SUMMARY REPORT

Talisman Energy Inc.

Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8

June 2012

Horse Lake First Nation

Kelly Lake Cree Nation

Kelly Lake First Nations

Kelly Lake Métis Settlement Society

McLeod Lake Indian Band

Saulteau First Nations

West Moberly First Nations

Traditional Land Use Sites Assessment

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overview

During the May and June of 2012, representatives from Horse Lake First Nation (HLFN), Kelly Lake Cree Nation (KLCN), Kelly Lake First Nation (KLFN), Kelly Lake Métis Settlement Society (KLMSS), McLeod Lake Indian Band (MLIB), Saulteau First Nations (SFN), West Moberly First Nations (WMFN) and Landsong Heritage Consulting Ltd. (Landsong) conducted a Traditional Land Use (TLU) Sites Assessment of the proposed Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 (Project) on behalf of Talisman Energy Inc. (Talisman).

This Project extends into the province of Alberta and will be regulated by the National Energy Board. A separate TLU Sites Assessment Report has been prepared for the portion of this Project within Alberta.

The purpose of this TLU Sites Assessment was to identify, document and evaluate site-specific TLU data and landscape-level TLU information directly associated with the proposed Project and to consider possible Project impacts, or predicted effects, on these sites and resources within a context of Aboriginal Treaty Rights and Interests in order

to suggest impact mitigation solutions to reduce or negate these impacts.

The involvement of local Aboriginal communities in this assessment was essential to formulating site impact mitigation recommendations that are relevant to the communities' core land use practices, values and objectives. The involvement of Talisman in the assessment was essential to developing impact mitigation strategies that meet the safety and engineering specifications of the proposed Project

This Summary Report, containing basic spatial data pertaining to TLU sites as well as land use definitions and methodology, has been shared with Talisman in order to facilitate meaningful discussion around TLU, to accommodate TLU site mitigation recommendations that require that specific actions be taken by Talisman and for purposes of the Project application.

A Detailed Data Package, including TLU site information forms, TLU sites photos and all GIS data pertaining to the sites (shape file format and/or excel spreadsheets) will be provided to the participating Aboriginal communities to be used at the discretion of each community for initiatives such as land and resource planning, community-based

education and/or discussions with Talisman and other stakeholders in the area. Additionally, the Confidential Summary Reports provided to Aboriginal communities include details pertaining to TLU site type information (removed from Client Report copies) and a table of Environmental Biophysical Features and Observations.

project personnel

Horse Lake First Nation **field personnel**	Jayme Savard
Kelly Lake Cree Nation **field personnel**	Margaret Gladu
Kelly Lake First Nation **field personnel**	Charlie Calliou
Kelly Lake Métis Settlement Society **field personnel**	Shirley Letendre
McLeod Lake Indian Band **field personnel**	Andy Solonas, Jr.
Saulteau First Nations **field personnel**	Bev Rohel
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1. introduction

1.1 project description

The proposed Talisman Pipeline Right of Way from the BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 (the "Project") consists of a pipeline right of way (15m x 2715m), 4 workspaces (5m x 450m, 5m x 40m, 10m x 45m, 5m x 88m) and a cut-off (15m). The proposed Project is located on Crown land within Treaty No. 8 BC and within the asserted overlapping traditional territories of Aseniwuche Winewak Nation (AWN), Aseniwuche Winewak Nation Nose Creek (AWN Nose Creek), Horse Lake First Nation (HLFN), Kelly Lake Cree Nation (KLCN), Kelly Lake First Nation (KLFN), Kelly Lake Métis Settlement Society (KLMSS), McLeod Lake Indian Band (MLIB), Saulteau First Nations (SFN) and West Moberly First Nations (WMFN). The Traditional Land Use (TLU) Sites Assessment involved representatives from all Aboriginal communities, except AWN and AWN Nose Creek who were notified but did not participate.

1.2 TLU objectives

The objectives of the TLU Sites Assessment are as follows:

- to identify and document past and current TLU sites information at both a site-specific and landscape-level within the proposed Project area

- to document proposed Project related concerns raised by the Aboriginal participants

- to consider the proposed Project's potential impacts on TLU sites within the context of Aboriginal Treaty Rights and Interests

- to develop feasible measures to mitigate and/or negate significant impacts to TLU sites and resources

- to maintain a community-based approach through involvement of local Aboriginal participants and to provide Aboriginal communities with TLU deliverables that are relevant and of utility

- to provide Talisman with information and deliverables necessary to respond to Aboriginal communities' questions and concerns and to manage TLU impact mitigation recommendations during construction and throughout the life of the proposed Project

1.3 study timeframe

Fieldwork for the TLU Sites Assessment was undertaken on May 30, 31, June 2, 3 and 5, 2012. The proposed Project area was accessed by 4x4 trucks. Fieldwork was conducted on foot.

1.4 project personnel

Jayme Savard of Horse Lake First Nation (HLFN), Margaret Gladu of Kelly Lake Cree Nation (KLCN), Charlie Calliou of Kelly Lake First Nation (KLFN), Shirley Letendre of Kelly Lake Métis Settlement Society (KLMSS), Andy Solonas, Jr. of Mcleod Lake Indian Band (MLIB), Bev Rohel of Saulteau First Nations (SFN) and Ryan Desjarlais of West Moberly First Nations (WMFN) worked with Landsong during the proposed Project TLU Sites Assessment.

Participants from Aboriginal communities were selected by either the Chief and Council or Land Use Department of each community. It is understood that whereas the participant is selected by his or her respective community, his/her opinions and perspectives may not represent the Aboriginal community as a

whole. It is for this reason that we encourage a community based review process managed by the community's land use departments or by Chief and Council. We further encourage the leadership and membership of each Aboriginal community to consider the proposed Project's potential impacts on TLU sites within the context of Aboriginal Rights / Title and Treaty Rights and Interests.

On May 24, 2012, Landsong provided participation forms to AWN, AWN Nose Creek, HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN. The purpose of the forms was to provide a brief project description and request respective community participation in TLU Sites Assessment component of the proposed Project. HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN confirmed their intention to participate soon after receipt of each participation form. Copies of participation forms and associated communications are on file at Landsong and are available upon request.

Landsong assisted with the identification of and documentation of TLU sites information and with the development of TLU site mitigation strategies. In addition, Landsong prepared reporting, data packages and mapping for review by the participating Aboriginal communities. Landsong staff included: Beth Hrychuk, M.A., RPCA, Kate McAnally, B.A., MGIS, Marina McCaffrey, M.A., Tammi Mills, M.Sc. and A.J. Hills.

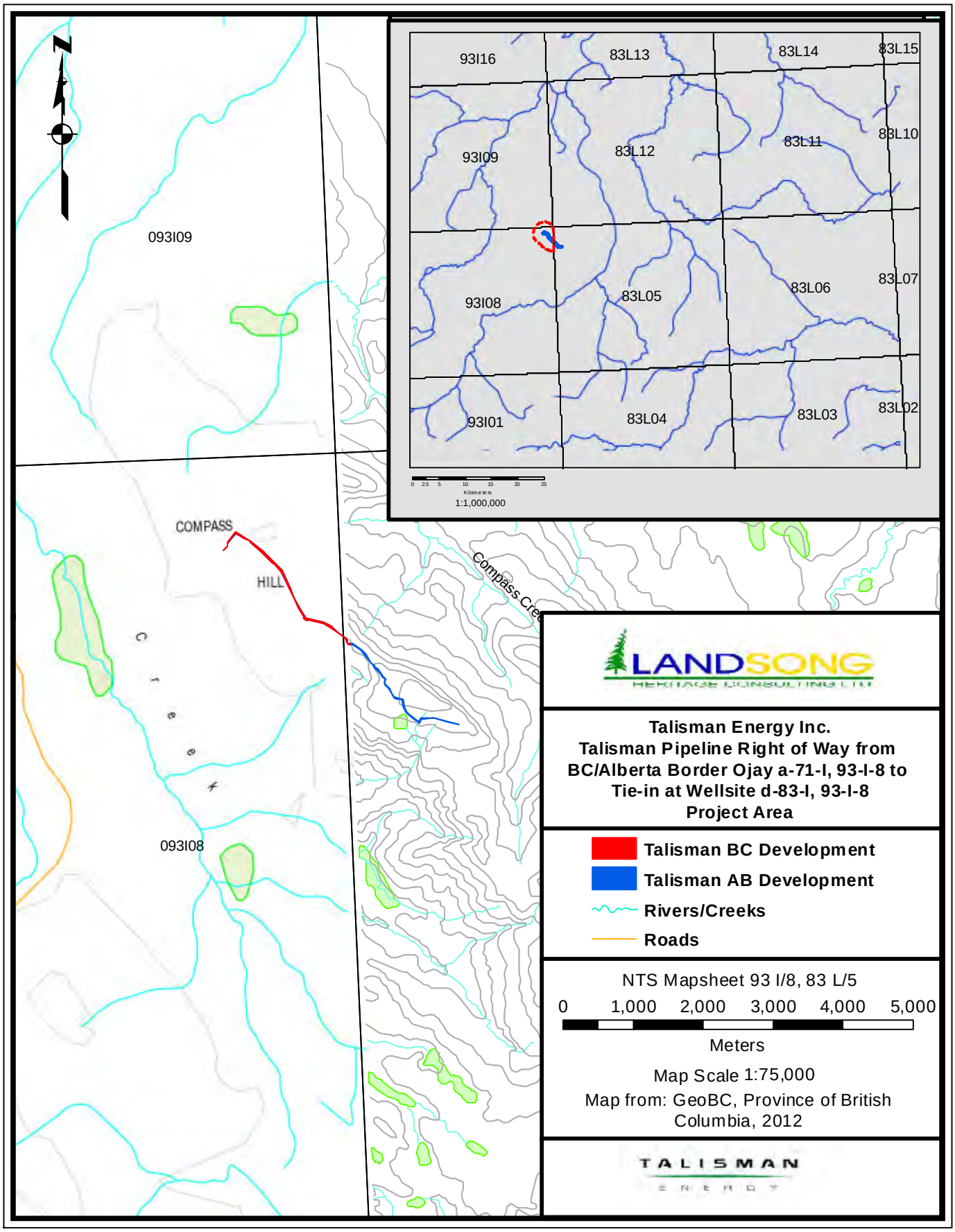

figure 1 Talisman Energy Inc.; Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 - Project Area

2. background

2.1 archaeology and ethnohistory

During the late Pleistocene and early Holocene epochs, as the Laurentide and Cordilleran ice sheets receded from the British Columbia landscape, small groups of people traveled along the eastern slopes of the Rocky Mountains, also known as the Rocky Mountain Trench (Burns 1996, Mandryk et al. 2001, McMillan and Yellowhorn 2004, Meltzer 2009). Newly re-established flora and fauna (often concentrated along the shores of proglacial lakes and major waterways) provided resources for hunter-gatherer populations (Pielou 1991, Fladmark et al. 1988, Kauffman and Judson 1990, Driver 1992, Burns 1996).

Archaeological evidence of human occupation has been recovered from a number of sites in northeastern British Columbia. A fluted projectile point recovered from the Charlie Lake Cave Site (HbRf-39), near Fort St. John, is associated with a radiocarbon age of c.10,400BP (Fladmark et al.1988). Archaeological sites at Pink Mountain (HhRr-1) north of Fort St. John (Wilson 1989), the Halfway River Valley (Wilson and Carlson 1987) and the Trutch-Sikanni Chief River area (Walde 1994) provide further archaeological evidence for early Holocene occupation. The identification of hundreds of archaeological sites dating to various periods since this time suggests that northeastern British Columbia has been occupied continuously for at least ten thousand years (Fladmark 1981, Carlson 1996, McMillan and Yellowhorn 2004, Howe and Brolly 2008).

Gradual environmental changes linked to the Altithermal climatic episode approximately 6,000 years ago resulted in the establishment of the modern boreal forest cover and parkland-like setting including large areas of floodplains, meadows, muskeg and alpine tundra at higher elevations (Pielou 1991, Burley et

al 1996, McMillan and Yellowhorn 2004). The encroachment of the boreal forest necessitated a swift and complex adaptation to new resources, as the grazing areas of the wood bison were curtailed and their populations declined (Driver 1992, Fladmark 1996). A rich and diverse animal population including moose, elk, bear, wolf, wolverine, lynx, beaver, mink, martin, hare, weasel, otter and waterfowl thrived in this environment (Pielou 1991, Driver 1992, Burns 1996).

Aboriginal peoples of northeastern British Columbia were, and some largely remain, hunters and gatherers (Fladmark 1982). They were nomadic and thus their economic realization of land's resources was balanced with its sustainable utilization (Driver 1992). Oral accounts suggest that life prior to the influence of European contact in northeastern British Columbia followed the cycles of the seasons, animal migrations and the cultural patterns of resource utilization that had existed in this region for thousands of years. Tools for both utility and survival were furnished from stone, wood, bone and antler. Deadfall traps, snares and brush fences (designed for efficiency and mobility) were utilized to trap small mammals such as hare and beaver. An abundance of animals provided food, furs and hides. Fish were procured and cached for winter use and an acquired knowledge of plants yielded both medicines and food (Riddington 1981).

Today the following nine Aboriginal communities have traditional land use interests in the proposed Project area:

Aseniwuche Winewak Nation (AWN) is made up of seven small land holdings located along Highway 40 to the north and east of Grande Cache, AB. AWN maintains a band office in the town of Grande Cache. The people of AWN were relocated from their home lands to accommodate the formation of Jasper National Park. They are not a signatory of Treaty No. 8 (1899) AB but hold their lands communally under four cooperative associations and two enterprises, each with the legal authority to manage its own affairs. AWN's Traditional Land Use

Area is vast, extending across the British Columbia/Alberta border and encompassing all of Willmore Wilderness Park and much of Jasper National Park.

Aseniwuche Winewak Nation Nose Creek (AWN Nose Creek) is a settlement made up of a small group of Aseniwuche Winewak peoples who chose to relocate to the Nose Creek/Kakwa area rather than Grande Cache after the creation of Jasper National Park in 1910 relocated them from their traditional home lands. They maintain close ties to the Aseniwuche Winewak Nation of Grande Cache.

Horse Lake First Nation (HLFN) is located at Horse Lake, AB, approximately 60km northwest of the Grande Prairie along Highway 43, and 10km west of the town of Hythe, AB, on Highway 672. HLFN is a signatory of Treaty No. 8 (1899) AB. Whereas the governing body of HLFN is on reserve, HLFN maintains a land use office in Edmonton, AB.

Kelly Lake is located approximately 120km southeast of Dawson Creek, near the Alberta border. The Kelly Lake community is comprised of three Aboriginal groups: Kelly Lake Cree Nation (KLCN), Kelly Lake First Nations (KLFN) and Kelly Lake Métis Settlement Society (KLMSS).

> **Kelly Lake Cree Nation (KLCN)** consists of a group of Aboriginal peoples who have not yet entered into Treaty with the Government of Canada and are therefore not a reserve-based nation. In 1991, KLCN issued a statement of claim for aboriginal title and compensation in recognition of damages done to their traditional lands, which is still being reviewed by the federal court.
>
> **Kelly Lake First Nations (KLFN)** is a group of First Nations residing in the Kelly Lake area who are recognized as First Nations (Treaty No. 8

(1899) BC), rather than Metis peoples. Some KLFN members are registered under Saulteau First Nations (SFN) as a result of membership policies associated with Bill C-31; however, KLFN has its own land base and leadership and is an independent community. KLFN maintains a band office in Beaverlodge, AB.

Kelly Lake Métis Settlement Society (KLMSS) members identify themselves as Métis, and continue to assert their constitutionally protected Section 35 Aboriginal rights. They have not entered into Treaty No. 8 (1899) BC and seek their own identity and land rights independent of other Aboriginal communities in the area. KLMSS maintains a band office in Hythe, AB.

McLeod Lake Indian Band (MLIB) is located at McLeod Lake, BC, approximately 150km north of Prince George along Highway 97. In April of 2000, MLIB signed an agreement with the Province of British Columbia and Canada to adhere to the terms of Treaty No. 8 (1899) BC. MLIB maintains a land use and referrals office in Chetwynd, BC.

Saulteau First Nations (SFN) is located approximately 20km north of the town of Chetwynd along Highway 29 at Moberly Lake, British Columbia. The people of SFN, originating from Manitoba, arrived in the Chetwynd area of northeastern BC in the late 1800s. The band was formed by the amalgamation of Beaver, Cree and Saulteau residents with the SFN Reserve located at the east end of Moberly Lake. SFN is a signatory of Treaty No. 8 (1899) BC.

West Moberly First Nations (WMFN) is located approximately 30km north of the town of Chetwynd along Highway 29 at Moberly Lake, British Columbia. Originally part of the Hudson Hope Band with Halfway River First Nation (HRFN), the communities separated in 1971 and are now recognized as two separate

First Nations. The WMFN Reserve is located at the west end of Moberly Lake. WMFN is a signatory of Treaty No. 8 (1899) BC.

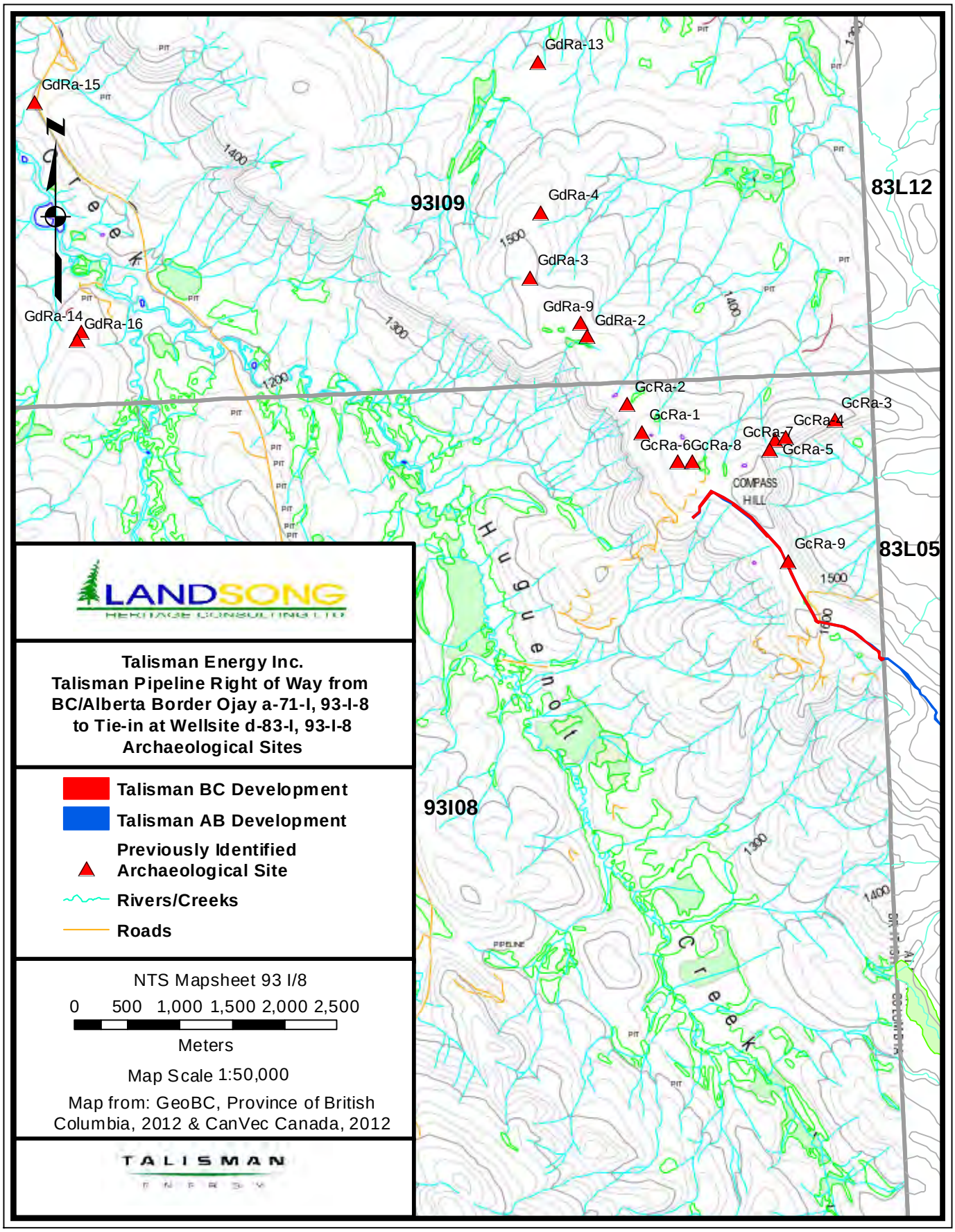

figure 2 **Talisman Energy Inc.; Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 - Archaeological Sites**

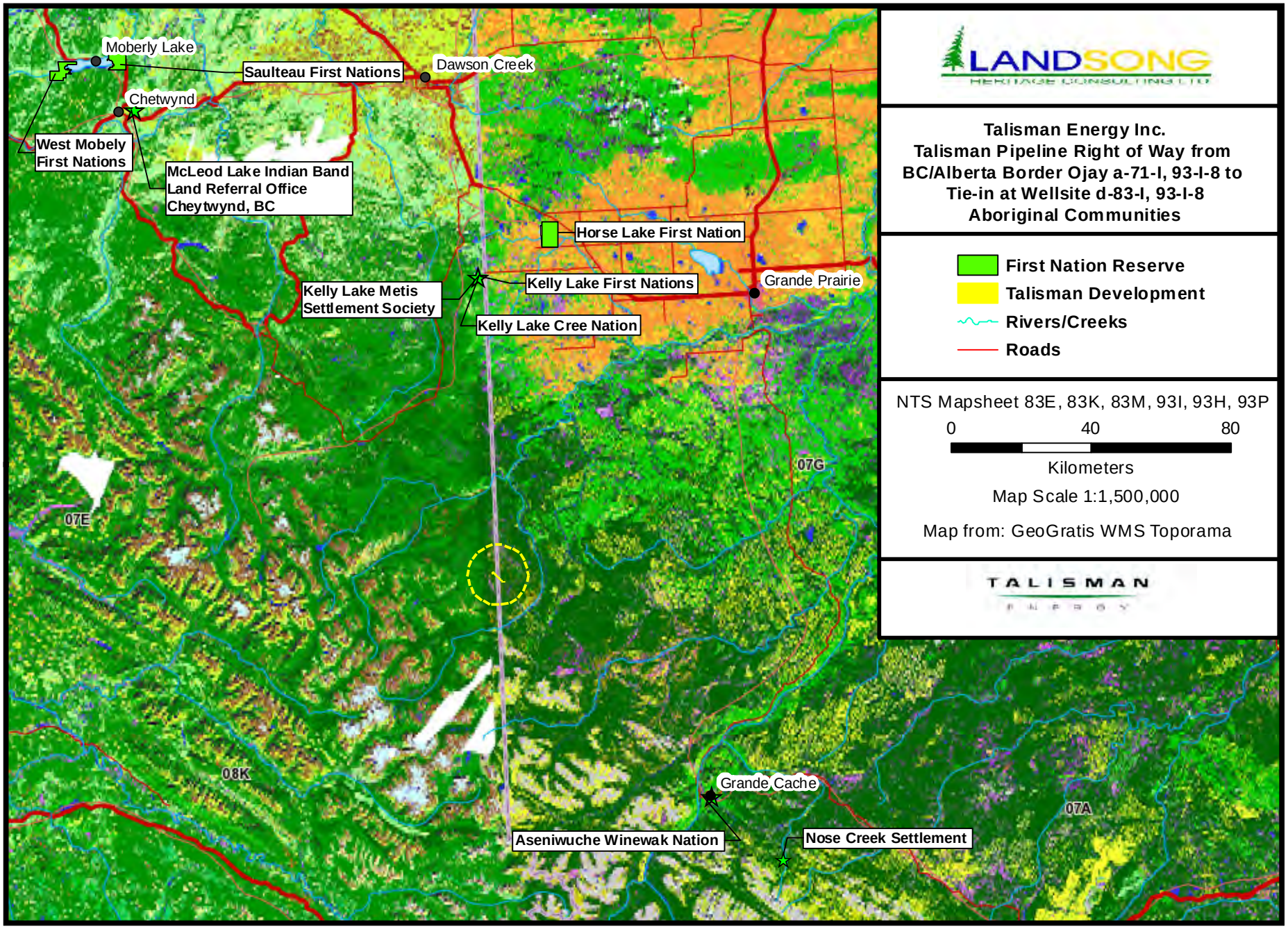

figure 3 **Talisman Energy Inc.; Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 - Aboriginal Communities**

2.2 regional description

The proposed Project is located within the Engelmann Spruce Sub-Alpine Fir (ESSF) Biogeoclimatic Zone (figure 4). The ESSF Biogeoclimatic Zone is characterized by long, cold winters with an extensive snow cover. Mountainous areas within this zone may have snowpack of up to three or more metres resulting in fast-flowing run-off streams during the spring melt. This zone is noted for a short, cool growing season often with less than sixty frost-free days per annum (Alldritt-McDowell 1998).

ESSF forests cover a vast area of high elevation mountain ranges within the province. The zone is generally characterized by rugged slopes and steep water-carved valleys, but also includes rolling foothills and the fringes of the interior plateau. The forest cover within the ESSF is characterized by scattered and stunted growths of subalpine fir (Krummholz) within the highest elevations of the zone. Engelmann spruce and subalpine fir dominate the middle elevations. The drier and lower regions within the zone (terrain often ravaged by fire) support expansive stands of lodgepole pine (Alldritt-McDowell 1998).

Plants commonly found within the ESSF Biogeoclimatic zone include: junipers, willows, swamp birch, alder, prickly wild rose, Sitka valerian, cow parsnip, colt's foot, yarrow, lady fern, oak fern, spring wood fern, stinging nettle, triangle-leaved ragwort, meadowrue, devil's club, fireweed, vetch, horsetail, caribou lichen, honeysuckle, several varieties of alpine grasses, birch-leaved spirea, shrubby cinquefoil, false azalea, Indian hellebore, arrow-leaved groundsel, subalpine daisy, foamflower, white-flowered rhododendron, Labrador tea, swamp-laurel, four-angled mountain-heather, pink mountain-heather, kinnikinnick, peavine, chickweed and pussy toes. Bryophytes include feathered stiff clubmoss, red-stemmed feather moss, leafy mosses and various liverworts. Berries include several varieties of: bunchberry, gooseberry, soapberry, grouseberry, huckleberry, currants, blueberry, Saskatoon berry, cranberries, black elderberry,

common snowberry, black twinberry, choke cherry, pin cherry, crowberry, thimbleberry, highbush and lowbush cranberry, wild red raspberry, red baneberry, and wild strawberry. Wildflowers include several examples of the lily, orchid, and buttercup families, yarrow, monkey flower, goldenrod, tall larkspur, arnica, aster, fireweed, common paintbrush, red clover, twinflower, plantain and monkshood. Aquatic plants include marsh cinquefoil, common cattail, arrow-grass and pondweed (Alldritt-McDowell 1998; DeLong et al 1990; Johnson et al 1995).

Carnivore and omnivore populations in the ESSF typically include grizzly bear, black bear, cougar, lynx, wolf, wolverine, coyote, marten, fox, fisher, mink and weasel. Herbivore populations include moose, elk, caribou, mountain goat, mule deer, white-tail deer, hare and various rodents including mountain beaver, hoary marmot and squirrel (Alldritt-McDowell 1998; DeLong et al 1990; Gadd 2003).

Birds and waterfowl generally include the Gray Jay, Stellar's Jay, Red Crossbill, White-winged Crossbill, Pine Siskin, Clark's Nutcracker, Golden Eagle, American bald eagle, mountain chickadee, Red-breasted Nuthatch, Varied thrush, American robin, Orange-crowned sparrow, Cassin's Finch, Hammond's Flycatcher, raven, crow, magpie, yellow-bellied sapsucker, northern flicker, pileated woodpecker, goshawk, gyrfalcon, great horned owl, kestrels, loon, trumpeter swan, mallards, buffleheads, blue winged teals, grouse and ptarmigan (Alldritt-McDowell 1998; DeLong et al 1990; Gadd 2003).

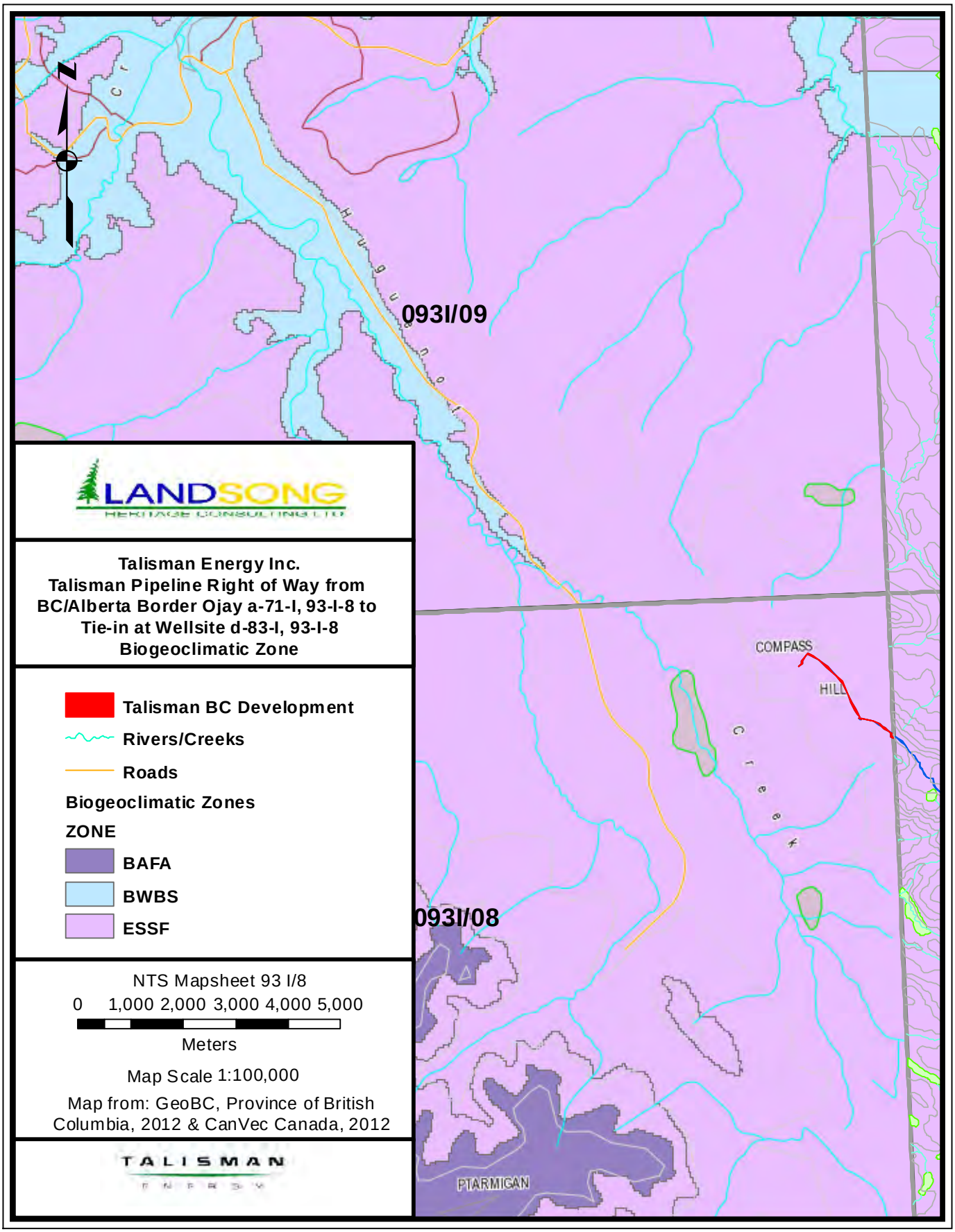

figure 4 **Talisman Energy Inc.; Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8 - Biogeoclimatic Zone**

2.3 project area description

The proposed Project is located approximately 97.4km southeast of the town of Tumbler Ridge, 53.5km southeast of Highway 52, and 3.4km west of Huguenot Creek. The Project area can be accessed by 4x4 vehicle from the town of Tumbler Ridge by travelling east on Highway 52 for ~50km, turning left (south) onto the Ojay Main Road and continuing for ~93km before turning right (southeast) onto the wellsite access road for d-83-I and taking the first left on to the Border Road and continuing for ~700m. The proposed Project area is located adjacent to the Border Road.

The proposed Project is located within terrain ranging from undulating to rolling with gentle to steep slopes of various aspects. Forested areas are dominated by white spruce, pine, fir and alder. Soils were predominantly very poorly to moderately well drained.

Previous disturbances within the proposed Project are attributed to geophysical exploration and oil and gas development activities. A diverse ground cover of mosses, grasses, club moss, lichens, caribou lichen, ground cedar, crow berry, strawberry, raspberry, bunchberry, Labrador tea, wintergreen, rhododendron, lingonberry and cranberry was found within the proposed Project area.

plate 1 View southeast of the proposed Project at ~0+632 depicting ground cover of grasses and rhododendron.

plate 2 View northwest of the proposed Project at ~0+400 showing forest cover of white spruce, pine and fir

plate 3 View east of the proposed Project at ~2+600 showing undulating to rolling terrain.

plate 4 View southwest of the proposed Project at ~2+402 showing previous geophysical disturbance.

3. methodology

3.1 data classification

Aboriginal peoples and anthropologists often describe human land use as a continuum from ancient land use, through historic land use, current land use to future land use. Land use sites may exhibit patterns of continuous or intermittent use throughout or within these temporal periods or phases. During each phase of land use, cultural groups have left physical evidence of land use (sometimes referred to as material culture or artifacts), and/or memorialized land use through oral histories and Traditional Ecological Knowledge (TEK).

For at least ten thousand years, the Aboriginal people of northeast British Columbia have traditionally hunted, fished, gathered plants for food and medicines and have made "household" belongings (tools, clothing, hunting implements etc.) from wood, stone, bone, animals and plant products. Whereas western items have now replaced many traditional items, the utilization of wilderness areas and environmental resources remains an integral part of Aboriginal culture in the North. Understanding and managing potential industry related impacts to the environment is essential to assessing potential impacts to TLU.

For the purposes of this TLU assessment, cultural and environmental sites, features and observations are divided into four categories: 1) Archaeological Sites, 2) Historic Sites, 3) TLU Sites and 4) Environmental Biophysical Features and Observations. The four categories below provide definitions, give examples of site types and address protection and guidance for impact mitigation strategies.

3.1.1 Archaeological Sites

definition: An Archaeological Site is a location which contains the physical remains of past human activities. Archaeological sites may date to prehistoric or historic times. In British Columbia, prehistoric period Archaeological Sites and many historic period Archaeological Sites are considered significant to Aboriginal peoples. Archaeological research may contribute to an understanding of Aboriginal prehistory and ancient traditional land use.

examples: Archaeological sites may include ancient campsites, tipi rings, fishing weirs, quarries and lithic production locations, animal drive lanes, cairns, animal kill sites, Culturally Modified Trees (CMTs) that predate 1846, and rock art.

protection measures: In British Columbia, Archaeological Sites are afforded automatic protection under Section 13 of the British Columbia Heritage Conservation Act (HCA) if they predate 1846, contain human remains, rock art and/or shipwrecks or plane wrecks that are more than two years in age. Section 14 of the HCA allows for a qualified archaeologist to conduct Heritage Inspection Permit testing at an archaeological site. A Section 12 Site Alteration Permit must be in place prior to the destruction of an Archaeological Site, in whole or in part.

3.1.2 Historic Sites

definition: Historic Sites include both archaeological sites (a field of research referred to as “Historical Archaeology”, see Archaeological Sites above) and non-archaeological Historic Sites. Non-archaeological Historic Sites usually consist of historic buildings. Historical archaeological sites are only afforded automatic protection under section 13 of the HCA if they pre-date 1846 or if are considered by the province to have heritage value (which is defined in the HCA as “the historical, cultural, aesthetic, scientific or educational worth or usefulness of a site or object”.

examples: Historic Sites may include buildings with heritage value, old trapper cabins, homesteads, sawmills, fur trade and commerce sites, mining settlements and historic industry sites.

protection measures: Historic Sites may be protected under Section 9 of the HCA as Provincial Heritage Sites. Historic Sites may also be protected through individual project-specific agreements made by the project proponent. Sites may also be recorded for inventory purposes and/or baseline information and such sites are usually afforded no protection, or mitigation to minimize Project-related impacts. Sites may or may not be considered confidential. Data pertaining to historic sites may or may not be considered by Aboriginal Communities to be their intellectual property.

3.1.3 Traditional Land Use Sites

definition: TLU Sites are locations and resources utilized for both past and current Aboriginal cultural purposes. TLU Sites may contain physical evidence of Aboriginal land use (excluding sites protected under section 9 or section 13 of the HCA), locations that have significance for sacred and/or ceremonial reasons (with or without physical evidence) and/or locations relevant to oral histories. TLU Sites may also include environmental sites and biophysical features that are of importance to Aboriginal peoples for the continuation of traditional lifeways. Impacts to these sites and features may impact the right to hunt, to trap, to fish and more generally to utilize wilderness areas in traditional ways including camping, berry picking and plant collection for food and medicine and recreation.

The placement of sites in either the TLU Site Category or the Environmental Biophysical Features and Observations Category below may vary between different Aboriginal communities as it reflects specific land use patterns and values that may be unique to those communities. For example: duck nesting sites may be considered as a TLU Site by one Aboriginal community if they

collect and eat duck eggs, but the same sites may be considered an Environmental Observation by a community that does not traditionally harvest duck eggs.

examples: TLU Sites may include CMTs that post-date 1846, pack trails and wagon trails, Aboriginal trap sets and snares, human birth places and death places (burials are protected under Section 13 of the HCA; see archaeological sites above), sacred and ceremonial sites, gathering sites/campsites, food procurement sites and significant wildlife habitat such as moose licks, calving areas, animal dens, wildlife trees with cavities that house small furbearers, well-defined game trails and water sources such as spring-fed ponds in areas where they are not plentiful. Other TLU Sites may be of "household importance" such as rotten wood appropriate for smoking hides and plants for food and/or medicine.

protection measures: TLU Sites may be protected under Section 4 of the HCA through a formal agreement between the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) that is approved by the Lieutenant Governor in Council and First Nations. As per Section 8 of the HCA, no Agreements under Section 4 in anyway abrogate or derogate from the Aboriginal and Treaty Rights of any Aboriginal peoples. TLU Sites may also be protected under environmental regulations or through individual project-specific agreements made between industry and Aboriginal communities. Sites may also be recorded for inventory purposes and/or baseline information only and such sites are usually afforded no protection, or mitigation to minimize Project-related impacts. Detailed TLU Site information is usually kept confidential as it is considered by Aboriginal Communities to be their intellectual property.

3.1.4 Environmental Biophysical Features and Observations

definition: For the purposes of this TLU Sites Assessment, the Environmental Biophysical Features and Observations Category is defined as wildlife habitat features and vegetation that are considered integral to ecosystems and the health of wilderness areas. These features and observations are not utilized specifically by Aboriginal peoples but are considered important features to the local ecosystem.

examples: Environmental Biophysical Features and Observations may include, but are not limited to, fish, bird and animal sightings, nesting and denning areas, wildlife trees, animal signs such as droppings and scat, tracks, claw marks on trees, rubs, and squirrel middens.

protection measures: Some environmental features and observations may be protected under environmental legislation or through best-practices standards of industry on a project by project basis. Other features and observations may be recorded for inventory purposes and/or baseline information, and whereas they are not given site-specific protection, they are addressed collectively within the Project's Environmental and Socio-Economic Assessment (ESA).

Environmental Biophysical Features and Observations are recorded during TLU assessments as inventory baseline information specific to Crown Lands utilized by Aboriginal communities. Recommendations for protection and impact mitigation measures are usually managed in conjunction with environmental specialists and are addressed within the ESA. Environmental Biophysical Features and Observations information is not considered confidential.

3.2 TLU process

3.2.1 pre-field planning

Upon receipt of preliminary proposed Project mapping, Landsong reviewed the Project to consider which Aboriginal communities may have traditional land use interests in the proposed Project area. Asserted Traditional land use territories within the Treaty No. 8 (1899) area in Alberta and British Columbia have large areas of overlap. The results of this review are communicated with the proponent. At the request of Talisman, AWN, AWN Nose Creek, HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN were invited to participate in the TLU Sites assessment.

With the proposed Project area and Aboriginal TLU areas defined, a documentary review of published and unpublished documents and databases was conducted to build on the findings of previous studies. This research included conducting a site file search of previously recorded archaeological sites in the vicinity of the proposed Project, using the Heritage Resource Inventory Application (H.R.I.A.) and Remote Access to Archaeological Data (R.A.A.D.).

3.2.2. field reconnaissance program

The Project was assessed by pedestrian traverse using 1m to 5m transects which covered the proposed pipeline right of way, ancillary components and forested lands immediately adjacent to the Project. Each TLU site and environmental biophysical features and observations was recorded to a level of detail considered appropriate to the data classification, site category, site type and site significance as determined by Aboriginal participants.

The field recording process was guided by the Aboriginal participants and facilitated by the Landsong staff (collectively, referred herein after as the TLU

Team). After identifying a site, feature or observation, the TLU Team discussed the site details within a context of TEK and past and current Aboriginal land use. The Team further considered potential planned and unplanned proposed Project-related impacts. Planned Project-related impacts include the construction of the proposed development and all associated facilities. Unplanned Project-related impacts include inadvertent, accidental, or secondary disturbances. Examples of unplanned disturbances include: erosion (natural or related to construction), vehicular impact outside the Project boundaries, human interference related to increased access to once remote areas.

Each TLU site and environmental feature or observation was recorded using a handheld GPS operating in NAD 83. Locations were also photographed (when this was deemed appropriate by the participating Aboriginal representatives) and a detailed site recording form was completed.

Not all TLU and environmental sites were recorded. Some sites may not be recorded for various reasons. Firstly, the inventory is based on a fieldwork strategy that utilizes pedestrian transects through the Project area. Whereas best efforts are made to cover the proposed Project area, depending on the terrain features and the width of the transect paths; some sites may not be identified and thus remain unrecorded. Secondly, certain site types may be extremely sensitive in nature and, particularly in instances where avoidance is not required; members of the TLU Team may request that sites are not recorded. Thirdly, some TLU sites are specific to individual Aboriginal families who may not have been represented by the TLU team. Lastly, there are usually numerous environmental biophysical features and observations, for example animal bedding sites, tracks and tree gnaws, where only a representative sample may be recorded for logistical reasons.

Not all site categories were identified during the TLU Sites Assessment of the proposed Project development area.

3.2.3. mitigation recommendations & best practices

Discussions regarding TLU site significance and appropriate site mitigation options were held at each site location. TLU sites are considered to have low, moderate or high significance as determined by the participants from Aboriginal communities. TLU sites of low significance are usually documented for inventory purposes and are not considered to require mitigation measures. TLU sites of low significance may be utilized regularly but are ubiquitous within the area or they simply may be not utilized or rarely utilized. TLU sites of moderate significance usually require mitigation measures designed to either minimize site impacts, increase buffer areas between the proposed development and the site, or to avoid the site. TLU sites considered to be of high significance usually require avoidance. It is understood that the significance of a traditional land use site may vary from individual to individual, family to family, community to community and that site significance may change over time.

Consensus regarding site significance and mitigation strategies was reached in the field whenever possible. In a circumstance where TLU Team participants do not reach a consensus of the significance of a TLU site, the Team always recommends the highest suggested level of protection for the site. For example, in a circumstance where several members of the TLU Team recommend that a site be recorded for “inventory purposes only” and one member recommends the mitigation strategy “minimize impact” the TLU Team would defer to the recommendation “minimize impact”.

Some TLU site types have standard mitigation strategies that have been introduced and tested on previous TLU Assessments with success. The following is a list of site types, with a brief description and a discussion of mitigation practices. The photos included within this section of the confidential copy of the TLU Summary Report are specific TLU sites and environmental biophysical features and observations that are from this Project. Photos have

been removed from the Client copy as they may contain information that may be considered sensitive or confidential to the participating Aboriginal communities.

- Aboriginal Campsites are usually recorded as TLU Sites. Campsites may also illustrate patterns of re-occupation and may therefore also contain an Archaeological, Historical and current use component. Impact mitigation strategies for campsites correspond directly to the significance of the site. If the destruction of the campsite would have significant residual impacts on an Aboriginal community or part thereof, these sites are usually either avoided or measures taken to relocate modern components of the site such as meat racks, tipi poles and tables.

- Historic structure sites are automatically protected under the BC HCA if the structure pre-dates 1846. An historic structure that post-dates 1846 can be protected under the HCA if the structure is considered to be of heritage significance. Aboriginal historic structures in northeast BC, such as trapper cabins, and lean-to shelters date from the fur trade era to current times and thus recorded as TLU Sites. Site significance of historic structures and their remains is usually considered to be either moderate or high and site avoidance is common. Historic structures are often associated with a collection of historic artifacts, and in some cases oral histories provide information regarding the structure's use and occupations.

- Aboriginal Commerce and Industry Sites such as locations for trading and selling furs and supplies, historic grazing and haying fields and saw mills may be recorded as TLU Sites.

- CMTs are trees altered, or culturally modified, by Aboriginal peoples "as part of their traditional use of the forest" (Stryd 1997). In northeast BC, CMTs generally include bark-stripped (or cambium stripped) trees, blazed

trees, Aboriginally-logged trees, and other modified trees such as old timber with lower branches removed to create winter shelters. Increment tree bores are used to determine the ages of all modifications as well as the age of the tree. CMT sites are protected under the Section 13 of the HCA if they pre-date 1846 as Archaeological Sites and are usually recorded as TLU Sites if they post-date 1846.

- Aboriginal Pack Trails are trails traditionally used by Aboriginal peoples. Recording trails is important to understanding human seasonal migrations, ceremonial journeys, hunting and trapping patterns, trade routes and family movements. Trails are usually recorded as either TLU sites or Historic Sites. Blazed trails with CMTs pre-dating 1846 may be protected as Archaeological Sites.

  Recommendations to mitigate impact on pack trails correspond to the significance of the trail and also take into consideration previous impacts that may have fragmented trail continuity. In a circumstance where proposed linear developments such as pipelines or roads extend in the same direction as a pack trail, an avoidance measure such as re-aligning the proposed linear development may be recommended. In a circumstance where linear developments intersect a pack trail a recommendation may be to relocate associated log decks or workspaces and then ensure the trail is kept clear of felled trees and brush and to re-blaze trees directly adjacent to the disturbance in order to better preserve the integrity of the trail. In circumstances where a pack trail will be impacted by a non-linear or large-scale surface development such as a mine, a cut block or a facility site, a recommendation to re-blaze a trail reroute around the development area may be implemented.

- Aboriginal traps and snares may be recorded as TLU Sites. Bear, lynx, marten, fisher, squirrel, wolverine, muskrat, beaver, are commonly trapped and snared. In a circumstance where an historic trap is in direct conflict with proposed development, the TLU team may recommend re-locating the trap to a location adjacent to the proposed development disturbance. Historic traps are usually not collected.

  If the ownership of traps and snares is uncertain, or likely that of a registered trapline owner, a recommendation will be made for the proponent to contact the registered trapline owner to advise him/her of the location of the trap site.

- All Human Burial Sites, regardless of age, are protected under the HCA and recorded as Archaeological Sites. Aboriginal burials may require specific ceremonial measures in conjunction with avoidance procedures.

- Aboriginal birthplaces and death places (or memorial locations) are recorded as TLU Sites. Some Aboriginal people consider a birth location or a death location as equally significant to a burial place. These locations may be devoid of any distinguishing features, but are remembered and may be visited by living informants. TLU recommendations for human birth and death places may include site avoidance, minimizing impacts (including aesthetic and visual) and ceremonial practices.

- Sacred sites and ceremonial sites may be recorded as TLU Sites. Sites may include sweat lodge or healing lodge sites, Sundance sites, medicinal plant collecting areas, vision quest locations, ceremonial tree or prayer cloth tree sites. Recommendations for mitigating impacts to sacred sites and ceremonial sites usually involve avoidance measures; however, recommendations may vary depending on the determined site significance.

- Medicinal plant sites are recorded as TLU sites. Owing to the often confidential and highly sensitive nature of these sites, the associated TEK is often managed by the Aboriginal knowledge holder and descriptions are not disseminated between the Aboriginal communities. Some Aboriginal people consider that "all plants are medicine" and are concerned that the identification of select plants might lead to the neglect of others. Medicinal plants may or may not be listed as "rare plants" and therefore, TLU recommendations may not correlate to environmental regulations. Significant medicinal plant sites may require avoidance. Other sites may require access management measures, agreements regarding chemical applications and/or the restriction of construction disturbances such as workspaces and log decks and/or post-construction TLU assessment.

- Plants for food and berry picking sites are recorded as TLU sites. The often ubiquitous nature of some of these sites may require their consideration at a landscape level rather than at a site-specific level. Plants for food and berry picking may be visited seasonally, annually or as needed by Aboriginal peoples. Moreover, berry picking sites are often closely tied to fire cycles and forestry activity, resulting in a continually changing pattern of resource utilization. Sometimes sites are documented for Future TLU. TLU recommendations for mitigating construction-related impacts to plants for food and berry picking sites often include access management measures, agreements regarding chemical applications and the restriction of construction disturbances.

- Other Plant/Vegetation Sites are recorded as TLU sites. Such sites may contain plants utilized domestically or ceremonially. Included are moss sites, lichen sites, and fungus sites. Other plant sites may be used to collect vegetation utilized during food procurement or rotten wood sites used for processing hides. Some plants have multiple uses and different

parts of the plant (roots, stems, leaves, buds, flowers) may be uniquely utilized. A single plant may therefore be a source of food, have medicinal uses and possibly have domestic or food processing uses as well. TLU recommendations for mitigating these sites may include access management measures, agreements regarding chemical applications and the restriction of construction disturbances. Sometimes the Aboriginal communities simply decide to harvest areas prior to construction.

- Significant Wildlife Habitat sites are recorded as TLU sites. Such sites include moose licks, watering holes or springs, calving areas, ungulate sand wallows, animal dens and well defined/incised game trails. These sites are specifically important for Aboriginal people to hunt, fish, trap and maintain TLU practices. These sites may also be of importance from a biophysical perspective and thus information collected is shared with the proposed Project's environmental specialists and sites are managed cooperatively. Recommendations may include avoidance measures such as reduction or relocation of temporary workspace with set-backs to buffer the sites from view. Recommendations may also include but are not limited to chemical application restrictions, access management, seasonal construction restrictions to allow for animals to leave dens and/or avoidance of spring construction near calving areas.

- Aboriginal Fishing Sites are recorded as TLU sites. Fishing Sites may be specific locations along water courses and the shore of lakes and on frozen waters that have been traditionally utilized for fishing. Fish commonly found in the Peace area of northeast British Columbia include rainbow trout, lake trout, northern pike, whitefish, arctic grayling, dolly varden, ling cod (burbot), lake char. These sites may also be of importance from a biophysical perspective and thus information collected is shared with the proposed Project's environmental specialists and sites are managed cooperatively.

- Bird & Waterfowl Nesting Sites are recorded as either TLU Sites, if they are utilized for egg collection (duck and goose) or are considered sacred (i.e. eagle nesting areas and swan nesting areas). Otherwise they are recorded as Environmental Biophysical Features and Observations. All nesting site information and information collected is shared with the proposed Project's environmental specialists. In circumstances where the nesting site is considered a TLU location the TLU team's recommendations (usually avoidance with a buffer) may exceed environmental regulations.

- Game trails that are well-defined and show signs of frequent animal use are recorded as TLU Sites. In non-linear or large-scale developments, game trails are usually documented, but not avoided. Where a linear project impacts a significant game trail, the following ***wildlife crossing measures*** are recommended to allow animals to use established trails rather than rerouting them down new linear disturbances:

    - clear trail of strippings, spoil, snow and rollback windrows and felled trees during construction and separate and rest down the pipe during stringing to encourage continued trail use.
    - undertake an efficient construction schedule to reduce the times in which welded pipe is strung and trenches are open.

- Animal Signs including rubs, gnaws, chews, diggings, claw, hoof and paw prints/tracks, droppings and scat, foraging locations, kill sites, and small animal trails (i.e. rabbit and mouse) are recorded as Environmental Biophysical Features and Observations and information collected is shared with the Project's environmental specialists. These signs are usually recorded by the TLU Team for inventory purposes only and are considered indicators of the health of animal populations within an area. Animal signs also help track the movement of animals (pre, during and

post construction) and may contribute to the body of regional base-line information.

- Animal, Fish and Bird Sightings are usually recorded as Environmental Biophysical Features and Observations and information collected is shared with the Project's environmental specialists. Common sightings include black bear, grizzly bear, dear, moose, elk, squirrel, rabbit, frogs, owls, eagles, and numerous other birds. When fish are observed in creeks they are also recorded.

3.2.4 information management, reporting and data review

TLU information and associated TEK are considered by the participating Aboriginal communities to be their proprietary information. In order to balance the interests of each participating Aboriginal community with the necessity to share information with Talisman representatives for the managed mitigation of potential impacts to TLU sites, specific information-sharing protocols were discussed in the field at each site and in relation to each concern.

Care has been taken to provide only information that is considered necessary to allow for informed discussions between the participating Aboriginal communities and Talisman representatives. Generally TLU information provided to Talisman will include a Site Identifier Number, a UTM location and a corresponding recommendation.

A Detailed Data Package including TLU site information, TLU sites photos, and all GIS data pertaining to the sites (shape file format and/or excel spreadsheets) will be provided to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN to be used at the discretion of each Aboriginal community for initiatives such as land and resource planning, community-based education and/or potential discussions with Talisman and other stakeholders in the area.

Additionally, the Summary Reports provided to the Aboriginal communities include details pertaining to TLU site type information. These Summary Reports are marked “confidential” to easily identify them from the Summary Reports provided to Talisman and included in the proposed Project Application.

Landsong encourages review of all TLU data, mapping, reporting and recommendations by the leadership and membership of each participating Aboriginal community. Comments received will be responded to by Landsong and/or Talisman’s Consultation and Community Relations personnel. Reporting revisions will be made as required.

4. results & recommendations

4.1 site-specific TLU recommendations

A total of fifty-six (56) specific sites, biophysical features and observations were recorded during the TLU assessment. The sections below summarize the proposed Project area's cultural and environmental resources as identified during this TLU assessment. The site identifier numbers listed within each table below correlate to points on Figure 5.

All members of the TLU Team were satisfied with the scope of the field assessment and the level of detailed TLU recorded. No further site-specific TLU field data collection is recommended in association with the Project.

4.1.1 Archaeological Sites

Eighteen (18) previously recorded archaeological sites are located within five kilometres of the proposed Project. Three of these sites, GcRa-6, GcRa-8 and GcRa-9, are located within 500m of the proposed Project.

One previously unrecorded archaeological site, GcRa-10 was identified during the Archaeological Impact Assessment (AIA) of the proposed Project. Archaeological Site GcRa-10 is located at 0+000 within the proposed pipeline right of way at the British Columbia/Alberta border. All cultural material was recovered in British Columbia with testing and site boundaries extending over the border into Alberta. A reroute was recommended that would relocate a portion of the pipeline right of way ~40m south of the flagged boundary of the site. Talisman has agreed to this recommendation and the proposed reroute is reflected on the current survey plan Revision 2 (figure 5).

A separate Final Report for BC Heritage Inspection Permit 2012-0118 containing all archaeological information will be submitted to the BC Ministry of Forests, Lands and Natural Resource Operations, Archaeology Branch, Permitting and Assessment Section (BC Archaeology Branch) for review.

TABLE 1 - ARCHAEOLOGICAL SITES				
Borden Number	**UTM NAD83**		**Site Type**	**Impact Mitigation Recommendations**
	E	**N**		
GcRa-6	692405	6042443	Subsurface Lithics	The site is located ~304m northwest of the Project and is considered 100% recovered. No avoidance is required for this site.
GcRa-8	692549	6042442	Subsurface Lithics	The site is located ~223m northwest of the Project, was revisited during the AIA and will not be impacted.
GcRa-9	693458	6041499	Subsurface Lithics	The site is located~76m northeast of the Project, was revisited during the AIA and will not be impacted.
GcRa-10	694278	6040675	Subsurface Lithics	This site was identified within the Project boundaries during the AIA. The site will be avoided by rerouting a portion of the pipeline ~40m south of the flagged site boundaries.

4.1.2 Historic Sites

No Historic Sites were identified during the TLU Assessment.

4.1.3 TLU Sites

A total of twenty-five (25) TLU sites were identified and recorded during the assessment. The TLU Team reached a consensus regarding the recommendations for all TLU sites during the field assessment. The TLU Site Types are only included in the confidential copies of this Summary Report which is provided only to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN.

TABLE 2 - TRADITIONAL LAND USE SITES				
Site Number	**UTM NAD83**		**Site Type**	**Impact Mitigation Recommendations**
	Easting	**Northing**		
TU1	694005	6040881	*Confidential*	• Recorded for baseline inventory • No mitigation
TU2	693999	6040899	*Confidential*	• Recorded for baseline inventory • No mitigation

TABLE 2 - TRADITIONAL LAND USE SITES				
Site Number	UTM NAD83		Site Type	Impact Mitigation Recommendations
	Easting	Northing		
TU3	693865	6040947	*Confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU4	693801	6040957	*Confidential*	• Recorded for baseline inventory • No mitigation
TU5	693790	6040941	*Confidential*	• Recorded for baseline inventory • No mitigation
TU6	693781	6040956	*Confidential*	• Recorded for baseline inventory • No mitigation
TU7	693775	6040956	*Confidential*	• Recorded for baseline inventory • No mitigation
TU8	693768	6040965	*Confidential*	• Recorded for baseline inventory • No mitigation
TU9	693685	6040984	*Confidential*	• Recorded for baseline inventory • No mitigation
TU10	693660	6040999	*Confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU11	693598	6041034	*Confidential*	• Recorded for baseline inventory • No mitigation
TU12	693476	6041312	*Confidential*	• Recorded for baseline inventory • No mitigation
TU13	693424	6041430	*Confidential*	• Recorded for baseline inventory • No mitigation
TU14	693372	6041515	*Confidential*	• Recorded for baseline inventory • No mitigation
TU15	693260	6041704	*Confidential*	• Recorded for baseline inventory • No mitigation
TU16	693195	6041797	*Confidential*	• Recorded for baseline inventory • No mitigation
TU17	693158	6041826	*Confidential*	• Recorded for baseline inventory • No mitigation
TU18	693083	6041918	*Confidential*	• Recorded for baseline inventory • No mitigation
TU19	693030	6041958	*Confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU20	692937	6042030	*Confidential*	• Recorded for baseline inventory • No mitigation
TU21	692700	6042199	*Confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU22	692605	6042215	*Confidential*	• Recorded for baseline inventory • No mitigation
TU23	692573	6042164	*Confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU24	692562	6042157	*Confidential*	• Recorded for baseline inventory • Contact registered trap line owner and share site specific information
TU25	692513	6042044	*Confidential*	• Recorded for baseline inventory • No mitigation

4.1.4 Environmental Biophysical Features and Observations

A total of thirty-one (31) Environmental Biophysical Features and Observations were recorded during the TLU assessment. Observations demonstrated that the Project area is occupied and/or frequented by wildlife including moose, caribou, deer, black bear, grizzly bear, porcupine, small fur bearers and birds. Specific environmental information is included in the Confidential Summary TLU Report provided to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN, and has also been shared directly with the Project's Environmental Team.

4.2 Landscape Level TLU Recommendations

Landscape level TLU recommendations relate to the entire Project rather than specific Project components and specific sites. The proposed Project area is well known by the local Aboriginal communities and is an area accessed regularly throughout all seasons. The TLU participants and members of their respective communities hunt moose and deer in the Project area, pick a variety of berries and plants for food and medicine, fish, camp and utilize the area for recreational purposes.

Aboriginal concerns regarding Medicinal Plants:

The participants from HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN discussed a general concern regarding the cultural significance of medicinal plants in the area. It is maintained that plants found in the mountains that have grown in areas not affected by development are stronger and contain more potent medicinal qualities than those that grow in other terrain and can be used to treat a variety of ailments such as infections and treating injures. It is therefore recommended that every effort be made to reduce the overall project footprint wherever possible.

Talisman response:

Talisman has minimized the footprint of the proposed Project by paralleling and overlapping the existing road. By adhering to the current proposed Project boundaries, this will minimize the effect on traditional medicinal plants in the area. Talisman will ensure that all construction equipment shall arrive on site in a clean condition to minimize the risk of introducing noxious weeds and non-native plant species to the Project area.

Aboriginal concerns regarding pack trails:

The participants from HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN identified two blazed pack trails, with nine identified blazes that crossed the proposed Project area. Two of the recorded blazes were located within the proposed development area. Both of the pack trails have been impacted by previous road construction. Oral histories, as well as personal experiences, demonstrate that pack trails in the area have been utilized by the Aboriginal peoples for hundreds, and likely thousands of years.

Whereas a blazed reroute of this trail was considered, these specific trails have already been highly fragmented by the construction of the road. Attempts were made to locate the continuation of the blazed pack trails on the other side of the road construction, but these were unsuccessful. It was suggested that the pack trails might have followed where the road now exists. The purpose of drawing the proponent's attention to the pack trails and to the previous and continued disturbance of trails is to increase industry awareness and hopefully to reduce impacts to other pack trails in association with future developments.

Talisman response:

Talisman has minimized the footprint of the proposed Project by paralleling and overlapping the existing road. Talisman will continue to engage Aboriginal communities in development Projects in the earliest stages of planning and provide opportunities for pre-construction field assessments that allow for the

identification of TLU sites and the implementation of impact mitigation strategies as needed.

4.3 report content review

This TLU study is an overview or general inventory of TLU sites and resources within the proposed Project area and is not inclusive of all TLU sites and resources. Furthermore, this report may not have captured all of the Aboriginal community's concerns for the proposed Project.

HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN are encouraged to review this report and respond with comments and suggestions. Aboriginal community communications will be provided to Talisman's consultation and community relations personnel and will be addressed through continued Project communications.

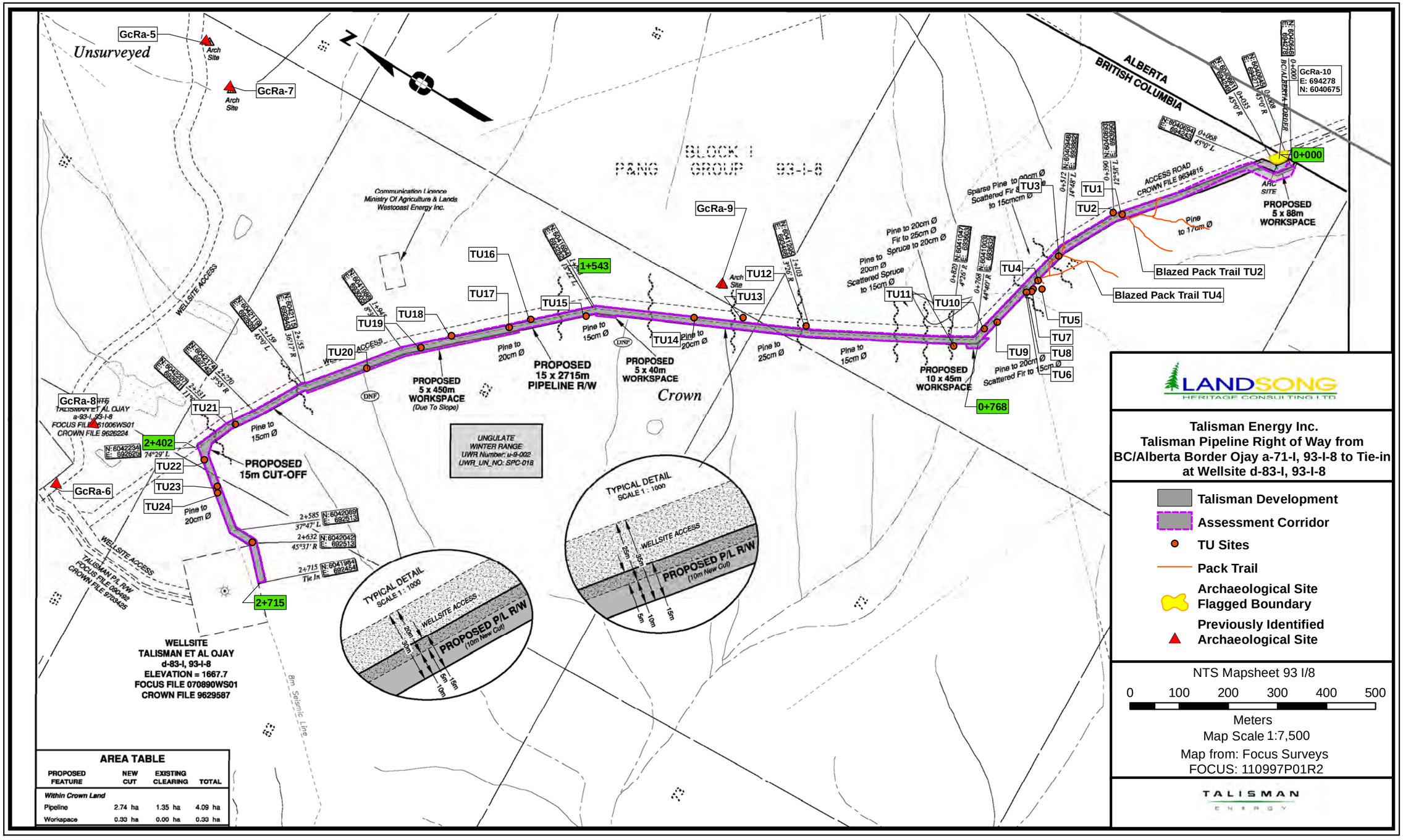

figure 5 Talisman Energy Inc.; Talisman Pipeline Right of Way from BC/Alberta Border Ojay a-71-I, 93-I-8 to Tie-in at Wellsite d-83-I, 93-I-8

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SUMMARY REPORT

Talisman Energy Inc.

Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M

June 2012

Horse Lake First Nation

Kelly Lake Cree Nation

Kelly Lake First Nations

Kelly Lake Métis Settlement Society

McLeod Lake Indian Band

Saulteau First Nations

West Moberly First Nations

Traditional Land Use Sites Assessment

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overview

During May and June of 2012, representatives from Horse Lake First Nation (HLFN), Kelly Lake Cree Nation (KLCN), Kelly Lake First Nation (KLFN), Kelly Lake Métis Settlement Society (KLMSS), McLeod Lake Indian Band (MLIB), Saulteau First Nations (SFN), West Moberly First Nations (WMFN) and Landsong Heritage Consulting Ltd. (Landsong) conducted a Traditional Land Use (TLU) Sites Assessment of the proposed Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14W6M) to 7-26-63-14 W6M on behalf of Talisman Energy Inc.

This Project extends into the province of British Columbia and will be regulated by the National Energy Board. A separate TLU Sites Assessment Report has been prepared for the portion of this Project within British Columbia.

The purpose of this TLU Sites Assessment was to identify, document and evaluate site-specific TLU data and landscape-level TLU information directly associated with the proposed Project and to consider possible Project impacts, or predicted effects, on these sites and resources within a context of Aboriginal Treaty Rights and Interests in order to suggest impact mitigation solutions to reduce or negate these impacts.

The involvement of local Aboriginal communities in this assessment was essential in formulating site impact mitigation recommendations that are relevant to the communities' core land use practices, values and objectives. The involvement of Talisman in the assessment was essential to developing impact mitigation strategies that meet the safety and engineering specifications of the proposed Project.

This Summary Report, containing basic spatial data pertaining to TLU sites as well as land use definitions and methodology, has been shared with Talisman in order to facilitate meaningful discussion around TLU, to accommodate TLU site mitigation recommendations that require specific actions be taken by Talisman and for purposes of the Project application.

A Detailed Data Package, including TLU site information forms, TLU sites photos and all GIS data pertaining to the sites (shape file format and/or excel spreadsheets) will be provided to the participating Aboriginal communities to be used at the discretion of each community for initiatives such as land and resource planning, community-based education and/or discussions with Talisman and other stakeholders in the area. Additionally, the Confidential Summary Reports provided to Aboriginal communities include details pertaining to TLU site type information (removed from Client Report copies) and a table of Environmental Biophysical Features and Observations.

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1. introduction

1.1 project description

The proposed Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M (the "Project") consists of a pipeline right of way (15m x 2263.5m) and two workspaces (5m x 37m & 10m x 40m). The project is located on Crown land within Treaty No. 8 AB and within the asserted overlapping traditional territories of Aseniwuche Winewak Nation (AWN), Aseniwuche Winewak Nation Nose Creek (AWN Nose Creek), Horse Lake First Nation (HLFN), Kelly Lake Cree Nation (KLCN), Kelly Lake First Nations (KLFN), Kelly Lake Métis Settlement Society (KLMSS), McLeod Lake Indian Band (MLIB), Saulteau First Nations (SFN) and West Moberly First Nations (WMFN). The Traditional Land Use (TLU) Sites Assessment involved representatives from all Aboriginal communities, except AWN and AWN Nose Creek who were notified but did not participate.

1.2 TLU objectives

The objectives of the TLU Sites Assessment are as follows:

- to identify and document past and current TLU sites information at both a site-specific and landscape-level within the proposed Project area

- to document proposed Project related concerns raised by the Aboriginal participants

- to consider the proposed Project's potential impacts on TLU sites within the context of Aboriginal Treaty Rights and Interests

- to develop feasible measures to mitigate and/or negate significant impacts to TLU sites and resources

- to maintain a community-based approach through involvement of local Aboriginal participants and to provide Aboriginal communities with TLU deliverables that are relevant and of utility

- to provide Talisman with information and deliverables necessary to respond to Aboriginal communities' questions and concerns and to manage TLU impact mitigation recommendations during construction and throughout the life of the proposed Project

1.3 study timeframe

Fieldwork for the TLU Sites Assessment was undertaken on May 31, June 1, 3 and 4, 2012. The proposed Project area was accessed by 4x4 trucks. Fieldwork was conducted on foot.

1.4 project personnel

Jayme Savard of Horse Lake First Nation (HLFN), Margaret Gladu of Kelly Lake Cree Nation (KLCN), Charlie Calliou of Kelly Lake First Nation (KLFN), Shirley Letendre of Kelly Lake Métis Settlement Society (KLMSS), Andy Solonas, Jr. of McLeod Lake Indian Band (MLIB), Bev Rohel of Saulteau First Nations (SFN), and Ryan Desjarlais of West Moberly First Nations (WMFN) worked with Landsong during the proposed Project TLU Sites Assessment.

Participants from Aboriginal communities were selected by either the Chief and Council or the Land Use Department of each community. It is understood that whereas the participant is selected by his or her respective community, his/her opinions and perspectives may not represent the Aboriginal community as a

whole. It is for this reason that we encourage a community based review process managed by the community's land use departments or by Chief and Council. We further encourage the leadership and membership of each Aboriginal community to consider the proposed Project's potential impacts on TLU sites within the context of Aboriginal Rights /Title and Treaty Rights and Interests.

On May 24, 2012 Landsong provided participation forms to AWN, AWN Nose Creek, HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN. The purpose of the forms was to provide a brief project description and request respective community participation in TLU Sites Assessment component of the proposed Project. HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN confirmed their intention to participate soon after receipt of each participation form. Copies of participation forms and associated communications are on file at Landsong and are available upon request.

Landsong assisted with the identification and documentation of TLU sites information and with the development of TLU site mitigation strategies. In addition, Landsong prepared reporting, data packages and mapping for review by the participating Aboriginal communities. Landsong staff included: Beth Hrychuk, M.A., RPCA, Kate McAnally, B.A., MGIS, Marina McCaffrey, M.A., Tammi Mills, M.Sc., Derek Sorkilmo B.A., B.Ed., and A.J. Hills.

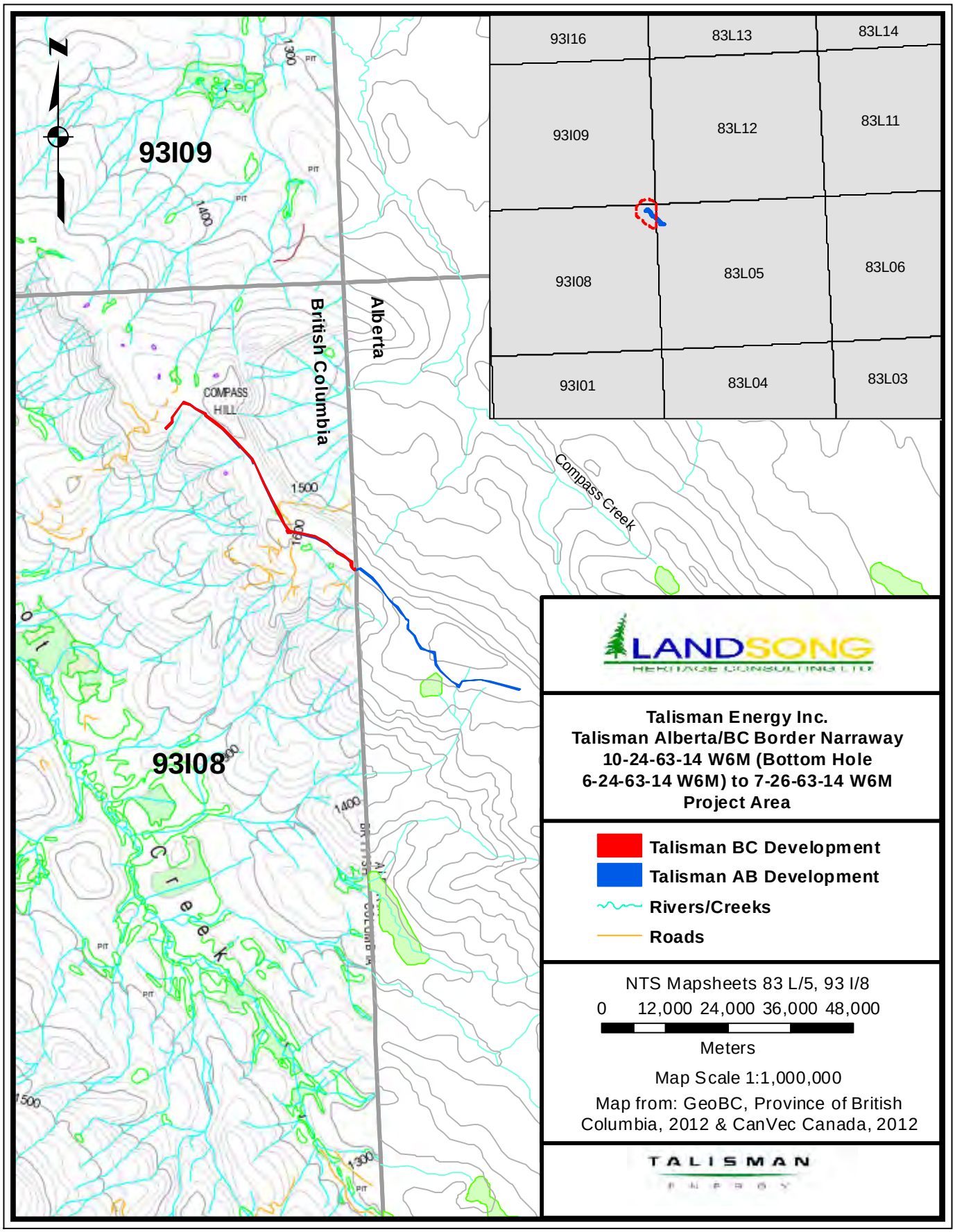

figure 1 **Talisman Energy Inc.; Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M - Project Area**

2. background

2.1 archaeology and ethnohistory

During the late Pleistocene and early Holocene epochs, as the Laurentide and Cordilleran ice sheets receded from the Western Canadian landscape, small groups of people traveled along the eastern slopes of the Rocky Mountains, also known as the Rocky Mountain Trench (Burns 1996, Mandryk et al. 2001, McMillan and Yellowhorn 2004, Meltzer 2009). Newly re-established flora and fauna (often concentrated along the shores of proglacial lakes and major waterways) provided resources for hunter-gatherer populations (Pielou 1991, Fladmark et al. 1988, Kauffman and Judson 1990, Driver 1992).

Archaeological evidence of human occupation has been recovered from a number of sites on the eastern slopes of the Rocky Mountains. A fluted projectile point recovered from the Charlie Lake Cave Site (HbRf-39), near Fort St. John, BC is associated with a radiocarbon age of c.10,400 BP (Fladmark et al. 1988). The James Pass Archaeological Site, located west of Sundre, Alberta, dates to c.10,000 BP and represents 7,000 years of continuous use (Ronaghan 1993). Further archaeological evidence of occupation in Western Canada during the early Holocene Period has been recovered from locations including Pink Mountain (HhRr-1) north of Fort St. John, BC (Wilson 1989), the Halfway River Valley, BC (Wilson and Carlson 1987), the Trutch-Sikanni Chief River area, BC (Walde 1994), Lake Minnewanka, Alberta (Landals 1993), Fletcher, Alberta (Forbis 1968), Saskatoon Mountain, Alberta (Wright 1992) and Sibbald Creek, Alberta (Gryba 1983).

Gradual environmental changes linked to the Altithermal climatic episode approximately 6,000 years ago resulted in the establishment of the modern boreal forest cover and parkland-like setting including large areas of floodplains,

meadows, muskeg and alpine tundra at higher elevations (Pielou 1991, McMillan and Yellowhorn 2004). The encroachment of the boreal forest necessitated a swift and complex adaptation to new resources, as the grazing areas of the wood bison were curtailed and their populations declined (Driver 1992, Fladmark 1996). A rich and diverse animal population including moose, elk, bear, wolf, wolverine, lynx, beaver, mink, martin, hare, weasel, otter and waterfowl thrived in this environment (Pielou 1991, Driver 1992).

The Aboriginal peoples of northwestern Alberta were, and some largely remain, hunters and gatherers. They were nomadic and thus their economic realization of the land's resources was balanced with its sustainable utilization (Jenness 2003, Howe and Brolly 2008). Oral accounts suggest that life prior to the influence of European contact in northwestern Alberta followed the cycles of the seasons, animal migrations, and the cultural patterns of resource utilization that had existed on the eastern slopes of the Rocky Mountains in northern Alberta for thousands of years. Tools for both utility and survival were furnished from stone, wood, bone and antler. Microblades, knives, scrapers, prepared cores and projectile points were common elements within the prehistoric toolkit (McMillan and Yellowhorn 2004). Deadfall traps, snares and brush fences (designed for efficiency and mobility) were utilized to trap small mammals such as hare and beaver. Animals provided food, furs and hides. Fish were procured and cached for winter use. Traditional ecological knowledge of plants allowed for the harvest of foods and the preparation of medicines (Riddington 1981).

Today the following ten (10) Aboriginal communities have traditional land use interests in the proposed Project area:

Aseniwuche Winewak Nation (AWN) is made up of seven small land holdings located along Highway 40 to the north and east of Grande Cache, AB. AWN maintains a band office in the town of Grande Cache. The people of AWN were relocated from their home lands to accommodate the formation of Jasper

National Park. They are not a signatory of Treaty No. 8 (1899) AB but hold their lands communally under four cooperative associations and two enterprises, each with the legal authority to manage its own affairs. AWN's Traditional Land Use Area is vast, extending across the British Columbia/Alberta border and encompassing all of Willmore Wilderness Park and much of Jasper National Park.

Aseniwuche Winewak Nation Nose Creek (AWN Nose Creek) is a settlement made up of a small group of Aseniwuche Winewak peoples who chose to relocate to the Nose Creek/Kakwa area rather than Grande Cache after the creation of Jasper National Park in 1910 relocated them from their traditional home lands. They maintain close ties to the Aseniwuche Winewak Nation of Grande Cache.

Horse Lake First Nation (HLFN) is located at Horse Lake, AB, approximately 60km northwest of the Grande Prairie along Highway 43, and 10km west of the town of Hythe, AB, on Highway 672. HLFN is a signatory of Treaty No. 8 (1899) AB. Whereas the governing body of HLFN is on reserve, HLFN maintains a land use office in Edmonton, AB.

Kelly Lake is located approximately 120km southeast of Dawson Creek, near the Alberta border. The Kelly Lake community is comprised of three Aboriginal groups: Kelly Lake Cree Nation (KLCN), Kelly Lake First Nations (KLFN) and Kelly Lake Métis Settlement Society (KLMSS).

> **Kelly Lake Cree Nation (KLCN)** consists of a group of Aboriginal peoples who have not yet entered into Treaty with the Government of Canada and are therefore not a reserve-based nation. In 1991, KLCN issued a statement of claim for aboriginal title and compensation in recognition of damages done to their traditional lands, which is still being reviewed by the federal court.

Kelly Lake First Nations (KLFN) is a group of First Nations residing in the Kelly Lake area who are recognized as First Nations (Treaty No. 8 (1899) BC), rather than Metis peoples. Some KLFN members are registered under Saulteau First Nations (SFN) as a result of membership policies associated with Bill C-31; however, KLFN has its own land base and leadership and is an independent community. KLFN maintains a band office in Beaverlodge, AB.

Kelly Lake Métis Settlement Society (KLMSS) members identify themselves as Métis, and continue to assert their constitutionally protected Section 35 Aboriginal rights. They have not entered into Treaty No. 8 (1899) BC and seek their own identity and land rights independent of other Aboriginal communities in the area. KLMSS maintains a band office in Hythe, AB.

McLeod Lake Indian Band (MLIB) is located at McLeod Lake, BC, approximately 150km north of Prince George along Highway 97. In April of 2000, MLIB signed an agreement with the Province of British Columbia and Canada to adhere to the terms of Treaty No. 8 (1899) BC. MLIB maintains a land use and referrals office in Chetwynd, BC.

Saulteau First Nations (SFN) is located approximately 20km north of the town of Chetwynd along Highway 29 at Moberly Lake, British Columbia. The people of SFN, originating from Manitoba, arrived in the Chetwynd area of northeastern BC in the late 1800s. The band was formed by the amalgamation of Beaver, Cree and Saulteau residents with the SFN Reserve located at the east end of Moberly Lake. SFN is a signatory of Treaty No. 8 (1899) BC.

West Moberly First Nations (WMFN) is located approximately 30km north of the town of Chetwynd along Highway 29 at Moberly Lake, British Columbia.

Originally part of the Hudson Hope Band with Halfway River First Nation (HRFN), the communities separated in 1971 and are now recognized as two separate First Nations. The WMFN Reserve is located at the west end of Moberly Lake. WMFN is a signatory of Treaty No. 8 (1899) BC.

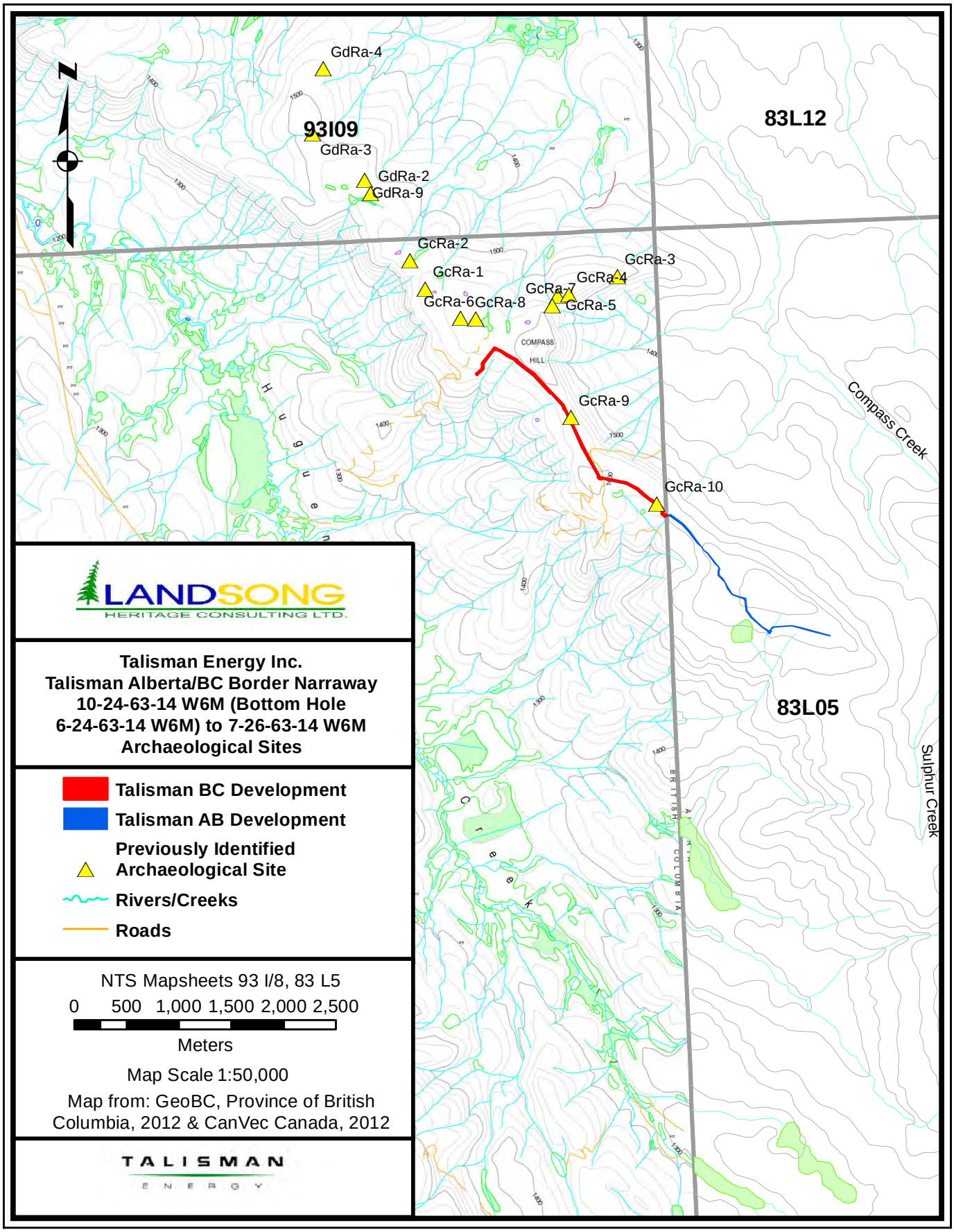

figure 2 **Talisman Energy Inc.; Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M - Archaeological Sites**

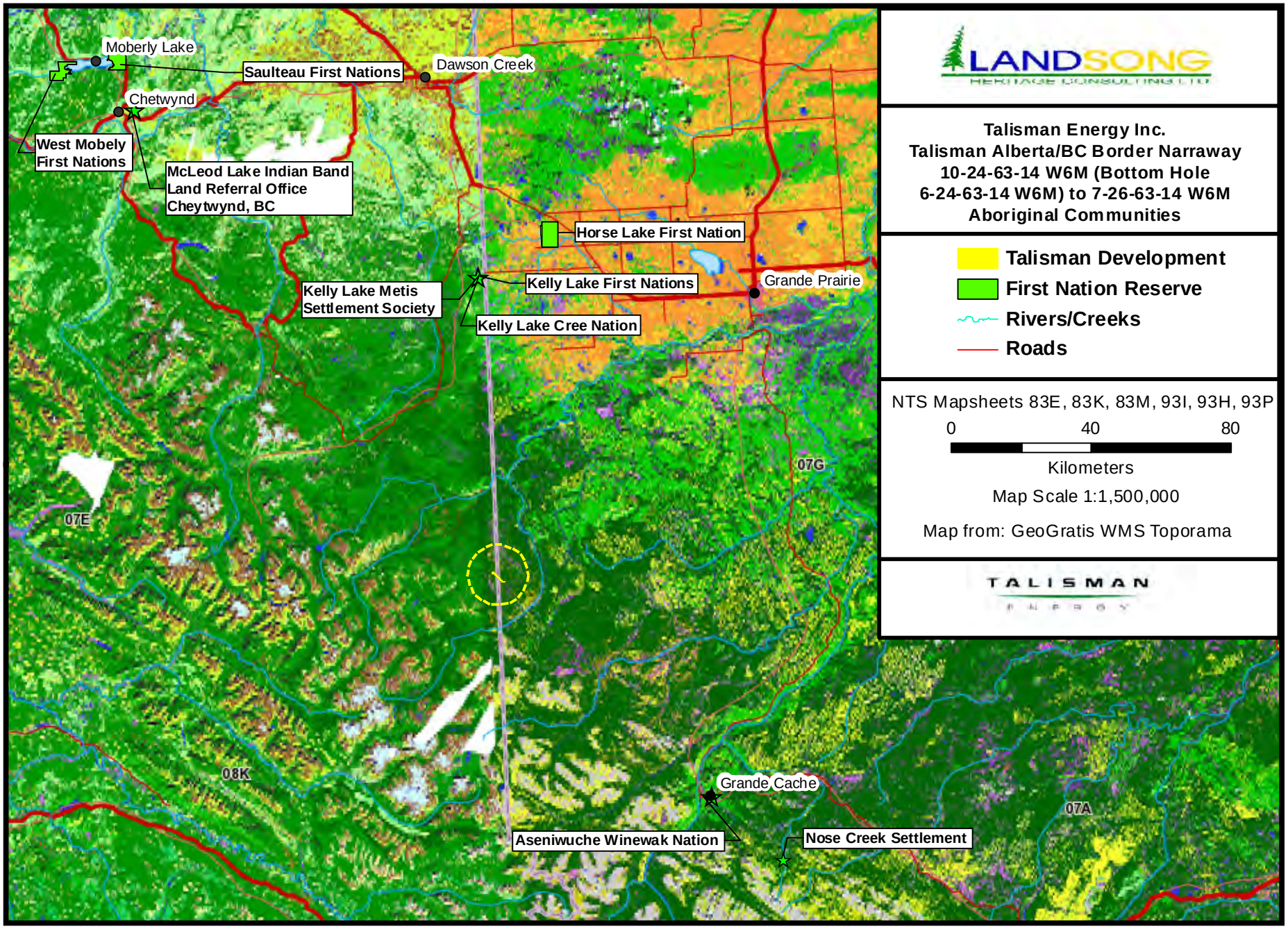

figure 3 **Talisman Energy Inc.; Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M - Aboriginal Communities**

2.2 regional description

The proposed Project is located within the Lower Foothills Natural Subregion (LFNS) of Alberta (NRC 2006). The LFNS is a transitional zone between Boreal and Cordilleran climates characterized by cold winters with high levels of snowfall, with snow from late September to early June. This zone is also noted for wetter climates, resulting in pure stands of lodgepole pine amongst mixed wood stands, and for a shorter, cool growing season than adjacent Natural Subregions (NRC 2006).

The LFNS covers a wide belt of land in the province; extending from the Bow River Valley in the south to Grande Prairie in the North. Its landscape is defined by undulating to strongly rolling dissected plateaus at the eastern edge, and giving way to steeper and more rugged slopes on its western boundary where it transitions into the Upper Foothills Subregion. Forest cover within the LFNS is the most diverse in Alberta, holding a wide variety of forest types and tree species. The drier and lower regions within the zone support expansive stands of lodgepole pine. Aspen, balsam poplar, white birch, black spruce, white spruce, balsam fir and tamarack grow in both mixed and pure stands on many different slopes and aspects. The more poorly drained areas in the region are dominated by black spruce, tamarack, and a variety of shrubs and herbs (Downing & Pettapiece 2006).

Common plants found throughout the LFNS include: willows, bog birch, alder, prickly wild rose, devil's club, honeysuckle, Labrador tea, peavine, horsetail and wild sarsaparilla. Bryophytes include feathered club moss, common tree moss and various liverworts. Berries include several varieties of: bunchberry, gooseberry, huckleberry, currants, blueberry, bearberry, Saskatoon berry, cranberries, black elderberry, common snowberry, black twinberry, choke cherry, pin cherry, crowberry, thimbleberry, wild red raspberry, red baneberry, wild strawberry and loganberry. Wildflowers include several examples of the lily,

orchid, buttercup, yarrow, monkey flower, goldenrod, tall larkspur, arnica, aster, fireweed, common paintbrush, red clover, twinflower, plantain and monkshood. Aquatic plants include marsh cinquefoil, common cattail, arrow-grass and pondweed (Downing & Pettapiece 2006).

Carnivore and omnivore populations include grizzly bear, black bear, cougar, lynx, wolf, wolverine, coyote, marten, fox, fisher, mink, otter and weasel. Herbivore populations include moose, elk, caribou, mountain goat, stone and Dahl's sheep, mule deer, white-tail deer, hare and various rodents including beaver, muskrat and squirrel (Gadd 2003).

Birds and waterfowl include: the black capped chickadee, tree swallow, red-breasted nuthatch, red-winged blackbird, purple finch, swainson's thrush, yellow warbler, American robin, darkened junko, mountain bluebird, white-crowned sparrow, Bohemian waxwing, raven, crow, magpie, whiskey-jack, yellow-bellied sapsucker, northern flicker, pileated woodpecker, American bald eagle, golden eagle, goshawk, red-tailed hawk, gyrfalcon, great horned owl, barred owl, kestrels, fisher, Canada goose, loon, trumpeter swan, mallards, buffleheads, blue winged teals, Barrow's goldeneye, grouse and ptarmigan (Gadd 2003).

Bull trout, northern pike, lake whitefish, arctic grayling, mountain whitefish, white sucker, burbot, longnose sucker, goldeye, walleye, yellow perch and rainbow trout are present in many of the streams, rivers and lakes throughout the LFNS (Gadd 2003).

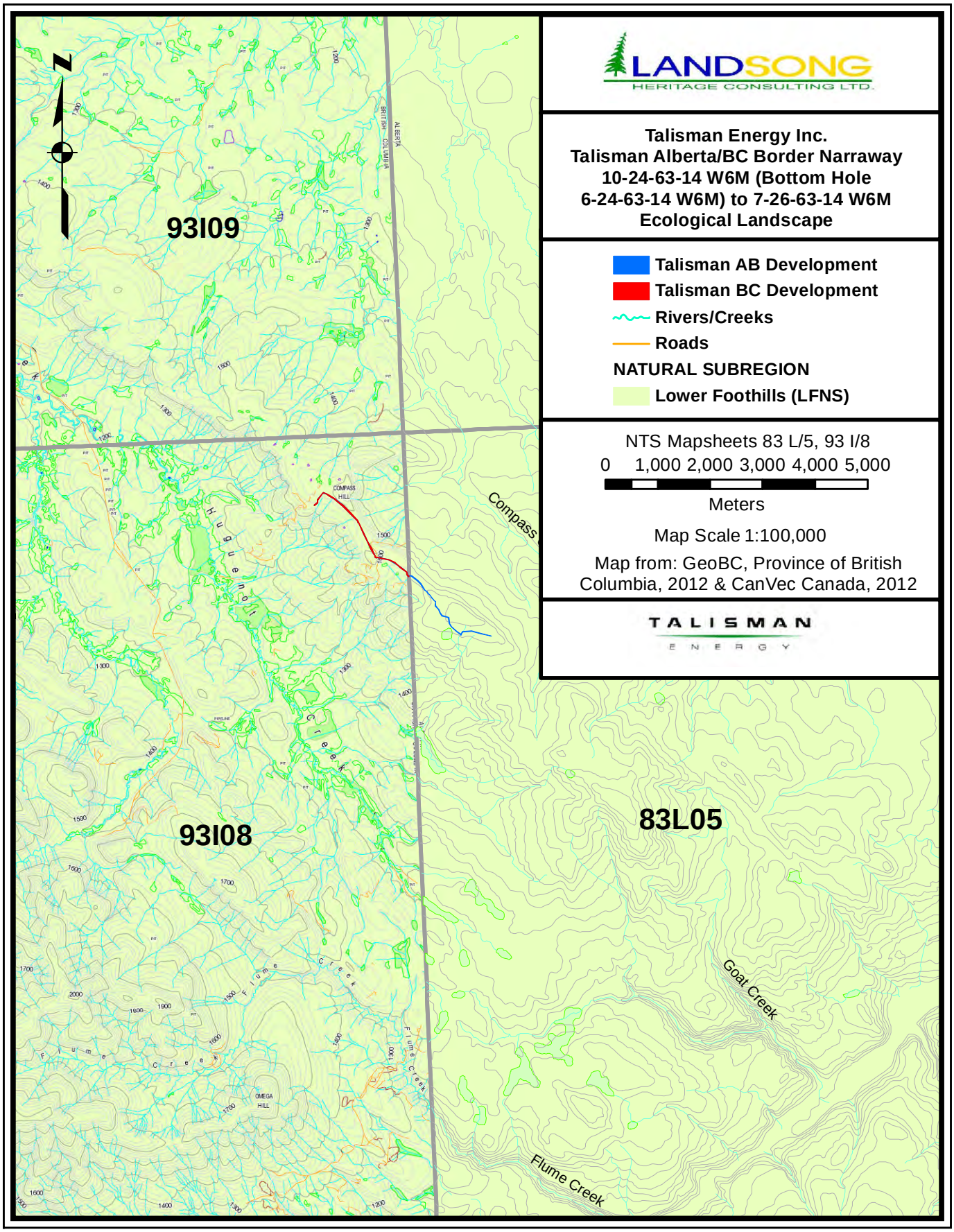

figure 4 Talisman Energy Inc.; Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M - Ecological Landscape

2.3 project area description

The proposed Project area is located approximately 87km northwest of Grande Cache, 77km northwest of Highway 40, 5km west of Narraway Road and 2km southwest of Compass Creek. The Project area can be accessed by 4x4 vehicle from the town of Tumbler Ridge, British Columbia by travelling east on Highway 54 for ~50km, turning left (south) onto the Ojay Main Road and continuing for ~93km. Turn right (southeast) onto the wellsite access road for d-83-I and take the first left on to the Border Road. Travel ~3km on Border Road to a locked gate. Park and continue to the Project by foot.

The Project terrain from 2+689 to 3+399 is undulating with moderate to steep southwestern slopes. Soils are very poorly to moderately well drained. Forested areas are dominated by willow, pine, fir and alder, with ground cover comprised of grasses, mosses, club moss, lichens, caribou lichen, cow parsnip, Labrador tea, bunchberry, ground cedar, huckleberry, lingonberry, crowberry and ink cap mushroom.

From 3+399 to 4+256 the terrain is undulating with gentle to steep southwestern slopes. Soils are very poorly drained and forest cover consists of pine and fir. Ground cover is comprised of grasses, mosses, club moss, caribou lichen, cow parsnip, Labrador tea, bunchberry, ground cedar, soapberry, ferns, pink wintergreen, crowberry, toad's pelt and lingonberry.

From 4+256 to 4+864 the terrain ranges from featureless to undulating with moderate to steep southern slopes, and soils are very poorly to moderately well drained. Forest cover consists of pine, fir and alder and ground cover is comprised of grasses, mosses, club moss, lichens, caribou lichen, cow parsnip, Labrador tea, bunchberry, ground cedar, and soapberry.

Previous disturbance is limited to an adjacent oil and gas road, approximately five metres of which overlaps the proposed pipeline right of way.

plate 1 View southeast of the proposed Project from 2+689 showing typical ground cover

plate 2 View southeast of the proposed Project from 2+871 depicting pine and white spruce forest cover

plate 3 View northwest of the proposed Project from 3+399 showing terrain typical of the area

plate 4 View northwest of the proposed Project from 3+848 depicting ground cover of mosses, lichens and Labrador tea

plate 5 View northeast of the proposed Project from 4+256 showing level terrain

plate 6 View northwest of the proposed Project from 4+865 depicting very poorly drained terrain

3. methodology

3.1 data classification

Aboriginal peoples and anthropologists often describe human land use as a continuum from ancient land use, through historic land use, current land use to future land use. Land use sites may exhibit patterns of continuous or intermittent use throughout or within these temporal periods or phases. During each phase of land use, cultural groups have left physical evidence of land use (sometimes referred to as material culture or artifacts), and/or memorialized land use through oral histories and Traditional Ecological Knowledge (TEK).

For at least ten thousand years, the Aboriginal people of northwestern Alberta have traditionally hunted, fished, gathered plants for food and medicines and have made "household" belongings (tools, clothing, hunting implements etc.) from wood, stone, bone, animals and plant products. Whereas western items have now replaced many traditional items, the utilization of wilderness areas and environmental resources remains an integral part of Aboriginal culture in the North. Understanding and managing potential industry related impacts to the environment is essential to assessing potential impacts to TLU.

For the purposes of this TLU sites assessment, cultural and environmental sites, features and observations are divided into four categories: 1) Archaeological Sites, 2) Historic Sites, 3) TLU Sites and 4) Environmental Biophysical Features and Observations. The four categories below provide definitions, give examples of site types and address protection and guidance for impact mitigation strategies.

3.1.1 Archaeological Sites

definition: An Archaeological Site is a location which contains the physical remains of past human activities. Archaeological sites may date to prehistoric or historic times. In Alberta, prehistoric period Archaeological Sites and many historic period Archaeological Sites are considered significant to Aboriginal peoples. Archaeological research may contribute to an understanding of Aboriginal prehistory and ancient traditional land use.

examples: Archaeological sites may include ancient campsites, tipi rings, fishing weirs, quarries and lithic production locations, animal drive lanes, cairns, animal kill sites and rock art.

protection measures: In Alberta, Archaeological Sites are afforded automatic protection under the Alberta Historical Resources Act (HRA). Section 30 of the HRA allows for a qualified archaeologist to conduct Archaeological Research testing at an archaeological site.

3.1.2 Historic Sites

definition: Historic Sites include both archaeological sites (a field of research referred to as "Historical Archaeology", see Archaeological Sites above) and non-archaeological Historic Sites. Non-archaeological Historic Sites usually consist of historic buildings. Historical archaeological sites can be protected under the HRA if considered by the province to have heritage resource value (HRV).

examples: Historic Sites may include buildings with heritage value, old trapper cabins, homesteads, sawmills, fur trade and commerce sites, mining settlements and historic industry sites.

protection measures: Historic Sites may be protected under the HRA. Historic Sites may also be protected through individual project-specific agreements made

by the project proponent. Sites may also be recorded for inventory purposes and/or baseline information and such sites are usually afforded no protection, or mitigation to minimize Project-related impacts. Sites may or may not be considered confidential. Data pertaining to historic sites may or may not be considered by Aboriginal Communities to be their intellectual property.

3.1.3 Traditional Land Use Sites

definition: TLU Sites are locations and resources utilized for both past and current Aboriginal cultural purposes. TLU Sites may contain physical evidence of Aboriginal land use, locations that have significance for sacred and/or ceremonial reasons (with or without physical evidence) and/or locations relevant to oral histories. TLU Sites may also include environmental sites and biophysical features that are of importance to Aboriginal peoples for the continuation of traditional lifeways. Impacts to these sites and features may impact the right to hunt, to trap, to fish and more generally to utilize wilderness areas in traditional ways including camping, berry picking and plant collection for food and medicine and recreation.

The placement of sites in either the TLU Site Category or the Environmental Biophysical Features and Observations Category below may vary between different Aboriginal communities as it reflects specific land use patterns and values that may be unique to those communities. For example: duck nesting sites may be considered as a TLU Site by one Aboriginal community if they collect and eat duck eggs, but the same sites may be considered an Environmental Observation by a community that does not traditionally harvest duck eggs.

examples: TLU Sites may include CMTs, pack trails and wagon trails, subsistence sites such as Aboriginal trap sets or fishing weirs, human birth places, sacred and ceremonial sites (these may also be afforded protection as

Historic Sites), gathering sites/campsites, and significant wildlife habitat such as moose licks, calving areas, animal dens, well-defined game trails and water sources such as spring-fed ponds in areas where they are not plentiful. Other TLU Sites may be of "household importance" such as rotten wood appropriate for smoking hides and plants for food and/or medicine.

protection measures: The protection of specific TLU sites, including ceremonial sites, historic sites and medicinal plant collecting sites, may be managed under the HRA. TLU Sites consisting of critical animal habitat may also be protected under environmental regulations. Other sites may be afforded protective measures through individual project-specific agreements made between industry and Aboriginal communities. Sites may also be recorded for inventory purposes and/or baseline information only and such sites are usually afforded no protection, or mitigation to minimize Project-related impacts. Detailed TLU Site information is usually kept confidential as it is considered by Aboriginal Communities to be their intellectual property.

3.1.4 Environmental Biophysical Features and Observations

definition: For the purposes of this TLU Sites Assessment, the Environmental Biophysical Features and Observations Category is defined as wildlife habitat features and vegetation that are considered integral to ecosystems and the health of wilderness areas. These features and observations are not utilized specifically by Aboriginal peoples but are considered important features to the local ecosystem.

examples: Environmental Biophysical Features and Observations may include, but are not limited to, fish, bird and animal sightings, nesting and denning areas, wildlife trees, animal signs such as droppings and scat, tracks, claw marks on trees, rubs, and squirrel middens.

protection measures: Some environmental features and observations may be protected under environmental legislation or through best-practices standards of industry on a project by project basis. Other features and observations may be recorded for inventory purposes and/or baseline information, and whereas they are not given site-specific protection, they are addressed collectively within the a Project's environmental management plan

Environmental Biophysical Features and Observations are recorded during TLU assessments as inventory baseline information specific to Crown Lands utilized by Aboriginal communities. Recommendations for protection and impact mitigation measures are usually managed in conjunction with environmental specialists and are not considered confidential.

3.2 TLU process

3.2.1 pre-field planning

Upon receipt of preliminary Project mapping, Landsong reviewed the proposed Project to consider which Aboriginal communities may have traditional land use interests in the proposed Project area. Asserted traditional land use territories within the Treaty No. 8 (1899) area in Alberta and British Columbia have large areas of overlap. The results of this review are communicated with the proponent. At the request of Talisman, AWN, AWN Nose Creek, HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN were invited to participate in the TLU Sites Assessment.

With the proposed Project area and Aboriginal TLU areas defined, a documentary review of published and unpublished documents and databases was conducted to build on the findings of previous studies. This research included conducting a site file search of previously recorded archaeological sites in the vicinity of the proposed Project by accessing information from Alberta

Culture, Historic Resources Management Branch. Due to the proximity of the proposed Project to British Columbia, the Heritage Resource Inventory Application (HRIA) and Remote Access to Archaeological Data (RAAD) were also utilized.

3.2.2. field reconnaissance program

The proposed Project was assessed by pedestrian traverse using 1m to 5m transects which covered the proposed pipeline right of way, workspaces and forested lands immediately adjacent to the Project. Each TLU site and environmental biophysical feature and observation was recorded to a level of detail considered appropriate to the data classification, site category, site type and site significance as determined by Aboriginal participants.

The field recording process was guided by the Aboriginal participants and facilitated by the Landsong staff (collectively, referred herein after as the TLU Team). After identifying a site, feature or observation, the TLU Team discussed the site details within a context of TEK and past and current Aboriginal land use. The Team further considered potential planned and unplanned proposed Project-related impacts. Planned Project-related impacts include the construction of the proposed development and all associated facilities. Unplanned Project-related impacts include inadvertent, accidental, or secondary disturbances. Examples of unplanned disturbances include: erosion (natural or related to construction), vehicular impact outside the Project boundaries and/or human interference related to increased access to once remote areas.

Each TLU site and environmental feature or observation was recorded using a handheld GPS operating in NAD 83. Locations were also photographed (when this was deemed appropriate by the participating Aboriginal representatives) and a detailed site recording form was completed.

Not all TLU and environmental sites were recorded. Some sites may not be recorded for various reasons. First, the inventory is based on a fieldwork strategy that utilizes pedestrian transects through the Project area. Whereas best efforts are made to cover the proposed Project area, depending on the terrain features and the width of the transect paths, some sites may not be identified and thus remain unrecorded. Second, certain site types may be extremely sensitive in nature and, particularly in instances where avoidance is not required; members of the TLU Team may request that sites are not recorded. Third, some TLU sites are specific to individual Aboriginal families who may not have been represented by the TLU team. Finally, there are usually numerous environmental biophysical features and observations, for example animal bedding sites, tracks and tree gnaws, where only a representative sample may be recorded for logistical reasons.

Not all site categories were identified during the TLU Sites Assessment of the proposed Project development area.

3.2.3. mitigation recommendations & best practices

Discussions regarding TLU site significance and appropriate site mitigation options were held at each site location. TLU sites are considered to have low, moderate or high significance as determined by the participants from Aboriginal communities. TLU sites of low significance are usually documented for inventory purposes and are not considered to require mitigation measures. TLU sites of low significance may be utilized regularly but are ubiquitous within the area or they simply may be not utilized or rarely utilized. TLU sites of moderate significance usually require mitigation measures designed to either minimize site impacts, increase buffer areas between the proposed development and the site, or to avoid the site. TLU sites considered to be of high significance usually require avoidance. It is understood that the significance of a traditional land use

site may vary from individual to individual, family to family, community to community and that site significance may change over time.

Consensus regarding site significance and mitigation strategies was reached in the field whenever possible. In a circumstance where TLU Team participants do not reach a consensus of the significance of a TLU site, the Team always recommends the highest suggested level of protection for the site. For example, in a circumstance where several members of the TLU Team recommend that a site be recorded for "inventory purposes only" and one member recommends the mitigation strategy "minimize impact" the TLU Team would defer to the recommendation "minimize impact".

Some TLU site types have standard mitigation strategies that have been introduced and tested on previous TLU Assessments with success. The following is a list of site types, with a brief description and a discussion of mitigation practices. The photos included within this section of the confidential copy of the TLU Summary Report are specific TLU sites and environmental biophysical features and observations that are from this Project. Photos have been removed from the Client copy as they may contain information that may be considered sensitive or confidential to the participating Aboriginal communities.

- Aboriginal Campsites are usually recorded as TLU Sites. Campsites may also illustrate patterns of re-occupation and may therefore also contain an Archaeological, Historical and current use component. Impact mitigation strategies for campsites correspond directly to the significance of the site. If the destruction of the campsite would have significant residual impacts on an Aboriginal community or part thereof, these sites are usually either avoided or measures taken to relocate modern components of the site such as meat racks, tipi poles and tables.

- Historic structure sites may be protected under the HRA if the structure is considered to be of heritage significance. Aboriginal historic structures, such as trapper cabins, and lean-to shelters date from the fur trade era to current times are recorded as TLU Sites. Site significance of historic structures and their remains is usually considered to be either moderate or high and site avoidance is common. Historic structures are often associated with a collection of historic artifacts, and in some cases oral histories provide information regarding the structure's use and occupations.

- Aboriginal Commerce and Industry Sites such as locations for trading and selling furs and supplies, historic grazing and haying fields and saw mills may be recorded as TLU Sites.

- CMTs are trees altered, or culturally modified, by Aboriginal peoples "as part of their traditional use of the forest" (Stryd 1997). CMTs can include bark-stripped (or cambium stripped) trees, blazed trees, Aboriginally-logged trees, and other modified trees such as old timber with lower branches removed to create winter shelters. Increment tree bores are used to determine the ages of all modifications as well as the age of the tree.

- Aboriginal Pack Trails are trails traditionally used by Aboriginal peoples. Recording trails is important to understanding human seasonal migrations, ceremonial journeys, hunting and trapping patterns, trade routes and family movements. Trails are usually recorded as TLU sites and are only afforded protection if heritage value is demonstrated.

  Recommendations to mitigate impact on pack trails correspond to the significance of the trail and also take into consideration previous impacts that may have fragmented trail continuity. In a circumstance where

proposed linear developments such as pipelines or roads extend in the same direction as a pack trail, an avoidance measure such as re-aligning the proposed linear development may be recommended. In a circumstance where linear developments intersect a pack trail a recommendation may be to relocate associated log decks or workspaces and then ensure the trail is kept clear of felled trees and brush and to re-blaze trees directly adjacent to the disturbance in order to better preserve the integrity of the trail. In circumstances where a pack trail will be impacted by a non-linear or large-scale surface development such as a mine, a cut block or a facility site, a recommendation to re-blaze a trail reroute around the development area may be implemented.

- Aboriginal traps and snares may be recorded as TLU Sites. Bear, lynx, marten, fisher, squirrel, wolverine, muskrat, beaver, are commonly trapped and snared. In a circumstance where an historic trap is in direct conflict with proposed development, the TLU team may recommend re-locating the trap to a location adjacent to the proposed development disturbance. Historic traps are usually not collected.

  If the ownership of traps and snares is uncertain or likely that of a registered trapline owner, a recommendation will be made for the proponent to contact the registered trapline owner to advise him/her of the location of the trap site.

- All Human Burial Sites, regardless of age, are protected under the HRA. No human remains are to be disturbed in any way without written authorization from the Director of Vital Statistics and the Minister. Aboriginal burials may require specific ceremonial measures in conjunction with avoidance procedures.

- Aboriginal birthplaces and death places (or memorial locations) are recorded as TLU Sites. Some Aboriginal people consider a birth location or a death location as equally significant to a burial place. These locations may be devoid of any distinguishing features, but are remembered and may be visited by living informants. TLU recommendations for human birth and death places may include site avoidance, minimizing impacts (including aesthetic and visual) and ceremonial practices.

- Sacred sites and ceremonial sites may be recorded as TLU Sites. Sites may include sweat lodge or healing lodge sites, Sundance sites, medicinal plant collecting areas, vision quest locations, ceremonial tree or prayer cloth tree sites. Recommendations for mitigating impacts to sacred sites and ceremonial sites usually involve avoidance measures; however, recommendations may vary depending on the determined site significance. Sacred and ceremonial sites may be protected under the HRA.

- Medicinal plant sites are recorded as TLU sites. Owing to the often confidential and highly sensitive nature of these sites, the associated TEK is often managed by the Aboriginal knowledge holder and descriptions are not disseminated between the Aboriginal communities. Some Aboriginal people consider that “all plants are medicine” and are concerned that the identification of select plants might lead to the neglect of others. Medicinal plants may or may not be listed as “rare plants” and therefore, TLU recommendations may not correlate to environmental regulations. Significant medicinal plant sites may require avoidance and be protected under the HRA. Other sites may require access management measures, agreements regarding chemical applications and/or the restriction of construction disturbances such as workspaces and log decks and/or post-construction TLU assessment.

- Plants for food and berry picking sites are recorded as TLU sites. The often ubiquitous nature of some of these sites may require their consideration at a landscape level rather than at a site-specific level. Plants for food and berry picking may be visited seasonally, annually or as needed by Aboriginal peoples. Moreover, berry picking sites are often closely tied to fire cycles and forestry activity, resulting in a continually changing pattern of resource utilization. Sometimes sites are documented for Future TLU. TLU recommendations for mitigating construction-related impacts to plants for food and berry picking sites often include access management measures, agreements regarding chemical applications and the restriction of construction disturbances.

- Other Plant/Vegetation Sites are recorded as TLU sites. Such sites may contain plants utilized domestically or ceremonially. Included are moss sites, lichen sites, and fungus sites. Other plant sites may be used to collect vegetation utilized during food procurement or rotten wood sites used for processing hides. Some plants have multiple uses and different parts of the plant (roots, stems, leaves, buds, flowers) may be uniquely utilized. A single plant may therefore be a source of food, have medicinal uses and possibly have domestic or food processing uses as well. TLU recommendations for mitigating these sites may include access management measures, agreements regarding chemical applications and the restriction of construction disturbances. Sometimes the Aboriginal communities simply decide to harvest areas prior to construction.

- Significant Wildlife Habitat sites are recorded as TLU sites. Such sites include moose licks, watering holes or springs, calving areas, ungulate sand wallows, animal dens and well defined/incised game trails. These sites are specifically important for Aboriginal people to hunt, fish, trap and maintain TLU practices. These sites may also be of importance from a biophysical perspective and thus information collected is shared with the

proposed Project's environmental specialists and sites are managed cooperatively. Recommendations may include avoidance measures such as reduction or relocation of temporary workspace with set-backs to buffer the sites from view. Recommendations may also include but are not limited to chemical application restrictions, access management, seasonal construction restrictions to allow for animals to leave dens and/or avoidance of spring construction near calving areas.

- Aboriginal Fishing Sites are recorded as TLU sites. Fishing Sites may be specific locations along water courses and the shore of lakes and on frozen waters that have been traditionally utilized for fishing. These sites may also be of importance from a biophysical perspective and thus information collected is shared with the proposed Project's environmental specialists and sites are managed cooperatively.

- Bird & Waterfowl Nesting Sites are recorded as either TLU Sites, if they are utilized for egg collection (duck and goose) or are considered sacred (i.e. eagle nesting areas and swan nesting areas). Otherwise they are recorded as Environmental Biophysical Features and Observations. All nesting site information and information collected is shared with the proposed Project's environmental specialists. In circumstances where the nesting site is considered a TLU location the TLU team's recommendations (usually avoidance with a buffer) may exceed environmental regulations.

- Game trails that are well-defined and show signs of frequent animal use are recorded as TLU Sites. In non-linear or large-scale developments, game trails are usually documented, but not avoided. Where a linear project impacts a significant game trail, the following ***wildlife crossing measures*** are recommended to allow animals to use established trails rather than rerouting them down new linear disturbances:

- clear trail of strippings, spoil, snow and rollback windrows and felled trees during construction and separate and rest down the pipe during stringing to encourage continued trail use.
- undertake an efficient construction schedule to reduce the times in which welded pipe is strung and trenches are open.

- Animal Signs including rubs, gnaws, chews, diggings, claw, hoof and paw prints/tracks, droppings and scat, foraging locations, kill sites, and small animal trails (i.e. rabbit and mouse) are recorded as Environmental Biophysical Features and Observations and information collected is shared with the Project's environmental specialists. These signs are usually recorded by the TLU Team for inventory purposes only and are considered indicators of the health of animal populations within an area. Animal signs also help track the movement of animals (pre, during and post construction) and may contribute to the body of regional base-line information.

- Animal, Fish and Bird Sightings are usually recorded as Environmental Biophysical Features and Observations and information collected is shared with the Project's environmental specialists. Common sightings include black bear, grizzly bear, deer, moose, elk, squirrel, rabbit, frogs, owls, eagles, and numerous other birds. When fish are observed in creeks they are also recorded.

3.2.4 information management, reporting and data review

TLU information and associated TEK are considered by the participating Aboriginal communities to be their proprietary information. In order to balance the interests of each participating Aboriginal community with the necessity to share information with Talisman representatives for the managed mitigation of

potential impacts to TLU sites, specific information-sharing protocols were discussed in the field at each site and in relation to each concern.

Care has been taken to provide only information that is considered necessary to allow for informed discussions between the participating Aboriginal communities and Talisman representatives. Generally TLU information provided to Talisman will include a Site Identifier Number, a UTM location and a corresponding recommendation.

A Detailed Data Package including TLU site information, TLU sites photos, and all GIS data pertaining to the sites (shape file format and/or excel spreadsheets) will be provided to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN to be used at the discretion of each Aboriginal community for initiatives such as land and resource planning, community-based education and/or potential discussions with Talisman and other stakeholders in the area.

Additionally, the Summary Reports provided to the Aboriginal communities include details pertaining to TLU site type information. These Summary Reports are marked “confidential” to easily identify them from the Summary Reports provided to Talisman and included in the proposed Project Application.

Landsong encourages review of all TLU data, mapping, reporting and recommendations by the leadership and membership of each participating Aboriginal community. Comments received will be responded to by Landsong and/or Talisman’s Consultation and Community Relations personnel. Reporting revisions will be made as required.

4. results & recommendations

4.1 site-specific TLU recommendations

A total of forty-one (41) specific sites, biophysical features and observations were recorded during the TLU Sites Assessment. The sections below summarize the proposed Project area's cultural and environmental resources as identified during this TLU assessment. The site identifier numbers listed within each table below correlate to points on Figure 5.

All members of the TLU Team were satisfied with the scope of the field assessment and the level of detailed TLU recorded. No further site-specific TLU field data collection is recommended in association with the Project.

4.1.1 Archaeological Sites

One previously unrecorded archaeological site, GcRa-10, was identified during the Archaeological Impact Assessment (AIA) for the British Columbia portion of the proposed Project. Archaeological Site GcRa-10 is located at 0+000 of the British Columbia portion of the pipeline right of way at the BC/Alberta border. All cultural material was recovered in British Columbia with testing and site boundaries extending over the border into Alberta.

A separate Final Report for Archaeological Research Permit 12-051 HRIA containing all archaeological information will be submitted to Alberta Culture, Historic Resources Management Branch for review.

TABLE 1 - ARCHAEOLOGICAL SITES

Borden Number	UTM NAD83		Site Type	Impact Mitigation Recommendations
	E	N		
GcRa-10	694278	6040675	Subsurface Lithics	*This site was identified within the Project boundaries in BC. A reroute has been proposed and agreed to by Talisman that will reroute the Project to the southeast of the site.*

4.1.2 Historic Sites

No Historic Sites were identified during the TLU Assessment.

4.1.3 TLU Sites

A total of twenty (20) TLU sites were identified and recorded during the assessment. Whereas the TLU Team reached a consensus regarding a majority of the recommendations for the TLU sites, at a few TLU sites some participants recommended basic recording for inventory only (with no specific mitigation measures) while others suggested that the sites should be reviewed by an environmental specialist to ensure adequate protection if required. In these situations, the highest level of recommendation is cited (see table below).

The TLU Site Types are only included in the Confidential Copies of this Summary Report which are provided only to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN.

TABLE 2 - TRADITIONAL LAND USE SITES

Site Number	UTM NAD83		Site Type	Impact Mitigation Recommendations
	Easting	Northing		
TU1	694318	6040626	*confidential*	• Recorded for baseline inventory • No mitigation
TU2	694332	6040620	*confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU3	305714	6040482	*confidential*	• Recorded for baseline inventory • No mitigation
TU4	305835	6040325	*confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU5	305852	6040317	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU6	305883	6040251	*confidential*	• Recorded for baseline inventory • No mitigation
TU7	305968	6040104	*confidential*	• Recorded for baseline inventory • No mitigation
TU8	305980	6040083	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU9	305980	6040083	*confidential*	• Recorded for baseline inventory • No mitigation

TABLE 2 - TRADITIONAL LAND USE SITES				
Site Number	UTM NAD83		Site Type	Impact Mitigation Recommendations
	Easting	Northing		
TU10	305980	6040083	*confidential*	• Recorded for baseline inventory • No mitigation
TU11	305979	6040027	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU12	306016	6039929	*confidential*	• Recorded for baseline inventory • See wildlife crossing measures • Share site information with environmental specialist
TU13	306222	6039733	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU14	306368	6039493	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU15	306545	6039494	*confidential*	• Recorded for baseline inventory • See wildlife crossing measures
TU16	306585	6039483	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU17	306662	6039493	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU18	306740	6039458	*confidential*	• Recorded for baseline inventory • No mitigation
TU19	306821	6039439	*confidential*	• Recorded for baseline inventory • Discuss options for minimizing impact with environmental specialist
TU20	306837	6039426	*confidential*	• Recorded for baseline inventory • See wildlife crossing measures

4.1.4 Environmental Biophysical Features and Observations

A total of twenty-one (21) Environmental Biophysical Features and Observations were recorded during the TLU assessment. Observations demonstrated that the Project area is occupied and/or frequented by wildlife including moose, caribou, deer, black bear, grizzly bear, porcupine, small fur bearers and birds. Specific environmental information is included in the Confidential Summary TLU Report provided to HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN, and has also been shared directly with the Project's environmental team.

4.2 Landscape Level TLU Recommendations

Landscape level TLU recommendations relate to the entire Project rather than specific Project components and specific sites. The proposed Project area is well known by the local Aboriginal communities and is an area accessed regularly throughout all seasons. The TLU participants and members of their respective communities hunt moose, bear and deer in the Project area, pick a variety of berries and plants for food and medicine, fish, camp and utilize the area for recreational purposes.

Aboriginal community concern regarding Medicinal Plants:

The participants discussed a general concern regarding the cultural significance of medicinal plants in the area. It is maintained that plants found in the mountains that have grown in areas not affected by development are stronger and contain more potent medicinal qualities than those that grow in other terrain. Medicinal plants are currently used by Aboriginal communities to treat a variety of ailments such as infections and injuries. It is therefore recommended that every effort be made to reduce the overall project footprint wherever possible.

Talisman response:

Talisman has minimized the footprint of the proposed Project by paralleling and overlapping the existing road. By adhering to the current proposed Project boundaries, this will minimize the effect on traditional medicinal plants in the area. Talisman will ensure that all construction equipment shall arrive on site in a clean condition to minimize the risk of introducing noxious weeds and non-native plant species to the Project area.

Aboriginal community concern regarding seasonal drainages:

Some participants expressed concern regarding four seasonal drainages located within the proposed Project boundaries that are being utilized by wildlife in the area as a water source. Participants suggested the extension of existing culverts

over the proposed pipeline right of way in order to preserve the drainages as water sources and would like to see reclamation work around the drainages such as willow planting and fabric placed to prevent erosion. Not all Aboriginal community representatives were in agreement about this being a concern.

Talisman response:

Talisman will be constructing the proposed Project utilizing construction best practices to ensure that water sources are protected, i.e. use of silt fence as sediment control measure. Talisman will minimize the changes in grade along the right of way to the extent feasible and original contour and surface drainages shall be re-established following Project construction.

Aboriginal community concerns regarding wet areas:

There was concern regarding seasonal wet areas located within the proposed Project that are being utilized by wildlife. Participants suggested these areas should be reviewed by an environmental specialist and the impacts to these specific areas should be minimized. Whereas none of the participants were opposed to sharing the details of this information with an environmental specialist, several members of the TLU team did not think mitigation measures were necessary.

Talisman response:

The locations (UTMs) of each of the seasonal wet areas have been shared with Talisman who has provided this data to Roy Northern Environmental for review. Roy Northern is currently undertaking a field review of these locations with a representative from WMFN and will provide a more detailed professional opinion on the significance of these locations within the general Project area and protective measures if required.

4.3 report content review

This TLU study is an overview or general inventory of TLU sites and resources within the proposed Project area and is not inclusive of all TLU sites and resources. Furthermore, this report may not have captured all of the Aboriginal community's concerns for the proposed Project.

HLFN, KLCN, KLFN, KLMSS, MLIB, SFN and WMFN are encouraged to review this report and respond with comments and suggestions. Aboriginal community communications will be provided to Talisman's consultation and community relations personnel and will be addressed through continued Project communications.

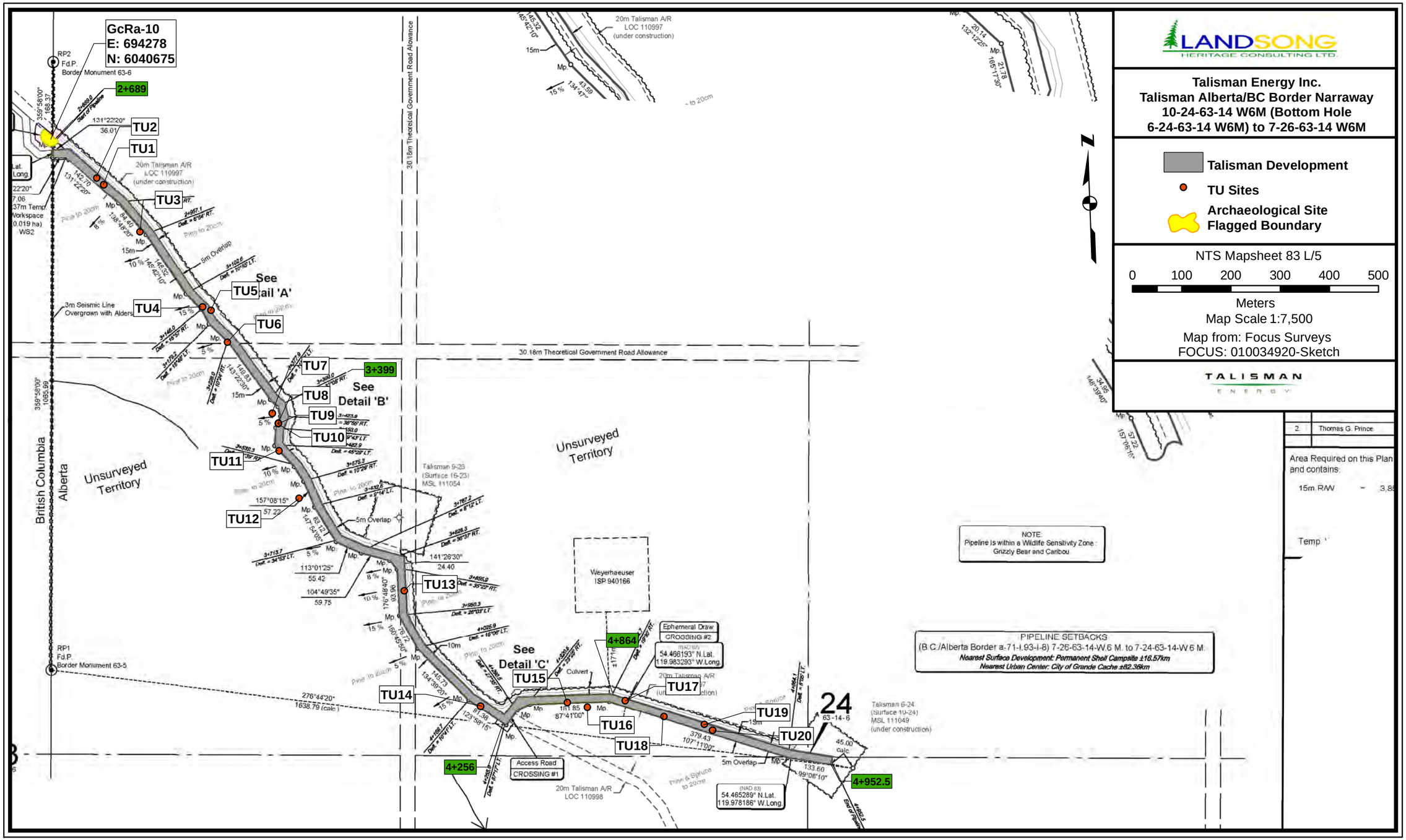

figure 5 Talisman Energy Inc.; Talisman Alberta/BC Border Narraway 10-24-63-14 W6M (Bottom Hole 6-24-63-14 W6M) to 7-26-63-14 W6M

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