

June 15, 2015

Pacific Trails Pipeline Management Inc.  
500, 5<sup>th</sup> Avenue S.W.  
Calgary AB T2P 0L7

Attention: Pacific Trails Pipeline Management Inc.

**Re: Amendment of Pipeline Permit 9706583 (Administrative Section 3) (the Permit)**

Date of Issuance: June 15, 2015  
Commission File No: 9706583  
Job No: 023551512-001

The BC Oil and Gas Commission (the Commission), under section 26(1)(d) of the *Oil and Gas Activities Act*, proposed amending Pacific Trails Pipeline Management Inc.'s permit to clarify annual reporting requirements for clearing activities conducted under this Permit. After offering an opportunity to be heard, it was indicated by Pacific Trails Pipeline Management Inc. that the permit holder has no concerns with the proposed amendment. The Commission hereby amends the Permit and the authorizations associated with the Permit, as follows:

**CONDITIONS**

The Permit is amended to remove condition 4:

*For any period of time that clearing work has been conducted under this permit, the permit holder must:*

- a. annually, on or before March 31<sup>st</sup> of each year, and*
- b. within 60 days of the date that all of the clearing work associated with the activities authorized under this permit has been completed, submit to the Commission a Post Construction Plan as an ePASS shape file identifying the location of the total area actually cleared under this permit during the time period covered by the Post Construction Plan, including a summary of timber harvested and recovered.*

to be replaced with the following:

*The permit holder must:*

- a. annually, on or before March 31 of each year, submit to the Commission, on the KERMIT system, a Post Construction Plan map*

- showing the location and nature of any construction activities completed under this permit during the previous calendar year, and*
- b. within 60 days of completion of construction activities under this permit, submit to the Commission a Post Construction Plan as an ePASS shape file accurately identifying the location of the total area actually disturbed by construction activities under this permit.*

The permit holder must comply with all of the permissions and conditions in the Permit and associated authorizations and any additional conditions noted herein.

This amendment forms an integral part of the Permit and associated authorizations and should be attached thereto.



Authorized Signatory  
Viva Wolf  
Executive Director, Permitting and Authorizations and Commission Statutory  
Decision Maker

Cc: Scott Land & Lease Co. Ltd  
EAO  
First Nations (Carrier Sekani Tribal Council, Kitselas First Nation, Burns Lake Indian Band, Dark House, Nee-Tahi-Buhn Indian Band, Office of the Wet'suwet'en, Skin Tyee Nation, Stelat'en First nation, Wet'suwet'en First Nation)  
Worksafe BC  
FLNRO  
OGC File: 9706583



May 20, 2016

Pacific Trails Pipeline Management Inc.  
c/o Chevron Canada Ltd. (Attn: Land Department)  
500, 5<sup>th</sup> Avenue S.W.  
Calgary AB T2P 0L7

Attention: Pacific Trails Pipeline Management Inc.

**Re: Application for Crown Land Access relating to pipeline permit for  
Administrative Section 3 (9706583)**

Access to Crown land held by Pacific Trails Pipeline Management Inc. (PTP) under section 14 of the *Land Act* under 9706583 will soon expire. PTP, as holder of the above noted pipeline permit, has applied, pursuant to section 138(1) of the *Petroleum and Natural Gas Act*, for authorization to enter, occupy or use unoccupied Crown land within the operating area, as described in the application to the Commission and in the pipeline permit, to carry out the oil and gas activity and related activities authorized under the pipeline permit.

I hereby grant PTP's application, and add the following permissions, conditions, and advisory guidance to the pipeline permit:

**PERMISSIONS**

- b. Pursuant to Section 138(1) of the *Petroleum and Natural Gas Act*, the permit holder is authorized to enter, occupy and use any unoccupied Crown land located within the operating area to carry out the oil and gas activity and related activities authorized under this permit. The permission to occupy and use Crown land does not entitle the permit holder to exclusive possession of the area. The permission to occupy and use Crown land expires if this permits expires, or is suspended, cancelled, surrendered or declared spent.

**CONDITIONS**

## Land Access Under Section 138 of the *Petroleum and Natural Gas Act*

69. The rights granted by this authorization are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act, Forest Act, Land Act, Mineral Tenure Act, Petroleum and Natural Gas Act, Range Act, Water Sustainability Act* or *Wildlife Act*, or any extension or renewal of the same.
70. The permit holder must not assign, sublicense or transfer this permit, or permit any person to use or occupy any Crown land within the operating area, other than its employees, contractors, or representatives, without the Commission's written consent.
71. The permit holder must ensure that the area is maintained in a condition so as to minimize hazards, including but not limited to hazards associated with storage of materials and equipment.
72. The permit holder must ensure that any Crown land within the operating area is maintained free of garbage, debris and unused equipment.

### ADVISORY GUIDANCE

6. Appropriate *Land Act* tenure will be issued upon acceptance of the post construction plan. Submission of the original application and submission of the post construction plan is considered application for all subsequent *Land Act* tenures; no further applications for replacement tenure is required.

Please include this letter as part of your permit documentation for this pipeline. All other permissions and conditions in the original permit will continue to apply.

I would encourage you to contact me at (250) 794-5318 or email should you have any questions regarding this matter.

Respectfully,



Lori Phillips  
Authorizations Manager, Applications and Operations Division



April 8, 2015

PACIFIC TRAIL PIPELINES MANAGEMENT INC.  
500, 5<sup>th</sup> Avenue SW  
Calgary AB T2P 0L7

Attention: Pacific Trail Pipelines Management Inc.

**RE: Pipeline Permit**

**Date of Issuance: April 8, 2015**  
**Commission File No: 9706583**  
**Job No.: PTP-0001**

**PERMISSIONS**

The BC Oil and Gas Commission (the "Commission"), under section 25(1) of the *Oil and Gas Activities Act* (OGAA), hereby permits the holder to construct and operate a pipeline for the purpose of conveying natural gas subject to the following conditions, any applicable exemptions and authorizations:

- a. The permissions and authorizations granted under this permit are limited to the areas described in the following construction plans by Can-Am Geomatics as submitted to the Commission in the permit application dated May 27, 2014:

Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg1-10_rev1 sheet 1, revision 1, dated December 10, 2014;
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg1-10_rev1 sheets 2 to 10, revision 1, dated January 28, 2013 (except for KM 215.9 to 216.9);
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg11-21_rev1 sheets 11 to 21, revision 1, dated January 28, 2013;
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg22-31_rev1 sheets 22 to 31, revision 1, dated January 28, 2013; and
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg32-42_rev1 sheets 32 to 42, revision 1, dated January 28, 2013.

This permit expires two years from the date of issuance as per section 8 of the *Oil and Gas Activities Act General Regulation* if the permit holder has not begun the construction of the pipeline permitted unless the permit has been extended.

A handwritten signature in blue ink, appearing to be 'M', is located in the bottom right corner of the page.



## CONDITIONS

### Park Use Permit

1. Prior to commencing any construction activities under this permit within the Burnie River Protected Area, the permit holder must possess a valid park use permit authorizing works in that area, issued pursuant to the *Park Act* by BC Parks, Ministry of Environment.

### Notification and Reporting

2. Prior to commencing any construction activities under this permit, the permit holder must provide the Burns Lake Indian Band, Carrier Sekani Tribal Council, Kitselas First Nation, Nee-Tahi-Buhn Indian Band, Office of the Wet'suwet'en, Skin Tyee Nation, Stelat'en First Nation, Wet'suwet'en First Nation and Dark House the proposed construction schedule.
3. The permit holder must notify the Commission no more than one month and no less than one week prior to commencing construction of a horizontal directional drill or flow isolation stream crossing.
4. For any period of time that clearing activities have been conducted under this permit, the permit holder must:
  - a. annually, on or before March 31 of each year; and
  - b. within 60 days of the date that all of the clearing activities associated with the activities authorized under this permit has been completed,

submit to the Commission a Post Construction Plan as an ePASS shape file accurately identifying the location of the total area actually disturbed under this permit during the time period above.

5. Prior to undertaking construction activities within 100 m upslope and 200 m downslope of a water supply well or waterworks the permit holder must:
  - a. provide information on the location and ownership of the water supply well or waterworks to the Commission; and
  - b. notify the owners of the water supply well or waterworks of the nature and planned timing of the construction activities.

### First Nations Trails

6. At the completion of construction activities the permit holder must restore any identifiable trails traditionally used by First Nations that were impacted by pipeline construction, to the level of access that existed prior to construction, if the location of the trail is made known to the permit holder by a First Nation or the Commission prior to completion of immediate post construction restoration.

### Clearing

7. Clearing and site preparation is limited to areas needed for the pipeline right of way, work spaces and decking sites.
8. Clearing and site preparation, inclusive of work spaces and decking sites, must be confined to the construction corridor and must not exceed 1031 ha and must not, without leave of the Commission, occur within:
  - a. 100 meters of where water is diverted by a waterworks, water supply well or water storage reservoir;

- b. an area containing a mineral lick, bald eagle, osprey or great blue heron nest unless the mineral lick or nest is not damaged by activities authorized under this permit;
  - c. a permanent sample site on Crown Land used as a snow course;
  - d. an area that would require harvest or disturbance of whitebark pine trees;
  - e. a riparian management area (RMA), except to facilitate a stream or wetland crossing or does not involve new clearing; or
  - f. a wildlife tree retention area.
9. Except with leave of the Commission, new cut for extra work spaces or decking sites is not permitted within a wildlife habitat area (WHA), riparian reserve zone or old growth management area as defined in the *Environmental Protection and Management Regulation (EPMR)* or the *Forest and Range Practices Act (FRPA)* and its regulations.
  10. Clearing and site preparation must be limited to the area necessary to safely construct the pipeline taking into account the influence of terrain, safe equipment operations, clearing debris, worker safety and egress, protection of adjacent infrastructure or environmental values and other conditions relevant to safe construction operations.
  11. Except with leave of the Commission, clearing and site preparation must be located on previously disturbed areas located within the construction corridor except where previously disturbed area is less than 2 hectares or as required to avoid one or more of the areas or features identified in condition 8 (a) to (f).
  12. For fish bearing streams, where operationally feasible, the permit holder must postpone clearing of slopes and banks within 10 metres of the stream high water mark until immediately prior to trench excavation and pipe installation. If vegetation must be cleared in advance of trench excavation and pipe installation, the vegetation ground mat and root structure must remain intact until immediately prior to trench excavation and pipe installation.
  13. Where practicable, the permit holder must maintain vegetation and minimize stumping or ground disturbance within 10 metres of the high water mark of a fish bearing watercourse.

#### **Wildlife**

14. Except with leave of the Commission, the permit holder must not undertake construction or significant maintenance activities inside and within 1000 meters of UWR U-6-003 except between June 15 and October 31.
15. Except with leave of the Commission, the permit holder must not undertake clearing, site preparation, construction or significant maintenance activities within WHA 6-333 for caribou, between KM 359 and KM 367, except between July 15 and January 15.
16. The permit holder must not undertake:
  - a. any clearing activities from KM 336 to KM 377 within the migratory bird nesting period between April 1 and July 31, and must not undertake any clearing activities from KM 197 to 336 during the migratory bird nesting period from May 1 and July 31 unless the area has been previously logged, brushed, or mowed; or
  - b. any construction activities within wetlands where active waterfowl nests are present.



17. The permit holder must not undertake construction activities within 200 meters of an active grizzly bear or black bear den between November 1 and May 31.
18. The permit holder must ensure that wildlife movement is not obstructed across the right of way during construction.
19. If a great blue heron rookery is discovered within 300 metres of the construction corridor, a mitigation plan must be prepared by a qualified professional and submitted to the satisfaction of the Commission, to effectively mitigate construction associated disturbance to the heron prior to commencing construction activities within 300 metres of the rookery. Any protocols, mitigation or monitoring associated with that plan must be implemented by permit holder.
20. The permit holder must collect and temporarily store garbage in bear-proof containers within the construction corridor.

### **Terrain Stability, Acid Rock Drainage and Mineral Leaching**

21. Prior to undertaking any construction activities, other than clearing and geotechnical work, on the portions of the pipeline that cross debris flow fans, the permit holder must prepare and file with the Commission a detailed engineering assessment, prepared by a qualified specialist to the satisfaction of the Commission that identifies the active, inactive and dormant zones for each debris flow fan and contains any recommendations, endorsed by the qualified specialist, regarding appropriate mitigation measures for each zone. The recommendations contained in the assessment must be implemented by the permit holder.
22. Prior to operating the pipeline, the permit holder must prepare and file with the Commission a report satisfactory to the Commission for the monitoring and maintenance of ground and slope stability in or around the pipeline corridor. The report must be prepared by a qualified professional and must include:
  - a. assessment and monitoring of any areas where karst or ground subsidence may be located;
  - b. assessment and monitoring of ground and slope stability; and
  - c. recommendations for the monitoring, avoidance or mitigation of any geohazard risks identified in the assessments conducted under a and b.

The above information must be prepared by a qualified professional and any recommendations identified under item c must be implemented by permit holder.

23. The permit holder must submit prior to construction an acid rock assessment and mitigation plan to the Commission, all to the satisfaction of the Commission, with respect to potentially acid generating (PAG) rock along the proposed pipeline route. The information must include the following elements:
  - a. the criteria used to classify acid rock drainage/metal leaching (ARD/ML) potential;
  - b. the process used to delineate PAG rock including desktop and field/laboratory assessments;
  - c. results of engineering evaluation of expected PAG rock locations and associated construction-related quantities;
  - d. additional planned characterization to complement initial assessment results;



- e. protocols to be followed during construction to verify results of PAG characterization and engineering assessments;
- f. a flowchart outlining material handling steps for confirmed PAG rock;
- g. associated mitigation and monitoring programs for exposed in situ and disposed PAG rock;
- h. mitigation selection criteria;
- i. typical drawings and typical specifications for mitigation such as soil covers and rock slope face barriers (e.g., shotcrete and synthetic spray cover); and
- j. gradational specifications for cover layer barriers composed of glacial till and/or other materials.

The above information must be prepared by a qualified professional and any protocols, mitigation or monitoring associated with e through j must be implemented by permit holder.

### **Stream, Wetland and Lake Crossings**

- 24. Subject to sections 11 and 12 of the EPMR , crossings of non-fish bearing streams and wetlands must be constructed in accordance with the methods for such crossings approved by the Commission and specified in the Project Watercourse Crossing Table and the relevant detail in the Typical Drawings of the Environmental Management Plan.
- 25. Subject to sections 11 and 12 of the EPMR , crossings of fish bearing streams and wetlands must be constructed in accordance with the timing and methods approved by the Commission and specified in the Project Watercourse Crossing Table and the relevant detail in the Typical Drawings of the Environmental Management Plan, except that:
  - a. the contingency pipeline crossing method may only be utilized with leave of the Commission; and
  - b. horizontal directional drilling and micro tunneling are the only approved trenchless crossing methods.
- 26. Prior to undertaking any construction activities for the purpose of horizontal directional drilling or micro tunneling, the following information and plans must be submitted to the satisfaction of the Commission:
  - a. for the Gosnell River, Gosnell Tributary, Morice River, Crystal Creek, Burnie River Tributary or Allin Creek crossings, bathymetric survey data in the vicinity of the crossing location;
  - b. a crossing diagram showing the proposed drill profile;
  - c. location of the investigative bore holes;
  - d. the subsurface stratigraphy along the proposed drill route;
  - e. proposed drill entry point, exit point and angles;
  - f. stream high water mark;
  - g. depth of cover along the crossing;
  - h. bank full width and flood elevation; and

- i. tree and vegetation retention areas adjacent to the stream.
27. Horizontal directional drilling and micro-tunneling must be planned and conducted in accordance with the Directional Drilling Procedures and Drilling Mud Release Contingency Plan and the relevant detail in the Typical Drawings of the Environmental Management Plan and any plans accepted by the Commission under condition 26 above.
28. Open cut crossings must be planned and conducted in accordance with the relevant detail in the Typical Drawings of the Environmental Management Plan and the following requirements:
- a. An open cut may only occur with leave of the Commission unless the stream or wetland is frozen to its bed or is completely dry with no evidence of subsurface flow;
  - b. where the streambed consists of rocks, pebbles or coarse gravel overlaying finer material, this material must be removed and stockpiled separately above the high water mark of the stream for replacement during restoration;
  - c. excavated materials must be contained using appropriate techniques, so that that sediment-laden water and spoil do not re-enter the waterbody;
  - d. any sediment-laden trench water must be pumped onto stable surfaces in a manner that does not cause erosion of soils or release of suspended sediments to watercourses;
  - e. where feasible, aquatic vegetation and organic debris removed from the construction area must be salvaged and returned following trench backfilling; and
  - f. channels, banks and beds of streams or wetlands, including any disturbed stable natural material must be restored, to the extent practicable, to the structure and conditions that existed before the crossing construction was initiated. Fish streams must be restored based on pre-construction surveys, including restoration of areas containing rearing potential with adequate stream depth and in-stream structures and restoration of spawning areas with gravel placement.
29. Flow isolation crossings must be planned and conducted in accordance with b to f of condition 28 and the following additional requirements:
- a. crossings of fish-bearing streams and wetlands may commence only after confirming that sufficient equipment and supplies are available to complete the crossing in an efficient and timely manner;
  - b. instream activities, including the location and operation of any equipment, must be conducted in the dry and must be isolated from water flowing in the stream or wetland;
  - c. spawning gravels must not be disturbed when redds are present;
  - d. activities must be suspended if high stream flows present an increased risk to effectively completing the intended crossing installation technique;
  - e. welding, coating, weighting and, where applicable testing, of the pipe must be completed prior to commencement of trenching within fish-bearing water bodies;
  - f. water from flumes, pump-arounds, diversions, or other methods must be released to downstream areas using dissipation structures to avoid causing erosion or sediment release;





- g. pump intakes must not disturb beds of streams or wetlands and must be screened with a maximum mesh size of 2.54 mm and approach velocity of 0.038 m/sec;
- h. water flows downstream of in-stream wetland construction sites must be maintained consistent with upstream flows; and
- i. hard ditch plugs must be installed at or near the banks of the crossing and left in place until the crossing has been initiated.

30. Prior to commencing construction on any pipeline stream crossing, the permit holder must:

- a. identify any new streams not described in the Project Watercourse Crossing Table contained within of the Environmental Management Plan;
- b. conduct the field work needed to complete stream classifications and identify the fish species presence for that stream, including any required confirmation of fish species presence in streams that were surveyed prior to issuance of this permit, and
- c. submit the results of the field work required under (b) to the satisfaction of the Commission. The results must clearly identify where: 1) salmonids, and 2) Dolly Varden and Bull Trout spawning sites were found and what management and mitigation measures will be employed for each in order to minimize impacts to these species and spawning sites.

31. Construction or maintenance activities within a fish bearing stream or wetland must occur:

- a. during the applicable reduced risk work windows as specified in the Skeena Region Reduced Risk In-stream Work Windows and Measures (attached); or
- b. in accordance with alternative timing and associated mitigation recommended by a qualified professional and accepted by the Commission.

32. Vegetable based hydraulic oil must be used in hydraulic machinery conducting work within a stream or wetland.

33. Unless otherwise authorized by the Commission, prior to construction activities in:

- a. a stream classified as S1, S2, S3 or S4;
- b. the Riparian Reserve Zones of a stream classified as S1, S2, S3, or a S4 stream; or
- c. a wetland.

The permit holder must develop a Water Quality Monitoring Program to the satisfaction of the Commission. The Water Quality Monitoring Program must:

- a. be developed, implemented and supervised by a qualified professional;
- b. be consistent with the Ministry of Environment's approved water guidelines;
- c. include onsite environmental water quality monitoring, including field monitoring of turbidity, for potential exceedance of *BC Water Quality Guidelines* for the protection of aquatic life, as they may be amended from time to time;
- d. require pre and post construction monitoring upstream (baseline) and downstream of the location of potential disturbance from construction activities;
- e. require sampling that is representative of water quality variation across the stream;

- f. require post construction monitoring during the first and second years following construction; and
  - g. require documentation of pre and post construction monitoring.
34. The permit holder must implement the Water Quality Monitoring Program developed as per condition 33 and:
- a. provide records of documentation of all pre and post construction monitoring to the Commission;
  - b. immediately report to the Commission any exceedance of the *BC Water Quality Guidelines* for aquatic life, relative to the baseline; and
  - c. immediately take steps to address the factors producing any exceedance of the *BC Water Quality Guidelines* for aquatic life, relative to the baseline, and where such steps do not result in addressing the turbidity exceedance, promptly suspend construction operations at the site of activities causing the exceedance until effective solutions, satisfactory to the Commission, have been developed and implemented.

### Engineering

35. Upon completion of the construction work, the permit holder must conduct a baseline assessment of the pipeline condition and location using intelligent inspection devices, prepare a summary report of the findings of the baseline assessment and submit the report to the Commission.
36. The permit holder is authorized to construct and operate the pipeline segment to transmit sweet natural gas under a maximum operating pressure of 13790 kPa, unidirectionally (generally east to west), and in accordance with Piping & Instrumentation Diagram(s) submitted by Pacific Trail Pipelines Management Inc.:
- a. PL-PID-06-DWG-0008 Revision B, dated May 7, 2014;
  - b. PL-PID-06-DWG-0026 Revision C, dated May 7, 2014;
  - c. PL-PID-06-DWG-0027 Revision B, dated May 7, 2014;
  - d. PL-PID-06-DWG-0028 Revision B, dated May 7, 2014;
  - e. PL-PID-06-DWG-0039 Revision B, dated May 7, 2014; and
  - f. PL-PID-100-DWG-0002 Revision G, dated June 6, 2014.

Notwithstanding this condition, changes may be made to pigging design, and to above ground valves and piping, provided that:

- i. the changes do not affect direct connections to pipelines and facilities; and
  - ii. there are no changes to approved pressure protection, H<sub>2</sub>S protection or isolation.
37. Before beginning construction activities on any crossing of a road by the pipeline, the permit holder must submit, to the satisfaction of the Commission:
- a. Information, in tabular or other format, describing:
    - i. the crossing location;





- ii. a summary, including any outcomes, of engagement with the road tenure holder, primary road user or road owner;
  - iii. whether the crossing will be constructed using trenchless methods;
  - iv. the approximate dates and maximum time that traffic at the crossing is expected to be restricted or obstructed;
  - v. the pipeline specifications at the crossings, including pipeline diameter, wall thickness, depth of cover and grade; and
  - vi. maximum vehicular weights expected at the crossing location.
38. The permit holder must construct any road crossing consistent with information accepted by the Commission under condition 37.

### Archeology

39. An Archaeological Impact Assessment (AIA) must be completed for the proposed development area prior to any development activities taking place.
40. Previously identified archaeology site GbSs-2 is in conflict with the proposed development. No construction activities are authorized at this location without issuance of a site alteration permit, issued pursuant to section 12 of the *Heritage Conservation Act* (HCA), and approved by the Commission.
41. The permit holder must as soon as practicable submit an AIA report, to the satisfaction of the Commission, prepared by a permitted archaeologist.
42. The permit holder must avoid all known archaeology sites unless issued a site alteration permit by the Commission and pursuant to section 12 of the HCA.
43. If artifacts, features, materials or things protected under section 13(2) of the HCA are identified the permit holder must, unless the permit holder holds a permit under section 12 of the HCA issued by the Commission in respect of that artifact, feature, material or thing:
- a. immediately cease all work in the vicinity of the artifacts, features, materials or things;
  - b. immediately notify the Commission and the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations; and
  - c. refrain from resuming work in the vicinity of the artifacts, features, materials or things except in accordance with an appropriate mitigation plan that has been prepared in accordance with the HCA and approved by the Commission.

### Environment

44. Prior to commencing clearing or site preparation on any portion of the pipeline right of way, the permit holder must conduct a survey identifying any:
- a. bear dens located within 200 meters of the construction corridor,
  - b. vascular plants, mosses or lichens listed under the *Species at Risk Act* as endangered, threatened or special concern and located within the construction corridor, and
  - c. individuals or residences of a species identified as species at risk in a subsisting order issued under FRPA or OGAA and located within or adjacent to the construction corridor.



The permit holder must submit the survey results, along with site-specific mitigation plans for any of items identified in a to c that may be impacted by construction activities, to the satisfaction of the Commission prior to commencing construction on that portion of the pipeline.

45. Construction activities on wet, saturated or poorly drained soils must occur in a manner that does not cause significant rutting, compaction or erosion.
46. Subject to obtaining any required land owner permission, the permit holder must, before and after conducting construction activities, have the water in each water well systems located within 100 meters of the approved right of way area sampled under the direction of a Qualified Specialist and analyzed by an accredited laboratory facility using standard and accepted field sampling and analyzing procedures, and provide a report that includes the complete test results and analysis of the test to the Commission and to any land owner of the land on which the water well system is located. For each test, the analysis must include:
  - a. well yields and water level responses, as applicable;
  - b. basic water chemistry, including anions, cations, pH, alkalinity, SO<sub>4</sub>;
  - c. turbidity, total dissolved solids, total suspended solids, and true colour of water well user's water;
  - d. dissolved methane and higher chain hydrocarbons, if such substances are detected; and
  - e. isotope analysis of dissolved methane, if methane is detected.
47. In addition to water testing and reporting required by condition 46, and subject to obtaining any required land owner permission, the permit holder must, before and after any blasting operations, have the water in each water well system located within 200 meters of the blasting area sampled under the direction of a Qualified Specialist and analyzed by an accredited laboratory facility for nitrate levels, and provide a report that includes the complete test results and analysis of the test to the Commission and to any land owner of the land on which the water well system is located.
48. Fuel storage, equipment servicing or fueling must not occur within a riparian management area.
49. The permit holder must, as soon as practicable, restore recreation sites, recreation trails or recreation facilities established or authorized under FRPA that are affected by construction activities to their original pre-construction condition.
50. The permit holder must, as soon as practicable, restore range developments defined under FRPA that are affected by construction activities to their original pre-construction condition.
51. At the completion of construction activities the permit holder must restore any identifiable trails used by trappers that were impacted by pipeline construction, to the level of access that existed prior to construction, if the location of the trail is made known to the permit holder by the registered trapper for the area specific to the trail or the Commission prior to completion of immediate post construction restoration.
52. In all locations where run-off from the area of the pipeline right of way may flow into a watercourse, the permit holder must contour and stabilize banks and approach slopes and install berms, silt fences, or cross ditches as appropriate.
53. A qualified specialist must be on site during all construction activities within streams, wetlands or a riparian management area (RMA) of any potentially fish-bearing streams. This individual must have





the authority to stop or modify all construction operations within the RMA as necessary to minimize impact to aquatic habitat.

54. The permit holder must ensure where there are soil cut slopes greater than 10 metres in height, or where fine-grained soils are anticipated, soil cut slope design and support provisions must be designed and implemented according to the direction of a qualified specialist.
55. The permit holder must undertake dust control measures where dust resulting from construction activities has the potential to affect safe travel on a road or significantly impair the use and enjoyment of lawfully occupied permanent dwellings, significant public use areas or other similar areas.
56. The permit holder must undertake reasonable measures to mitigate noise from construction activity that has the potential to affect public safety or significantly impair the use and enjoyment of lawfully occupied permanent dwellings, significant public use areas during periods of use or other similar areas. Unless otherwise directed by the Commission, construction noise or anticipated construction noise in such areas occurring between 7pm and 7am must be consistent with the parameters and associated assessment methods contained in the Commission's *British Columbia Noise Control Best Practice Guideline*.
57. Upon completion of the construction of the pipeline, the permit holder must:
  - a. revegetate, using appropriate seed and vegetative lots registered by the BC Ministry of Forests, Lands and Natural Resource Operations, exposed mineral soil within areas cleared for pipeline construction, except for areas that are planned to be reforested, and
  - b. take reasonably practicable measures to limit or prevent vehicular access to and along the pipeline right of way.
58. The permit holder must determine timber hauling restrictions pertaining to the management of beetle infested timber recommended by the BC Ministry of Forests, Lands, and Natural Resource Operations and adhere to all such restrictions unless otherwise specified by the Commission.
59. As soon as practicable after construction activities are complete, the permit holder must install physical and vegetation barriers on the pipeline route in the Burnie-Shea and Herd Dome areas, to limit unauthorized motorized access.



## AUTHORIZATIONS ASSOCIATED WITH THE PERMIT

### Temporary Permit under Section 14 of the *Land Act*

60. Subject to 61 through 67 below, the Commission, under section 14 of the *Land Act* and pursuant to Authorization Number 941015, hereby authorizes the permit holder to occupy and use Crown land limited to the areas described in the following construction plans by Can-Am Geomatics as submitted to the Commission in the permit application dated May 27, 2014:

Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg1-10_rev1 sheet 1, revision 1, dated December 10, 2014;
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg1-10_rev1 sheets 2 to 10, revision 1, dated January 28, 2013 (except for KM 215.9 to 216.9;
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg11-21_rev1 sheets 11 to 21, revision 1, dated January 28, 2013;
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg22-31_rev1 sheets 22 to 31, revision 1, dated January 28, 2013; and
Can-Am File: N20120168, CAD File: N20120168PL-Sec3_Pg32-42_rev1 sheets 32 to 42, revision 1, dated January 28, 2013.

61. The permit holder will:

- a. indemnify the Province of British Columbia (the "Province") and the Commission against all losses, damages, costs, and liabilities arising out of any breach or non-performance of any condition or agreement set out in this permit, and any personal injury, death or property damage occurring on the site or happening by virtue of the permit holder's occupation of the site, and the amount of such losses, damages and costs shall be payable to the Province or the Commission immediately; and
- b. immediately effect, and keep in force while occupying the site, insurance of an amount not less than \$1,000,000 protecting the Province, the Commission and the permit holder (without any rights of cross-claim or subrogation) against claims for personal injury, death, property damage, or third party or public liability claims arising from any accident or occurrence on the site.

62. The authorization to occupy and use Crown land does not entitle the permit holder to exclusive possession of the area. The permit holder will not interfere with the activities of another person entering on and using the area under a prior or subsequent *Land Act* disposition.

63. The rights granted by this permit are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act*, *Forest Act*, *Mineral Tenure Act*, *Petroleum and Natural Gas Act*, *Range Act*, *Water Act* or *Wildlife Act*, or any extension or renewal of the same, any prior dispositions made under the *Land Act*, and the exceptions and reservations of rights and interests under section 50 of the *Land Act*.

64. The permit holder will acknowledge and agree that any interference with rights granted under this permit by virtue of the exercise or operation of the rights or interests set out in 62 or 63 above shall not constitute a breach of the Province's or the Commission's obligations under this permit and the permit holder will release and discharge the Province and/or the Commission from any claim for loss





or damage arising directly or indirectly out of any such interference. The permit holder will also agree to pay all costs and expenses that arise out of the permit holder's interference with the rights or interests set out in conditions 62 or 63 and that the permit holder will not commence or maintain proceedings under section 65 of the *Land Act* with respect to interference with the permit holder's rights arising out of exercise or operation of the rights set out in conditions 62 or 63.

65. The permit holder must pay, when due, the Fees to the address set out in the attached covering letter.
66. The permit holder must not assign, sublicense or transfer this Permit or permit any person to use or occupy the land, without the Commission's written consent.
67. This authorization of a permit to occupy and use Crown land expires two years from the date of issuance.

### **Changes in and about a Stream Authorization under section 9 of the *Water Act***

The Commission hereby authorizes the permit holder, under section 9 of the *Water Act*, to make changes in and about streams located in the areas described in the Project Watercourse Crossing Table contained within of the Environmental Management Plan.

### **Cutting Permit Authorization**

68. The Commission hereby issues the Permit holder Cutting Permit No. 15 under Master Licence to Cut number M02280 (Coast Mountains Resource District), and under Master License to Cut M02281 (Nadina Forest District), subject to the following conditions:
  - a. This Cutting Permit is subject to the terms and conditions in the Master Licence to Cut;
  - b. This Cutting Permit applies to only the Crown land portion shown on survey plan referenced in the Permissions, section a;
  - c. All harvested Crown timber within Master Licence to Cut number M02280 (Coast Mountains Forest District), must be marked with Timber Mark Number MSZ 902;
  - d. All harvested Crown timber within Master Licence to Cut number M02281 (Nadina Forest District), must be marked with Timber Mark Number MSZ 903;
  - e. This Cutting Permit is deemed spent upon the submission of the "Post-Construction Plan" or upon either the cancellation or the expiry of the "permitted oil and gas activity";
  - f. This Cutting Permit does not grant the Permit Holder the exclusive right to harvest timber from the License area and the Commission reserves the right to grant rights to other persons to harvest timber from the License area;
  - g. The felling, bucking and utilization specifications as described in Appendix A of your Master License to Cut applies to this Cutting Permit;
  - h. Stumpage for this Cutting Permit will be calculated as per the applicable appraisal manual;
  - i. Where timber felled on the cutting authority area that will not be removed from the site, volume billed will be based on an approved alternate method of scale;
  - j. Timber that is stored in decks or piles must be marked with the correct timber mark before transportation, or at the end of every shift. The marking must be applied to one



end of at least 10% of the timber pieces in each deck or pile using a hammer indentation or paint. Marking must be kept concurrent with decking;

- k. Where the Permit Holder is aware of overlapping forest tenure rights that have been granted to other persons, the Permit Holder is obligated to communicate to these persons the timing and extent of their harvest operations at least two weeks prior to commencement of harvest and take all reasonable steps to coordinate their activities with these persons; and
- l. In accordance with the Master Licence to Cut referenced above, "Within 60 days of completing operations on a Cutting Permit, the Licensee shall submit to the Commission a map showing all disturbances that have occurred pursuant to that Cutting Permit, at a scale of 1:20,000 or 1:50,000".

### ADVISORY GUIDANCE

1. The permit holder must provide notices required by the *Pipeline Regulation* prior to beginning construction, maintenance or repair of the pipeline.
2. As required by section 3 of the *Pipeline Regulation*, the permit holder must design, construct, operate and maintain the pipeline in accordance with CSA Z662.
3. As required by section 4(2) of the *Pipeline Regulation*, the permit holder must submit to the Commission the pipe and component specifications and the as-built drawings for the pipeline within 3 months after completion of construction of a pipeline.
4. As required by section 24(1) of the *Oil and Gas Activities Act General Regulation*, the permit holder must complete the surveying and posting of the pipeline right of way within 16 months after completing construction of the pipeline.
5. As required by section 7 of the *Pipeline Regulation*, the permit holder must include the pipeline authorized by this permit in its Integrity Management Plan and Damage Prevention Program.

### DEFINITIONS

Unless the condition or its context indicates otherwise, the terms in this permit have the same meaning as defined in the *Oil and Gas Activities Act* or the regulations under that Act.

**“Construction activities”** means clearing, site preparation, trench excavation, pipe installation and any other activities required to construct a pipeline.

**“Environmental management plan”** means, the environmental management plan as revised, that supports the application for this permit, the relevant components of which are acceptable to the Commission.

**“Construction corridor”** means, the area of land extending on either side of the centerline of the pipeline as indicated in the application for this permit, and is labelled as either “construction corridor” or “review corridor” on the construction plans.

**“Residence”** means a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.

**“Road”** means, an existing road:

- a. that is a highway as defined in the *Transportation Act* and is currently being maintained by an agency of the provincial government or a local government, either directly or by agreement,
- b. that is a Forest Service Road,
- c. for which there is a subsisting permit under the *Forest Act*, *Land Act* or *Oil and Gas Activities Act*,
- d. that is an industrial road as defined under the *Industrial Roads Act*, or
- e. that is privately owned.

**“Qualified Professional”** means a member in good standing of a profession regulated in British Columbia and who is recognized by that profession as being qualified to work in area of practice for which an opinion or advice is required.

**“Qualified Specialist”** means a person who possesses an appropriate combination of formal education, knowledge, skills, and experience to conduct a technically sound and rational assessment for the area of practice, and be familiar with applicable regulations, standards, policies, protocols and guidelines.



Ken Paulson, P. Eng.  
Chief Operating Officer  
Authorized Signatory  
Commission Delegated Decision Maker

pc: Scott Land & Lease Co. Ltd.

OGC: 9706583

FLNRO, Coast Mountains Forest District, Nadina Forest District

OGC, First Nations (Carrier Sekani Tribal Council, Kitselas First Nation, Burns Lake Indian Band, Dark House, Nee-Tahi-Buhn Indian Band, Office of the Wet'suwet'en, Skin Tyee Nation, Stelat'en First Nation, Wet'suwet'en First Nation)

WorkSafe BC