were constructed using spruce bark.

The Stoney Nakoda Nation Consultation Team did not discuss the traditional trails and travelways during the Stoney Nakoda Nation TK/TU program. However, it is noted in secondary sources that the Stoney Nakoda Nation people would travel annually in the spring to the Bow River area and hunting groups there in the Sheep and Highwood River area (Galileo Educational Network 2010).

### **H.6.3.2 Current Use of Lands and Resources for Traditional Purposes**

This section provides a description of Stoney Nakoda Nation’s current use of lands and resources for traditional purposes. In addition, this section fulfills the requirements of the TOR by providing background information on traditional use.

#### H.6.3.2.1 Hunting

Stoney Nakoda Nation continue to hunt deer and elk. Further information about locations of hunting areas was not provided by Stoney Nakoda Nation.

#### H.6.3.2.2 Trapping

No information was provided by Stoney Nakoda Nation about current trapping practices in the Project LSA.

#### H.6.3.2.3 Fishing

There was no discussion about current harvest and/or use of fish or aquatic species during the Stoney TK/TU program. Further information about current Stoney fishing, including species, locations, and timing, provided by Stoney Nakoda Nation will be considered in the Application.

#### H.6.3.2.4 Plant Gathering

During the Stoney Nakoda site tour, Stoney field crew identified many plant species that remain central to Stoney Nakoda ceremony, healing practices, and spirituality, which were identified in the Grassy Mountain area. Information regarding plant gathering species and locations were not provided.

#### H.6.3.2.5 Trails and Travelways

The Stoney Consultation Team did not discuss exact details of how the Project area is currently traversed. The Project is not anticipated to have adverse effects to Stoney Nakoda Nation trails and travelways.

### H.6.3.3 Aboriginal Health

There are Health Centres located in Morley, Big Horn, and Eden Valley which provide services and programs to Stoney Nakoda Nation members. Environmental public health services are provided by Stoney Nakoda Nation and Treaty 7 Management Corporation including safe drinking water testing which is a mandatory program (HCOM 2015).

Stoney Nakoda Nation members continue to harvest resources for subsistence, medicinal, and ceremonial purposes. Resources used by Stoney Nakoda Nation are located within the Project LSA. Plant species were not identified by Stoney Nakoda Nation. Animal species include deer and elk.

### H.6.3.4 Aboriginal Socio-Economic Conditions

Economic development and economic sustainability for Stoney Nakoda Nation include services in tourism, hospitality, commercial, and industrial development (RMN 2015). In particular, natural

resource exploration is a key source of revenue as well as a main employer (RMN 2015). Environmental stewardship is a priority consideration with any lands development (RMN 2015). There is interest in exploring agricultural opportunities on Stoney Nakoda Nation lands, enhancing ecotourism opportunities, and building on the success of the Nakoda Lodge (Wesley First Nation 2011).

The employment rate for Stoney 142, 143, and 144 is 31.4%, the participation rate is 50.6%, and the unemployment rate is 37.9%. The employment rate for Eden Valley is 21.9%, the participation rate is 32.9%, and the unemployment rate is 37.5% (Statistics Canada 2011).

There are several Stoney Nakoda Nation businesses identified by the Treaty 7 Business Directory (2013) including Iktomi custom apparel, Bearspaw Gas Bar, Ozada Bottle Depot, Trailkeepers Consulting, and Stoney Nakoda Resort and Casino.

#### **H.6.3.5 Aboriginal Physical and Cultural Heritage**

Stoney Consultation Team did not discuss exact locations of habitation areas in and around the Grassy Mountain Project area. However, they reported areas in the Project area that are recognized by Stoney Nakoda Nation people as meditation sites. Based on a review of literature about the Stoney, general information is noted about the sacred importance and uses of the mountainous areas along the Rocky foothills, as well as the types of shelters, and the history of Stoney settlements, including Eden Valley reserve (the most proximate Stoney reserve at a distance of approximately 95 kilometers [km] northeast of the Grassy Mountain Project).

### **H.6.4 Potential Effects and Mitigation Measures**

#### **H.6.4.1 Current Use of Lands and Resources for Traditional Purposes**

The assessment of potential effects of the Project on current use of lands and resources for traditional purposes focuses on the availability of lands and resources identified by Stoney Nakoda Nation. Based on the background information described, there may be potential effects to hunting and plant gathering.

##### **H.6.4.1.1 Hunting**

Stoney Nakoda Nation continues to hunt throughout their traditional territory. There are no specific hunting sites identified by Stoney Nakoda Nation in the Project LSA. Species that continue to be used for hunting are deer and elk. Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife and land and resource use.

Wildlife addresses potential effects on key species and habitat for wildlife species including elk. The majority of Project-related wildlife habitat loss or fragmentation will result from land clearing, surface mining, and construction of infrastructure and roads.

Potential direct and indirect effects from the Project that were assessed include:

Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- Habitat fragmentation and loss of connectivity.

Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions (assessed in MEMS 2015b); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

Land and Resource Use addresses potential effects to land use activities related to hunting including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga.

However, access for land use activities by Stoney Nakoda Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure. Benga also will continue to consult with Stoney Nakoda Nation, including discussion of options to facilitate access for land use activities where they may be affected by the Project.

Wildlife assessment methods contained in [CR #9, Section 3.2](#) included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The potential effects described in these sections could result in a change in identified hunted species and habitat, change in use or access to identified hunting locations, and change in preferred harvesting method.

Mitigation measures identified by Wildlife and Land and Resource Use apply to the effects described in this section. The pertinent mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor;
- access management within the Project footprint to reduce effects to wildlife; and
- wildlife and wildlife habitat reclamation.

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;
- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.6.4.1.2 Plant Gathering

There are plant gathering areas that overlap the Project LSA. The Project will intersect or be in proximity to habitat and species that are used for plant gathering by Stoney Nakoda Nation. Several VC sections are relevant to the assessment on plant gathering such as the assessment sections for Vegetation, and land and resource use.

[Section E.8.3](#) Vegetation addresses potential effects on key species and habitat including the species identified by Stoney Nakoda Nation. A summary of species identified by Stoney Nakoda Nation for the Project with the occurrence of species within the LSA is available in [CR #8](#) Vegetation. Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project's mine pit and associated waste rock disposal areas and infrastructure. In addition, air emissions released into the atmosphere during Project construction and operations may result in direct and indirect effects on vegetation arising from acid deposition.

Mitigation measures identified throughout the application for Vegetation and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation;

- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation;
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species;
- the provision of opportunities to identify and collect suitable lodge pole pine for TU ceremonies, and
- where practicable, utilize locally collected seed to preserve the legacy of species and of place; and
- access control policy to facilitate access to the Project site by authorized users.

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations; and
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### **H.6.4.2 Aboriginal Health**

The Project is located within the Stoney Nakoda Nation traditional territory in proximity to areas currently used by Stoney Nakoda Nation members. Stoney Nakoda Nation members continue to hunt and gather plants for subsistence purposes. The Human Health Risk Assessment ([Section E.12](#)) includes an Aboriginal receptor type in the assessment and documents health concerns identified by Aboriginal groups regarding impacts of existing development and of the Project specifically on their traditional lifestyle. The Aboriginal receptor types consider the potential for local residential communities, Aboriginal residential areas, Aboriginal land use areas (such as hunting and plant gathering) and recreational areas.

[Section E.12](#) Human Health assesses potential effects to health including acute inhalation risks, chronic inhalation risks, chronic multimedia exposure risks, and a wildlife risk assessment. In order for Aboriginal health receptors to be exposed to emissions from the Project, they must come into contact with chemicals of potential concern (COPCs). The potential exposure pathways related to

Aboriginal groups are summarized in [CR #12 Table 5.1.4-1](#) and include direct contact with COPCs through air inhalation, soil, ingestion of local vegetation, ingestion of wildlife, and contact with surface water or fish ingestion. The results of the human health risk assessment indicate risk quotients within the Mine Permit Boundary which will be inaccessible during construction and operation. Therefore, it is predicted that there will be no effects of the Project on Aboriginal health.

Input regarding potential effects to Aboriginal health and mitigation measures has not been provided by Stoney Nakoda Nation during consultation. Benga Mining will continue to work with Stoney Nakoda Nation and will consider mitigation measures proposed by Stoney Nakoda Nation if identified through the EA process.

Mitigation measures identified in Human Health apply to the effects described in this section. The results of the HHRA suggest that short-term predicted risks to human health will be limited to the LSA and within the project footprint. None of the remaining human receptor locations are predicted to have unacceptable levels of risk. Assuming public access within the Mine Permit Boundary is restricted and the mitigation measures assumed by the other disciplines are implemented ([Section A.10](#)); there is no need for further mitigation of emissions based on the results of the HHRA.

#### **H.6.4.3 Aboriginal Socio-Economic Conditions**

The Project will involve the construction of facilities within a mine permit boundary that is 45.16 km<sup>2</sup> of lands within the traditional territory of Stoney Nakoda Nation. No direct impacts of the Project are anticipated to Stoney Nakoda Nation's socio-economic conditions. Further information regarding benefits of the Project is described in [Section E.11](#) Socio-Economics.

The Project and associated project activities is not expected to have an adverse effects on Stoney Nakoda Nation commercial activity, forestry and logging operations, and recreation use. Input regarding potential effects to socio-economic conditions and mitigation measures has not been provided by Stoney Nakoda Nation during consultation. Benga Mining will continue to work with Stoney Nakoda Nation and will consider mitigation measures proposed by Stoney Nakoda Nation if identified through the EA process.

#### **H.6.4.4 Aboriginal Physical and Cultural Heritage**

The Project will intersect or be in proximity to physical and cultural heritage sites. Stoney Nakoda Nation reported areas in the Project area that are recognized by Stoney Nakoda Nation people as sacred sites for meditation. In addition, during consultation Stoney Nakoda Nation identified potential effects to sites of cultural or spiritual importance (Stoney Nakoda Nation, 2014). Several VC sections are relevant to the assessment on sacred, gathering and habitation sites such as the assessment sections for land and resource use and historical resources.

[Section E.13](#) Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure or object. There are 32 recorded archaeological or historic era resources located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, there are 10 that are overlapping the Project footprint. Stoney Nakoda Nation identified sacred sites used in the Project area however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in access to physical and cultural heritage features, disturbance to physical and cultural heritage features, and change in cultural value or importance. Input provided by Stoney Nakoda Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The recommendations made by Stoney Nakoda Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.6.4-1](#).

<b>Table H.6.4-1 Feedback Provided by Stoney Nakoda Nation</b>		
<b>Potential Effects Identified by Stoney Nakoda Nation</b>	<b>Recommended Mitigation Measures by Stoney Nakoda Nation</b>	<b>Benga Mining Response</b>
Concern for impacts, inadvertent or otherwise, to sites of cultural or spiritual significance (Stoney Nakoda Nation 2014).	To forestall this, Benga must install cultural monitoring and implement a mitigation plan for any newly-identified sites (Stoney Nakoda Nation 2014).	If culturally-important sites are identified during construction, a Cultural Site Discovery Contingency Plan will be implemented. Stoney Nakoda Nation will have an opportunity to contribute to the Plan.

Mitigation measures identified throughout the application for Land and Resource Use and Historical Resources apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- if avoidance of any unnamed pre-contact period sites is not possible based on size, location, and complexity, a mitigation excavation will be conducted in advance of Project development;
- if avoidance of any structures is not possible, mitigation will include a 20 m<sup>2</sup> excavation plot with full documentation of the remaining building structures including mapping and related detailed recordings; and

- a mitigation plan will be developed and implemented for mitigation excavation including sites located by the south disposal area land alteration activities.

Additional measures are recommended to avoid or minimize potential effects to Aboriginal physical and cultural heritage. These are outlined below:

- consultation will continue to further identify sites or cultural and sacred importance that warrant site-specific or situational mitigation (sites within 100 m of Project activity including additional sites identified by Stoney Nakoda Nation will be flagged prior to construction);
- consultation will include sharing information about construction timing;
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction; and
- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate land use locations.

## H.6.5 Characterization of Residual Effects

### H.6.5.1 Current Use of Lands and Resources for Traditional Purposes

The assessment of residual effects of the Project on current use of lands and resources for traditional purposes focuses on the potential effects remaining after mitigation measures are implemented. Based on the potential effects and mitigation measures described, there may be residual effects to current use for hunting, plant gathering and trails and travelways.

#### H.6.5.1.1 Hunting

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9 Wildlife](#) and [Section E.10 Land and Resource Use](#) and input provided by Stoney Nakoda Nation. [Section E9.3 Wildlife](#) characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and long-term in duration. The Project will affect the 10 wildlife VCs including moose, elk, bear and special status wildlife species such as mountain goat and eagles through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#). Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be insignificant for all assessed VCs. ([CR #9, Table 5.3-26](#)).

[Section E.10.3](#) Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species hunted by Stoney Nakoda Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to hunting are characterized as:

- low magnitude;
- local geographic extent;
- short-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.6.5.1.2 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section E.8.3](#) Vegetation, [Section E.10.3](#) Land and Resource Use, and input provided by Stoney Nakoda Nation. Removal of ecosite phases and ELCs that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

[Section E.8.3](#) Vegetation characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to TEK species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species used for plant gathering by Stoney Nakoda Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to plant gathering are characterized as:

- moderate magnitude;
- local geographic extent;
- long-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### **H.6.5.2 Aboriginal Health**

The characterization of residual effects to Aboriginal health includes consideration of residual effects described in [Section E.12.3](#) Human Health and input provided by Stoney Nakoda Nation. The Project is not expected to have measurable effects on Aboriginal health. As there are no predicted effects to Aboriginal receptors and no mitigation measures have been proposed, it is not anticipated that there will be residual effects of the Project on Aboriginal health.

#### **H.6.5.3 Aboriginal Physical and Cultural Heritage**

The characterization of residual effects to Aboriginal physical and cultural heritage includes consideration of residual effects described in [Section E.10](#) Land and Resource Use and input provided by Stoney Nakoda Nation.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

The Project could result in measurable effects on sacred, gathering, and habitation sites used by Stoney Nakoda Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed. As a result, residual effects to sacred, gathering, and habitation sites are characterized as:

- moderate magnitude;
- local geographic extent;
- long term duration;
- regular frequency;
- not reversible; and
- sensitive in ecological and social context.

#### H.6.5.4 Summary of Residual Effects Characterization

Overall, the Project is not anticipated to measurably affect Stoney Nakoda Nation’s ability to continue hunting or plant gathering practices within their traditional territory. If avoidance is not possible, the Project may damage or disturb sites that are identified by Stoney Nakoda Nation as sacred sites (Stoney Nakoda Nation, 2015). With the implementation of mitigation measures, potential residual effects may be reduced but not fully mitigated if sites are physically disturbed. A summary of residual effects of the Project to Stoney Nakoda Nation is provided in [Table H.6.5-1](#).

<b>Table H.6.5-1 Summary of Residual Effects to Stoney Nakoda Nation</b>						
<b>Valued Components</b>	<b>Residual Effects Characterization</b>					<b>Ecological and Social Context</b>
	<b>Magnitude</b>	<b>Geographic Extent</b>	<b>Duration</b>	<b>Frequency</b>	<b>Reversibility</b>	
Hunting	Low	Local	Short-term	Continuous	Reversible	Resilient
Plant Gathering	Moderate	Local	Long-term	Continuous	Reversible	Resilient
Aboriginal Physical and Cultural Heritage	Moderate	Local	Long-term	Regular	Not Reversible	Sensitive

**Magnitude** Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA.

Moderate – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability to exercise the Aboriginal Interest in the RSA.

**Duration** Short term – limited to the construction phase; Long term – beyond the project lifespan

**Ecological and Social Extent** **Sensitive** – the Aboriginal Interest is sensitive or has low resiliency to disruption; **Resilient** – the Aboriginal Interest is not sensitive or has high resiliency to disruption.

## H.6.6 Cumulative Effects

### H.6.6.1 Potential Contribution to Cumulative Effects

The cumulative effects assessment considers cumulative environmental effects that are likely to result from the Project in combination with the environmental effects of other physical activities and have been or will be carried out. This subsection provides a description of the contribution of the Project to cumulative effects that may have effects on the Aboriginal or Treaty Rights of Stoney Nakoda Nation.

The scientific rationale for the selection of spatial boundaries for each of the disciplines, and the discipline specific LSA and RSA spatial and temporal scales for each of the disciplines are provided in detail in [Section D](#). These boundaries have been defined as lasting approximately 24 years, concomitant with the life of the Project. Segments of the temporal boundaries include the duration of the construction, operation and abandonment phases of the Project.

The Local Study Area (LSA) is established based on the zone of the Project influence, beyond which the potential environmental, cultural and socio-economic effects of the Project are expected to be non-detectable. The Regional Study Area (RSA) is established based on the extent to which it would be expected that the interaction of residual effects of the Project with the residual effects of other projects would be detectable. It is also the area in which socio economic effects are expected to be detectable. VC-specific boundaries are established for both the LSA, for Project-specific effects, and the RSA, for cumulative effects. Effects on those VCs that have impacts more directly tied to the footprint of the Project are also assessed at the spatial scale of the Project footprint.

### H.6.6.2 Other Projects and Activities

Existing, approved and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) and are shown relative to Stoney Nakoda Nation Traditional Territory on [Figure H 6.6-1](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within the largest RSA (i.e., wildlife grizzly bear RSA). As can be seen on [Figure D.2.4-3](#), not all Projects are contained within the study areas of each of the respective disciplines.

Most of the resource development currently occurring within the WRSA and GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the

reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to 2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the Wildlife RSA and Grizzly Bear RSA will be associated with forestry activities at Year 14 and Year 27.

### **H.6.6.3 Potential for Cumulative Effects and Impacts to Aboriginal or Treaty Rights and Interests**

#### **H.6.6.3.1 Cumulative Effects on Current Use of Land and Resources for Traditional Purposes**

As described in this section, the contribution of the Project's residual effects are unlikely to cause a change in cumulative effects that could affect the viability or sustainability of traditional use by Aboriginal people of lands and resources within the RSA. Details on mitigation measures can be found in the references for each valued component listed below.

#### **H.6.6.3.2 Cumulative Effects on Wildlife and Plant Harvesting**

As described in Wildlife, the incremental effects of the Project to cumulative effects on wildlife habitat availability, fragmentation/connectivity, mortality risk, and abundance will be small and no significant cumulative effects to wildlife population persistence are predicted. Therefore, no cumulative effects from the Project are predicted to impact Aboriginal or Treaty rights or interests related to wildlife populations. [CR #9, Table 6.4-1](#) contains a summary of residual cumulative effects ratings.

As described in detail in [Section E.8.4 Vegetation](#), while the Project will result in some loss of traditional use vegetation within the LSA these losses represent very small proportions of the total amount of these vegetation communities within the RSA. Neither the project-specific residual effects, nor the Project's residual effects acting cumulatively with other projects would threaten the regional sustainability of traditional use plants or other vegetation resources, wetlands, biodiversity or fragmentation identified in this assessment.

#### **H.6.6.3.3 Cumulative Effects on Traditional Use Locations, Access Routes**

Approximately one half of the Project footprint is located on privately held land. Combined with other private land ownership in the LSA and challenging terrain, it is probable that the Project's contribution to cumulative residual effects on traditional use locations and access routes will not be significant. However, Benga has offered to work with affected Aboriginal groups on an Access Management Plan to both control access to authorized persons, and to facilitate access to traditional use locations where feasible.

#### **H.6.6.3.4 Cumulative Effects on Water, Aquatic Resources, Soil, Terrain and Vegetation**

##### **Hydrogeology**

Groundwater effects associated with surface facilities, mining operation, mine spoil and pit dewatering have low to moderate impact ratings and are all local in extent within the LSA. No other planned or reasonably foreseeable projects within the RSA are expected to act in cumulative manner with these effects so a cumulative effects assessment is not required, and was not completed, for this Project.

#### Water Quality and Aquatic Resources

There are no other planned or reasonably foreseeable projects within the RSA that are expected to act in cumulative manner with identified Water Quality or Aquatic Resources effects so a cumulative effects assessment is not required, and was not completed, for this Project.

#### Soil and Terrain

There are no anticipated significant cumulative effects on any of the soil and terrain valued components: soil quality, soil biodiversity and ecological integrity, alteration of terrain, land capability effects.

#### Vegetation

Cumulative impacts were assessed for terrestrial vegetation, wetlands, and biodiversity and fragmentation. With mitigation, cumulative impacts to all three VCs were assessed as being insignificant.

#### H.6.6.3.5 Cumulative Effects on Human Health

As the Air Quality Assessment did not identify any planned projects in the area, a cumulative effects assessment was not required, and not completed, for the current assessment. At the local scale, the emissions from the Project are not predicted to cause significant adverse effects to human health at all human receptor locations accessible to the general public. Assessed health risks at the local scale included acute inhalation, chronic inhalation, and chronic multimedia exposure.

#### H.6.6.3.6 Cumulative Effects on Air Quality, Noise, and Socio-economic Conditions

##### Air Quality

No significant cumulative effects are anticipated for any chemicals of potential concern assessed in the Air Quality assessment. Overall, residual air quality effects related to the Project were considered to be not significant.

##### Noise

The noise modelling results indicate that the Project noise levels during the night-time and day-time, with the addition of the average ambient sound levels, will be below the permissible sound levels for all residential and theoretical 1,500 m receptors. Therefore, no cumulative effects on noise are expected.

#### Socio-Economic

The Project will create positive economic and fiscal effects on the socio-economic regional study area (RSA) and of affected Aboriginal Groups. The Project is estimated to create:

- 910 person years of on- and off-site employment related to the construction of the plant, facilities and infrastructure for the mine between 2017 and 2019; and
- 385 long-term operations positions to be hired by 2020.

Benga has provided detailed information on Project-related economic opportunities to all affected First Nations and is actively developing plans with them to maximize the successful uptake of the available opportunities.

The Project will contribute an estimated \$140 million (NPV 2015) and \$210 million (NPV 2015) to provincial and federal corporate income taxes respectively as well as approximately \$195 million (NPV 2015) in provincial royalties over the 23-year operating life of the project, assuming a \$140/tonne average real price of coal.

#### H.6.7 Follow-up and Monitoring

Monitoring programs will be implemented to verify the effectiveness of mitigation measures. Elements of the follow-up and monitoring program includes:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

#### H.6.8 Aboriginal Issues and Concerns

Category	Description of Issue/Concern	Response
Land and Resource Use	Concern about lack of reference to the objectives of the South Saskatchewan	Benga followed up with Alberta and received confirmation that existing legislated standards

Category	Description of Issue/Concern	Response
	Regional Plan and wanted confirmation that current legislated standards and land use designations apply to the Grassy Mountain Project.	and land use designations continue to apply to the Project. The assessment of potential effects to Land and Resource Use in <a href="#">Section E.10</a> considers the South Saskatchewan Regional Plan (SSRP).
Air Quality	Concern about air emissions. In Section 2.5 of the PTOR, Stoney Nation would like the EIA report to include information about government standards and exceedances	Criteria for evaluating effects to air quality are described in <a href="#">Section E.1</a> . These include government regulated exceedances and thresholds.

## H.7 ASSESSMENT OF POTENTIAL EFFECTS – TSUUT’INA NATION

### H.7.1 Introduction

Tsuut’ina Nation is a member nation of the Treaty 7 Management Corporation which acts as a tribal council for Treaty 7 First Nations including Siksika Nation, Blood Tribe (Kainai Nation), Piikani Nation, and Stoney Nakoda Nation. The Tsuut’ina Nation traditional territory is located in southern Alberta and includes Crowsnest Pass and surrounding areas ([Figure H.7.1-1](#)). The proximity of the Tsuut’ina Nation reserve in relation to the Project is summarized in [Table H.7.1-1](#).

Reserve	Distance to the Project LSA (km)	Distance to the Project RSA (km)
Tsuut’ina Nation 145	132.73	107.73

There are 2,259 registered Tsuut’ina Nation members (AANDC, 2015). The number of Tsuut’ina Nation members who live on their own reserve is 1,612 and a total of 526 live off-reserve (AANDC, 2015). Tsuut’ina Nation is governed by an elected Chief and Council which operates through an appointment term of 2 years as summarized in [Table H.7.1-2](#).

Title	Name	Appointment Date	Appointment Ends
Chief	Roy Whitney Onespot	11/30/2014	11/29/2016

<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Councillor	Stanley Big Plume	11/30/2014	11/29/2016
Councillor	Emmet Crowchild	11/30/2014	11/29/2016
Councillor	Regena Crowchild	11/30/2014	11/29/2016
Councillor	Vincent Crowchild	11/30/2014	11/29/2016
Councillor	Brent Dodging Horse	11/30/2014	11/29/2016
Councillor	Lyle Dodging Horse	11/30/2014	11/29/2016
Councillor	Leon Littlelight	11/30/2014	11/29/2016
Councillor	Dean Many Wounds	11/30/2014	11/29/2016
Councillor	Andy Onespot	11/30/2014	11/29/2016
Councillor	Ellery Starlight	11/30/2014	11/29/2016
Councillor	Emil Starlight	11/30/2014	11/29/2016
Councillor	Darryl Whitney	11/30/2014	11/29/2016

Tsuut'ina Nation, which means "a great number of people", are descendants of Athapaskan-speaking people, which include the Navajo and Apache of the south and the Dene and Chippewa of the north (Tsuut'ina Nation 2015). Tsuut'ina Nation has kept their traditions and their culture has evolved into to one that is unique to Athapaskan-speaking people (Tsuut'ina Nation 2015).

Prior to the arrival of Europeans, indigenous peoples had a stable and long lived economy based on the acquisition of naturally occurring plant, animal and other resources. In the highly seasonal environment of the northern plains, a hunting and gathering economy meant that peoples were nomadic and practiced a seasonal round, where people travelled from one place to another during the annual cycle to exploit resources when those resources could be acquired in a given location at a given time. This economic regime and seasonal round guided their respective cultures (Tsuut'ina Nation 2015).

## **H.7.2 Aboriginal Consultation**

### **H.7.2.1 Consultation Summary**

Benga initiated engagement with Tsuut'ina Nation in June 2013 with a meeting at the Tsuut'ina Nation administration building to introduce the company and the Project, and to describe early baseline environmental studies that had been initiated on-site to date. Early on, Benga shared

updates on the Project as they became available and provided guidance on the provincial and federal regulatory processes that would be involved.

In April 2014, Benga and Tsuut’ina Nation began to develop a framework for continued consultation, which was ultimately drafted into a First Nations Consultation Plan which was provided to Tsuut’ina Nation for review before it was finalized for submission to the Alberta government. Based on this First Nations Consultation Plan, Benga and Tsuut’ina Nation then discussed a draft work plan and budget to outline the tasks and schedules associated with continued engagement, and to ensure that Tsuut’ina Nation’s resource needs for continued participation were met as the Project progressed through EIA process. The consultation work plan and budget were revised, as necessary, to accommodate unanticipated changes to the Project or the regulatory process such as Project changes leading it to come under CEAA purview, and CEAA’s referral of the Project to Review Panel.

In accordance with the First Nations Consultation Plan, Benga provided a copy of the PTOR to Tsuut’ina Nation in December 2014 and followed-up with a meeting to discuss the PTOR in detail. In March 2015, Benga advised Tsuut’ina Nation when the AER finalized the TOR, confirming at that time that Tsuut’ina Nation’s comments had been provided to the AER. To ensure that Tsuut’ina Nation remained informed about the Project’s status in the federal regulatory process, Benga met with Tsuut’ina Nation in April 2015 to discuss the CEAA Project Description and followed up in July 2015 to provide an update on information on funding opportunities for participation in the CEAA review process.

Consultation and engagement activities with Tsuut’ina Nation include:

- capacity funding for participation in consultation process;
- meetings to discuss Project updates;
- provision of key regulatory documents, such as:
  - proposed terms of reference;
  - First Nations Consultation Plan;
  - project description for the EA process; and
  - information packages.

A chronology of key consultation activities with Tsuut’ina Nation can be found in [Table H.7.2-1](#).

<b>Table H.7.2-1 Chronology of Key Consultation Activities with Tsuut’ina Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>

**Table H.7.2-1 Chronology of Key Consultation Activities with Tsuut’ina Nation**

Date	Method of Communication	Topic of Communication
October 8, 2013	Meeting	Benga introduced the Project to Tsuut’ina Nation.
February 3, 2014	Email	Benga provided an update on the Project and informed Tsuut’ina Nation that Benga is preparing for the EIA process.
March 6, 2014	Meeting	Benga provided a Project update and an overview of the provincial and federal EIA processes.
April 23, 2014	Meeting	Benga provided a Project, regulatory, and schedule update. Benga expressed interest in working with Tsuut’ina to develop a road map for consultation and inquired about existing TK protocols or databases.
May 8 - 17, 2014	Teleconference / Email	Benga’s consultant and Tsuut’ina Nation developed the work plan schedule, logistics, and budget for the TK/TU program, including the upcoming Site Tour.
May 22 & June 13, 2014	Email	Benga provided a job posting for environmental studies program field assistant to Tsuut’ina Nation.
May 23, 2014	Meeting	Discussed the TUS work plan, the Site Tour, Project changes, and Tsuut’ina Nation’s engagement preferences. Tsuut’ina inquired about economic opportunities connected with the Project.
May 29, 2014	Email	Benga provided draft minutes for the May 23 meeting for Tsuut’ina Nation’s review.
June 2, 2014	Email	Tsuut’ina submitted budgets for the Site Tour and TK/TU program.
June 8 -18, 2014	Email	Benga’s consultant and Tsuut’ina finalize plan, budget and logistics for Site Tour.
July 8, 2014	Email	Benga provided a Draft First Nations Consultation Plan for Tsuut’ina Nation’s review and comment.
July 11, 2014	Site Tour	Site Tour conducted.
July 18, 2014	Email	Benga provided an overview of the EIA process and the Draft Consultation Plan. Benga and Tsuut’ina Nation discussed next steps for the TK/TU program.
August 12-13, 2014	Field work	Tsuut’ina Nation participated in ground-truthing activities related to the collection of TK/TU information.
October 6, 2014	Meeting	Benga provided an overview of Project activities and the Consultation Plan. Benga and Tsuut’ina agreed on the proposed outline of the TK/TU Report.
October 17, 2014	Meeting	Benga met with the new Tsuut’ina Nation Consultation Director to

**Table H.7.2-1 Chronology of Key Consultation Activities with Tsuut’ina Nation**

Date	Method of Communication	Topic of Communication
		introduce the project, provide an update on the EIA process, and discuss the Consultation Plan.
October 27-28, 2014	Field work	Piikani Nation participated in ground-truthing activities related to the collection of TK/TU information.
October 28 & November 3, 2014	Email	Benga’s consultant provided photos coordinates and mapping detail of sacred site identified during field work to Tsuut’ina Nation. (The site is outside the boundary of the current project footprint)
November 2, 2014	Email	Benga provided draft minutes for the October 17 meeting for Tsuut’ina Nation’s comment.
November 3, 2014	Meeting	Discussed Project activities, regulatory processes, the EIA, progress on the TLUS and Consultation Plan.
November 25, 2014	Email	Benga provided an overview of key milestone dates for the EIA Application, the Aboriginal Consultation process, and Traditional Use and Historical Resources studies.
December 8, 2014	Email	TU consultant provided draft notes from the field work for Tsuut’ina Nation’s comment.
December 9, 2014	Email	Benga provided the PTOR.
December 9, 2014	Meeting	TU consultant and Tsuut’ina Nation jointly reviewed ground-truthing notes, the TK/TU Report and maps for accuracy.
January 15, 2015	Meeting	Discussed updated Project activities, permits, feasibility study, the Alberta PTOR, draft EIA consultation work plan, TU study and budgets.
February-March 16, 2015	Email	TU consultant and Tsuut’ina Nation jointly worked on the TK/TU Report.
March 19, 2015	Email	Benga advised that the AER had finalized the TOR for the provincial EIA and confirmed that the Tsuut’ina Nation’s comments were provided to the AER.
March 31, 2015	Email	Benga provided a list of potential employment and contracting opportunities to Tsuut’ina Nation.
April 2, 2015	Email	Benga provided the CEAA Project Description with a request for Tsuut’ina Nation’s input and discussion.
April 13, 2015	Email	TU consultant and Tsuut’ina Nation finalized the confidential TK/TU report for integration in the EIA.
April 17, 2015	Email	TU consultant and Tsuut’ina Nation corresponded regarding integration

**Table H.7.2-1 Chronology of Key Consultation Activities with Tsuut'ina Nation**

Date	Method of Communication	Topic of Communication
		of the TK/TU Report in the EIA and reviewed the process of transitioning the report from confidential to public.
April 27 & 28, 2016	Email	Benga and Tsuut'ina Nation corresponded regarding contracting opportunities on the project.
May 28, 2015	Meeting	TU consultant and Tsuut'ina Nation jointly finalized edits to convert the confidential TK/TU Report to a (non-confidential) public report.
June 16, 2015	Email	TU consultant provided the public TK/TU Report and, at Tsuut'ina Nation's request, the latest footprint map.
June 25, 2015	Email	Tsuut'ina Nation advised Benga that prior to finalizing the TU report, Tsuut'ina Nation would perform a ceremony for any sites impacted by the Project. It was clarified that the sites in question were outside of the Project boundary.
July 8, 2015	Letter	Benga provided a Project Environmental Assessment update.
July 9, 2015	Email	TU consultant provided maps and photos to assist with locating the two culturally-important sites and discussed their location relative to the Project site (over 500 m) with Tsuut'ina Nation.
July 15, 2015	Letter	TU consultant provided an update on the project's footprint and noted the deadline to submit the public TK/TU Report to Benga.
July 16, 2015	Email	Tsuut'ina submitted their public TK/TU Report to Benga.
July 29, 2015	Letter	Benga provided Project update and reference to funding opportunities for participation in the CEAA review process.
August 5, 2015	Meeting	Benga confirmed that the two culturally-important sites lay outside of the project footprint. The parties discussed upcoming field work and economic opportunities.
August 27, 2015	Email	Benga provided an information package to allow Tsuut'ina Nation an opportunity to provide feedback on Benga's understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 30, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Tsuut'ina Nation's format preference for receiving the report.

### H.7.2.2 Traditional Use and Traditional Knowledge Studies

Tsuut'ina Nation's TK/TU study of the Grassy Mountain area served as an instrument for Tsuut'ina Nation to record traditional knowledge and land uses, to identify potential effects of the proposed Project, and to give Tsuut'ina knowledge holders an opportunity to provide ideas for mitigation of potential effects. This study is a vital component of the consultation process because TK/TU studies enhance the quality of an environmental assessment in terms of confidence in results, avoiding potential impacts to Aboriginal groups, and incorporating knowledge of the local environment. The information gathered in the TK/TU research with Tsuut'ina Nation is the intellectual property of Tsuut'ina Nation and was not provided to Benga. The public report version of the Tsuut'ina Nation TK/TU study is a summary of outcomes of the fieldwork and information related to the Project that is approved by Tsuut'ina Nation for use in the EA process. The Tsuut'ina Nation TK/TU study is available in [Appendix 7b](#).

Initial planning for the TK/TU study began in April 2014 to develop work plans, schedules, and budgets to fund Tsuut'ina Nation's participation in the study. The study was completed in three phases – the first of which was a preliminary site tour completed in July, 2014. The preliminary site tour involved visiting five sites with representatives from Tsuut'ina Nation's consultation team as well as Elders to record data via video, photos, and GPS records. The objectives of the preliminary site tour were to collect initial TK/TU data and to identify next steps for the second phase of the study. The second phase of the TK/TU study built on findings from the first phase and involved ground-truthing field work which was completed over four days in August and October 2014. Over the course of all phases of the field work, Tsuut'ina Nation technicians and Elders identified and recorded 64 TK/TU sites.

### H.7.2.3 Economic Opportunities

Since the Project's initiation, Benga has, and will continue to work collaboratively with Tsuut'ina Nation to develop opportunities for Tsuut'ina Nation to derive direct and long-lasting benefits from the Project.

Tsuut'ina Nation has demonstrated interest in being involved in training and economic opportunities throughout the life of the Project and has participated in ongoing discussions with Benga and its consultants to discuss details as they develop. As part of these discussions, Benga provided to Tsuut'ina Nation a comprehensive list detailing the contracting opportunities that will be made available during mine construction and operations, and continues to engage in subsequent discussions of these opportunities. In 2014, Benga also submitted postings to Tsuut'ina Nation for field technician employment opportunities in support of the EIA process. Benga has further provided

detailed information on all direct and contracted employment positions that will be available during construction and operations.

In supporting the Traditional Use Study of the Project area, Benga provided funding for the services of independent Traditional Studies consultants, as well as funding for Tsuut'ina Nation to carry out the study. The Traditional Use Study involved a preliminary site visit, two field programs, interviews, and workshops were documented in a confidential report for Tsuut'ina Nation's exclusive use, as well as a public report documenting Tsuut'ina TK/TU of the Grassy Mountain Area.

In accordance with the consultation work plan and budget discussed with Tsuut'ina Nation, Benga offers funding in support of Tsuut'ina Nation's continued engagement on the Project's EIA process.

### **H.7.3 Background**

Tsuut'ina Nation people were nomadic and hunted in areas where they travelled including through neighboring tribes (Tsuut'ina Nation 2015). Tsuut'ina Nation hunting areas were traditionally concentrated on the plains and foothills of southwestern Alberta including areas between the Red Deer and Battle River (Tsuut'ina Nation 2013b, Hudson's Bay Company 1967). By the mid-nineteenth century, hunting occurred mainly along the Bow and Red rivers (Dempsey 2001). At Crowsnest Pass, large game animals were hunted through all seasons (Tsuut'ina Nation 2015). In the past, buffalo were available in Crowsnest Pass during winter as they concentrated in the bottom of the valley at Crowsnest River. Traditionally, Tsuut'ina Nation members hunted deer, elk, antelope, mountain sheep, mountain goat, porcupine, rabbit, and squirrel for sustenance as well as for spiritual and ceremonial purposes. They would also collect eggs and harvest ducks, geese, and swans (Dempsey 2001).

The Tsuut'ina Nation Consultation Team did not provide information about traditional trapping practices during ground-truthing activities. Based on information gathered through secondary sources, hunting for buffalo was a primary harvesting activity while fishing and beaver-trapping were less prominent (Parks Canada 2015). Tsuut'ina Nation people trapped coyotes, wolves, and foxes in late fall using dead-falls which is a type of trap (Dempsey 2001). The practice of trapping eagles was sacred and spiritual among Tsuut'ina Nation (Dempsey 2001). Other secondary sources indicate "[t]he Tsuut'ina did not trap as intensively as the Cree and other northern Aboriginal groups, but instead relied on the buffalo hunt" (Tsuut'ina Nation 2013b).

During the ground-truthing program, the Tsuut'ina Nation Consultation Team did not provide information about traditional fishing practices (Tsuut'ina Nation 2015). Secondary sources note that Tsuut'ina Nation engaged in fishing activities but not as much as hunting and that fish were generally not eaten (Dempsey 2001). There is no mention of fishing in Crowsnest Pass near the Project.

Traditionally, Tsuut'ina Nation people harvested and consumed a variety of plant species, including prairie turnips, serviceberries, blueberries, and chokeberries (Dempsey 2001). They also harvested lodge pole pine for constructing tipis. Tsuut'ina Nation people harvested and used alpine plants in Crowsnest Pass during all seasons (Tsuut'ina Nation 2015).

Historically, Tsuut'ina people traveled their territory to trade with neighboring groups and the Hudson's Bay Company as well as to undertake their seasonal round. Tsuut'ina Nation used Crowsnest Pass as a trading route to reach the Shuswap to the west. Tsuut'ina Nation would travel to Rocky Mountain House or Fort Edmonton to trade buffalo robes, dried meat and horses to the Hudson's Bay Company in the fall and in the spring (Dempsey 2001).

### **H.7.3.2 Current Use of Lands and Resources for Traditional Purposes**

This section provides a description of Tsuut'ina Nation's current use of lands and resources for traditional purposes. In addition, this section fulfills the requirements of the TOR by providing background information on traditional use.

#### **H.7.3.2.1 Hunting**

Due to prior mining in the Grassy Mountain area in the 1940s and 1950s, Tsuut'ina members have shifted their attention to areas that are less disturbed (Tsuut'ina Nation 2015). Today, Tsuut'ina still use the Crowsnest Pass area for hunting; however, the scale is reduced compared to past levels of hunting. As reported during the ground-truthing field work, species of importance to the Tsuut'ina Nation continue to be elk, moose, deer, sheep, buffalo, and eagles (Tsuut'ina Nation 2015).

#### **H.7.3.2.2 Trapping**

The Tsuut'ina Consultation Team did not provide information about current trapping practices. It is not anticipated that the Project will have adverse effects to trapping activities for Tsuut'ina Nation.

#### **H.7.3.2.3 Fishing**

During ground-truthing activities, Tsuut'ina field crew observed three different kinds of trout in Blairmore Creek (Tsuut'ina Nation 2015). No other fish were identified during the field activities and there was limited discussion about fish. Secondary sources indicate current Tsuut'ina fishing in the Bow River, Bragg Creek, and Fish Creek (Government of Alberta 2015) during the summer south of Calgary; however, none in the Crowsnest Pass or in the assessment area for the Project. Therefore it is anticipated that the Project would not impact fishing activities, resources or access for Tsuut'ina Nation.

#### H.7.3.2.4 Plant Gathering

During ground-truthing, Tsuut'ina field crew identified the following important plant species near the proposed Project: Berries, sweet pine, lodge pole pine, juniper, bear root, muskeg tea, trees, shrubs, lichen, fungus, willow, and poplar (Tsuut'ina Nation 2015). June is noted as a favourable month for harvesting alpine plants. The medicinal power of a plant is located in the root, flowers, leaves, and bark.

An abundance of traditional and medicinal plants were documented in and around the proposed Project (Tsuut'ina Nation 2015). Some of these are not found at lower elevations near Tsuut'ina Nation (southwest of Calgary). A few of these species of plants were harvested during ground-truthing as they were in season including: tree fungus, raspberry, bearberry, sweetgrass, sweet pine, and lingonberries (Tsuut'ina Nation 2015).

#### H.7.3.2.5 Trails and Travelways

Travel and access to the Crowsnest Pass by Tsuut'ina members has diminished since contact with Euro-Canadian settlers. Indian Act restrictions and increased development have resulted in a decline in regular access by Tsuut'ina members to areas in proximity of the Project where they used to exercise their interests in hunting and plant gathering.

### H.7.3.3 Aboriginal Health

The Tsuut'ina Nation Health Centre provides services and programs to Tsuut'ina Nation members. Environmental public health services are provided by Tsuut'ina Nation and Treaty 7 Management Corporation including safe drinking water testing which is a mandatory program (HCOM 2015).

Tsuut'ina Nation members continue to harvest resources for subsistence, medicinal, and ceremonial purposes. Resources used by Tsuut'ina Nation are located within the Project LSA (Tsuut'ina Nation 2015). Plant species include berries, sweet pine, lodge pole pine, juniper, bear root, muskeg tea, shrubs, lichen, fungus, willow, poplar, sweetgrass, lingonberries, and raspberry (Tsuut'ina Nation 2015). Animal species include elk, moose, deer, sheep, buffalo, and eagles (Tsuut'ina Nation 2015).

### H.7.3.4 Aboriginal Socio-Economic Conditions

Based on the National Household Survey, the participation rate for Tsuut'ina Nation members is 60.8%, the employment rate is 55.9%, and the unemployment rate is 8.8% (Statistics Canada 2011). There are several Tsuut'ina Nation businesses identified by the Treaty 7 Business Directory (2013) including small businesses and recreational services such as the Redwood Meadows Golf and Country Club.

### H.7.3.5 Aboriginal Physical and Cultural Heritage

During ground-truthing, Tsuut'ina field crew recorded several rock cairns used as a navigational tools situated along historic trails. According to secondary sources, "[t]he only dwelling used by the Sarcee was the tepee, usually made of 12-14 buffalo skins, with six more forming an interior lining. Like the Blackfoot, they used a four-pole foundation" (Dempsey 2001). More specific to the Crowsnest Pass, geophysical and landscape elements, such as Crowsnest Mountain, and surrounding areas also play important parts in Tsuut'ina religion and spirituality (Tsuut'ina Nation 2015).

During ground-truthing field work, there was limited discussion about current habitation and sacred areas in and around the Grassy Mountain Project. Tsuut'ina identified one vision quest site more than 500 m away from the Grassy Mountain Project boundary. According to secondary sources, Moose Mountain, approximately 60 km southwest of Calgary, is a culturally important area to the Tsuut'ina Nation with no indication in these sources of important areas specific to the Crowsnest Pass (Tsuut'ina Nation 2013b).

## H.7.4 Potential Effects and Mitigation Measures

### H.7.4.1 Current Use of Lands and Resources for Traditional Purposes

The assessment of potential effects of the Project on current use of lands and resources for traditional purposes focuses on the availability of lands and resources identified by Tsuut'ina Nation. Based on the background information described, there may be potential effects to hunting and plant gathering.

#### H.7.4.1.1 Hunting

Tsuut'ina Nation continues to hunt throughout their traditional territory. No specific hunting sites were identified by Tsuut'ina Nation in the Project LSA. Species that continue to be used for hunting are elk, moose, deer, sheep and eagles. Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife and land and resource use.

[Section E.9.3 – Wildlife](#) addresses potential effects on key species and habitat for wildlife species including moose, elk, bighorn sheep, bald eagle, and golden eagle. The majority of Project-related wildlife habitat loss or fragmentation will result from land clearing, surface mining, and construction of infrastructure and roads.

Potential direct and indirect effects from the Project that were assessed include:

Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- habitat fragmentation and loss of connectivity.

Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions (assessed in MEMS 2015b); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

[Section E.10.3](#) – Land and Resource Use addresses potential effects to land use activities related to hunting including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga. However, access for land use activities by Tsuut’ina Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure. Benga also will continue to consult with Tsuut’ina Nation, including discussion of options to facilitate access for land use activities where they may be affected by the Project.

Wildlife assessment methods contained in [CR #9, Section 3.2](#) included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The potential effects described in these sections could result in a change in identified hunted species and habitat, change in use or access to identified hunting locations, and change in preferred harvesting method. The recommendations made by Tsuut’ina Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.7.4-1](#).

<b>Potential Effects Identified by Tsuut’ina Nation</b>	<b>Recommended Mitigation Measures by Tsuut’ina Nation</b>	<b>Benga Mining Response</b>
The Project will limit Tsuut’ina Nation in their ability to hunt and practice traditional ways on the site (Tsuut’ina Nation 2015).	Tsuut’ina Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from	The ability to continue hunting practices is included in the assessment of potential effects to Tsuut’ina Nation. Proposed mitigation measures

	Tsuut'ina Nation will be considered through the EA process.	are described including the implementation of an Aboriginal Access Management Plan.
Health and wellness of wildlife, including birds, may be compromised indirect impacts such as increased animal-vehicle collisions (Tsuut'ina Nation 2015).		Habitat connectivity and movement is assessed in <a href="#">Section E.9.3</a> including potential impacts to wildlife from traffic. Proposed mitigation measures related to managing this potential effect include access management and enforcing speed limits along the main access road and utility corridors. In addition, wildlife crossing signs will be used to minimize wildlife-vehicle collisions.

Mitigation measures identified in Wildlife and Land and Resource Use apply to the effects described in this section. The pertinent mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor;
- access management within the Project footprint to reduce effects to wildlife; and
- wildlife and wildlife habitat reclamation.

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;
- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.7.4.1.2 Plant Gathering

The Project will intersect or be in proximity to habitat and species that are identified for plant gathering by Tsuut'ina Nation. These include berries, sweet pint, lodge pole pine, juniper, bear root, muskeg tea, shrubs, lichen, fungus, willow, poplar, sweetgrass, lingonberries, and raspberry. Plant gathering occurs mainly in June for alpine plants. Several VC sections are relevant to the assessment on plant gathering such as the assessment sections for Vegetation and Land and Resource Use.

[Section E.8.3](#) – Vegetation addresses potential effects on key species and habitat including the species identified by Tsuut’ina Nation. A summary of species identified by Tsuut’ina Nation for the Project with the occurrence of species within the LSA is available in [CR #8](#) Vegetation. Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project’s mine pit and associated waste rock disposal areas and infrastructure. In addition, air emissions released into the atmosphere during Project construction and operations may result in direct and indirect effects on vegetation arising from acid deposition.

The potential effects described in these sections could result in a change in identified plant species and habitat, change in use or access to identified plant gathering locations, and change in preferred harvesting method. Input provided by Tsuut’ina Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The input provided by Tsuut’ina Nation and their proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.3.5-5](#).

<b>Potential Effects Identified by Tsuut’ina Nation</b>	<b>Recommended Mitigation Measures by Tsuut’ina Nation</b>	<b>Benga Mining Response</b>
The Project will limit access to plants, and potentially damage plant health (Tsuut’ina Nation 2015).	TU sites must be logged so that they are protected and ceremonial and medicinal plants are harvested before being destroyed (Tsuut’ina Nation 2014a)	Benga will continue to work with Tsuut’ina Nation to identify other species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan.
	Tsuut’ina Nation expressed interest in harvesting lodge pole pine during the Spring on a regular and ongoing basis with financial support for doing so provided by Benga (Tsuut’ina Nation 2014c).	Benga will provide lodge pole pine cleared from the site to First Nations.

Mitigation measures identified throughout the application for Vegetation and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation ;

- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation;
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species;
- the provision of opportunities to identify and collect suitable lodge pole pine for TU ceremonies;
- where practicable, utilize locally collected seed to preserve the legacy of species and of place; and
- access control policy to facilitate access to the Project site by authorized users.

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations;
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### **H.7.4.2 Aboriginal Health**

The Project is located within the Tsuut'ina Nation traditional territory in proximity to areas currently used by Tsuut'ina Nation members.

The Human Health Risk Assessment includes an Aboriginal receptor type in the assessment and documents health concerns identified by Aboriginal groups regarding impacts of existing development and of the Project specifically on their traditional lifestyle. The Aboriginal receptor types consider the potential for local residential communities, Aboriginal residential areas, Aboriginal land use areas (such as hunting and plant gathering) and recreational areas.

[Section E.12.3](#) – Human Health assesses potential effects to health including acute inhalation risks, chronic inhalation risks, chronic multimedia exposure risks, and a wildlife risk assessment. In order for Aboriginal health receptors to be exposed to emissions from the Project, they must come into contact with chemicals of potential concern (COPCs). The potential exposure pathways related to Aboriginal groups are summarized in [CR# 12, Table 5.1.4-1](#) and include direct contact with COPCs

through air inhalation, soil, ingestion of local vegetation, ingestion of wildlife, and contact with surface water or fish ingestion. The results of the human health risk assessment indicate risk quotients within the Mine Permit Boundary which will be inaccessible during construction and operation. Therefore, it is predicted that there will be no effects of the Project on Aboriginal health.

Input regarding potential effects to Aboriginal health and mitigation measures has not been provided by Tsuut'ina Nation during consultation. Benga Mining will continue to work with Tsuut'ina Nation and will consider mitigation measures proposed by Tsuut'ina Nation if identified through the EA process.

Mitigation measures identified in Human Health apply to the effects described in this section. The results of the HHRA suggest that short-term predicted risks to human health will be limited to the LSA and within the project footprint. None of the remaining human receptor locations are predicted to have unacceptable levels of risk. Assuming public access within the Mine Permit is restricted and the mitigation measures assumed by the other disciplines are implemented ([Section A.10](#)); there is no need for further mitigation of emissions based on the results of the HHRA.

#### **H.7.4.3 Aboriginal Socio-Economic Conditions**

The Project will involve the construction of facilities within a mine permit boundary that is 45.16 km<sup>2</sup> of lands within the traditional territory of Tsuut'ina Nation. No direct impacts of the Project are anticipated to Tsuut'ina Nation's socio-economic conditions. Further information regarding benefits of the Project is described in [Section E.11](#) Socio-Economics.

The Project and associated project activities is not expected to have an adverse effects on Tsuut'ina Nation commercial activity, forestry and logging operations, and recreation use. Input regarding potential effects to socio-economic conditions and mitigation measures has not been provided by Tsuut'ina Nation during consultation. Benga Mining will continue to work with Tsuut'ina Nation and will consider mitigation measures proposed by Tsuut'ina Nation if identified through the EA process.

#### **H.7.4.4 Aboriginal Physical and Cultural Heritage**

The Project will intersect or be in proximity to physical and cultural heritage sites. Tsuut'ina field crew recorded several rock cairns however specific locations were not identified. Several VC sections are relevant to the assessment on Aboriginal physical and cultural heritage sites such as the assessment sections for land and resource use and historical resources.

Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or

esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure or object. There are 32 recorded archaeological or historic era resources located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, there are 10 that are overlapping the Project footprint. Tsuut’ina Nation identified rock cairns and culturally important sites in the Project area however specific locations have not been provided. Direct impacts to historical resources are anticipated for sites within the Project footprint as a result of Project construction.

The potential effects described in these sections could result in a change in access to physical and cultural heritage features, disturbance to physical and cultural heritage features, and change in cultural value or importance. Input provided by Tsuut’ina Nation during consultation is considered in the identification of potential effects and proposed mitigation measures. The recommendations made by Tsuut’ina Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.7.4-1](#).

<b>Potential Effects Identified by Tsuut’ina Nation</b>	<b>Recommended Mitigation Measures by Tsuut’ina Nation</b>	<b>Benga Mining Response</b>
Inadvertent impact to sacred sites (Tsuut’ina Nation 2015).	To prevent this Tsuut’ina Nation recommends a 100 m buffer around all sacred sites including at Waypoint 03 (Tsuut’ina Nation 2015).	Sites of cultural and sacred importance within 100 m of project activity that are identified by Tsuut’ina Nation will be flagged prior to construction. The Tsuut’ina Nation TK/TU Study did not identify the location of Waypoint 03. Benga will continue to work with Tsuut’ina Nation to identify the location of sacred sites and discuss ways to mitigate potential effects.
	Expressed desire for continuing to carry out ceremonies and to respect ceremonies held in the past (Tsuut’ina Nation 2015).	Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project. Benga will continue to work with Tsuut’ina Nation through the life of the Project and looks forward to continued discussion of how Tsuut’ina Nation’s traditional use in the area can continue.

Mitigation measures identified throughout the application for Land and Resource Use and Historical Resources apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users;
- if avoidance of any unnamed pre-contact period sites is not possible based on size, location, and complexity, a mitigation excavation will be conducted in advance of Project development;
- if avoidance of any structures is not possible, mitigation will include a 20 m<sup>2</sup> excavation plot with full documentation of the remaining building structures including mapping and related detailed recordings; and
- a mitigation plan will be developed and implemented for mitigation excavation including sites located by the south disposal area land alteration activities.

Additional measures are recommended to avoid or minimize potential effects to Aboriginal physical and cultural heritage. These are outlined below:

- consultation will continue to further identify sites or cultural and sacred importance that warrant site-specific or situational mitigation (sites within 100 m of project activity including additional sites identified by Tsuut'ina Nation will be flagged prior to construction);
- consultation will include sharing information about construction timing;
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction; and
- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate land use locations.

## **H.7.5 Characterization of Residual Effects**

### **H.7.5.1 Current Use of Lands and Resources for Traditional Purposes**

The assessment of residual effects of the Project on current use of lands and resources for traditional purposes focuses on the potential effects remaining after mitigation measures are implemented. Based on the potential effects and mitigation measures described, there may be residual effects to current use for hunting and plant gathering.

#### **H.7.5.1.1 Hunting**

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9 Wildlife](#) and [Section E.10 Land and Resource Use](#) and input provided by Tsuut'ina Nation. [Section E9.3 Wildlife](#) characterizes residual effects to wildlife as local to regional extent,

continuous in frequency, reversible, low in magnitude, and long-term in duration. The Project will affect the 10 wildlife VCs including moose, elk, bear and special status wildlife species such as mountain goat and eagles through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#). Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be insignificant for all assessed VCs. ([CR #9, Table 5.3-26](#)).

[Section E.10.3](#) – Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species hunted by Tsuut'ina Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to hunting are characterized as:

- low magnitude;
- local geographic extent;
- short-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### H.7.5.1.2 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section E.8.3](#) Vegetation, [Section E.10.3](#) Land and Resource Use, and input provided by Tsuut'ina Nation. Removal of ecosite phases and ELCs that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

**Section E.8.3** – Vegetation characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to TEK species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

**Section E.10.3** – Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species used for plant gathering by Tsuut'ina Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns. As a result, residual effects to plant gathering are characterized as:

- moderate magnitude;
- local geographic extent;
- long-term duration;
- continuous frequency;
- reversible; and
- resilient in ecological and social context.

#### **H.7.5.2 Aboriginal Health**

The characterization of residual effects to Aboriginal health includes consideration of residual effects described in **Section E.12** Human Health and input provided by Tsuut'ina Nation. The Project is not expected to have measurable effects on Aboriginal health. As there are no predicted effects to Aboriginal receptors and no mitigation measures have been proposed, it is not anticipated that there will be residual effects of the Project on Aboriginal health.

### H.7.5.3 Aboriginal Physical and Cultural Heritage

The characterization of residual effects to Aboriginal physical and cultural heritage includes consideration of residual effects described in Section E.10 Land and Resource Use, and input provided by Tsuut'ina Nation.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

The Project could result in measurable effects on sacred, gathering, and habitation sites used by Tsuut'ina Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed. As a result, residual effects to sacred, gathering, and habitation sites are characterized as:

- moderate magnitude;
- local geographic extent;
- long term duration;
- regular frequency;
- not reversible; and
- sensitive in ecological and social context.

### H.7.5.4 Summary of Residual Effects Characterization

Valued Components	Residual Effects Characterization					
	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Ecological and Social Context
Hunting	Low	Local	Short-term	Continuous	Reversible	Resilient
Plant Gathering	Moderate	Local	Long-term	Continuous	Reversible	Resilient
Aboriginal Physical and Cultural	Moderate	Local	Long-term	Regular	Not reversible	Sensitive

**Table H.7.5-1 Summary of Residual Effects to Tsuut’ina Nation**

Valued Components	Residual Effects Characterization					
	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Ecological and Social Context
Heritage						

**Magnitude** Low – a change in the ability to exercise an Aboriginal Interest but within normal annual variability. Will not affect the ability to exercise an Aboriginal Interest in the RSA.

Moderate – a change in the ability to exercise an Aboriginal Interest outside a normal annual variability. Will not affect the ability to exercise the Aboriginal Interest in the RSA.

**Duration** Short term – limited to the construction phase; Long term – beyond the project lifespan

**Ecological and Social Extent** Sensitive – the Aboriginal Interest is sensitive or has low resiliency to disruption; Resilient – the Aboriginal Interest is not sensitive or has high resiliency to disruption.

## H.7.6 Cumulative Effects

### H.7.6.1 Potential Contribution to Cumulative Effects

The cumulative effects assessment considers cumulative environmental effects that are likely to result from the Project in combination with the environmental effects of other physical activities and have been or will be carried out. This subsection provides a description of the contribution of the Project to cumulative effects that may have effects on the Aboriginal or Treaty Rights of Tsuut’ina Nation.

The scientific rationale for the selection of spatial boundaries for each of the disciplines, and the discipline specific LSA and RSA spatial and temporal scales for each of the disciplines are provided in detail in [Section D](#). These boundaries have been defined as lasting approximately 24 years, concomitant with the life of the Project. Segments of the temporal boundaries include the duration of the construction, operation and abandonment phases of the Project.

The Local Study Area (LSA) is established based on the zone of the Project influence, beyond which the potential environmental, cultural and socio-economic effects of the Project are expected to be non-detectable. The Regional Study Area (RSA) is established based on the extent to which it would be expected that the interaction of residual effects of the Project with the residual effects of other projects would be detectable. It is also the area in which socio economic effects are expected to be detectable. VC-specific boundaries are established for both the LSA, for Project-specific effects, and the RSA, for cumulative effects. Effects on those VCs that have impacts more directly tied to the footprint of the Project are also assessed at the spatial scale of the Project footprint.

### H.7.6.2 Other Projects and Activities

Existing, approved and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) and are shown relative to Tsuut'ina Nation Traditional Territory on [Figure H.7.6-1](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within the largest RSA (i.e., wildlife grizzly bear RSA). As can be seen on [Figure D.2.4-3](#), not all Projects are contained within the study areas of each of the respective disciplines.

Most of the resource development currently occurring within the GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to 2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the GBRSA will be associated with forestry activities at Year 14 and Year 27.

### H.7.6.3 Potential for Cumulative Effects and Impacts to Aboriginal or Treaty Rights and Interests

#### H.7.6.3.1 Cumulative Effects on Current Use of Land and Resources for Traditional Purposes

As described in this section, the contribution of the Project's residual effects are unlikely to cause a change in cumulative effects that could affect the viability or sustainability of traditional use by Aboriginal people of lands and resources within the RSA. Details on mitigation measures can be found in the references for each valued component listed below.

#### H.7.6.3.2 Cumulative Effects on Wildlife and Plant Harvesting

As described in [Section E.9 Wildlife](#), the incremental effects of the Project to cumulative effects on wildlife habitat availability, fragmentation/connectivity, mortality risk, and abundance will be small and no significant cumulative effects to wildlife population persistence are predicted. Therefore, no cumulative effects from the Project are predicted to impact Aboriginal or Treaty rights or interests related to wildlife populations. [CR #9, Table 6.4-1](#) contains a summary of residual cumulative effects ratings.

As described in detail in [Section E.8.4 Vegetation](#), while the Project will result in some loss of traditional use vegetation within the LSA these losses represent very small proportions of the total amount of these vegetation communities within the RSA. Neither the project-specific residual effects, nor the Project's residual effects acting cumulatively with other projects would threaten the regional sustainability of traditional use plants or other vegetation resources, wetlands, biodiversity or fragmentation identified in this assessment.

#### H.7.6.3.3 Cumulative Effects on Traditional Use Locations, Access Routes

Approximately one half of the Project footprint is located on privately held land. Combined with other private land ownership in the LSA and challenging terrain, it is probable that the Project's contribution to cumulative residual effects on traditional use locations and access routes will not be significant. However, Benga has offered to work with affected Aboriginal groups on an Access Management Plan to both control access to authorized persons, and to facilitate access to traditional use locations where feasible.

#### H.7.6.3.4 Cumulative Effects on Water, Aquatic Resources, Soil, Terrain and Vegetation

##### Hydrogeology

Groundwater effects associated with surface facilities, mining operation, mine spoil and pit dewatering have low to moderate impact ratings and are all local in extent within the LSA. No other planned or reasonably foreseeable projects within the RSA are expected to act in cumulative manner with these effects; subsequently, a cumulative effects assessment is not required, and was not completed.

##### Water Quality and Aquatic Resources

There are no other planned or reasonably foreseeable projects within the RSA that are expected to act in cumulative manner with identified Water Quality or Aquatic Resources effects so a cumulative effects assessment is not required, and was not completed.

##### Soil and Terrain

There are no anticipated significant cumulative effects on any of the soil and terrain valued components: soil quality, soil biodiversity and ecological integrity, alteration of terrain, land capability effects.

##### Vegetation

Cumulative impacts were assessed for terrestrial vegetation, wetlands, and biodiversity and fragmentation. With mitigation, cumulative impacts to all three VCs were assessed as being insignificant.

#### H.7.6.3.5 Cumulative Effects on Human Health

As the Air Quality Assessment did not identify any planned projects in the area, a cumulative effects assessment was not required, and not completed, for the current assessment. At the local scale, the emissions from the Project are not predicted to cause significant adverse effects to human health at all

human receptor locations accessible to the general public. Assessed health risks at the local scale included acute inhalation, chronic inhalation, and chronic multimedia exposure.

#### H.7.6.3.6 Cumulative Effects on Air Quality, Noise, and Socio-economic Conditions

##### Air Quality

No significant cumulative effects are anticipated for any chemicals of potential concern assessed in the Air Quality assessment. Overall, residual air quality effects related to the Project were considered to be not significant.

##### Noise

The noise modelling results indicate that the Project noise levels during the night-time and day-time, with the addition of the average ambient sound levels, will be below the permissible sound levels for all residential and theoretical 1,500 m receptors. Therefore, no cumulative effects on noise are expected.

##### Socio-Economic

The Project will create positive economic and fiscal effects on the socio-economic regional study area (RSA) and of affected Aboriginal Groups. The Project is estimated to create:

- 910 person years of on- and off-site employment related to the construction of the plant, facilities and infrastructure for the mine between 2017 and 2019; and
- 385 long-term operations positions to be hired by 2020.

Benga has provided detailed information on Project-related economic opportunities to all affected First Nations and is actively developing plans with them to maximize the successful uptake of the available opportunities.

The Project will contribute an estimated \$140 million (NPV 2015) and \$210 million (NPV 2015) to provincial and federal corporate income taxes respectively as well as approximately \$195 million (NPV 2015) in provincial royalties over the 23-year operating life of the project, assuming a \$140/tonne average real price of coal.

#### **H.7.7 Follow-up and Monitoring**

Monitoring programs will be implemented to verify the effectiveness of mitigation measures. Tsuut'ina Nation expressed interest in participating in monitoring programs ([Table H.7.7-1](#)). Elements of the follow-up and monitoring program includes:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

<b>Table H.7.7-1 Tsuut’ina Nation Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Aboriginal Socio-Economic Conditions	Employment opportunities for Tsuut’ina in all phases of the Project life cycle, particularly for Tsuut’ina youth (Tsuut’ina Nation 2015).	Benga and Tsuut’ina Nation are committed and working together to provide employment opportunities for Tsuut’ina Nation members.
Construction activities	Concern about the possible use of explosives (Tsuut’ina Nation 2015).	A description of construction activities including blasting procedures is provided in <a href="#">Section C</a> . The potential effects on the environment as a result of blasting activities including to wildlife are considered throughout the EIA. Benga has proposed mitigation measures to reduce or avoid potential effects of blasting on the environment.
Follow-up and Monitoring	To ensure continued protection of the Project area, Benga should provide adequate funding for Tsuut’ina Nation members to conduct annual environmental monitoring (Tsuut’ina Nation 2015).	Benga will provide annual updates on environmental monitoring and ongoing remediation resulting from legacy or historical mining activities. Reporting is required by Statutory Authorities and Benga, to the extent permitted by regulators, will facilitate engagement with Tsuut’ina when reports are filed.
Follow-up and Monitoring	To ensure that Tsuut’ina Nation has the capacity to provide environmental monitoring services, Benga should provide adequate funding for 12 community members to obtain training and certification (Tsuut’ina Nation 2015).	Benga will employ a qualified environmental management team at all times during the operation and in post closure/remediation stages. The work undertaken by this management team will be discussed and provided to Tsuut’ina.

<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Follow-up and Monitoring	To provide for Tsuut'ina Nation's continued involvement on the project Benga should provide adequate funding for an annual project review for the life of the project (Tsuut'ina Nation 2015).	Benga is committed to ongoing consultation with Tsuut'ina Nation through the life of the Project. Follow-up and monitoring programs are discussed throughout the EIA. Benga looks forward to further discussion with Tsuut'ina Nation regarding potential additions to proposed activities.
Soils and Terrain	Concern that mining activity could cause instability and landslides (Tsuut'ina 2014b).	Geotechnical stability is addressed in <a href="#">Section B</a> .
Water Quality	The waterbodies adjacent to the project site – Blairmore Creek and Gold Creek, in particular – should be protected and their water quality monitored (Tsuut'ina Nation 2015).	Effects to surrounding watercourses are provided in <a href="#">Section E.6.3</a>
Water Quality	Concern about sources of water and water management. Want to be involved in discussion about determining key aquatic indicators to assess project impacts.	Benga looks forward to ongoing discussion with Tsuut'ina Nation regarding the EIA and welcomes any further comments regarding the assessment to water quality ( <a href="#">Section H.5</a> ).

## **H.8 ASSESSMENT OF POTENTIAL EFFECTS – KTUNAXA NATION**

### **H.8.1 Introduction**

Ktunaxa Nation (or Kootenai, Kutenai, or Kootenay) is represented by the Ktunaxa Nation Council (KNC), also known as the Ktunaxa Kinbasket Treaty Council, which offers programs and services to promote traditional knowledge, language and culture, community and social development and wellness, land and resource development, economic investment, and self-government (Ktunaxa Nation 2015). In addition, the KNC is responsible for negotiating a treaty with the governments of Canada and British Columbia. Ktunaxa Nation is currently in stage 4 of negotiating an agreement-in-principle with the province of British Columbia (Government of British Columbia 2015). Ktunaxa Nation have a balanced vision of development with values in protecting the environment while encouraging economic growth (Teck 2011).

The Ktunaxa Nation traditional territory is approximately 70,000 km<sup>2</sup> and extends into the United States. The Ktunaxa Nation recognizes two sub-groups--the Upper Kootenay and the Lower Kootenay. Each sub-group is understood to have specialized traditional knowledge in their respective regions (Parlee 2011). In Canada, KNC represents four member bands – St. Mary's Indian

Band, Lower Kootenay Indian Band, Tobacco Plains Indian Band, and Akisq'nuk First Nation (Figure H.8.1-1). The distance of Ktunaxa Nation reserves to the Project are summarized in Table H.8.1-1.

<b>Ktunaxa Nation Member Bands</b>	<b>Reserve/s</b>	<b>Distance to the Project LSA (km)</b>	<b>Distance to the Project RSA (km)</b>
St. Mary's Indian Band	Bummers Flat 6	86.53	61.53
	Cassimayooks 5	79.66	54.66
	Isidore's Ranch 4	80.69	55.70
	Kootenay 1	83.62	58.62
	St. Mary's 1A	92.35	67.35
Lower Kootenay Indian Band	Creston 1	160.28	135.28
	Lower Kootenay 1A	161.86	136.87
	Lower Kootenay 1B	161.00	136.00
	Lower Kootenay 1C	162.07	137.08
	Lower Kootenay 2	160.90	135.90
	Lower Kootenay 3	161.70	136.70
	Lower Kootenay 5	160.59	135.59
	Lower Kootenay No. 4	161.97	136.98
Tobacco Plains Indian Band	St. Mary's 1A	92.35	67.35
	Tobacco Plains 2	73.47	48.47
Akisq'nuk First Nation	Columbia Lake 3	122.52	97.52
	St. Mary's 1A	92.35	67.35

As of August 2015, the total registered population for Ktunaxa Nation is 1,090 (AANDC 2015). The number of Ktunaxa Nation members who live on their own reserve is 471 (AANDC 2015). The number of Ktunaxa Nation members living on Akisq'nuk First Nation reserves is 94, St. Mary's Indian Band is 191, Lower Kootenay Indian Band is 107, and Tobacco Plains Indian Band is 79 (AANDC

2015). Ktunaxa Nation member bands are each governed by an elected Chief and Council as summarized in [Table H.8.1-2](#)

<b>Table H.8.1-2 Ktunaxa Nation Elected Leadership</b>				
<b>Ktunaxa Nation Member Band</b>	<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
St. Mary's Indian Band	Chief	Jim Whitehead	11/02/2012	11/01/2016
	Councillor	Richard Williams	11/02/2012	11/01/2016
	Councillor	Codie Andrew	01/21/2013	11/01/2016
	Councillor	Vickie Thomas	11/06/2014	11/05/2018
	Councillor	Corrie Walkley	11/06/2014	11/05/2018
Lower Kootenay Indian Band	Chief	Jason M. Louie	01/01/2015	12/31/2018
	Councillor	Mary Basil	1/01/2013	12/31/2016
	Councillor	Jared Basil	12/15/2014	12/31/2016
	Councillor	Destyni Basil	01/01/2015	12/31/2018
	Councillor	Sandra Luke	01/01/2015	12/31/2018
Tobacco Plains Indian Band	Chief	Mary Mahseelah	08/01/2013	07/31/2017
	Councillor	Corey Letcher	08/01/2013	07/31/2017
	Councillor	Robert Luke	08/01/2013	07/31/2017
	Councillor	Daniel Gravelle	08/01/2013	07/31/2017
	Councillor	Jason Gravelle	08/01/2013	07/31/2017
Akisq'nuk First Nation	Chief	Lorne Shovar	06/19/2014	06/18/2018
	Councillor	Lucille Shovar	07/18/2012	07/17/2016
	Councillor	Donald Sam	05/20/2014	07/17/2016
	Councillor	Allan Nicholas	06/19/2014	06/18/2018
	Councillor	Rosemary Phillips	06/19/2014	06/18/2018

Ktunaxa language is distinct from other Aboriginal languages and it is characterized as an endangered language (First Peoples' Heritage, Language and Culture Council [FPHLCC] 2010). Information reported by the First Peoples' Heritage, Language, and Culture Council for a Ktunaxa language assessment indicate that there are approximately 29 fluent speakers, 110 who somewhat understand the language, and 238 who are learning the language (FPHLCC 2010).

Data from the 2011 National Household Survey indicate that Tobacco Plains Indian Band has a participation rate of 70%, an employment rate of 50%, and an unemployment rate of 28.6%. Akisq'nuk First Nation has a participation rate of 62.5%, an employment rate of 54.2%, and an unemployment rate of 13.3%. St. Mary's Indian Band has a participation rate of 81.2%, an employment rate of 56.2%, and an unemployment rate of 30.8%. Lower Kootenay Indian Band has a participation rate of 50%, an employment rate of 31.2%, and an unemployment rate of 25%.

The majority of Ktunaxa Nation citizens originate from the Ktunaxa or Kootenai culture. However, the Nation also contains descendants of the Kinbasket family, a small group of Shuswap (Secwepemc) people who journeyed east from Shuswap territory in the mid-1800s into Ktunaxa territory looking for a permanent home (Ktunaxa Nation 2015). Ktunaxa Nation traditionally occupied areas east and west of the Rocky Mountains and developed relationships with neighboring Aboriginal groups including Piikani Nation, Stoney Nakoda Nation, and Shuswap Indian Band (Teck 2011). The Crowsnest Pass area was traditionally occupied by Ktunaxa families whose descendants are now members of Tobacco Plains Indian Band (Teck 2011).

## **H.8.2 Aboriginal Consultation**

### **H.8.2.1 Consultation Summary**

Benga contacted the Ktunaxa Nation by telephone in December 2014 to introduce the Project and asked if Ktunaxa would like to engage to learn more. Benga emailed project information in early January 2015. In reply, Ktunaxa Nation advised that Benga should contact them if/when CEAA scopes Ktunaxa Nation into a federal assessment.

CEAA published the Project's Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Ktunaxa Nation. Benga promptly initiated consultation with Ktunaxa Nation with a letter offering information on the Project to assist Benga in understanding Ktunaxa Nation's uses in the Project area and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Ktunaxa Nation. In August 2015, Benga met with Ktunaxa Nation to provide an overview of the Project, distribute hard copies of the regulatory documents that had been sent to-date, and review consultation that had taken place with Alberta First Nations. Ktunaxa Nation indicated that continued engagement on the Project would be discussed during their Land and Resource Council’s next scheduled meeting on September 9, 2015. In the interim, Benga provided electronic copies of the information package seeking feedback on Benga’s understanding of Ktunaxa’s Aboriginal Interests.

A chronology of key consultation activities with Ktunaxa Nation can be found in [Table H.8.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
December 14, 2014	Teleconference	Benga contacted Ktunaxa Nation by phone to introduce the project.
January 6, 2015	Email / Teleconference.	Benga emailed project information. In reply, Ktunaxa Nation advised that Benga should contact them if/when CEAA scopes Ktunaxa Nation into a federal assessment.
July 8, 2015	Letter	Benga provided information on the Project and requesting to meet to further understand Ktunaxa Nation’s uses in the Project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Ktunaxa Nation for the EIA process on the Project, and referencing participation funding opportunities.
August 11, 2015	Meeting	Benga described the Project, consultation undertaken to date, timelines for the Alberta and federal EIA, and potential effects identified to date.
August 27, 2015	Email	Benga provided an information package to allow Ktunaxa Nation an opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
August 31, 2015	Email	In response to the information package that Benga submitted on August 27, 2015, Ktunaxa noted that a decision had not yet been made on whether Ktunaxa Nation would engage on the project but the issue would likely be decided in early September. Further Ktunaxa Nation indicated that it would be possible to provide information according to the proposed schedule, and sought to confirm that information from Ktunaxa Nation could be added to the application at a later date.

**Table H.8.2-1 Chronology of Key Consultation Activities with Ktunaxa Nation**

Date	Method of Communication	Topic of Communication
September 2, 2015	Email	Benga noted that it will require information by September 10, 2015 in order to be included in the Application. Benga noted its commitment to considering new information during the Panel review process if such information is received after the Application is submitted to the Panel.
September 30, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Ktunaxa Nation’s format preference for receiving the report. Ktunaxa Nation responded on October 5 <sup>th</sup> with their preference.

**H.8.2.2 Traditional Use and Traditional Knowledge Studies**

Traditional Use studies were not conducted with the Aboriginal groups added to the scope of consultation requirements at the ‘less affected’ level.

**H.8.3 Background**

Wildlife species that are reported to have been hunted traditionally by Ktunaxa people include grizzly bear, black bear, mule deer, whitetail deer, elk, moose, caribou, beaver, wolverine, marten, muskrat, weasel, duck, American coot, and Canada geese (Keefer 2002). In addition, mountain sheep, muskrat, gopher, and Spruce grouse were sustenance species for Ktunaxa people (Firelight Group 2011). Hunting took place in spring for deer, elk, and bighorn sheep (Arrow Archaeology Ltd 2014). Bison were hunted along the sheltered eastern slopes of the Rockies in the winter season through mountain passes including Tornado Pass and Crowsnest Pass (Firelight Group 2011; Arrow Archaeology Ltd. 2014). Ethnographic sources also document year round bison hunting in Crowsnest Pass (Turney-High 1941). Bison populations were diminished by 1875 to a few hundred (Firelight Group 2011, BC MOE 2000). Ktunaxa Nation knowledge holders and land users identified culturally important food species such as elk, deer, caribou, bighorn sheep, goat, caribou, cougar, wolverine, wolf, and grizzly bear for the Line Creek Operations Phase II Project located approximately 20 km northeast of Sparwood (Firelight Group 2011). Hunting remains important to Ktunaxa Nation for subsistence as well as guide-outfitting activities (Firelight Group 2011). Ktunaxa Nation has not identified current use in the Project assessment area (see [Figure H.8.3-1](#)).

Ktunaxa Nation used various methods to trap depending on the species. Traditionally for harvesting wild game, Ktunaxa hunters would drive deer into corrals which could be easily constructed and relocated as needed (Lower Kootenay Band 2015). Waterfowl was harvested by constructing large traps around waterbodies such as ponds. Hunters would use their canoe paddles to disturb

waterfowl from the bulrushes and into nets supported on poles of up to 30 feet in height (Lower Kootenay Band 2015).

Historically, the Ktunaxa Nation people fished for kokanee, chinook, rainbow trout, bull trout, mountain whitefish, sturgeon, and burbot (Lower Kootenay Band 2015). Northern pike-minnow, sucker, and sturgeon were also important fish species (Keefer 2002). Historical fishing locations identified in the literature (Firelight Group 2011) are located outside of the Project assessment area. Fish and fish habitat are important to Ktunaxa people for ecological, cultural, and commercial uses (Firelight Group 2011). Industrial development has resulted in reduced availability of anadromous salmon – a loss of salmon from the upper Columbia has been documented as a result of the Grand Coulee Dam (Firelight Group 2011). Important fish species were identified by Ktunaxa Nation land users and knowledge holders for the Line Creek Phase II Project such as westslope cutthroat trout, mountain whitefish, and bull trout (Firelight Group 2011). Ktunaxa Nation has not identified current use in the Project area for fishing.

Plants including berries and roots were used by Ktunaxa people for sustenance, medicinal purposes, crafting tools, camps, and canoes (Lower Kootenay Band 2015). Canoes were constructed with Western White pine, birch, cedar, maple sap, or pitch from coniferous trees (Lower Kootenay Band 2015). Plant species identified as traditionally important to Ktunaxa Nation for the Mica Unit 5 and Mica Unit 6 Project (BC Hydro 2009) include Western Red Cedar, Black Cottonwood, Pacific Yew, Beaked hazelnut, Highbush and lowbush cranberry, Devil's Club, Oregon Grape, Red Osier Dogwood, Currents and Gooseberries, and Cow Parsnip (Keefer 2002). Roots such as bitterroot, camas, nodding onion, biscuit root, balsamroot, yampa, tiger lily, yellow avalanche lily, mariposa lily, bugleweed, spring beauty, wild thistle, greens (e.g., sprouts, stems, leaves), prickly pear, lichen, cambium, lodge pole pine, ponderosa pine, and cottonwood were gathered for food (Firelight Group 2011). Choke-cherry bark was used as a medicine and for crafting wooden tools (Keefer and McCoy 1999). Kinnikinnick, also known as bearberry, produces berries that were fried and leaves used in a medicinal tea (Arrow Archaeology Ltd. 2014). Culturally and economically important plants were identified for the Line Creek Phase II Project including huckleberry, shaggy mane mushroom, and ?ayut – a culturally important plant in the genus *Ligusticum* (Firelight Group 2011). Ktunaxa Nation has not identified current use in the Project area for plant gathering.

Trails and travelways were located on land and by water for accessing resource harvesting areas, seasonal migration, as well as for trade with neighboring Aboriginal groups (Paskin 2009). The Crowsnest Pass area held a primary use for Ktunaxa Nation as a travel corridor in the mountain valleys to the Plains of what is now southern Alberta (Arrow Archaeology Ltd. 2014). Ktunaxa Nation continues to access the upper Elk and Fording Valleys for trails and transportation that are associated with resource harvesting, cultural practices, and camp sites (Firelight Group 2011). Site-

specific values such as camp sites or harvesting sites are typically associated with many cultural and economic practices that are connected by trails on the land, passes, and water routes (Firelight Group 2011). Ktunaxa Nation has not identified trails and travelways that are currently used in the Project area for traditional purposes.

Ktunaxa Nation creation stories and oral histories reference locations throughout their traditional territory (as shown in [Figure H.8.1-1](#)) including Crowsnest Mountain, the headwaters of the Columbia River, the Kootenay River, Arrow Lakes, and the location where Missoula, Montana now sits (Arrow Archaeology Ltd. 2014). Crowsnest Pass is known to have been a habitation site for hunting and harvesting particularly in the fall (Arrow Archaeology Ltd. 2014).

Ktunaxa Nation is within the Columbia River Watershed which does not overlap the Project. Ktunaxa Nation member bands are serviced by community drinking water supply and distribution systems at Columbia Lake No. 3, Tobacco Plains No. 2, Kootenay No. 1, and Creston No. 1 (AANDC 2013). Water is considered to be sacred to Ktunaxa Nation people because it is part of all living things (Teck 2011). The Tobacco Plains Indian Band maintains two groundwater wells and participates in the Columbia Basin Water Smart Initiative (2014). St. Mary’s Indian Band maintains a small water-system and is planning the construction of a new reservoir system and a retrofit to the existing pump house.

**H.8.4 Potential Effects and Mitigation Measures**

The Ktunaxa Nation traditional territory overlaps the Project RSA by 417.75 km<sup>2</sup>. There is no overlap with the LSA and there are no specific areas of use by Ktunaxa Nation that are interacting with or in proximity to Project activities (see [Figure H.8.3-1](#)).

There are no Ktunaxa Nation hunting grounds, trapping areas, fishing areas, plant gathering areas, or physical and cultural heritage sites identified in the Project LSA. The Project is not anticipated to effect Ktunaxa Nation current use, Aboriginal health, Aboriginal socio-economic conditions, and Aboriginal physical and cultural heritage.

**H.8.5 Aboriginal Issues and Concerns**

<b>Table H.8.5-1 Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Consultation Process	The timelines provided in the Environmental Assessment (EA) consultation process are insufficient to allow for Ktunaxa to provide meaningful	Benga appreciates the feedback from Ktunaxa Nation. Benga is committed to meaningful consultation including providing sufficient time to review and submit comments. Benga is open

Category	Description of Issue/Concern	Response
	feedback (Ktunaxa Nation 2015a).	to discussing the project schedule with Ktunaxa Nation and working together to meet project timelines.
Project Location	Concerned if the Project is located within the Elk Valley watershed as water and selenium are areas of interest to Ktunaxa Nation (Ktunaxa Nation 2015b)	Benga confirms that the Project is located outside of the Elk Valley watershed. Potential effects associated with selenium are assessed in <a href="#">Section C.5</a> .
Consultation Process	Concern that the Canadian Environmental Assessment Agency sends project information and notifications to individuals in the various Ktunaxa member (First Nation) offices and not to the Lands & Resources department. As a result, they receive notifications from CEAA late, or possibly not at all (2015b).	Benga offered to send information to the Ktunaxa Nation Lands & Resources Department to facilitate timely information sharing.

## H.9 ASSESSMENT OF POTENTIAL EFFECTS – SAMSON CREE NATION

### H.9.1 Introduction

Samson Cree Nation is a member Nation of Maskwacis Cree Nation and is a signatory to Treaty 6 in northern Alberta. The Samson Cree Nation asserted traditional territory extends beyond the boundary of Treaty 6 as shown in [Figure H.9.1-1](#). The main Samson Cree Nation reserves are Samson 137 and Samson 137A. Pigeon Lake 138A is shared with the other Maskwacis Cree Nation groups – Ermineskin Cree Nation, Louis Bull Tribe, and Montana First Nation. The proximity of Samson Cree Nation reserves to the Project are summarized in [Table H.9.1-1](#).

Reserve/s	Distance to the Project LSA (km)	Distance to the Project RSA (km)
Pigeon Lake 138A	360.62	335.62
Samson 137	342.73	317.73
Samson 137A	342.89	317.89

The total registered population for Samson Cree Nation is 8,197 (AANDC 2015). There are 5,798 members who live on one of the Samson Cree Nation reserves and 1,893 members who live off-reserve (AANDC 2015). Samson Cree Nation is governed by an elected Chief and Council as summarized in [Table H.9.1-2](#).

<b>Title</b>	<b>Name</b>	<b>Appointment Date</b>	<b>Appointment Ends</b>
Chief	Kurt Buffalo	02/11/2014	02/10/2017
Councillor	Clayton Bruno	02/25/2014	02/24/2017
Councillor	Kirk Buffalo	02/25/2014	02/24/2017
Councillor	Patrick Buffalo	02/25/2014	02/24/2017
Councillor	Shannon Buffalo	02/25/2014	02/24/2017
Councillor	Jonathan Dion	02/25/2014	02/24/2017
Councillor	Holly Johnson	02/25/2014	02/24/2017
Councillor	Willy Lightning	02/25/2014	02/24/2017
Councillor	Larron Northwest	02/25/2014	02/24/2017
Councillor	Vernon Saddleback	02/25/2014	02/24/2017
Councillor	Earl Swampy	02/25/2014	02/24/2017
Councillor	Glenda Swampy	02/25/2014	02/24/2017
Councillor	Marvin Yellowbird	02/25/2014	02/24/2017

Samson Cree language is part of the Plains Cree language dialect. There are approximately 1,065 Cree language speakers and 28.9% of Samson Cree Nation members identify knowledge of an Aboriginal language (Statistics Canada 2011).

## **H.9.2 Aboriginal Consultation**

### **H.9.2.1 Consultation Summary**

Prior to commencement of the EIA process, Samson Cree submitted a Statement of Concern to the AER in April 2014 in relation to an application to amend a Coal Exploration Permit (Samson Cree Nation 2014). The amendment was for permission to drive on sections of an existing road located on Crown land. The Samson Cree submission asserted Aboriginal and Treaty rights to the Project area and contained a general description of the nature of Samson Cree land and resource use. Benga

responded to Samson Cree that it had not found information to suggest – and that it did not believe – that Samson Cree Aboriginal and Treaty rights include the Project area (Benga 2014). In approving the application, the AER notified the Samson Cree in writing of its determination that Samson Cree did not provide “*information that demonstrates its members actually use lands or other natural resources in the project area*” and that the proposed work activity would “*entail minor land disturbances and temporary, localized impacts on the land and land users*” (AER 2014). Benga has not subsequently found or been provided with additional information regarding potential impacts to Samson Cree interests in the Project area.

CEAA published the Project’s Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Samson Cree Nation. Benga promptly initiated consultation with Samson Cree Nation with a letter offering information on the Project, requesting information to assist Benga in understanding Samson Cree Nation’s uses in the Project area, and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Samson Cree Nation. Samson Cree Nation responded in early August and provided a Traditional Land Use map and traditional territory boundary to inform Benga of its asserted interests related to the Project. This email indicated that a data sharing Agreement would be required for further engagement. In August 2015, Benga provided an information package seeking feedback on Benga’s understanding of Samson Cree’s Aboriginal Interests.

A chronology of key consultation activities with Samson Cree Nation can be found in [Table H.9.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
August 4, 2014	Letter	In response to Benga’s Coal Exploration Permit application amendment to drive on Crown land sections of an existing road, Samson Cree Nation submitted a SOC to Benga and the AER. This SOC described in general terms Samson Cree Nation’s asserted Aboriginal Interests in the Project area.
August 6, 2014	Letter	Benga submitted a letter to Samson Cree Nation containing responses to the concerns expressed in the SOC. Benga noted it did not have information indicating Samson Cree Nation use or exercise of Aboriginal

<b>Table H.9.2-1 Chronology of Key Consultation Activities with Samson Cree Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		or Treaty rights in the Project area.
August 7, 2014	Letter	Samson Cree Nation submitted a letter to Benga in response to Benga's letter dated August 6, 2014. The letter re-stated Samson Cree's assertion of Aboriginal rights in the South Saskatchewan region, that the Samson Cree believe the application contained insufficient information on Samson Cree's Aboriginal rights and that no capacity had been provided to complete traditional land use work to determine project-specific impacts.
August 12, 2014	Letter	AER sent a letter to Samson Cree Nation's legal advisor (and copied to Benga) requesting that Benga contact Samson Cree to attempt to address the concerns, and advising that Alberta offers Alternative Dispute Resolution services.
August 27, 2014	Letter	AER submitted a letter to Samson Cree Nation advising that AER had decided to issue Benga's applied for approval without a hearing. In explaining AER's decision to not hold a hearing to consider Samson Cree's concerns, AER cited case law that requires stronger evidence of a claim to Aboriginal rights in a particular area. Noting the absence of this information, and that the proposed activity would have minimal to non-existent effects on traditional land users, AER determined that Samson Cree would not be impacted by the proposed activities.
January 23, 2015	Letter	Samson Cree submitted comments to AER during the public comment period on the Draft Terms of Reference for the EIA. The comments re-iterated Samson Cree's assertion of Aboriginal rights to the Project area and requested Alberta require formal consultation with Samson Cree on the EIA. The submission also contains comments and suggestions on the Draft Terms of Reference for the EIA.
July 8, 2015	Letter	After CEAA published the Project's Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified Samson Cree of its publication, Benga provided information to Samson Cree on the Project and requested any information that would help Benga to further understand Samson Cree Nation's uses in the Project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Samson Cree Nation for the EIA process on the Project, and referencing participation funding opportunities.
August 4, 2015	Email	Samson Cree Nation provided Benga with a TLU map, a data sharing agreement for review and execution, as well as a document outlining Samson Cree Nation's environmental position.

<b>Table H.9.2-1 Chronology of Key Consultation Activities with Samson Cree Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
August 27, 2015	Email	Benga provided an information package to Samson Cree Nation and invited Samson Cree to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 30 & October 5, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Samson Cree Nation’s format preference for receiving the report. Samson Cree Nation replied on October 5 <sup>th</sup> to express their document format preferences.

**H.9.2.2 Traditional Use and Traditional Knowledge Studies**

Benga did not obtain traditional use and knowledge studies from the Aboriginal Groups identified by CEAA as less affected by the Project. The Samson Cree Nation’s Traditional Land Use Map appears in [Figure H.9.1-1](#).

**H.9.3 Background**

Benga was unable to locate any information sources on Samson Cree members’ use of land in the Project area. As a result, the only information available to Benga is contained in a submission by Samson Cree to the AER in August 2014 in relation to an amendment to a coal permit application (SCN 2014). In the letter, Samson Cree Nation submitted that their members hunt for species detailed below. Samson Cree Nation also cited Aboriginal Interests in trapping and fishing in the Project area (SCN 2014). However, no specific locations, seasonal use, or methods have been identified for hunting, trapping or fishing in the Project area.

Samson Cree Nation stated they identified plant harvesting and cultivation sites in proximity to the Project that are used for medicinal, ceremonial, and dietary purposes as well as for traditional teachings (SCN 2014). Plants cited are: tumble weed, sage, and sweetgrass, and the 2014 submission notes the Crowsnest Pass area is important for timber harvesting which is valuable to Samson Cree Nation, especially for holding ceremonies (SCN 2014).

Samson Cree Nation advised that traditional trail networks are located throughout their traditional territory and they link traditional land use regions to traditional use sites (SCN 2014). Trail networks were used traditionally by Samson Cree Nation members especially for trade and accessing harvesting areas (SCN 2014).

Samson Cree Nation note the South Saskatchewan Land Use Area holds spiritual importance for its members (SCN 2014); however, Samson Cree Nation has not identified current or historic use for sacred sites, gathering sites, or habitation sites in the Project area.

## **H.9.4 Potential Effects and Mitigation Measures**

### **H.9.4.1 Current Use of Land and Resources for Traditional Purposes**

The Samson Cree Nation asserts the Project is located within their traditional territory. It is the perspective of Benga Mining that the Project is not located within Samson Cree Nation's traditional territory. There are no specific areas of use by Samson Cree Nation that would interact with or be in proximity to Project activities. Therefore, there are no anticipated potential effects to Samson Cree Nation. Benga Mining will continue to share information about the Project with Samson Cree Nation and will consider information provided regarding potential effects and mitigation measures.

Samson Cree Nation asserts there are potential effects of the Project on the environment and their use of the Project area. To respond to this assertion, potential effects of the Project on the environment that may impact Samson Cree Nation are carried forward in this section to a review of potential effects including hunting, trapping and plant gathering.

#### **H.9.4.1.1 Hunting**

Samson Cree Nation advise there are hunting blinds, mineral salt licks, kill sites, game trails, moose breeding grounds, and water holes in the Project area. Species Samson Cree Nation state they hunt include grizzly, elk, moose, deer, sheep, rare prairie chicken, sage grouse, sprague's pipit, skunk, lynx, cougars, wolves, and wolverines. Several VC sections are relevant to the assessment on hunting such as the assessment sections for wildlife (E.9.3), and land and resource use (E.10.3).

[Section E.9.3 Wildlife](#) addresses potential effects on key species and habitat for wildlife species including moose, elk, bighorn sheep, Canada lynx, wolverine, and grizzly bear. The majority of Project-related wildlife habitat loss or fragmentation will result from land clearing, surface mining, and construction of infrastructure and roads.

Potential direct and indirect effects from the Project that were assessed include:

#### Potential direct effects to wildlife from land clearing, surface mining and construction of infrastructure and roads

- wildlife habitat loss; and
- habitat fragmentation and loss of connectivity.

Potential indirect effects to wildlife

- mortality from wildlife-vehicle collisions on access roads to the Project site (vehicles within the Project footprint would be traveling at low speeds);
- water contamination from accidental spills;
- effects on forage and water quality resulting from air emissions (assessed in MEMS 2015b); and
- indirect effects from sensitivity to human activity causing wildlife avoidance (some species such as bears are more sensitive, and some like moose are less sensitive).

[Section E.10.3](#) Land and Resource Use addresses potential effects to land use activities related to hunting including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga. However, access for land use activities by Samson Cree Nation could be impacted during construction and operation of the Project. To manage potential effects associated with public access to the Project site, Benga adopted a policy that will be used to guide access by authorized users only. Access control will be based on the level of risk to public safety and the need to protect Project infrastructure.

Wildlife assessment methods contained in [CR #9, Section 3.2](#) included quantitative analyses and also accounted for variations based on species-specific differences in habitat use and movement patterns.

The potential effects described in these sections could result in a change in identified hunted species and habitat, change in use or access to identified hunting locations, and change in preferred harvesting method. The recommendations made by Samson Cree Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.9.4-1](#).

<b>Table H.9.4-1 Feedback Provided by Samson Cree Nation</b>		
<b>Potential Effects Identified by Samson Cree Nation</b>	<b>Recommended Mitigation Measures by Samson Cree Nation</b>	<b>Benga Mining Response</b>
The new disturbance of constructing and operating the Program will affect wildlife and wildlife habitat in the area which will have an impact on Samson members' ability to hunt (Samson Cree Nation 2014).	Samson Cree Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Samson Cree Nation will be considered through the EA process.	Potential effects to vegetation and wildlife are described in <a href="#">Section E.8.3</a> and <a href="#">Section E.9.3</a> . Mitigation measures are identified in <a href="#">Section E.8.5</a> for vegetation and <a href="#">Section E.9.5</a> for wildlife including access management
The Program will disturb		Habitat connectivity and wildlife

<b>Table H.9.4-1 Feedback Provided by Samson Cree Nation</b>		
<b>Potential Effects Identified by Samson Cree Nation</b>	<b>Recommended Mitigation Measures by Samson Cree Nation</b>	<b>Benga Mining Response</b>
wildlife migratory patterns by creating a barrier and causing activity that will cause animals to avoid the area (Samson Cree Nation 2014).		movement is assessed in <a href="#">Section E.9.3</a>
Increased access to the area through clearing of areas necessary to construct the Project will increase predatory avenues that will decrease the numbers of game in the area (Samson Cree Nation 2014).		Access to hunting locations is included in the assessment of potential effects to hunting.
Effects to sensitive grizzly bear habitat (Samson Cree Nation 2014). The loss of familiar game trails, salt licks, and water holds will make locating game more difficult and may also force game out of the area surrounding the Program for an indefinite period of time (Samson Cree Nation 2014).		<a href="#">Section E.9.3</a> Wildlife assessment potential effects including habitat fragmentation and the disruption of natural movement patterns of wildlife. The results of the wildlife assessment are included in the assessment of potential effects to hunting.

Mitigation measures identified throughout the application for Wildlife and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- access control policy to facilitate access to the Project site by authorized users (Land and Resource Use [Section E.10.5](#));
- a minimum of six wildlife crossings to be incorporated into the design of the coal conveyor ([E.9.5](#));
- access management within the Project footprint to reduce effects to wildlife ([E.9.5](#));
- wildlife and wildlife habitat reclamation ([E.9.5](#)); and
- Conservation and Reclamation Plan ([Section F](#)).

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate hunting locations;
- consultation will continue to further identify areas used for hunting that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.9.4.1.2 Trapping

Samson Cree Nation advise they have an interest in trapping in the Project area. However, no trap lines are identified for use by Samson Cree Nation, or season of use or species. Several VC sections are relevant to the assessment on trapping such as the assessment sections for wildlife and land and resource use.

Wildlife addresses potential effects on key species and habitat for wildlife species including species that may be used for trapping activities. The majority of Project-related wildlife habitat loss or fragmentation will result from land clearing, surface mining, and construction of infrastructure and roads. Indirect habitat loss or fragmentation may result from sensory disturbances such as increased noise, artificial light, blasting, and vehicles that would cause wildlife to avoid the LSA. Wildlife mortality risk may increase as a result of increased traffic, wildlife encountering equipment and wildlife being attracted to Project facilities or humans. Wildlife mortality from hunting and predation may also increase as a result of improved access in the area.

Land and Resource Use addresses potential effects to land use activities related to trapping including accessibility to wildlife. A majority of the land within the proposed development footprint is privately owned by Benga. However, construction activities may impact the ability to access trapping areas. Within Crown lands to be used for the Project, there are two trap lines that overlap the LSA.

The potential effects described in these sections could result in a change in trapping species and habitat, change in use or access to trapping locations, and change in preferred harvesting method.

Mitigation measures identified throughout the application for Wildlife and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- ongoing consultation with trap line holders (E.10.5);
- access control policy to facilitate access to the Project site by authorized users (E.10.5);
- access management within the Project footprint to reduce effects to wildlife (E.9.5);
- wildlife and wildlife habitat reclamation (E.9.5); and
- Conservation and Reclamation Plan (Section F).

Additional measures are recommended to avoid or minimize potential effects to the availability of hunting areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate trapping locations;
- consultation will continue to further identify areas used for trapping that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.9.4.1.3 Fishing

Samson Cree Nation advised they have a fishing interest in the Project area. Several VC sections are relevant to the assessment on hunting such as the assessment sections for aquatics/fisheries and land and resource use.

Land and Resource Use addresses potential effects to land use activities including accessibility to the Project area. A majority of the land within the proposed development footprint is privately owned by Benga. However, construction activities may impact the ability to access fishing areas.

[Section E.6.3](#) – Aquatic Resources addresses potential effects to on the surrounding Blairmore Creek and Gold Creek watersheds. The potential effects described in these sections could result in a change in identified fishing species and habitat, change in use or access to identified fishing locations, and change in preferred harvesting method.

Mitigation measures identified throughout the application for Land and Resource Use and Aquatic Resources ([Section E.6.5](#)) apply to the effects described in this section.

Additional measures are recommended to avoid or minimize potential effects to the availability of fishing areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate fishing locations;
- consultation will continue to further identify areas used for fishing that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

#### H.9.4.1.4 Plant Gathering

Samson Cree Nation advised there are plant gathering and cultivation areas in the Project area. Species noted by Samson Cree Nation are tumble weed, sage, and sweetgrass. Several VC sections are relevant to the assessment on plant gathering such as the sections for vegetation and land and resource use. The potential effects described in these sections could result in a change in identified plant species and habitat, change in use or access to plant harvesting locations, and change in preferred harvesting method.

Vegetation addresses potential effects on key species and habitat including Mountain sage and sweetgrass. Potential effects of the Project on vegetation resources are predominantly related to clearing of vegetation and physical alteration of the landscape for the Project’s mine pit and associated waste rock disposal areas and infrastructure. In addition, air emissions released into the atmosphere during Project construction and operations may result in direct and indirect effects on vegetation arising from acid deposition.

Land and Resource Use addresses potential effects to land use activities. A majority of the land within the proposed development footprint is privately owned by Benga. However, construction activities may impact the ability to access the Project area. The Project may also impact the availability of resources and opportunities for recreational activities. The recommendations made by Samson Cree Nation and proposed mitigation measures to reduce or avoid potential effects are summarized in [Table H.9.4-2](#).

<b>Table H.9.4-2 Feedback Provided by Samson Cree Nation</b>		
<b>Potential Effects Identified by Samson Cree Nation</b>	<b>Recommended Mitigation Measures by Samson Cree Nation</b>	<b>Benga Mining Response</b>
Traditionally used plants will be destroyed and likely replaced	Samson Cree Nation has not yet recommended mitigation	Potential impacts to vegetation are described in <a href="#">Section E.8.3</a> including

with different or even non-native species through reclamation (Samson Cree Nation 2014).	measures. Recommendations for mitigation measures from Samson Cree Nation will be considered through the EA process.	the potential for invasive species.
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Mitigation measures identified throughout the application for Vegetation and Land and Resource Use apply to the effects described in this section. The mitigation measures proposed include:

- on-going consultation with Aboriginal Groups in designing mitigation measures for sustainable management of valued vegetation (Vegetation, [Section E.8.5](#));
- the implementation of a re-vegetation program which will aim at the re-establishment of vegetation communities, such as closed conifer forests, mature mixed forests, native upland herbaceous grasslands and treed swamps, common to the pre-disturbed landscape that will support valued vegetation (Vegetation, [Section E.8.5](#));
- the implementation of a re-vegetation program that utilizes native vegetation species and does not include agronomic invasive species (Vegetation, [Section E.8.5](#));
- the provision of opportunities to identify and collect suitable lodge pole pine for TU ceremonies, and
- where practicable, utilize locally collected seed to preserve the legacy of species and of place (Vegetation, [Section E.8.5](#)); and
- access control policy to facilitate access to the Project site by authorized users (Land and Resource Use [Section E.10.5](#)).

Additional measures are recommended to avoid or minimize potential effects to the availability of plant gathering areas. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate plant gathering locations;
- consultation will continue to further identify areas used for plant gathering that warrant site-specific or situational mitigation; and
- consultation will include sharing information about construction timing.

H.9.4.1.5 Trails and Travelways

The Project may intersect or be in proximity to areas that are not yet identified for trails and travelways by Samson Cree Nation. Several VC sections are relevant to the assessment on trails and travelways such as the assessment sections for land and resource use and historical resources.

Land and Resource Use addresses potential effects to land use activities. A majority of the land within the proposed development footprint is privately owned by Benga. However, construction activities may impact the ability to access the Project area. The Project may also impact the availability of resources and opportunities for recreational activities.

Historical Resources addresses potential effects to sites defined as any work of nature or humans that is of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific, or esthetic interest including a palaeontological, archaeological, prehistoric, historic, or natural site, structure, or object. Thirty-two recorded archaeological or historic era resources are located in the Project area including sites that are valued as cultural heritage sites to Aboriginal groups. Of the 32 sites, 10 overlap the Project footprint. Samson Cree Nation stated that they currently use trails and travelways in the Project area however specific locations have not been provided. The potential effects described in these sections could result in a change in use or access to trails and travelways or disturbance to features associated with trails and travelways. Input regarding potential effects to trails and travelways has been provided by Samson Cree Nation and is summarized in [Table H.9.4-3](#).

<b>Potential Effects Identified by Samson Cree Nation</b>	<b>Recommended Mitigation Measures by Samson Cree Nation</b>	<b>Benga Mining Response</b>
Destruction of trails and limiting access to Samson’s seasonal round routes will make it difficult to access resource use areas (Samson Cree Nation 2014).	Samson Cree Nation has not yet recommended mitigation measures. Recommendations for mitigation measures from Samson Cree Nation will be considered through the EA process.	Benga proposes to develop and implement an Aboriginal Access Management Plan with groups that are affected by access restrictions from the Project.

Mitigation measures identified for Land and Resource Use apply to the effects described in this section; in particular, access control policy to facilitate access to the Project site by authorized users. Additional measures are recommended to avoid or minimize potential effects to trails and travelways. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate trails and travelways;
- consultation will continue to further identify trails and travelways that warrant site-specific or situational mitigation;
- consultation will include sharing information about construction timing; and
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction.

Additional measures are recommended to avoid or minimize potential effects to trails and travelways. These are outlined below:

- develop and implement an Aboriginal Access Management Plan for construction and operation phases of the Project that includes notification of access restrictions during construction as required for safety purposes to allow for planning alternate trails and travelways;
- consultation will continue to further identify trails and travelways that warrant site-specific or situational mitigation;
- consultation will include sharing information about construction timing; and
- a Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites identified during pre-construction or construction.

#### **H.9.4.2 Aboriginal Health**

The Project and associated project an activity is not expected to have adverse effects on Samson Cree Nation health. Input regarding potential effects and mitigation measures has not been provided by Samson Cree Nation. Benga Mining will continue to work with Samson Cree Nation and will consider mitigation measures proposed by Samson Cree Nation if identified through the EA process.

#### **H.9.4.3 Aboriginal Socio-Economic Conditions**

The Project and associated project activities is not expected to have an adverse effects on Samson Cree Nation commercial activity, forestry and logging operations, and recreation use. Input regarding potential effects to socio-economic conditions and mitigation measures has not been provided by Samson Cree Nation during consultation. Samson Cree Nation expressed an interest in community investments and employment opportunities on the Project. Benga Mining will continue to work with Samson Cree Nation and will consider mitigation measures proposed by Samson Cree Nation if identified through the EA process.

#### H.9.4.4 Aboriginal Physical and Cultural Heritage

Samson Cree Nation notes a spiritual importance of the South Saskatchewan Land Use Area (SCN 2014); however, Samson Cree Nation has not identified current or historic use for sacred sites, gathering sites, or habitation sites in the Project area.

#### H.9.5 Characterization of Residual Effects

##### H.9.5.1 Current Use of Land and Resources for Traditional Purposes

###### H.9.5.1.1 Hunting

The characterization of residual effects to hunting includes consideration of residual effects described in [Section E.9 Wildlife](#) and [Section E.10 Land and Resource Use](#) and input provided by Samson Cree Nation. [Section E.9.3 Wildlife](#) characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and long-term in duration. The Project will affect the 10 wildlife VCs including moose, elk, bear and special status wildlife species such as mountain goat and eagles through changes in habitat availability, habitat fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#). Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be insignificant for all assessed VCs. ([CR #9, Table 5.3-26](#)).

[Section E.10.3 Land and Resource Use](#) characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to hunting areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species potentially hunted by Samson Cree Nation.

###### H.9.5.1.2 Trapping

The characterization of residual effects to trapping includes consideration of residual effects described in the [Wildlife](#) and [Land and Resource Use](#) sections and input provided by Samson Cree Nation. [Section E.9 Wildlife](#) characterizes residual effects to wildlife as local to regional extent, continuous in frequency, reversible, low in magnitude, and residual in duration. The Project will affect the 10 wildlife VCs including moose, elk and bear through changes in habitat availability, habitat

fragmentation/connectivity, mortality risk, all of which will affect local populations to some degree. With successful application of mitigation, the residual effects of the Project on habitat availability in the WLSA are summarized in [CR #9, Table 5.3-26](#) of the Wildlife section. Most of the Project-related effects on wildlife will be confined primarily to the Project footprint and sensory disturbances associated with mine construction and operations will be largely limited to the WLSA. Residual effects are predicted to be not significant for all assessed VCs ([CR #9, Table 5.3-26](#) in the Wildlife section). Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to trapping areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species potentially trapped by Samson Cree Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns.

#### H.9.5.1.3 Fishing

The characterization of residual effects to trapping includes consideration of residual effects described in [Section E.6](#) Aquatics and [Section E.10](#) Land and Resource Use and input provided by Samson Cree Nation.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to fishing areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species potentially fished by Samson Cree Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns.

#### H.9.5.1.4 Plant Gathering

The characterization of residual effects to plant gathering includes consideration of residual effects described in [Section E.8](#) Vegetation, [Section E.10](#) Land and Resource Use, and input provided by Samson Cree Nation. Removal of ecosite phases and ELCs that are important for valued vegetation species in the Project LSA will have a local impact. However, these habitats are expected to remain

intact within the remainder of the LSA and in the RSA. Therefore the overall availability of habitat is not anticipated to be substantially affected by the Project.

Vegetation characterizes residual effects as local in geographic extent, long-term in duration, continuous in frequency, reversible, and high magnitude. The Project will have a neutral contribution with respect to valued species and communities. The reclaimed land will support a range of communities with equivalent capabilities to those of the surrounding lands and that existed prior to development. The Project will not result in the loss of the resource to the communities, the region or the province. The confidence rating is high. The effect of the project is well understood as are the techniques used for revegetation. Use of proven techniques for revegetation will be supported by adaptive management and monitoring. The probability of occurrence is high given the type of project and method of coal extraction.

Land and Resource Use characterize residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access to plant gathering areas will be minor and can be mitigated.

The Project is not expected to have measurable effects on the long term abundance, distribution, and sustainability of species potentially used for plant gathering by Samson Cree Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project is not expected to affect current access patterns.

#### H.9.5.1.5 Trails and Travelways

The characterization of residual effects to trails and travelways includes consideration of residual effects described in Land and Resource Use, [Section E.13](#) Historical Resources, and input provided by Samson Cree Nation.

Land and Resource Use characterizes residual effects as local in geographic extent, extended in duration, continuous in frequency, reversible to long-term, nil in magnitude, neutral in Project contribution and high in confidence. The majority of the land to be developed is privately owned and the lands will be reclaimed to an equivalent capability. Therefore, it is predicted that the potential impacts of the Project on access will be minor and can be mitigated.

#### H.9.5.2 Summary of Residual Effects Characterization

Overall, the Project is not anticipated to measurably affect Samson Cree Nation's ability to hunt, trap, fish or gather plants within the Project area.

## H.9.6 Cumulative Effects

### H.9.6.1 Potential Contribution to Cumulative Effects

There is no contribution to cumulative effects on Samson Cree use of the Project area, or Aboriginal or Treaty rights.

### H.9.6.2 Other Projects and Activities

Existing, approved, and planned projects and activities in the region considered in the assessment are listed in [Table D.2.4-2](#) and are shown relative to Samson Cree Nation Traditional Territory on [Figure H.9.5-1](#). Local and Regional Study Areas vary in size for each of the VCs, as discussed in [Section D.2.4-3](#). The project list provided in [Table D.2.4-2](#) was generated to capture all projects found within the largest RSA (*i.e.*, wildlife grizzly bear RSA). As can be seen on [Figure D.2.4-3](#), not all Projects are contained within the study areas of each of the respective disciplines.

Most of the resource development currently occurring within the GBRSA at baseline is associated with coal mining, forestry, and oil and gas activities. Other existing and approved developments and activities include various urban areas, road/rail/utility corridors, and recreational areas (including ski hills and golf courses). Several projects and activities are expected to occur in the reasonably foreseeable future including expansion at the Coal Mountain Phase 2 site, timber harvesting up to 2030 and beyond, and a realignment of Highway 3. Most of the area affected by future projects in the GBRSA will be associated with forestry activities at Year 14 and Year 27.

### H.9.7 Follow-up and Monitoring

Monitoring programs will be implemented to verify the effectiveness of mitigation measures. Elements of the follow-up and monitoring program include:

- an environmental monitoring plan; and
- a construction monitoring plan.

Conservation and reclamation activities are discussed in further detail in [Section F](#) including input provided by Aboriginal groups.

### H.9.8 Aboriginal Issues and Concerns

Table H.3.7-7 Aboriginal Issues and Concerns		
Category	Description of Issue/Concern	Response
Consultation	Samson is concerned about the alienation	Benga is committed to ongoing consultation

<b>Table H.3.7-7 Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
Process	of further Crown land which will result in an effective infringement to Samson’s Aboriginal and Treaty rights. Samson wants to understand the impacts before any decisions are made in respect to Benga’s Application to ensure proper mitigation measures are established. Samson wants to also understand the cumulative impacts of Benga’s Program Activities to Samson Territory (Samson Cree Nation 2014)	with Samson Cree Nation including discussion of mitigation measures. Benga will consider and, where possible, will incorporate mitigation measures suggested by Samson Cree Nation.
Consultation Process	Samson is concerned that Benga has not consulted Samson on any potential harvest opportunities necessary for clearance. The timber is important to Samson because it is absolutely critical to hold ceremony (Samson Cree Nation 2014).	Benga will continue to work with Samson Cree Nation to identify species of importance for harvesting in advance of construction activities.
Consultation Process	Samson is concerned about the infringements to its Aboriginal and Treaty rights, which includes a spiritual component (Samson Cree Nation 2014).	Since CEEA’s identification of Samson Cree Nation as an Aboriginal group that may be “less affected” by the Project in late June 2015, Benga has directly sought a dialogue regarding Samson Cree’s interests. Benga is committed to ongoing consultation with Samson Cree Nation and will work with Samson Cree Nation through the EA process to better understand the potential impacts of the Project on Samson Cree Nation.
Environmental Assessment	Samson is concerned about impacts to the biodiversity of this resource-rich area (Samson Cree Nation 2014).	The purpose of the EA is to describe potential effects on the environment, including impacts to plants and wildlife, and identify mitigation measures.
Accidents and Malfunctions	Samson is concerned about potential breaches that may arise from Benga’s activities resulting in the pollution of important waterways and therefore threatening the wildlife habitat and populations within the Program area (Samson Cree Nation 2014).	Benga will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment.
Water Quality	Samson is concerned about water	Potential effects of the Project to water quality

<b>Table H.3.7-7 Aboriginal Issues and Concerns</b>		
<b>Category</b>	<b>Description of Issue/Concern</b>	<b>Response</b>
	contamination arising from Benga’s activities (Samson Cree Nation 2014).	are assessed in <a href="#">Section E.5.3</a> .
Traffic	Samson is concerned about the increased traffic and access to the Crowsnest Pass area (Samson Cree Nation 2014).	Habitat connectivity and movement is assessed in <a href="#">Section E.9.3</a> including potential impacts to wildlife from traffic. Proposed mitigation measures related to managing this potential effect include access management and enforcing speed limits along the main access road and utility corridors. In addition, wildlife crossing signs will be used to minimize wildlife-vehicle collisions.
Air Quality	Samson is concerned about the impacts arising from the increased dust from Benga’s activities (Samson Cree Nation 2014).	Potential effects of the Project related to dust emissions are included throughout the assessment for wildlife ( <a href="#">Section E.9.3</a> ), air quality ( <a href="#">Section E.1.3</a> ), health ( <a href="#">Section E.12.3</a> ) and vegetation ( <a href="#">Section E.8.3</a> ).
Visual Quality	Construction of the Program will further destroy the surrounding area of traditional land use sites making a new and unfamiliar landscape (Samson Cree Nation 2014).	Benga will continue to work with Samson Cree Nation and share project information and receive comments.
Physical and Cultural Heritage	Sacred sites will be erased from the landscape or abandoned due to proximity to the Program (Samson Cree Nation 2014).	Benga has not received information about sacred sites from Samson Cree Nation. Benga looks forward to receiving any additional feedback from Samson Cree Nation on sacred sites and how the Project may impact sacred sites. Benga will work with Samson Cree Nation to identify appropriate ways to mitigate potential effects.

## H.10 ASSESSMENT OF POTENTIAL EFFECTS - SHUSWAP INDIAN BAND

### H.10.1 Introduction

Shuswap Indian Band is a member band of the Shuswap Nation Tribal Council (SNTC) and is located in the East Kootenay region of British Columbia (Shuswap Band 2015). The SNTC reports that the Shuswap Indian Band territory is 1,246 hectares (SNTC 2015). The location of the Shuswap Indian Band traditional territory in relation to the Project is shown in [Figure H.10.1-1](#). There are two

Shuswap Indian Band reserves – Shuswap and St. Mary’s 1A ([Figure H.10.1-1](#)). The proximity of the reserves in relation to the Project RSA is summarized in [Table H.10.1-1](#).

Reserves	Distance to the Project LSA (km)	Distance to the Project RSA (km)
Shuswap	140.78	115.79
St. Mary’s 1A	92.35	67.35

As of August 2015, the total registered population of Shuswap Indian Band is 264 (AANDC 2015). The number of Shuswap Indian Band members who live on their own reserves is 87 (AANDC 2015). The number of members who live off-reserve is 144 (AANDC 2015). Shuswap Indian Band is governed by an elected Chief and Council as summarized in [Table H.10.1-2](#).

Title	Name	Appointment Date	Appointment Ends
Chief	Barbara Cote	11/09/2014	11/08/2016
Councillor	Timothy Eugene	11/09/2014	11/08/2016
Councillor	Rosalita Pascal	11/09/2014	11/08/2016

Traditionally, the Shuswap Indian Band people based their economy on resource harvesting focused on salmon and ungulates (Shuswap Band 2015). The fur trade and gold rush affected their beliefs, economy, and ability to access resources (Shuswap Band 2015). The result of over-hunting was a shortage of resources used for traditional purposes and a growing reliance on trade (Shuswap Band 2015). Today, economic development is increasingly committed to tourism, recreation, and industrial and resource development (Shuswap Band 2015). The Kinbasket Development Corporation (KDC) is a corporate extension of Shuswap Indian Band (SNTC 2015). The KDC promotes the economic and social well-being of the Shuswap Indian Band people by developing and supporting independent business on reserve (KDC 2015). The goal of business development through the KDC is to build strong partnerships and create an environment of shared benefits between investors and Shuswap Indian Band (KDC 2015). Based on statistics from the National Household Survey (2011), the participation rate for Shuswap Indian Band is 68.8%, the employment rate is 62.5%, and the unemployment rate is 9.1% (AANDC 2015).

The traditional language of the Shuswap, Secwepemctsin, is part of the Interior Salish language family (FPHLCC 2015). There are seven Interior Salish languages that are split between a northern group and a south-eastern group (Shuswap Band 2015a). The Shuswap language contains traditional ecological knowledge and connects people to the land (FPHLCC 2015). There are two band members who understand or speak the language somewhat and one fluent speaker (FPHLCC 2015).

Secwepemc (Shuswap) people traditionally occupied and lived a semi-nomadic lifestyle throughout south-central British Columbia (Shuswap Band 2015b). The Shuswap people separated from the other Interior Salish groups and developed a seasonal round and governance system that guided their interactions with the land and with each other (Shuswap Band 2015b). Semi-underground pithouses (kekulis) are traditional habitation sites that are evidence of the traditional way-of-life and cultural connection to the land (Shuswap Band 2015). Archaeological evidence of Shuswap people in South Central British Columbia begins 4000 years ago although elders say the Shuswap people have always lived in the area (Shuswap Band 2015).

## H.10.2 Aboriginal Consultation

### H.10.2.1 Consultation Summary

CEAA published the Project’s Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Shuswap Indian Band. Benga promptly initiated consultation with Shuswap Indian Band with a letter offering information on the Project and requesting information to assist Benga in understanding Shuswap Indian Band’s uses in the Project area and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Shuswap Indian Band. In August 2015, Benga provided an information package seeking feedback on Benga’s understanding of Shuswap Indian Band’s Aboriginal Interests.

A chronology of key consultation activities with Shuswap Indian Band can be found in [Table H.10.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
July 8, 2015	Letter	Benga provided information on the Project and requesting information to

<b>Table H.10.2-1 Chronology of Key Consultation Activities with Shuswap Indian Band</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		further understand Shuswap Band’s uses in the Project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Shuswap Band for the EIA process on the Project, and referencing participation funding opportunities.
August 27, 2015	Email	Benga provided an information package to allow Shuswap Band an opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.

**H.10.2.2 Traditional Use and Traditional Knowledge Studies**

Benga did not obtain traditional use and knowledge studies from the Aboriginal Groups identified by CEAA as less affected by the Project.

**H.10.3 Background**

This discussion focuses on background information that is relevant to the assessment of potential effects of the Project on Shuswap Indian Band as required by the CEAA EIS Guidelines. Information regarding traditional or current use, sacred sites or cultural values, recreational use, commercial activity, reliance on country foods, and drinking water sources in the Project area is not identified in public sources and has not been provided by Shuswap Indian Band.

**H.10.4 Potential Effects and Mitigation Measures**

It is the perspective of Benga Mining that the Project is not located within Shuswap Indian Band’s traditional territory. There are no specific areas of use by Shuswap Indian Band that are interacting with or in proximity to Project activities (see [Figure H.10.4-1](#)). Therefore, there are no anticipated potential effects to Shuswap Indian Band. Benga Mining will continue to share information about the Project with Shuswap Indian Band and will consider information provided regarding potential effects and mitigation measures.

## **H.11 ASSESSMENT OF POTENTIAL EFFECTS - FOOTHILLS OJIBWAY FIRST NATION**

### **H.11.1 Introduction**

Foothills Ojibway First Nation is a non-treaty and non-status band and therefore does not have any Indian reserves (TERA 2013). Benga Mining has not been provided with information regarding the location of Foothills Ojibway First Nation traditional territory. Based on publicly available sources including information from other projects, the Eastern Slopes of the Rocky Mountains are main portions of the Foothills Ojibway First Nation traditional territory with lands that fall within Treaty 6 and 8 (Meyer 2012, Tucker 2012). It is understood that there are approximately 250 members who identify as Foothills Ojibway First Nations living in Hinton, Alberta which is the key settlement area (Meyer 2012).

Foothills Ojibway First Nation members are descendants of families who did not sign Treaty 6; however, there are family connections with members who did sign Treaty 6 and are associated with the Sunchild and O'Chiese Aboriginal groups (Meyer 2012). Foothills Ojibway First Nation is a diverse group including members with Cree and Saulteaux heritage (Meyer 2012). The language is diverse but mainly Algonquian including Saulteaux and Cree (Meyer 2012). Foothills Ojibway First Nation families migrated west from Ontario in the 1500s but continued to move west based on invasion of their traditional territory and a desire to avoid European settlers (Meyer 2012). In the early 1900s, they settled in the Rocky Mountain House area near Pembina and Brazeau Rivers (Meyer 2012).

### **H.11.2 Aboriginal Consultation**

#### **H.11.2.1 Consultation Summary**

CEAA published the Project's Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Foothills Ojibway First Nation. Benga promptly initiated consultation with Foothills Ojibway First Nation with a letter offering information on the Project and requesting information to assist Benga in understanding Foothills Ojibway First Nation's uses in the Project area and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Foothills Ojibway First Nation. In August 2015, Benga provided an information package seeking feedback on Benga's understanding of Foothills Ojibway First Nations Aboriginal Interests.

A chronology of key consultation activities with Foothills Ojibway First Nation can be found in [Table H.11.2-1](#).

<b>Table H.11.2-1 Chronology of Key Consultation Activities with Foothills Ojibway First Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
July 8, 2015	Letter	Benga provided information on the Project and requesting information to further understand Foothills Ojibway First Nation’s uses in the project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Foothills Ojibway First Nation for the EIA process on the Project, and referencing participation funding opportunities.
August 27, 2015	Email	Benga provided an information package to allow Foothills Ojibway First Nation an opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.

### H.11.2.2 Traditional Use and Traditional Knowledge Studies

Benga did not obtain traditional use and knowledge studies from the Aboriginal Groups identified by CEAA as less affected by the Project.

### H.11.3 Background

This discussion focuses on background information that is relevant to the assessment of potential effects of the Project on Foothills Ojibway First Nation as required by the Alberta TOR and CEAA EIS Guidelines. Foothills Ojibway First Nation continue to exercise their Aboriginal Interests in hunting, plant gathering, and sacred, gathering, and habitation sites (Meyer 2012, Tucker 2012, TERA 2008, Trans Mountain 2013). Information regarding traditional or current use, sacred sites or cultural values, recreational use, commercial activity, reliance on country foods, and drinking water sources in the Project area is not identified in public sources and has not been provided by Foothills Ojibway First Nation.

### H.11.4 Potential Effects and Mitigation Measures

Potential effects of the Project are not anticipated to extend beyond the RSA ([Figure D.2.4-3](#)). The description of the Foothills Ojibway First Nation traditional territory does not include locations that are interacting with or in proximity to Project activities. Benga Mining will continue to share

information about the Project with Foothills Ojibway First Nation and will consider information provided regarding potential effects and mitigation measures.

## **H.12 ASSESSMENT OF POTENTIAL EFFECTS - MÉTIS NATION OF ALBERTA REGION 3**

### **H.12.1 Introduction**

There are two main organizations that represent Métis people in Alberta – the Métis Nation of Alberta Association (MNA) and the Métis Settlements General Council. The MNA is a representative organization and a service provider to Métis people in Alberta with 6 regional zones and 8 Métis settlements (AMHS 2001). The historic Métis Nation traditional territory is west central North America (MNA 2007a). Region 3 is a boundary established by the MNA to represent Métis peoples living in southern Alberta (Figure H.12.1-1). Region 3 is represented by an elected President and Vice President with a headquarter office in Calgary. Their mandate is to provide opportunities to participate in policy and decision making processes and to facilitate the advancement of socio-economic and cultural well-being of Métis people (MNA 2007b). Functions of the MNA are established through the Alberta/MNA Framework Agreement process, Federal/Provincial/MNA Tripartite Process Agreement process, and the Government of Alberta’s Aboriginal Policy Framework (MNA 2007b).

The Métis culture is a fusion of European and Aboriginal influences including Cree, Ojibwa, Saulteaux, English, French, Scandinavian, and Irish. Historically, Métis people had strong linkages to the fur trade and were often intermediaries between European and Aboriginal cultures, for example working as guides and interpreters. The unique language of the Métis people is called Michif (MNA 2007a). As of 2011, there are over 96,865 Métis people living throughout the province of Alberta (Statistics Canada 2013).

### **H.12.2 Aboriginal Consultation**

#### **H.12.2.1 Consultation Summary**

CEAA published the Project’s Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Métis Nation of Alberta. Benga promptly initiated consultation with Métis Nation of Alberta with a letter offering information on the Project and requesting information to assist Benga in understanding Métis Nation of Alberta’s uses in the Project area and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Métis Nation of Alberta. In August 2015, Benga provided an information package seeking feedback on Benga’s understanding of Métis Nation of Alberta’s Aboriginal Interests.

A chronology of key consultation activities with Métis Nation of Alberta can be found in [Table H.12.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
May 6, 2015	Meeting	Benga met with Métis Nation of Alberta in their offices to provide Project information and to discuss the environmental assessment process. The Métis Nation of Alberta expressed interest in employment and business opportunities.
July 8, 2015	Letter	Benga provided information on the Project and requesting information to further understand Métis Nation of Alberta’s uses in the Project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Métis Nation of Alberta for the EIA process on the Project, and referencing participation funding opportunities.
August 27, 2015	Email	Benga provided an information package to allow Métis Nation of Alberta an opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 30, 2015	Email	Benga advised that the EIA report is scheduled for completion in mid-October and requested Métis Nation of Alberta’s format preference for receiving the report. Métis Nation of Alberta responded on October 5, 2015 with a request.

### **H.12.2.2 Traditional Use and Traditional Knowledge Studies**

Benga did not obtain traditional use and knowledge studies from the Aboriginal Groups identified by CEAA as less affected by the Project.

### **H.12.3 Background**

Hunting sites were traditionally temporary as Métis Nation people following the migratory patterns of buffalo which they hunted (MNA 2011). Wintering camps were constructed in the autumn in proximity to buffalo herds (AMHS 2015). Traditional hunting events continue to take place

throughout the province and some hunting events are organized under the Métis Harvesting Action Plan (2007). Métis harvest food through hunting, trapping, and fishing animals, fish, and fowl on a year-round basis with the exception of restrictions due to conservation closures (MNA 2007). Hunting areas are associated with trails and travelways throughout Alberta, Saskatchewan, Manitoba, and the United States (MNA 2011). Traditionally, Métis people accessed trails and travelways for harvesting and trading materials such as buffalo meat, robes, or wolf pelts (AMHS 2015). Physical and cultural heritage sites are located throughout Region 3 (AMHS 2015). These sites are not in proximity to the Project and are located outside of the Project RSA.

Métis people continue to participate in traditional practices and rely on the availability of resources such as country foods. The MNA assert that their economy, for commercial and sustenance purposes, was based on the ability to hunt and trap, which are practices that continue to be important for their economy today. Métis who fish for commercial purposes must obtain appropriate licenses to do so. In addition, MNA assists with business development for Métis members living off settlements through employment services including a training to employment program (MNA 2007).

#### **H.12.4 Potential Effects and Mitigation Measures**

The Project is located within MNA Region 3 territory. However, there are no specific areas of use by MNA Region 3 that are interacting with or in proximity to project activities (see [Figure H.12.4-1](#)). Therefore, there are no anticipated potential effects to MNA Region 3. Benga Mining will continue to share information about the Project with MNA Region 3 and will consider information provided regarding potential effects and mitigation measures.

### **H.13 ASSESSMENT OF POTENTIAL EFFECTS - MÉTIS NATION OF BRITISH COLUMBIA REGION 4**

#### **H.13.1 Introduction**

Métis Nation British Columbia was established in 1996, formally incorporating as the Métis Provincial Council of British Columbia. Métis Nation British Columbia is a self-governing, sustainable Nation operating in recognition of inherent rights for Métis citizens. The Métis Nation British Columbia Board of Directors consists of a President, Vice President, Métis Women BC Representative, Métis Youth BC Chair, and seven regional directors (MNBC 2013). In 2011, the British Columbia Métis Federation was established to represent Métis people in BC who split off from Métis Nation British Columbia. British Columbia Métis Federation advertises a 7,000 membership through the Métis Communities that are now affiliated with British Columbia Métis Federation and individuals who have registered. There are over 59,000 Métis people residing in BC, representing approximately 30% of the Aboriginal population in the province. The majority live off-reserve in urban settings (BCMARR 2013).

The Métis Nation of British Columbia is comprised of seven chartered communities (also referred to as regions) (MNBC 2015a). There are over 59,000 Métis people residing in BC, representing approximately 30% of the Aboriginal population in the province. The majority live off-reserve in urban settings (BCMARR 2013). Region 4 is the Kootenays region and is located in the southeastern corner of British Columbia as shown in [Figure H.13.1-1](#). Region 4 includes Columbia Valley Métis Association, Métis Nation Columbia River Society, Elk Valley Métis Association, Rocky Mountain Métis Association, Nelson & Area Métis Society, and Kootenay South Métis Society.

Métis is an independent population in Canada, distinct from First Nations, Inuit, and European descendants. Métis identity is connected to ancestral origins, including Scottish, French, Ojibway, and Cree, and the culture arose after initial contact with European explorers and traders, but prior to colonization (BCMARR 2013). Michif is the recognized language of Métis people. It developed during the 1700s as a form of communication between English and French-speaking fur traders and the Cree, Algonquian, and Sioux speaking traders (BCMARR 2013).

The traditional territory of the Métis Nation is not specifically defined and it includes Alberta, Saskatchewan, and Manitoba as well as parts of Ontario, British Columbia, the Northwest Territories and the Northern United States (MNBC 2015b).

## **H.13.2 Aboriginal Consultation**

### **H.13.2.1 Consultation Summary**

CEAA published the Project's Final Guidelines for the Preparation of an Environmental Impact Statement (Final Guidelines) in June 24, 2015 and concurrently notified potentially affected Aboriginal groups of its publication. As per Section 5.1 of the EIS Guidelines, CEAA identifies six Aboriginal groups that may be less affected by the Project for consultation including Métis Nation of British Columbia. Benga promptly initiated consultation with Métis Nation of British Columbia with a letter offering information on the Project and requesting information to assist Benga in understanding Métis Nation of British Columbia's uses in the Project area and to discuss any concerns.

Benga followed up in July 2015 with a letter describing a plan for continued consultation on the Project and referencing participation funding opportunities for Métis Nation of British Columbia. In August 2015, Benga provided an information package seeking feedback on Benga's understanding of Métis Nation of British Columbia's Aboriginal Interests. Métis Nation of British Columbia responded in September 2015 with a description of their history in the Project area and a map depicting use and occupancy data in the vicinity of the Project area. Métis Nation of British Columbia identifies that there is a gap in traditional knowledge relevant to the Project area particularly regarding resource

harvesting in the area. Métis Nation of British Columbia stated an interest in continued efforts and opportunities to provide information for the Project.

A chronology of key consultation activities with Métis Nation of British Columbia can be found in [Table H.13.2-1](#).

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
July 8, 2015	Letter	Benga provided information on the Project and requesting information to further understand Métis Nation of British Columbia’s uses in the Project area.
July 29, 2015	Letter	Benga provided a letter describing planned consultation with Métis Nation of British Columbia for the EIA process on the Project, and referencing participation funding opportunities.
August 27, 2015	Email	Benga provided an information package to allow Métis Nation of BC an opportunity to provide feedback on Benga’s understanding of their Aboriginal Interests and comment on valued components, spatial boundaries, baseline information, and potential effects.
September 10, 2015	Letter	Métis Nation of British Columbia responded with a letter describing their history in the Project area and a map depicting use and occupancy data in the vicinity of the Project area.
September 30, 2015	Email	Benga advised that the EIA report was scheduled for completion in mid-October and requested Métis Nation of British Columbia’s format preference for receiving the report.

### **H.13.2.2 Traditional Use and Traditional Knowledge Studies**

Benga did not obtain traditional use and knowledge studies from the Aboriginal Groups identified by CEAA as less affected by the Project.

### **H.13.3 Background**

MNBC provided a map of use in the project area (MNBC 2015b). However, none of the uses identified are located within the Project LSA as shown in [Figure H.13.1-1](#). The information identifies types of land use reported by harvester card holders as part of the annual harvest survey system. The types of wildlife identified include whitetail deer, grouse, rocky mountain elk, moose, rabbit, bear, and trout. Other activities include prospecting for gold and gathering firewood.

#### H.13.4 Potential Effects and Mitigation Measures

The MNBC Region 4 territory overlaps the Project RSA by 417.75 km<sup>2</sup>. There is no overlap with the LSA and there are no specific areas of use by MNBC Region 4 that are interacting with project activities (see [Figure H.13.4-1](#)). However, there are areas of use identified in proximity to project activities within the RSA. Potential effects of the Project are not anticipated for MNBC Region 4.

#### H.14 REFERENCES

Alberta Energy Regulator (AER). 2015. *Terms of Reference for Environmental Impact Assessment Report, Benga Mining Limited, Grassy Mountain Coal Project*. Website: <http://esrd.alberta.ca/lands-forests/land-industrial/programs-and-services/environmental-assessment/documents/RiversdaleCoalTermsReference-Mar19-2015A.pdf>

Canadian Environmental Assessment Agency (CEAA). 2014. *Technical Guidance for Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012*. Available online: <https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=B82352FF-1&offset=4&toc=hide>

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##### H.14.1 Blood Tribe (Kainai Nation)

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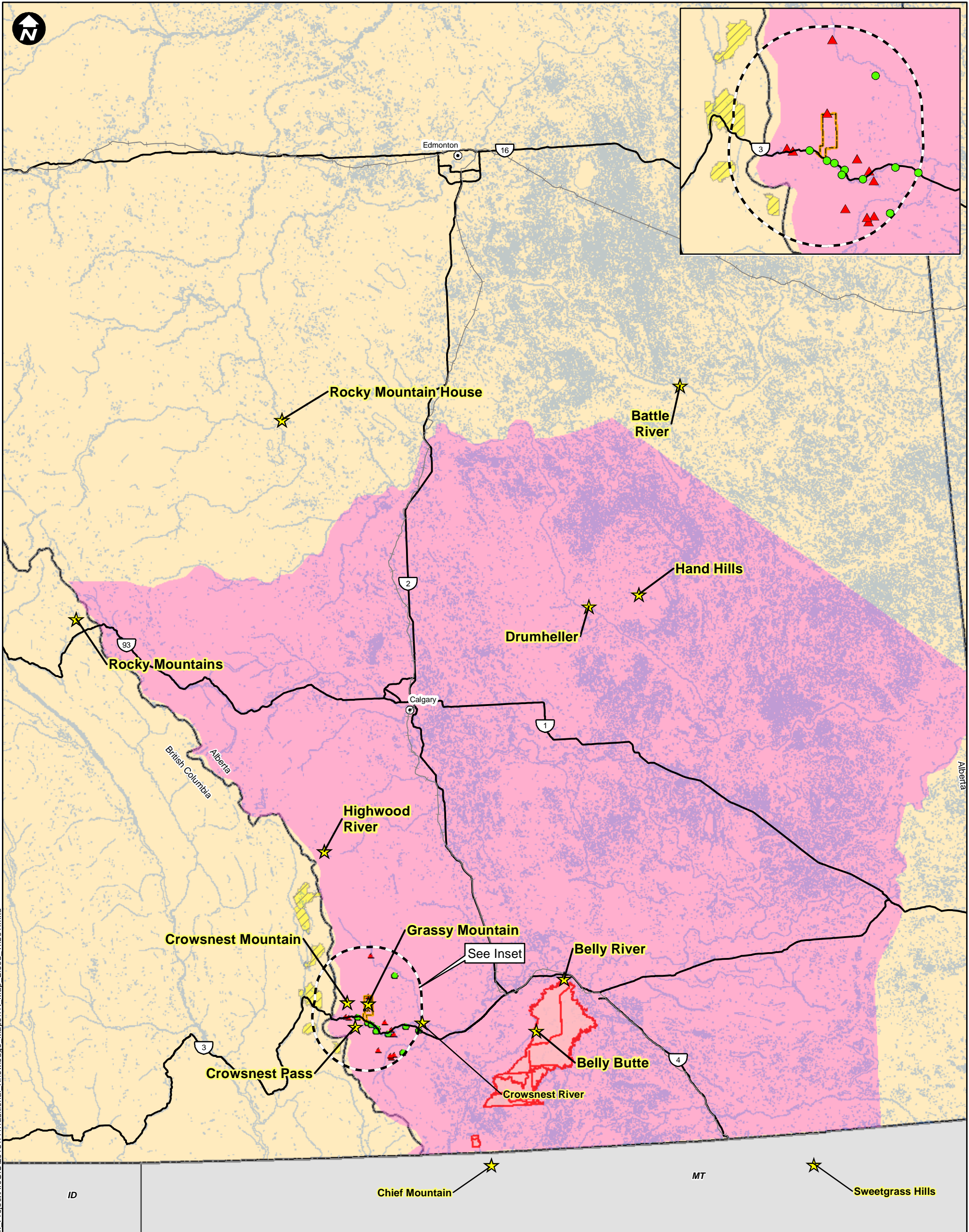
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## Figures



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**LEGEND**

- Regional Study Area
- Local Study Area
- Kainai Reserve
- Kainai Traditional Lands
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Rural Development
- TK/TU Point
- TK/TU Trail
- TK/TU Area

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



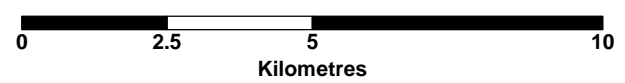
**TITLE**

**Areas of Interest and Other Projects in Proximity of the GMP Project- Blood Tribe (Kainai Nation)**

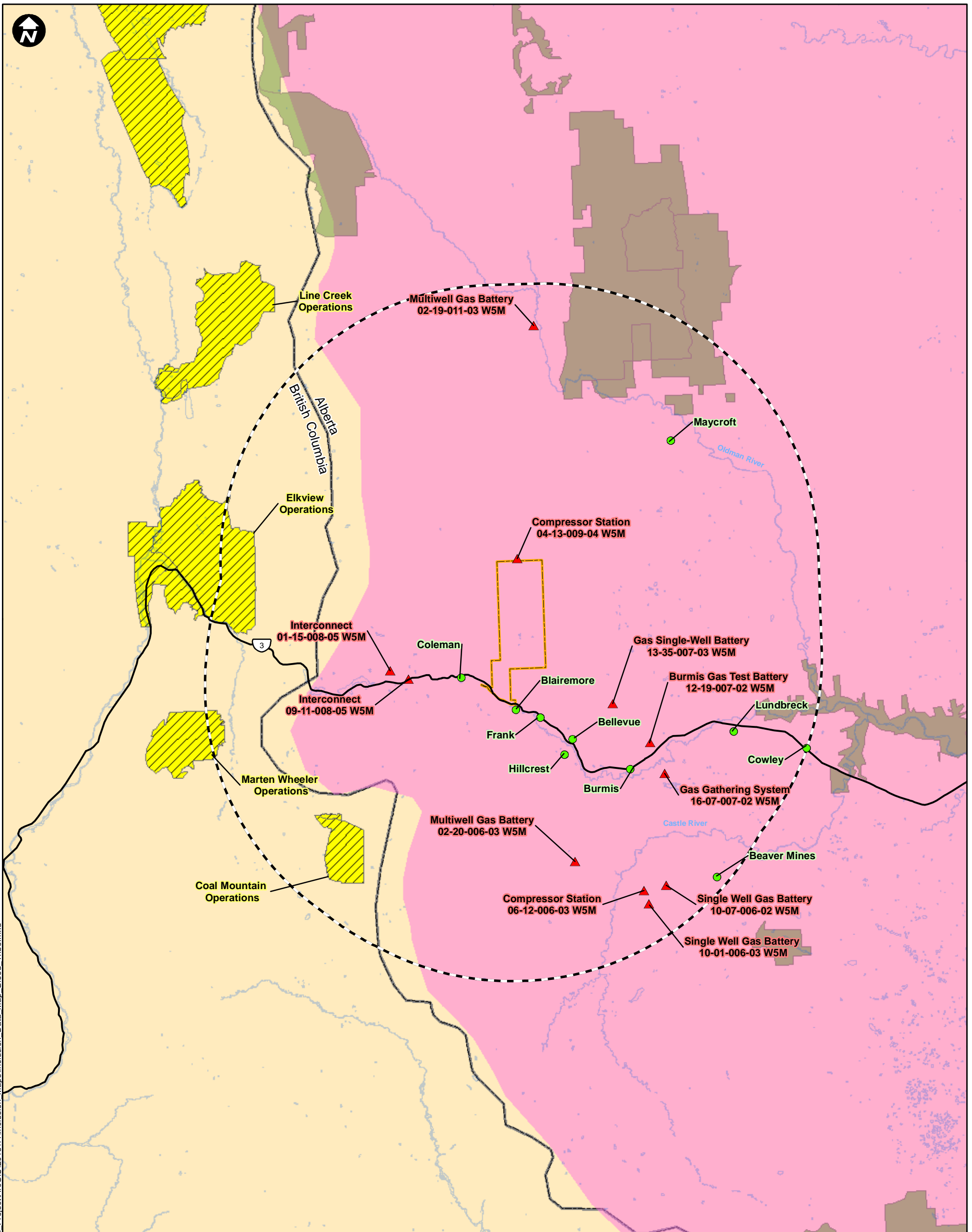
**NOTES**

Traditional Territory and Reserve Locations obtained through Natural Resource Canada Geogratis - <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**  
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**LEGEND**

- Regional Study Area
- Local Study Area
- Other Projects- Rural Development
- Kainai Traditional Lands
- Major Railroad
- Protected Area
- Existing Teck Coal Mine Permit
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Blood Tribe (Kainai Nation)**

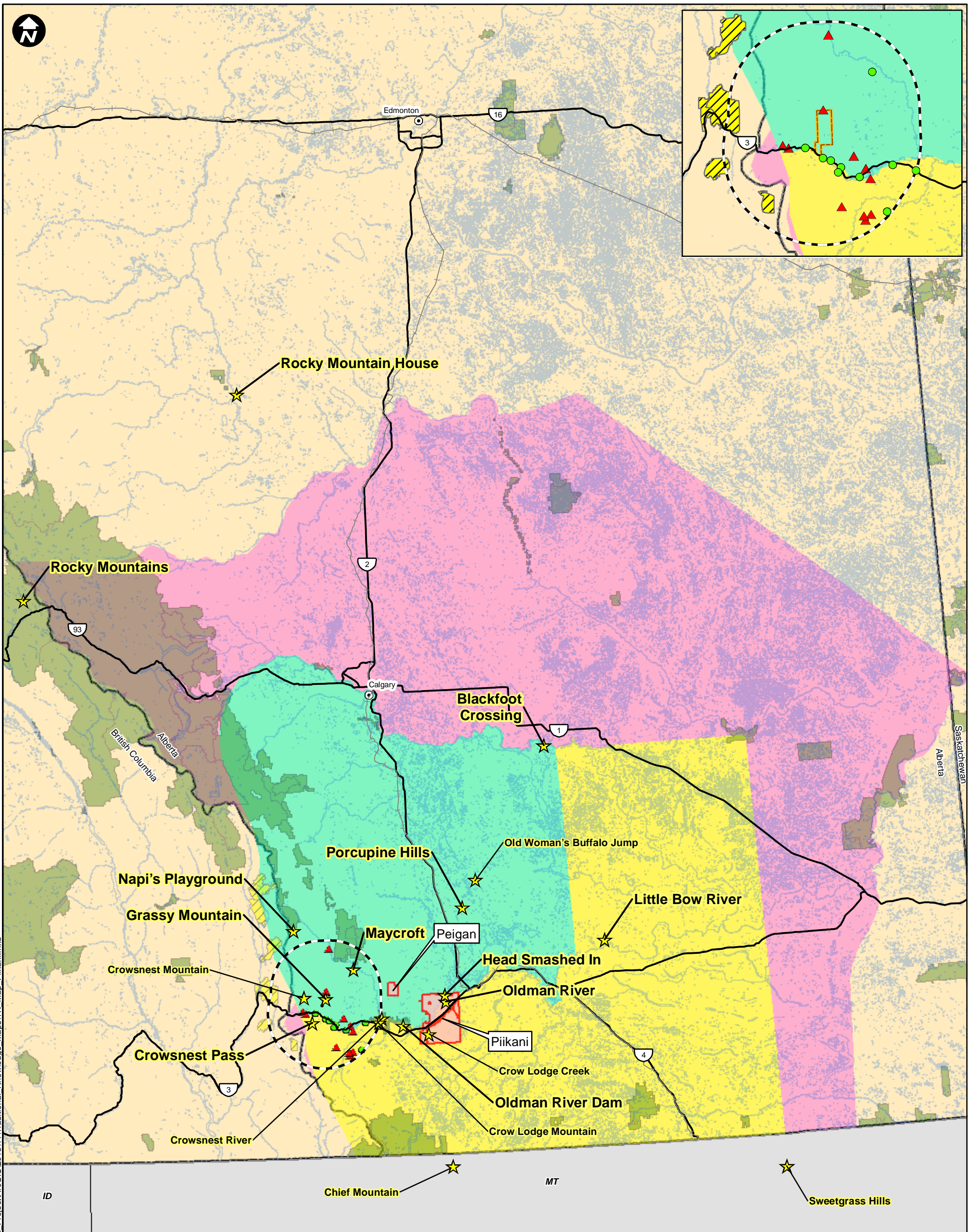
**NOTES**

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**FIGURE**

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**LEGEND**

- |                                   |                     |                                |
|-----------------------------------|---------------------|--------------------------------|
| <b>Traditional Lands Change</b>   | Regional Study Area | Gas Plant or Compressor        |
| Treaty 7 Boundary                 | Local Study Area    | Existing Teck Coal Mine Permit |
| 1855 to 1876                      | Protected Area      | Rural Development              |
| 1877 to 1910                      | Waterbody           | TK/TU Point                    |
| Piikani Reserve (1910 to Present) | Major Railroad      |                                |
|                                   | Highway             |                                |

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



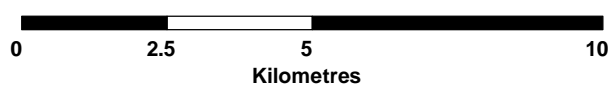
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**Areas of Interest and Other Projects in Proximity of the GMP Project- Piikani Nation**

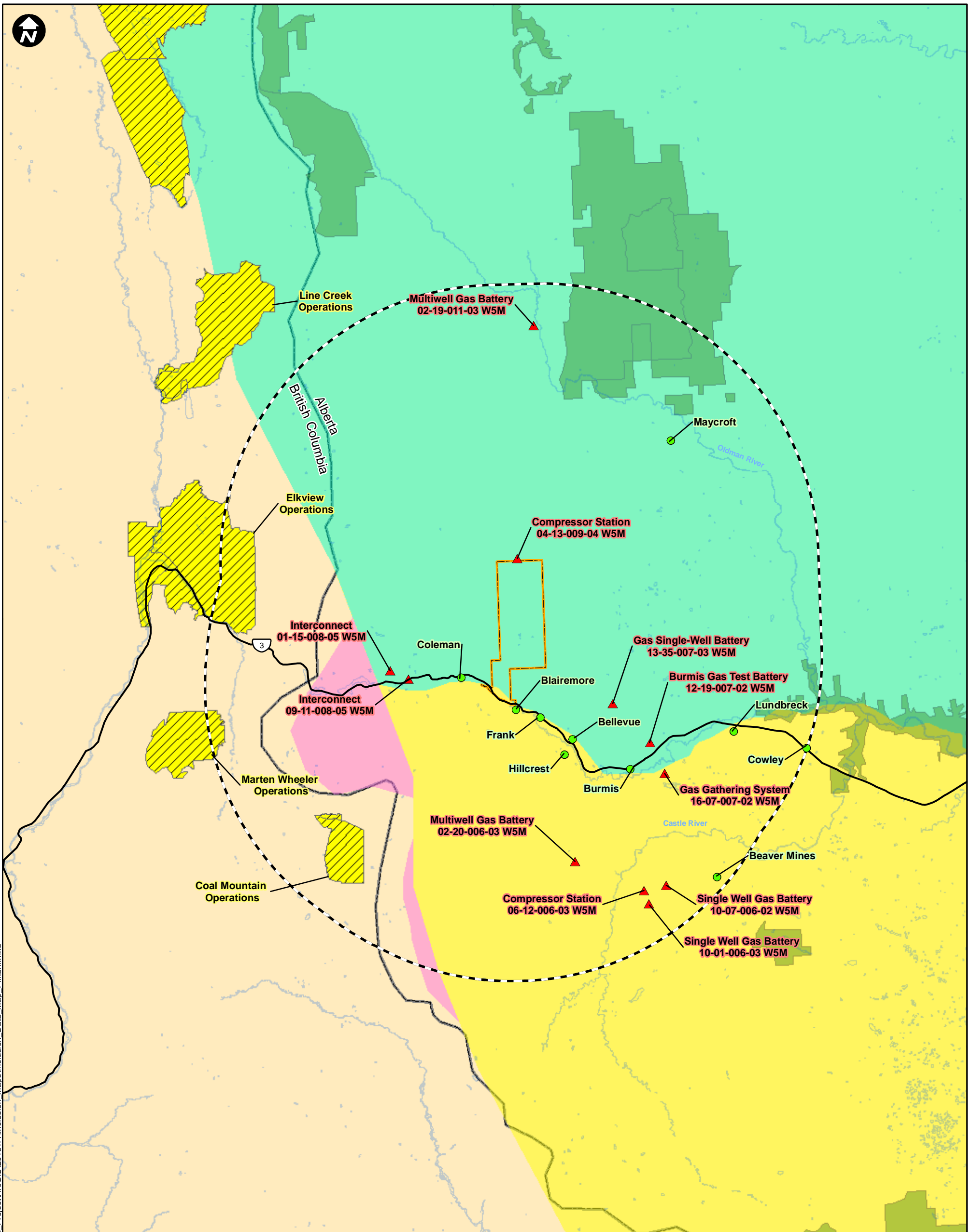
**NOTES**

Traditional Territory obtained through the "Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area," July 2015 Reserve Locations obtained through Natural Resource Canada Geogratis - <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
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**FIGURE**  
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**LEGEND**

- Regional Study Area
- Local Study Area
- Traditional Lands Change**
- Treaty 7 Boundary
- 1855 to 1876
- 1877 to 1910
- Other Projects- Rural Development
- Major Railroad
- Protected Area
- Existing Teck Coal Mine Permit
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Piikani Nation**

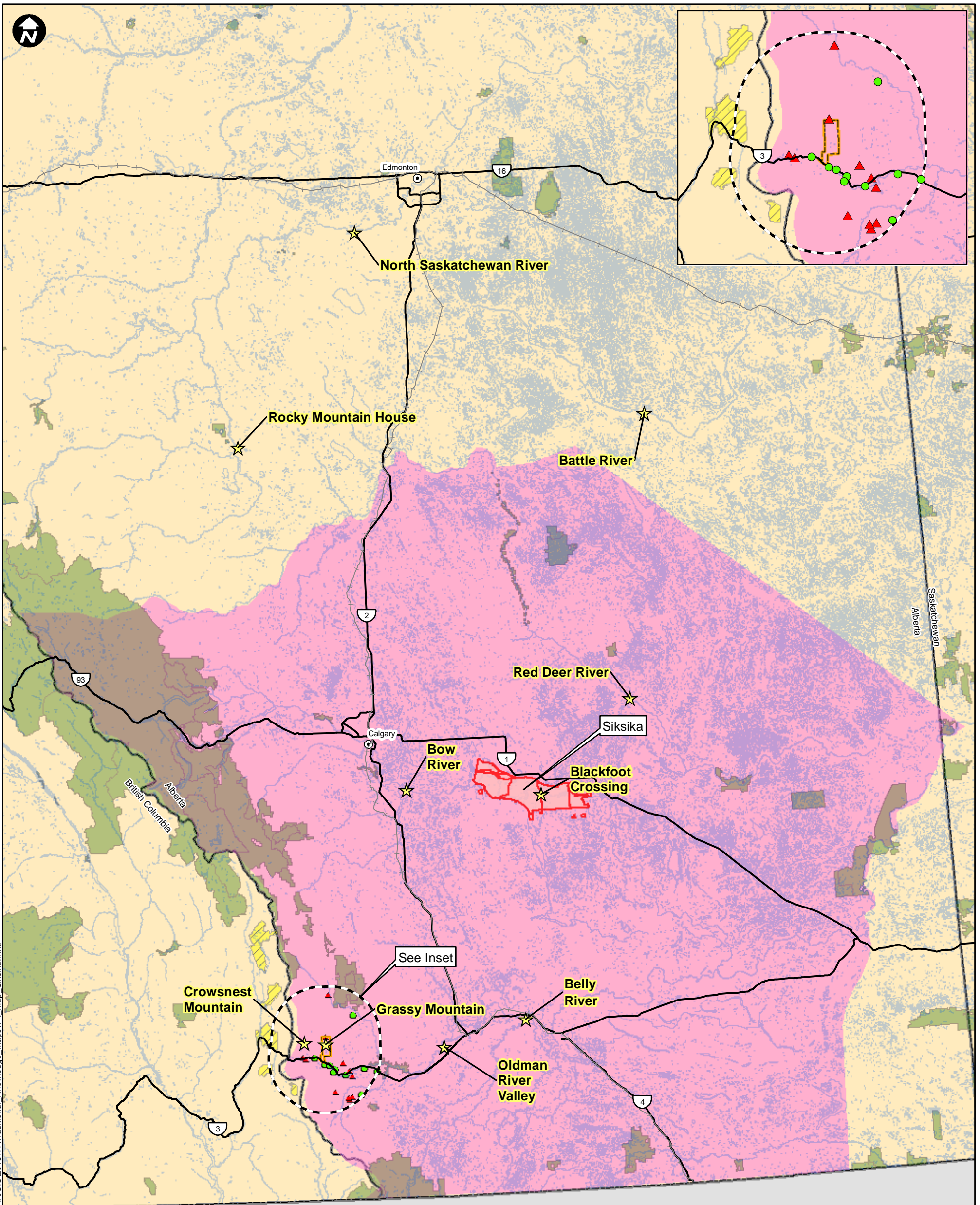
**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



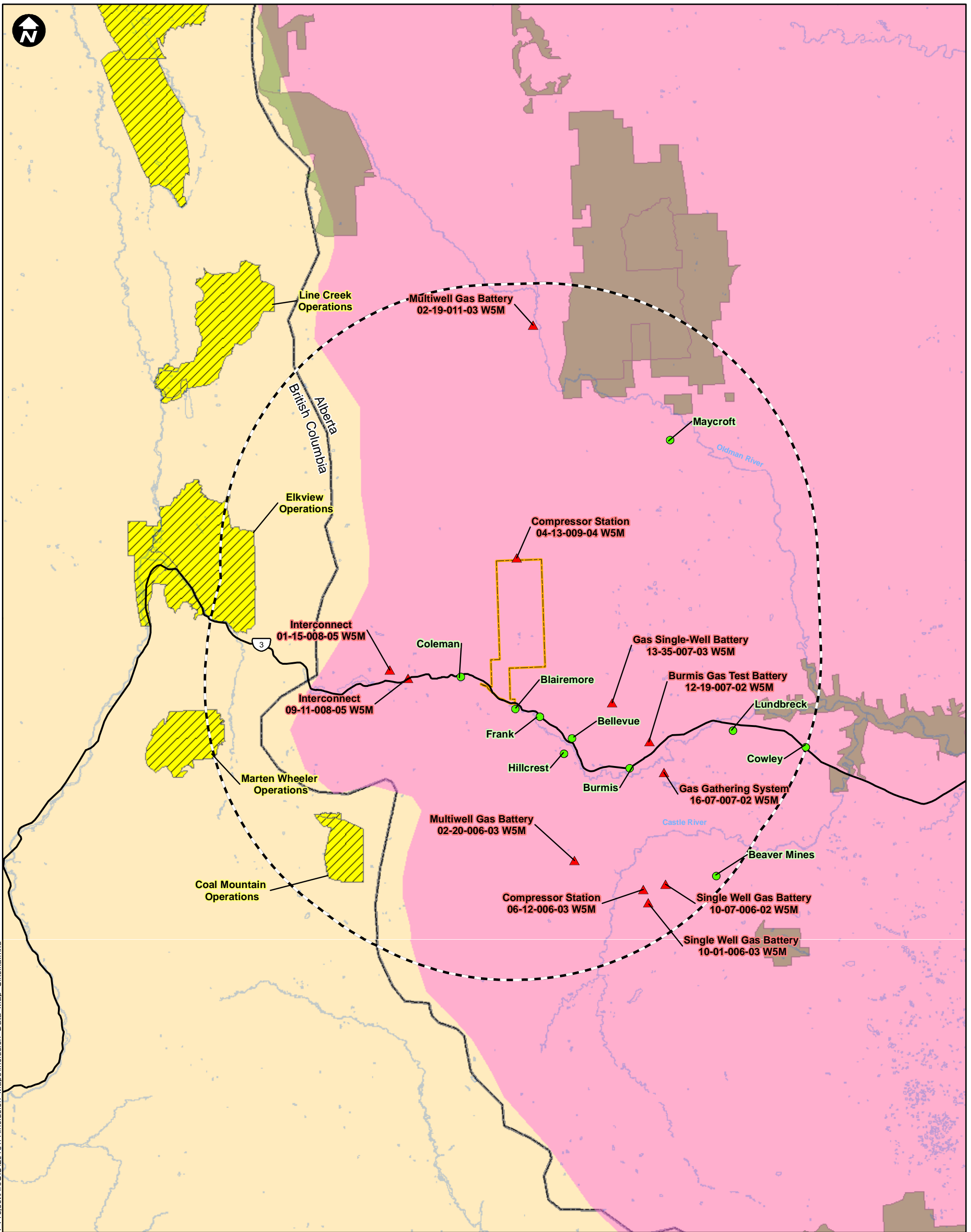
**FIGURE**

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Document Path: Z:\Clients\O\_T\Riversdale\_Resources\Grassy\_Mountain\_Project\ArcGIS\2015\11\Traditional\_Knowledge\_Maps\TK\_Map\_Siksika.mxd

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Regional Study Area</li> <li><span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Local Study Area</li> <li><span style="background-color: #f08080; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Kainai Reserve</li> <li><span style="background-color: #ff69b4; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Kainai Traditional Lands</li> <li><span style="background-color: #90ee90; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Protected Area</li> <li><span style="border-bottom: 1px solid blue; display: inline-block; width: 15px; margin-right: 5px;"></span> Waterbody</li> <li><span style="border-bottom: 1px solid black; display: inline-block; width: 15px; margin-right: 5px;"></span> Major Railroad</li> <li><span style="border-bottom: 2px solid black; display: inline-block; width: 15px; margin-right: 5px;"></span> Highway</li> <li><span style="color: red; font-weight: bold;">▲</span> Gas Plant or Compressor</li> <li><span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Existing Teck Coal Mine Permit</li> <li><span style="color: green; font-weight: bold;">●</span> Rural Development</li> <li><span style="color: yellow; font-weight: bold;">★</span> TK/TU Point</li> <li><span style="border-bottom: 1px solid black; display: inline-block; width: 15px; margin-right: 5px;"></span> TK/TU Trail</li> <li><span style="background-color: blue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> TK/TU Area</li> </ul>		<p><b>PROJECT</b></p> <p><b>RIVERSDALE GRASSY MOUNTAIN COAL PROJECT</b></p> <p><b>merjent</b></p>
<p><b>TITLE</b></p> <p><b>Areas of Interest and Other Projects in Proximity of the GMP Project- Siksika Nation</b></p>		
<p><b>NOTES</b></p> <p>Traditional Territory and Reserve Locations obtained through Natural Resource Canada Geogratis - <a href="http://geogratis.gc.ca/">http://geogratis.gc.ca/</a></p>		
<p>0 25 50 100 Kilometres</p>		
<p>PROJECT: 14-00201-01 DRAWN BY: WLR CHECKED BY: JM DATE: NOVEMBER 04, 2015</p>		
<p><b>FIGURE</b></p> <p><b>H\).%1</b></p>		



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**LEGEND**

- Regional Study Area
- Major Railroad
- Local Study Area
- Protected Area
- Other Projects- Rural Development
- Existing Teck Coal Mine Permit
- Siksika Traditional Lands
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Siksika Nation**

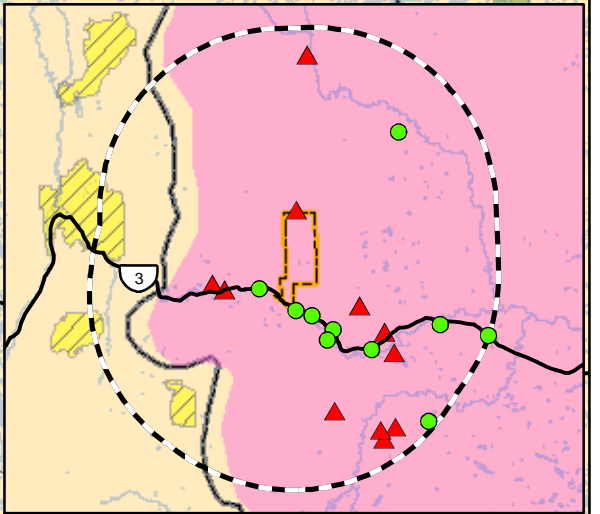
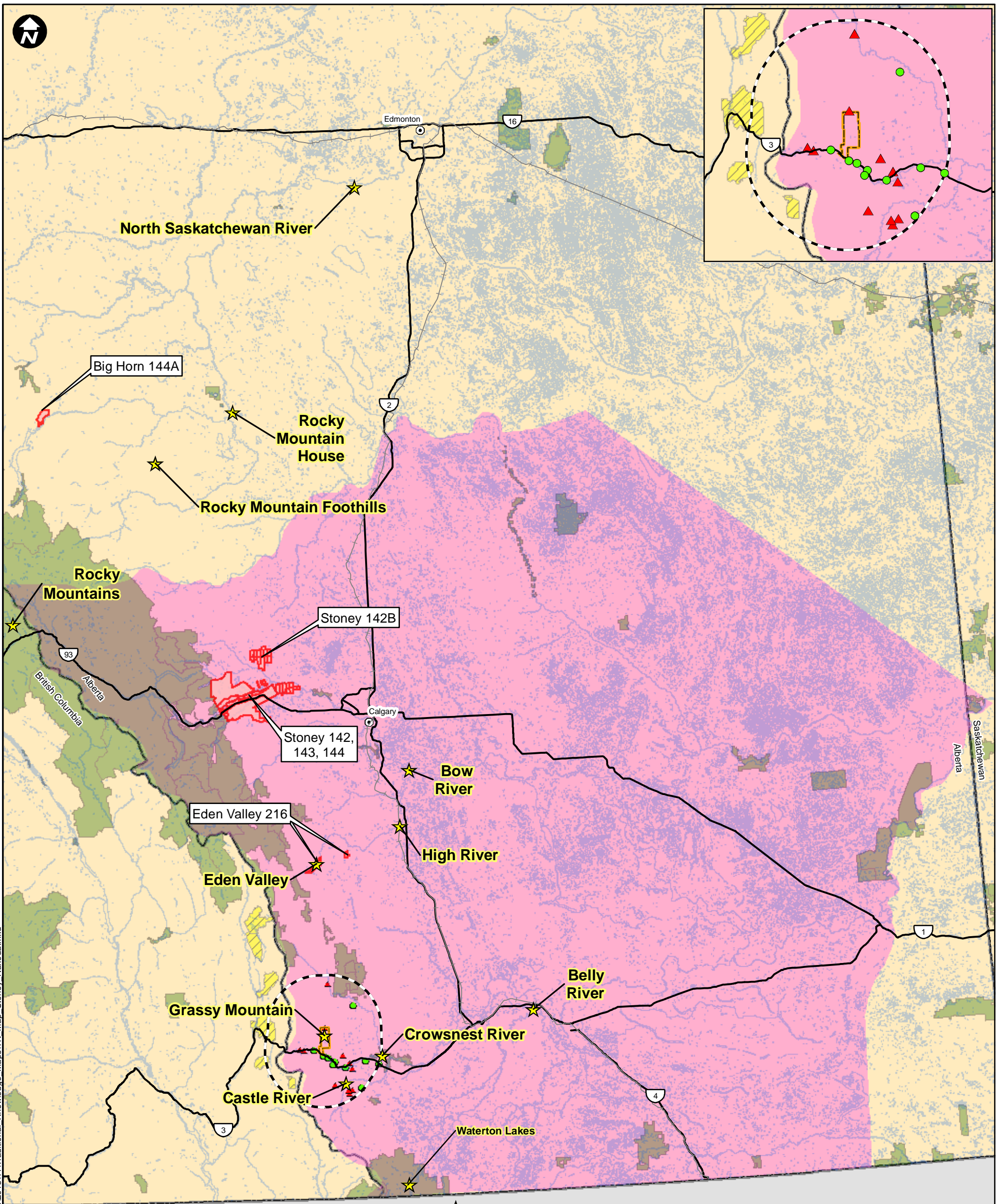
**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

**H) 'k -%**



Document Path: Z:\Riversdale\_Resources\Grassy Mountain\_Project\ArcGIS\2015\11\Traditional\_Knowledge\_Maps\TK\_Map\_Stoney\_Nakoda.mxd

**LEGEND**

- Regional Study Area
- Local Study Area
- Kainai Reserve
- Kainai Traditional Lands
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Rural Development
- TK/TU Point
- TK/TU Trail
- TK/TU Area

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Areas of Interest and Other Projects in Proximity of the GMP Project - Stoney Nakoda Nation**

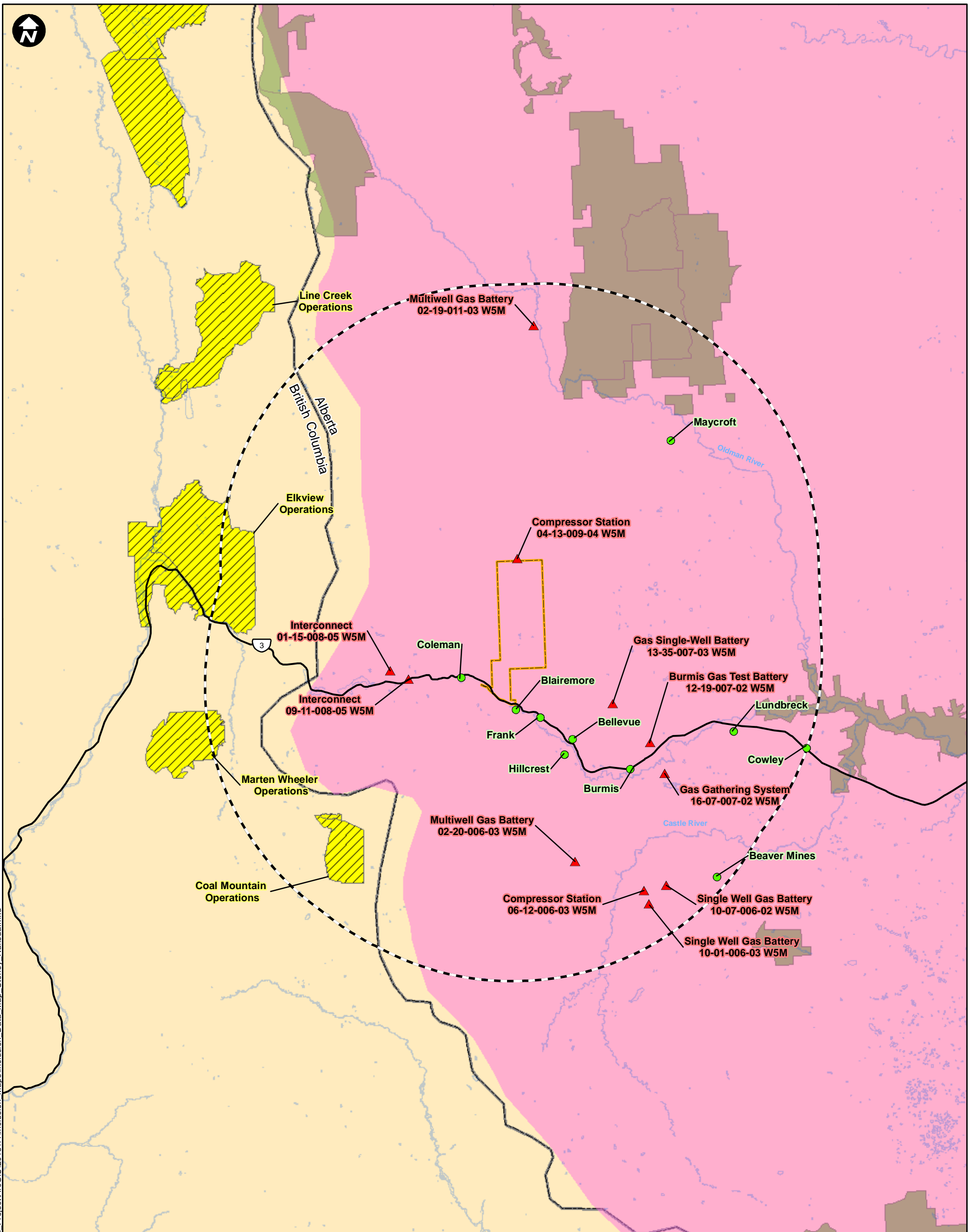
**NOTES**

Traditional Territory and Reserve Locations obtained through Natural Resource Canada Geogratis - <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**  
 H<sup>1</sup> 10%1



**LEGEND**

- Regional Study Area
- Major Railroad
- Local Study Area
- Protected Area
- Other Projects- Rural Development
- Existing Teck Coal Mine Permit
- Stoney Nakoda Traditional Lands
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Stoney Nakoda Nation**

**NOTES**

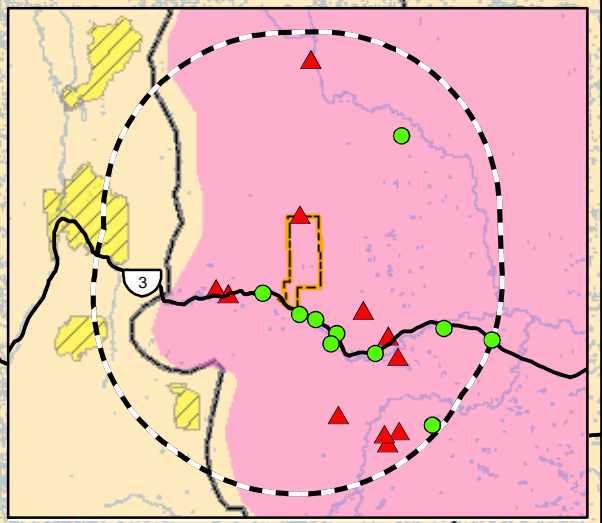
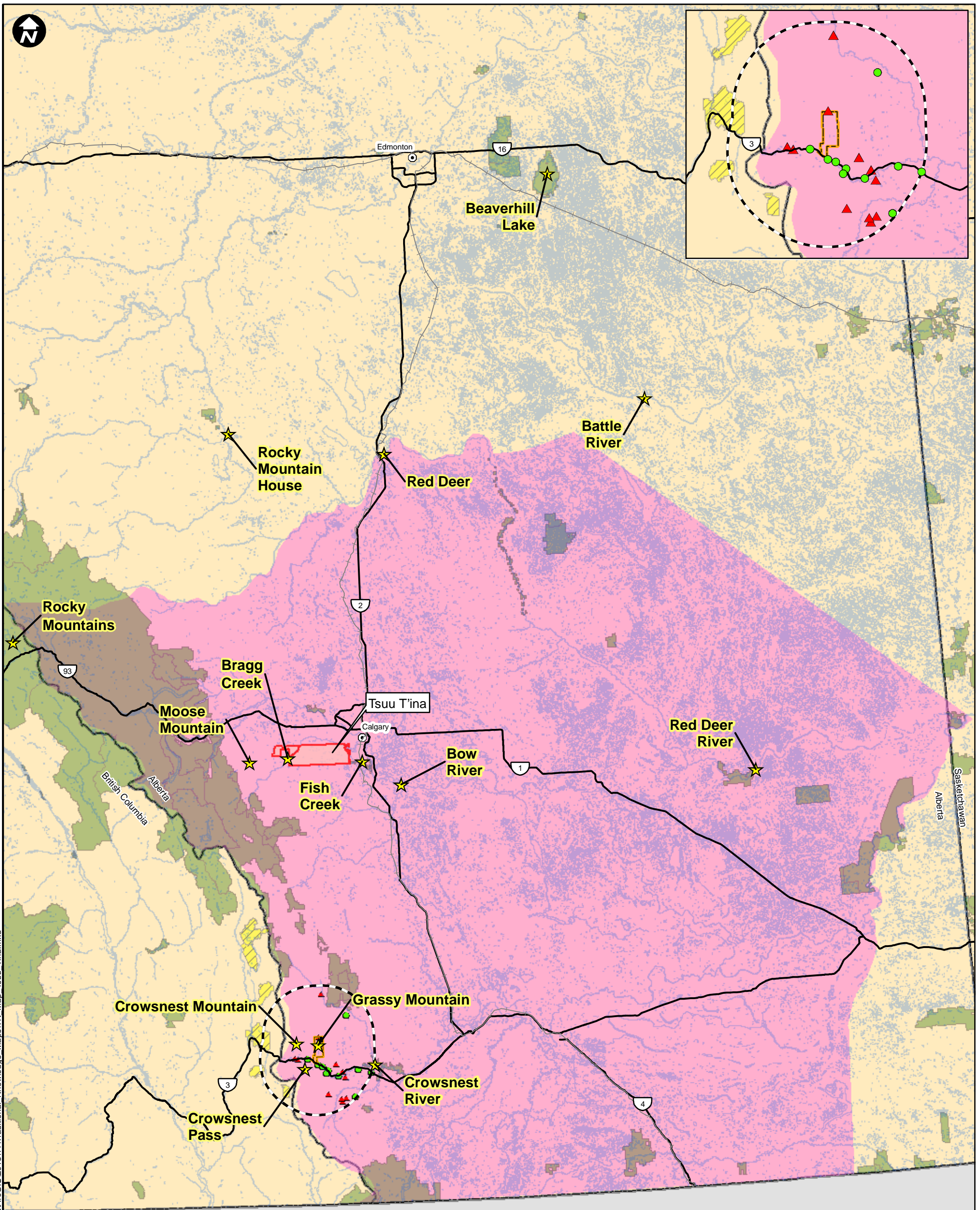
PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

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Document Path: Z:\Clients\Q\_T\Riversdale\_Resources\Grassy\_Mountain\_Project\ArcGIS\2015\11\Inclusion\_Maps\Inclusion\_Data\_Map\_Stoney\_Nakoda.mxd



Document Path: Z:\Clients\O\_T\Riversdale\_Resources\Grassy\_Mountain\_Project\ArcGIS\2015\11\Traditional\_Knowledge\_Maps\TK\_Map\_Tsuu\_Tina.mxd

**LEGEND**

- Regional Study Area
- Local Study Area
- Kainai Reserve
- Kainai Traditional Lands
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Rural Development
- TK/TU Point
- TK/TU Trail
- TK/TU Area

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Areas of Interest and Other Projects in Proximity of the GMP Project- Tsuu Tina Nation**

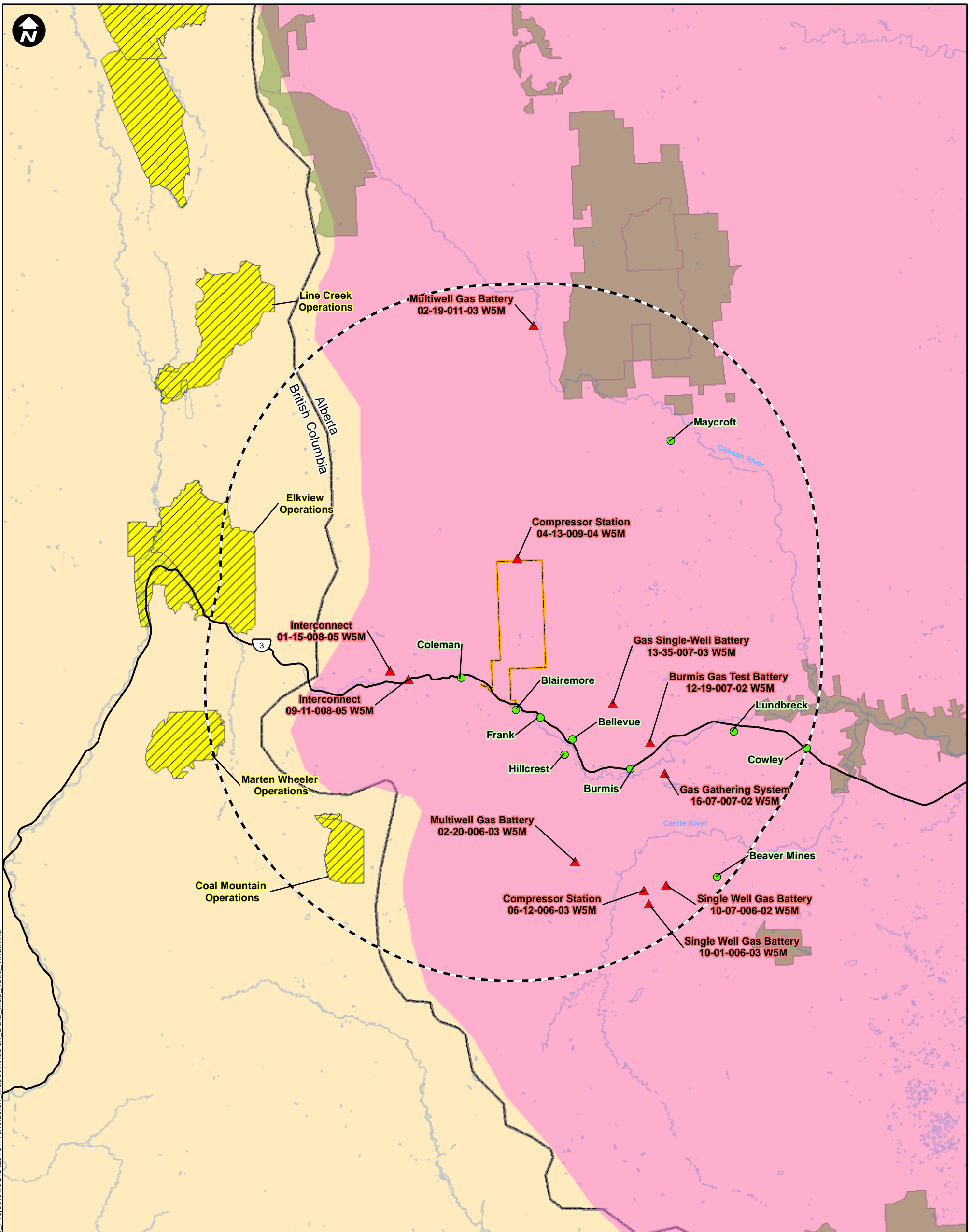
**NOTES**

Traditional Territory and Reserve Locations obtained through Natural Resource Canada Geogratis - <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**  
 H'+ '%%



**LEGEND**

- Regional Study Area
- Local Study Area
- Other Projects- Rural Development
- Tsuu Tina Traditional Lands
- Major Railroad
- Protected Area
- Existing Teck Coal Mine Permit
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Tsuu Tina Nation**

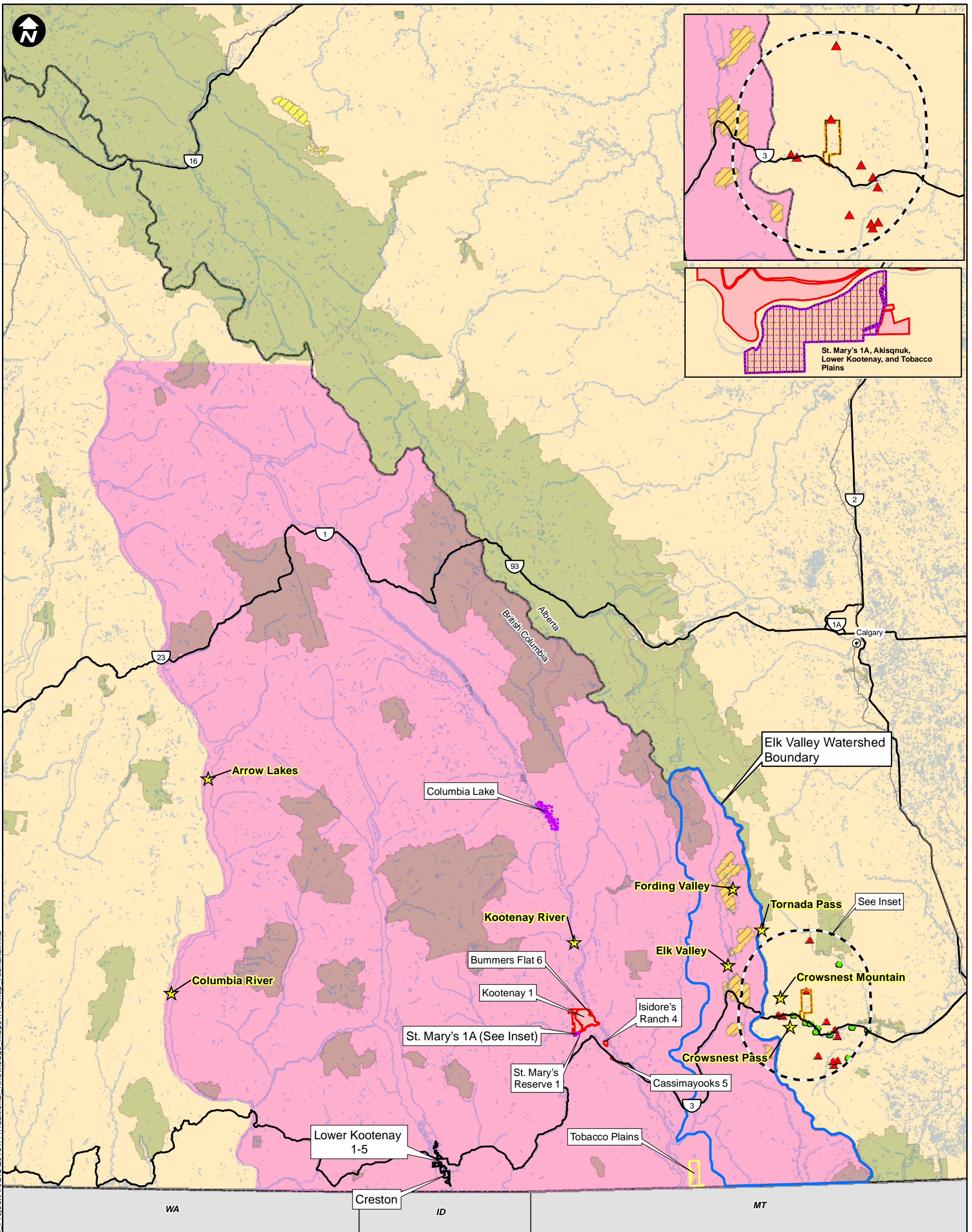
**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

**H<sup>+</sup> !1**



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**LEGEND**

- |                        |                           |                                |
|------------------------|---------------------------|--------------------------------|
| Regional Study Area    | St. Mary's Reserve        | Gas Plant or Compressor        |
| Local Study            | Ktunaxa Traditional Lands | Existing Teck Coal Mine Permit |
| Akisq'nuq Reserve      | Protected                 | Rural Development              |
| Lower Kootenay Reserve | Waterbody                 | TK/TU Point                    |
| Tobacco Plains Reserve | Major Railroad            |                                |
|                        | Highway                   |                                |

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



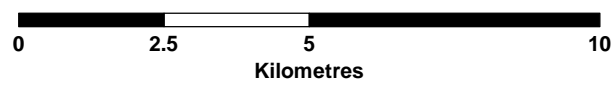
**TITLE**

**Areas of Interest and Other Projects in Proximity of the GMP Project- Ktunaxa Nation**

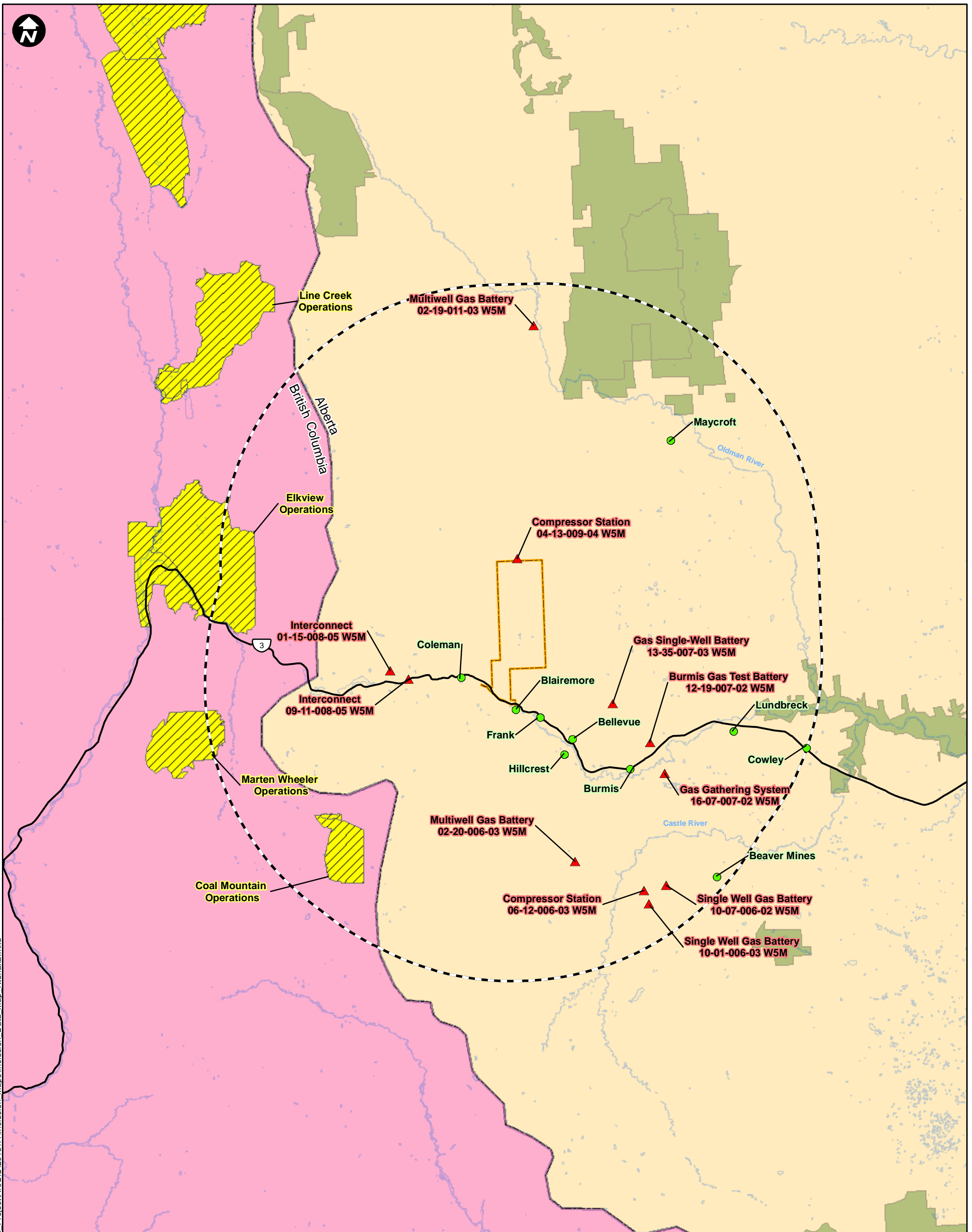
**NOTES**

Ktunaxa Traditional Territory obtained from Akisqnuq Nation webpage- [http://akisqnuq.org/clc/images/map\\_popup\\_KR.gif](http://akisqnuq.org/clc/images/map_popup_KR.gif)  
 Reserve Locations obtained through Natural Resource Canada Geogratis- <http://geogratis.gc.ca/>









PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**  
**H.8.1-1**



**LEGEND**

-  Regional Study Area
-  Local Study Area
-  Other Projects- Rural Development
-  Ktunaxa Traditional Lands
-  Major Railroad
-  Protected Area
-  Existing Teck Coal Mine Permit
-  Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

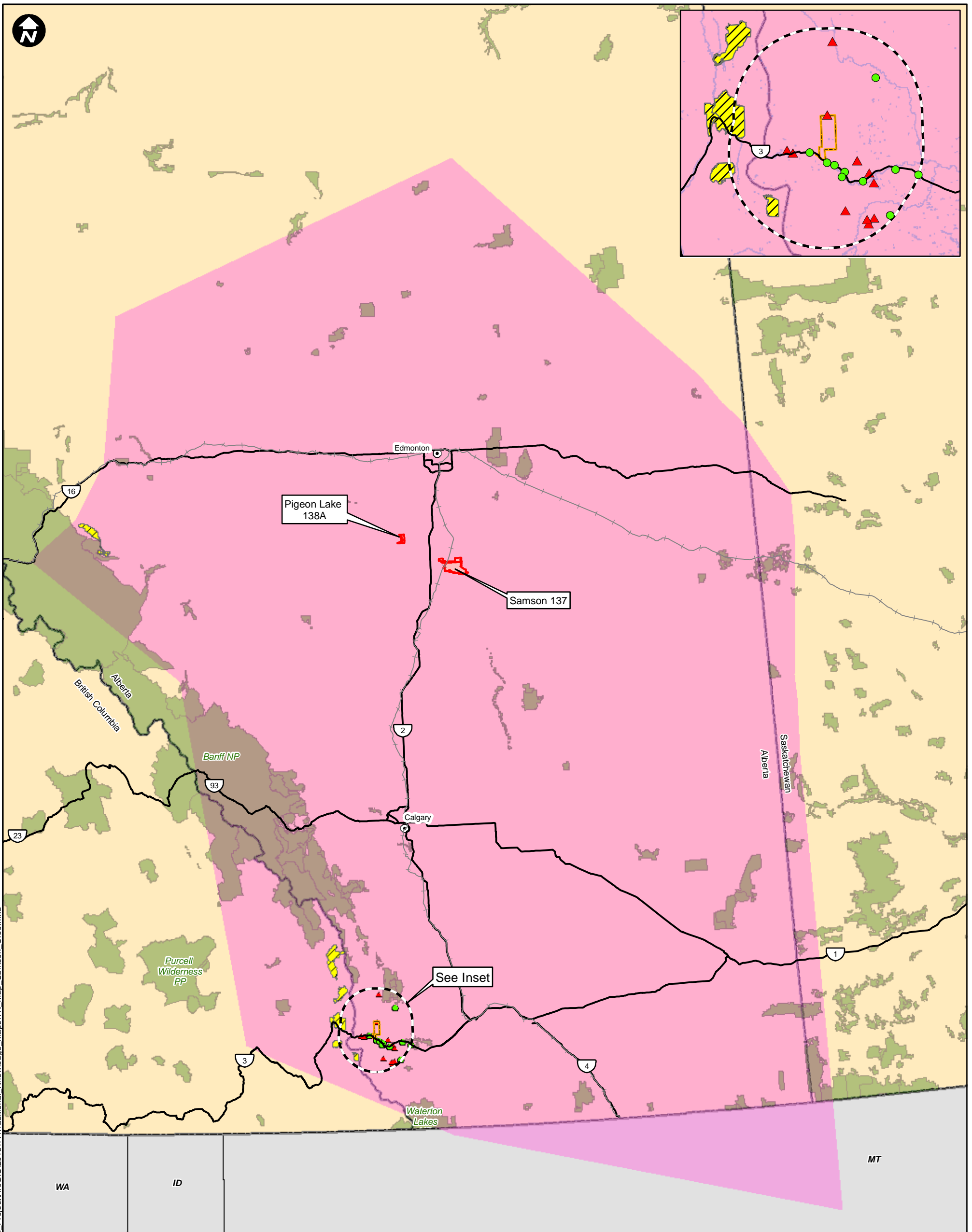
**Traditional Territory with Other Projects and Activities - Ktunaxa Nation**

**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE H.8.3-1**



Document Path: Z:\Clients\O\_T\Riversdale\_Resources\Grassy\_Mountain\_Project\ArcGIS\2015\11\Traditional\_Knowledge\_Maps\TK\_Map\_Samson\_Cree.mxd

**LEGEND**

- Regional Study Area
- Project Location
- Samson Cree Reserve Land
- Samson Cree Traditional Territory
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Other Projects- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Other Projects- Rural Development

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with the GMP Project - Samson Cree Nation**

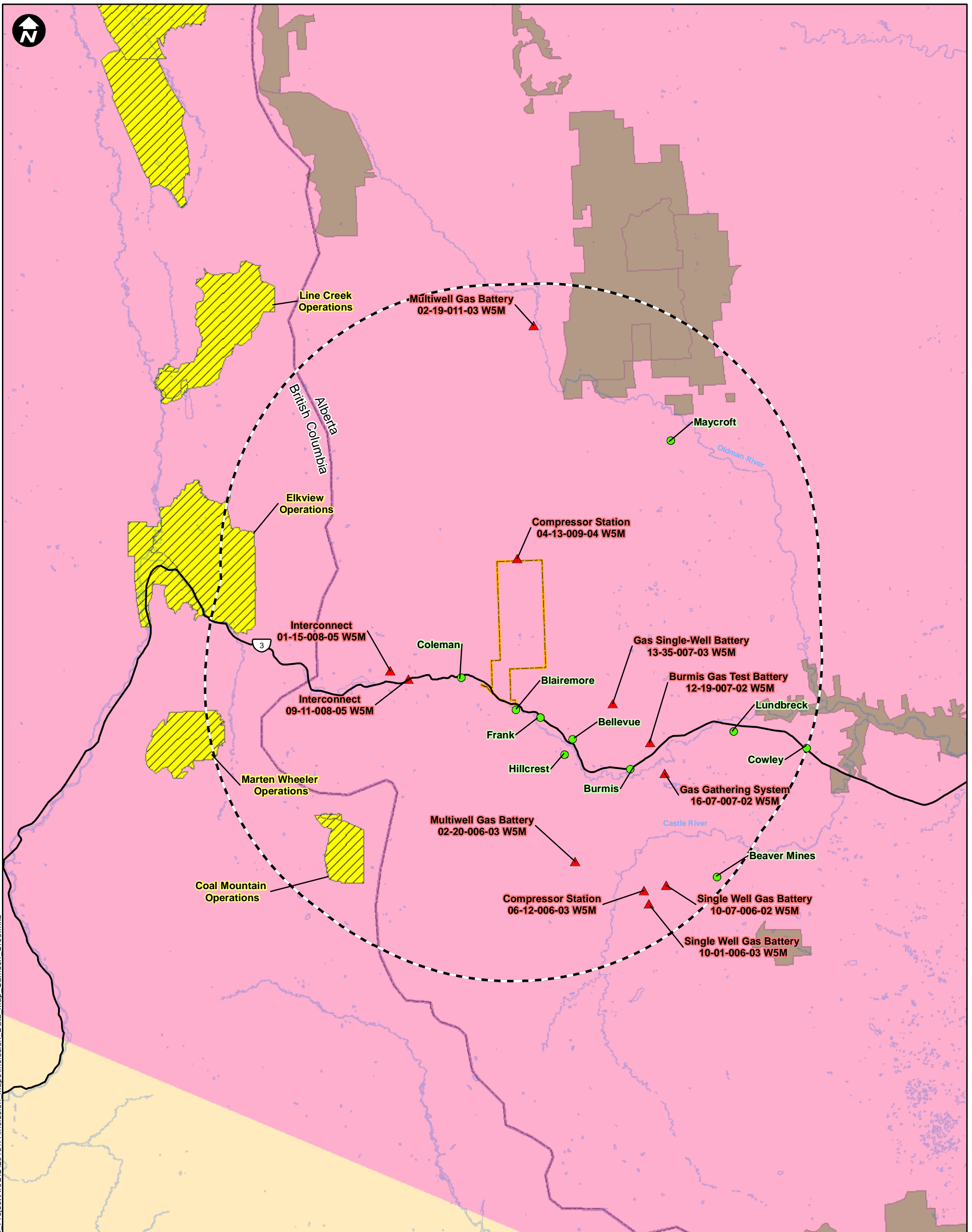
**NOTES**

Traditional Territory digitized from information from, "Samson Cree Nation (SCN). 2015. Samson Cree Nation TLU Map. Consultation process: personal correspondence dated July 31, 2015"  
Reserve Locations obtained through Natural Resource Canada Geogratis - <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
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DATE: NOVEMBER 04, 2015



**FIGURE**  
**H.9.1-1**



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**LEGEND**

- Regional Study Area
- Local Study Area
- Other Projects- Rural Development
- Samson Cree Traditional Lands
- Major Railroad
- Protected Area
- Existing Teck Coal Mine Permit
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

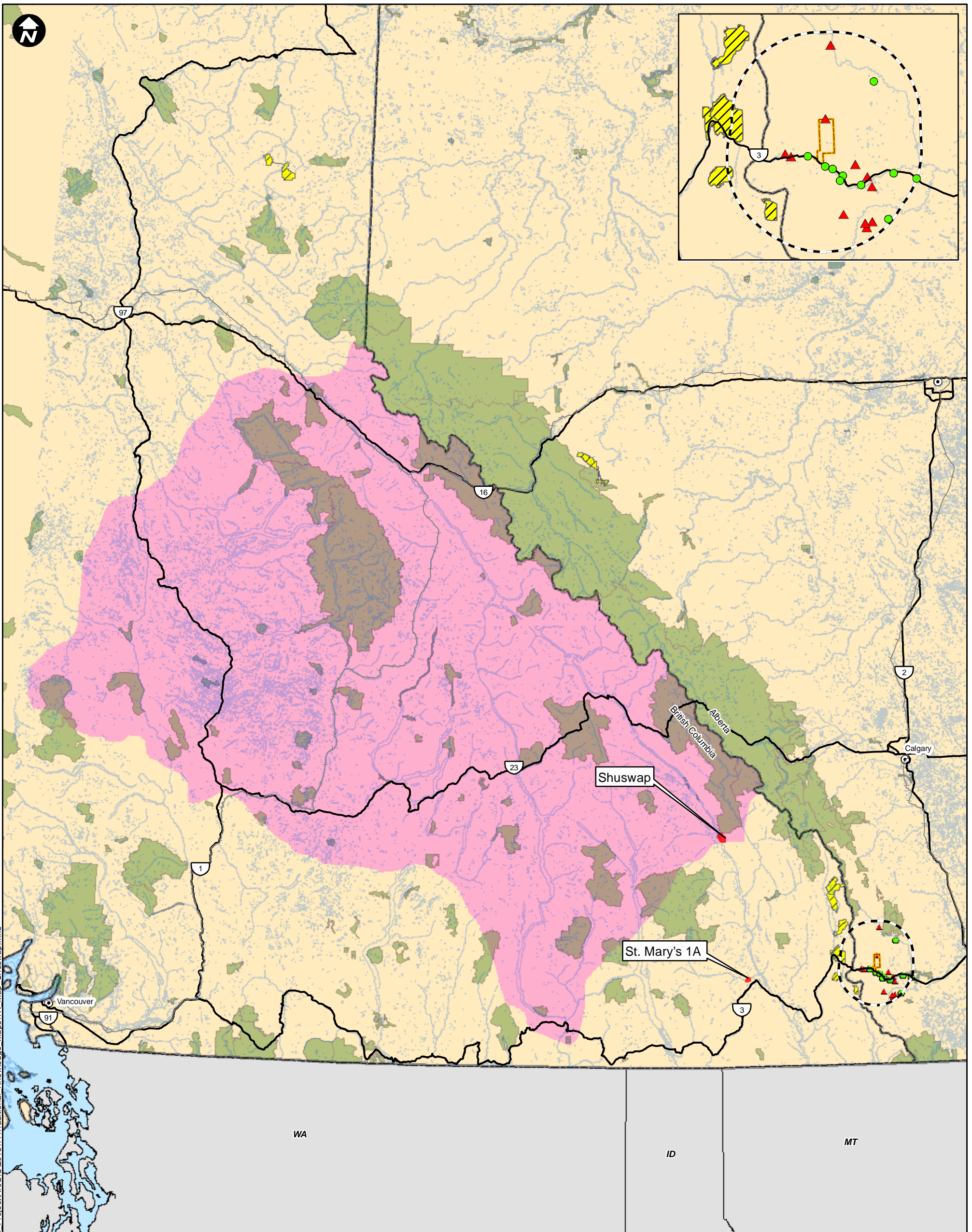
**Traditional Territory with Other Projects and Activities - Samson Cree Nation**

**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE H.9.5-1**



Document Path: Z:\Clients\O...Riversdale\_Resources\Grassy\_Mountain\_Project\ArcGIS\2015\11\Traditional\_Knowledge\_Maps\TK\_Map\_Shuswap.mxd

**LEGEND**

- Regional Study Area
- Local Study Area
- Shuswap Reserve Land
- Shuswap Traditional Lands
- Protected Area
- Waterbody
- Highway
- Major Railroad
- ▲ Other Projects- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Other Projects- Rural Development

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with the GMP Project - Shuswap Indian Tribe**

**NOTES**

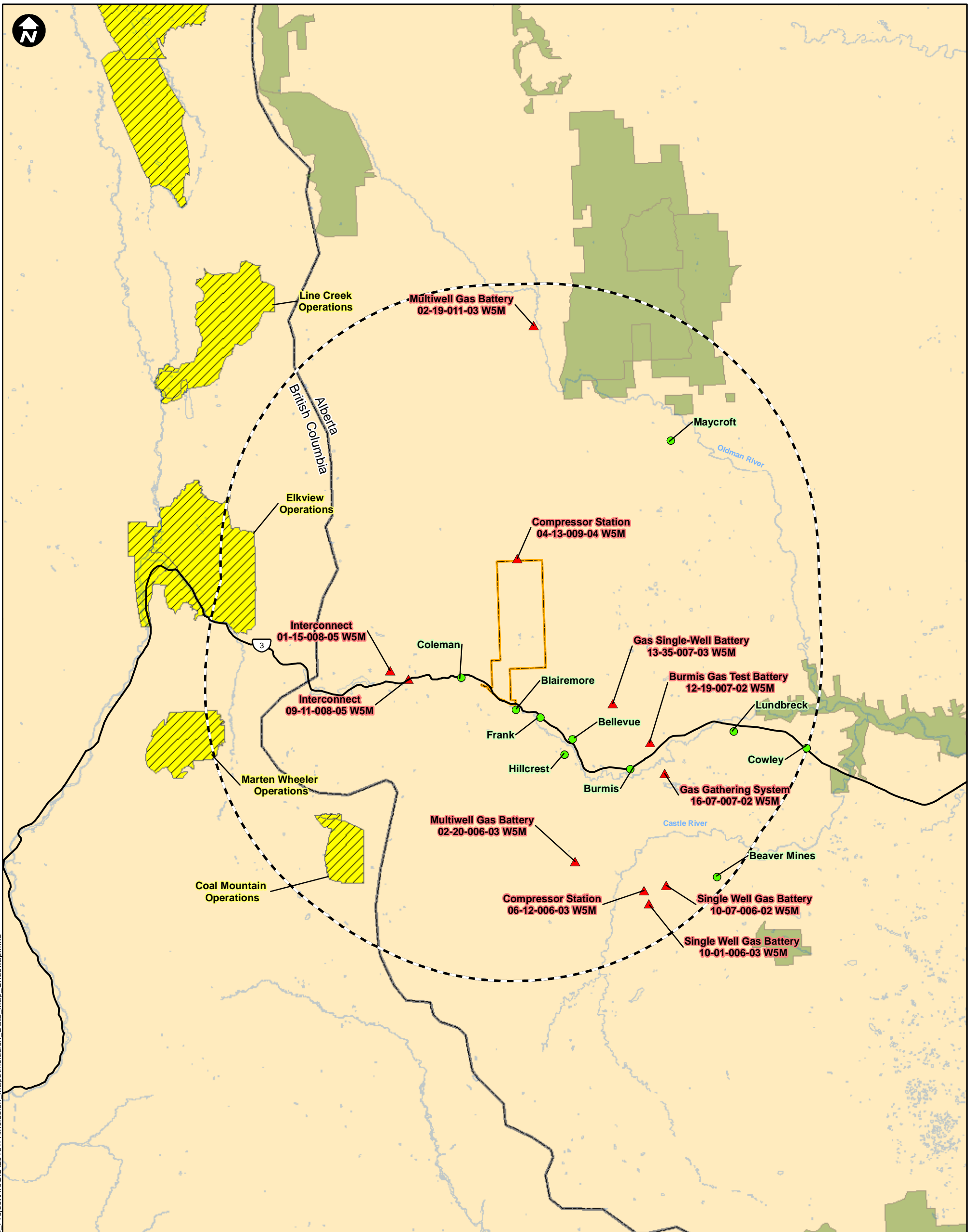
Shuswap Traditional Territory obtained from the Shuswap Band webpage- <http://shuswapband.net/culture-tradition-and-heritage/shuswap-lands> Reserve Locations obtained through Natural Resource Canada Geogratis- <http://geogratis.gc.ca/>

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

**H.10.1-1**



**LEGEND**

- Regional Study Area
- Major Railroad
- Local Study Area
- Protected Area
- Other Projects- Rural Development
- Existing Teck Coal Mine Permit
- Shuswap Traditional Lands
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**  
RESOURCES



**TITLE**

**Traditional Territory with Other Projects and Activities - Shuswap Indian Tribe**

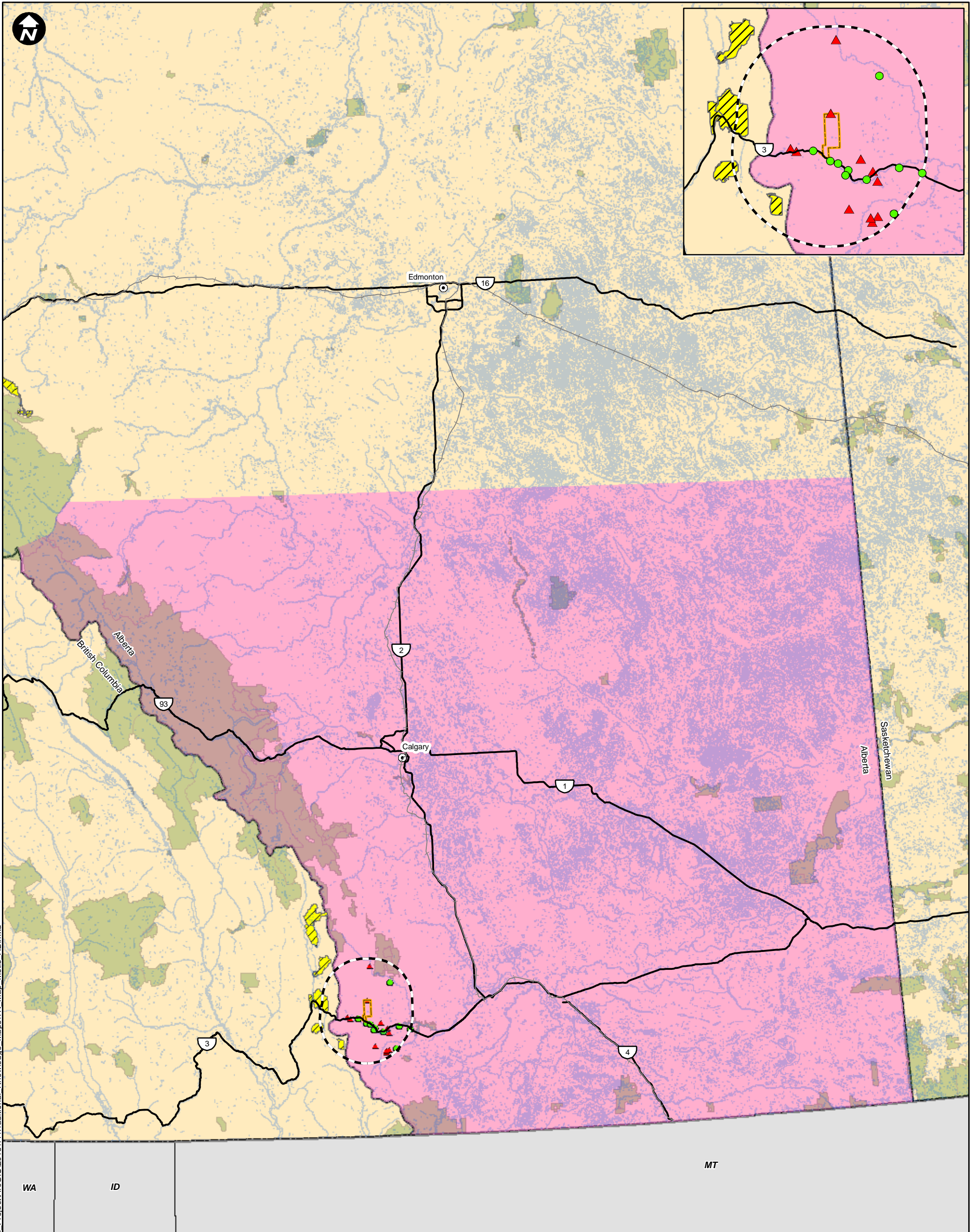
**NOTES**

PROJECT: 14-00201-01  
DRAWN BY: WLR  
CHECKED BY: JM  
DATE: NOVEMBER 04, 2015



**FIGURE**

**H.10.4-1**



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**LEGEND**

- Regional Study Area
- Local Study Area
- Métis Traditional Lands
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Other Projects- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Other Projects- Rural Development

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with the GMP Project - Métis Nation of Alberta**

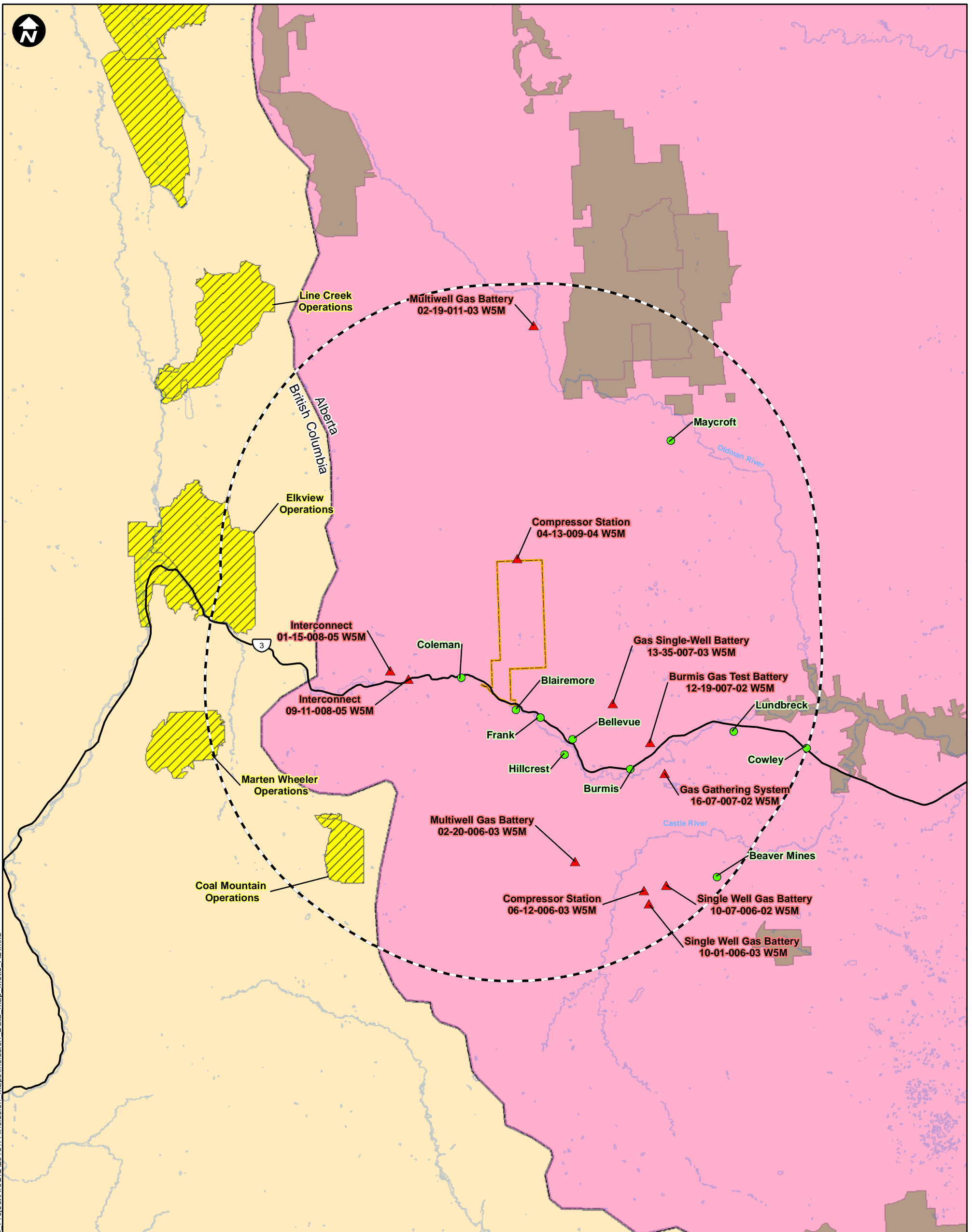
**NOTES**

Traditional territory digitized from information from the Alberta Métis Historical Society webpage- <http://www.collectionscanada.gc.ca/eppp-archive/100/205/301/ic/cdc/albertametis/geography/zone3.htm>  
Reserve locations obtained through Natural Resource Canada Geogratis- <http://geogratis.gc.ca/>









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CHECKED BY: JM  
DATE: NOVEMBER 04, 2015



**FIGURE**  
**H.12.1-1**



**LEGEND**

-  Regional Study Area
-  Local Study Area
-  Other Projects- Rural Development
-  Métis Traditional Lands
-  Major Railroad
-  Protected Area
-  Existing Teck Coal Mine Permit
-  Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Métis Nation of Alberta**

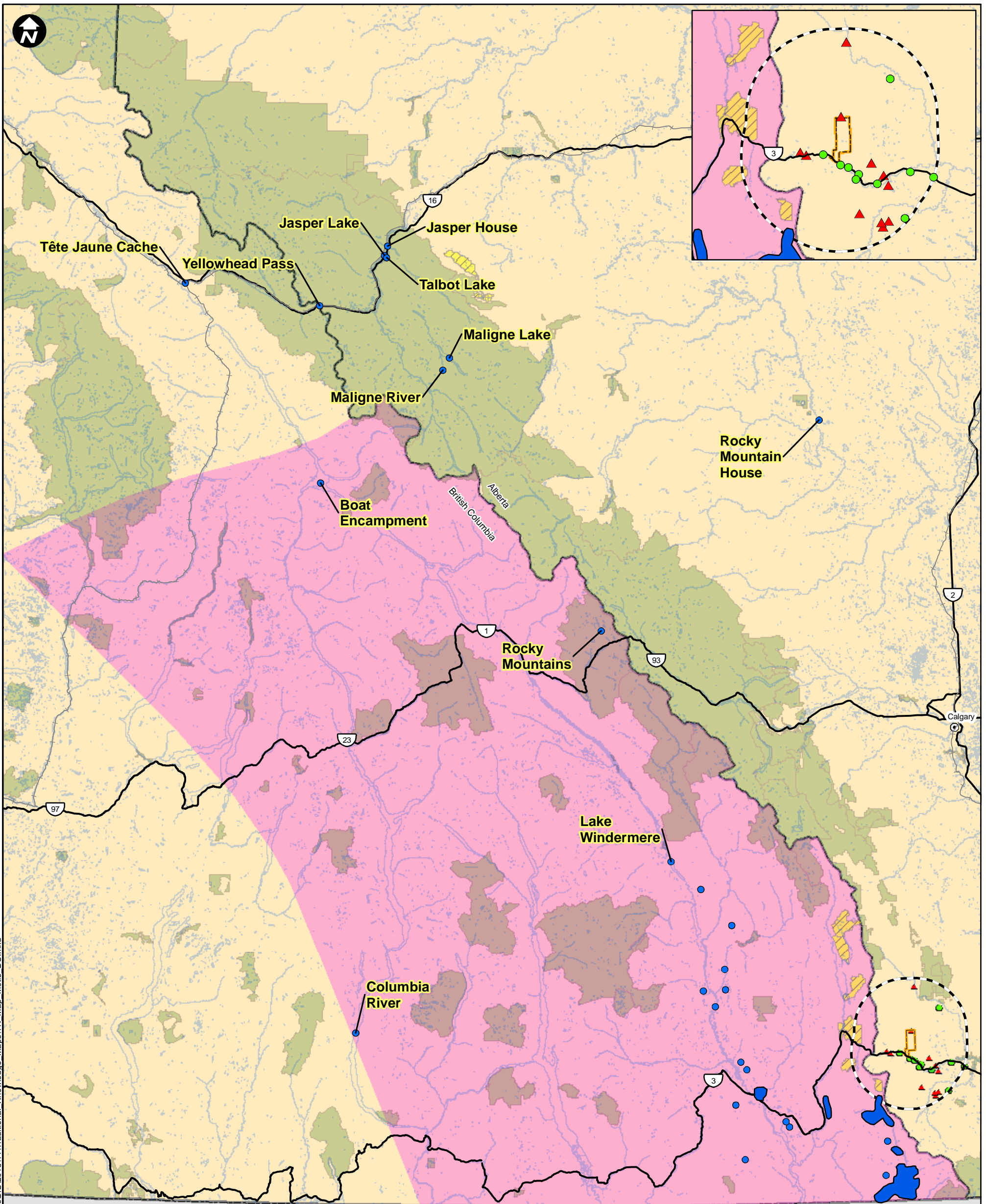
**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

**H.12.4-1**



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**LEGEND**

- Regional Study Area
- Local Study Area
- Métis Traditional Territory
- Métis Traditional Lands
- Protected Area
- Waterbody
- Major Railroad
- Highway
- Gas Plant or Compressor
- Existing Teck Coal Mine Permit
- Rural Development
- Areas of use including TK Sites

**PROJECT**

**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Areas of Interest and Other Projects in Proximity of the GMP Project- Métis Nation of British Columbia**

**NOTES**

Reference 1, 2015; Reference 2, 2015; Reference 3, 2015  
Datum/Projection: UTM NAD 83 Zone 11

PROJECT: 14-00201-01

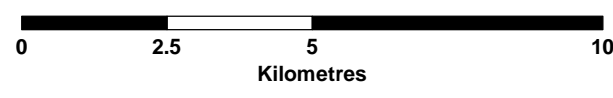
DRAWN BY: WLR

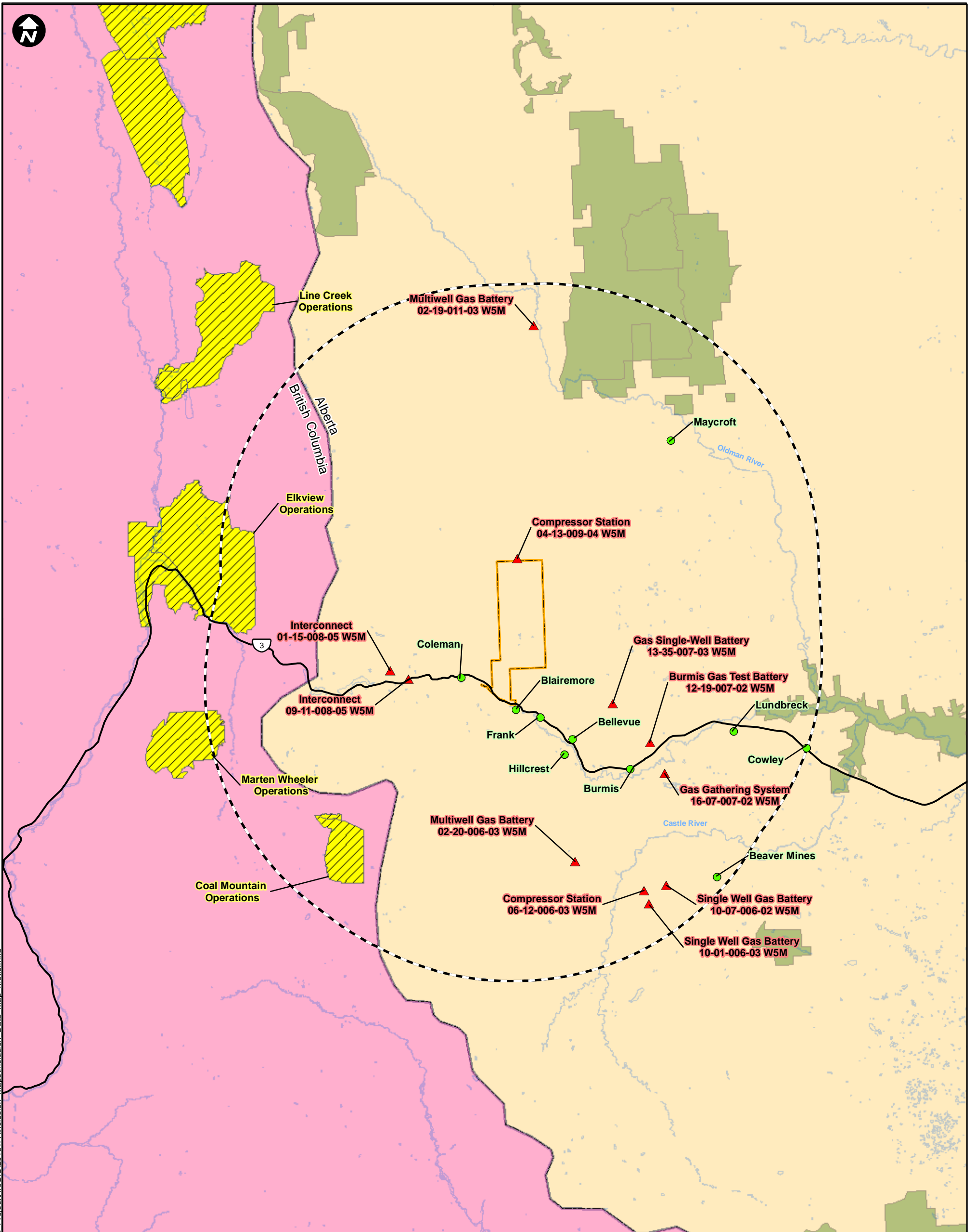
CHECKED BY: JM

DATE: NOVEMBER 04, 2015

**FIGURE**

**H.13.1-1**





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**LEGEND**

- Regional Study Area
- Major Railroad
- Local Study Area
- Protected Area
- Other Projects- Rural Development
- Existing Teck Coal Mine Permit
- Métis Traditional Lands
- Other Projects- Gas Plant or Compressor

**PROJECT**



**RIVERSDALE GRASSY MOUNTAIN COAL PROJECT**



**TITLE**

**Traditional Territory with Other Projects and Activities - Métis Nation of British Columbia**

**NOTES**

PROJECT: 14-00201-01  
 DRAWN BY: WLR  
 CHECKED BY: JM  
 DATE: NOVEMBER 04, 2015



**FIGURE**

**H.13.4-1**