

Part A: Scope and Definitions

Scope

1. This Licence entitles Paramount Resources Ltd. to use Water and dispose of Waste for industrial undertakings for the continuation of operation and maintenance activities associated with Natural Gas Facilities for well sites K-29, O-80, M-25, F-25, and F-25A located at Latitude 60° 20' to 60° 30' N to Longitude 123° 15' to 123° 45' W in the Northwest Territories.

Activities include:

- Maintenance and operation of access roads, well sites, quarry sites, staging areas, gathering system and pipeline rights-of-way, a communication system, camps, pipelines, sumps, and related facilities.
 - Other related activities such as completion, evaluation, recompletion, suspension, re-entry work, and re-activation of existing well sites.
2. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Northwest Territories Waters Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform to such Regulations.
 3. Compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

Definitions

In this Licence: MV2013L1-0002

“**Act**” means the *Northwest Territories Waters Act*.

“**Analyst**” means an Analyst designated by the Minister under subsection 35(1) of the Act.

“**Artesian Aquifer**” means a Water-bearing rock stratum which, when encountered during drilling operations, produces a pressurized flow of groundwater that reaches an elevation above the Water table or above the ground surface.

“**Board**” means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*.

“Drill Cuttings” means the solid materials, fragments of rock and other materials brought to the surface during the drilling process.

“Drilling Fluids” means any liquid mixture of clay, Water or chemical additives pumped downhole.

“Drilling Waste” means all materials or chemicals, solid or liquid, associated with the drilling process, including Drill Cuttings.

“Freeboard” means the vertical distance between the Water line and the lowest elevation of the effective Water containment crest.

“Engineer” means a professional Engineer registered to practice in the Northwest Territories in accordance with the *Engineering and Geoscience Professions Act*, S.N.W.T. 2006, c.16.

“Greywater” means all liquid Wastes from showers, baths, sinks, kitchens and domestic washing facilities but does not include Toilet Wastes.

“Impermeable” means a substance, substrate, membrane or material that is incapable of transmitting fluids.

“Inspector” means an Inspector designated by the Minister under subsection 35(1) of the Act.

“Licensee” means the holder of this Licence.

“Minister” means the Minister of Indian Affairs and Northern Development.

“Modifications” means an alteration to a physical work that introduces a new structure or eliminates an existing structure but does not alter the purpose or function of the work and does not include an expansion.

“Permeable” means a substance, substrate, membrane or material that absorbs or allows the passage of fluids.

“Progressive Reclamation” means those activities conducted during the operating period to modify and reclaim the land and Water to the satisfaction of the Board.

“Regulations” means Regulations proclaimed pursuant to section 33 of the *Northwest Territories Waters Act*.

“Sewage” means all Toilet Wastes and Greywater.

“Sump(s)” means a man-made pit, trench, hollow or cavity on the earth’s surface for the purpose of storing Water and/or Waste.

“Waste(s)” means Waste as defined by section 2 of the Act.

“Waste Disposal Facilities” means all facilities designated for the disposal of Waste.

“Wastewater” means Waste as defined by section 2 of the Act.

“Waterbody(ies)” means any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

“Watercourse” means any flowing body of Water.

“Water(s)” means any Waters as defined by section 2 of the Act.

“Water Use” means the use of Water as defined by section 2 of the *Northwest Territories Waters Act* and shall include freshwater from all sources.

“Water Use Fee” means a fee for the use of Water as defined by section 33 of the Act.

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Part B: General Conditions

- B.1 The Water Use Fee shall be paid annually on or before October 22 of each year of this Licence.
- B.2 The Licensee, pursuant to subsection 17(1) of the Act and section 12 of the Regulations, shall post within thirty (30) days of licence issuance, and maintain, a security deposit in the amount of ____ (\$__.00) in a form acceptable to the Minister.
- B.3 The Licensee shall post and maintain further security deposits as may be required by the Board based on the re-assessment of the water-related reclamation security in accordance with Part B, item 5 of this Licence or based on such other information as may be available to the Board.
- B.4 The Board may grant a reduction in the amount of security required to be maintained based on a re-assessment of the water-related reclamation security in accordance with Part B, item 5 of this Licence or based on such other information as may be available to the Board.
- B.5 The Licensee shall, by June 30 of each year, submit to the Board, for approval, a re-assessment of the Water related reclamation security amount which reflects Progressive Reclamation and any planned development for the upcoming operating season.
- B.6 The security deposit shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to section 17 of the Act.
- B.7 The Licensee shall file an annual report with the Board not later than March 31 which shall contain the information as set out in Schedule 1, item 1, included in this Licence for the one year period ending September 30 of the year being reported.
- B.8 The Licensee shall comply with the Schedules annexed to this Licence, and with any amendments to the Schedules as may be made from time to time, pursuant to the conditions of this Licence and as approved by the Board.
- B.9 The attached Schedules and any compliance dates specified in this Licence may be amended at the discretion of the Board.
- B.10 Meters, devices, or other such methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated, and maintained by the Licensee to the satisfaction of an Inspector.
- B.11 The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.

Part C: Conditions Applying to Water Use

- C.1 The Licensee shall obtain all Water for this operation from the Liard River, as described in application, or as otherwise approved by the Board.
- C.2 The daily quantity of water used for all purposes shall not exceed 300 cubic metres.
- C.3 The Water intake hose used on the Water pumps drawing water from surface waters shall be equipped with a screen with a mesh size sufficient to ensure no entrapment of fish.

Part D: Conditions Applying to Waste Disposal

- D.1 The Licensee shall, within four months of the issuance of this Licence, submit to the Board for approval a revised Waste Management Plan in accordance with the Board's 2013 "Waste Management Guidelines".
- D.2 If not approved by the Board, the updated Management Plan referred to in Part D, item 1 shall be revised and resubmitted for approval within 30 days of receiving notification of the Board's decision.
- D.3 All revised plans submitted to the Board shall include a brief summary of the changes made to the plan.
- D.4 The Licensee shall review the Waste Management Plan annually and modify the plan as necessary, or at the discretion of the Board, to reflect changes in operations, technology, chemicals, or fuels. Any proposed changes shall be submitted to the Board for approval.
- D.5 If during operations, any uncontrolled flow of liquids at surface is encountered, including that produced from an Artesian Aquifer, the Licensee shall notify an Inspector and the Board immediately. The Licensee shall collect and sample water from the flowing source at the point of discharge from the well as directed by the Inspector.
- D.6 Any fluids generated to surface shall be contained and shall not be disposed of without the approval of the Inspector.
- D.7 Waste, including Wastewater, shall not be discharged or decanted to any Waterbody, Watercourse or to the ground surface within 100 metres of the normal high water mark of any Waterbody or Watercourse.

- D.8 Prior to the discharge or decant of Waters or Waste the Licensee shall:
- a) Obtain a representative sample of the Water or Waste using the best methods available and describe in detail the prevailing conditions and how the sample was obtained;
 - b) Conduct the analysis in accordance with Part D, items 10 and 11;
 - c) *Locate all discharge areas to the satisfaction of the Inspector;* and
 - d) Indicate in writing to the Inspector and the Board;
 - i. The results of the sampling and analysis;
 - ii. The location of decant;
 - iii. The volume of decant;
 - iv. The method of decant;
 - v. The direction of flow;
 - vi. The location of fresh Waterbodies where the decanted effluent may go, if applicable; and
 - vii. The ability of all discharge areas to absorb the decanted Waste under different conditions.

D.9 The Licensee may commence decanting upon receipt of the Inspector's approval.

D.10 Discharge and decant Waters of Sewage directed to land shall meet the following effluent quality criteria:

Parameter	Maximum Criteria Limits
pH	6-9
Total Suspended Solids	300 mg/L
BOD ₅	360 mg/L
Faecal Coliforms	1 x 10 ⁶ CFU/100ml
Oil and Grease	5 mg/L and Non-visible

D.11 All analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater" or by such other methods as may be approved by the Analyst.

D.12 The Licensee shall not construct any new Sumps.

D.13 The Licensee shall ensure that any unauthorized Wastes do not enter any Waters.

Part E: Conditions Applying to Watercourse Crossings

E.1 The Licensee shall minimize the disturbance of riparian vegetation within the immediate boundary of any Watercourse crossing to the extent practicable.

E.2 The Licensee shall ensure that only clean snow is used for construction of snowfills for vehicle and equipment access on all Watercourse crossings and that no debris (with the exception of those items discussed in Part E, item 4) is placed in the Watercourse channel.

- E.3 Ice and snow crossings should not impede the flow of any Watercourse. These crossings shall be v-notched or removed before spring break-up to facilitate natural flow.
- E.4 Any materials placed below the normal high Water mark used in the construction of Water crossings shall be free of any contaminants, debris, or fine materials.
- E.5 Any materials placed below the normal high Water mark used in the construction of Water crossings shall be removed before spring break-up.
- E.6 All areas affected by construction or removal activities shall be stabilized and landscaped to pre-construction profiles or as approved by an Inspector.

Part F: Conditions Applying to Modifications

- F.1 The Licensee may, without written approval from the Board, carry out Modifications to the planned undertakings provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a) the Licensee has notified the Board in writing of such proposed Modifications at least 60 days prior to beginning the Modifications;
 - b) such Modifications do not place the Licensee in contravention of either the Licence or the Act;
 - c) the Board has not, during the 60 days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than 60 days; and
 - d) the Board has not rejected the proposed Modifications.
- F.2 Modifications for which all of the conditions referred to in Part F, item 1 have not been met may be carried out only with written approval from the Board.
- F.3 The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in this Licence within 90 days of completion of the Modifications.

Part G: Conditions Applying to Spill Contingency Planning

- G.1 The Licensee shall, within four months of the issuance of this Licence, submit to the Board for approval an updated Spill Contingency Plan in accordance with Indian and Northern Affairs Canada's 2007 "Guidelines for Spill Contingency Planning".
- G.2 If not approved by the Board, the updated Spill Contingency Plan referred to in Part G, item 1 shall be revised and resubmitted for approval within 30 days of receiving notification of the Board's decision.
- G.3 All revised plans submitted to the Board shall include a brief summary of the changes made to the plan.

- G.4 The Licensee shall review the Spill Contingency Plan annually and modify the plan as necessary, or at the direction of the Board, to reflect changes in operation and technology. Any proposed changes shall be submitted to the Board for approval.
- G.5 If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
- a) employ the appropriate contingency plan;
 - b) report the incident immediately via the 24-hour NWT Spill Report Line where substances and quantities satisfy Schedule 2, item 1. Currently the number is (867) 920-8130; and
 - c) report in accordance with spill reporting protocols existing in the NWT.

Part H: Conditions Applying to Closure and Reclamation

- H.1 The Licensee shall, six months prior to the closure of any specific component of the Project, submit to the Board for approval, a Component-specific Closure and Reclamation Plan in accordance with Schedule 3, item 1, included in this Licence.
- H.2 The Licensee shall, prior to closure of a drilling Sump, sample the Sump(s) and carry out closure activities in accordance with Schedule 3, item 2.
- H.3 The Licensee shall revise the plans referred to in Part H, items 1 and 2 if not approved. The revised plans shall be submitted to the Board for approval within six months of receiving notification of the Board's decision.
- H.4 Notwithstanding the time schedule referred to in the Closure and Reclamation Plan, the Licensee shall endeavour to carry out Progressive Reclamation of areas which are abandoned prior to closure of operations.
- H.5 The Licensee shall complete the reclamation work within the time schedule specified in the plan or as subsequently revised and approved by the Board.
- H.6 The Licensee shall review the Closure and Reclamation Plans annually, and modify the plans as necessary, or at the direction of the Board, to reflect changes in operation, technology, and results of reclamation and/or other studies. The proposed changes shall be submitted to the Board for approval.
- H.7 Upon implementation of the Closure and Reclamation Plan, the Licensee shall provide to the Board updates of all closure and reclamation activities in the Annual Report.
- H.8 Compliance with the Closure and Reclamation Plan specified in this Licence does not limit the legal liability of the Licensee, other than liability arising from provisions of the Act and its Regulations.

H.9 The Licensee shall restore all Sumps used for Sewage disposal by treating them with lime, backfilling, and compaction. Similar Wastes from permanent camps shall be fully contained and pumped out to an approved Wastewater disposal facility.

Mackenzie Valley Land and Water Board

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Schedule 1: General Conditions

1. The Annual Report referred to in Part B, item 2 shall include, but not be limited to, the following:
 - a) An As-Built map identifying all current sites and infrastructure at the Fort Liard - West Project site with a summary of the operation to date including the name and location of all existing wells and the status and identification of all wells reactivated, suspended or reclaimed;
 - b) The total quantities in cubic metres of fresh Water obtained;
 - c) The volume of each Waste generated by source, the disposal location, and for those Wastes disposed of in multiple locations, the volume disposed of in each location;
 - d) A description of any Sump closures and certification of Sump closure from a qualified Engineer and the Inspector;
 - e) Summary of Modifications or maintenance work carried out on pipelines, right-of-ways, camps, Water Supply or Waste Disposal Facilities, including all associated structures;
 - f) Identification of any new areas susceptible to erosion;
 - g) A description and performance evaluation of each preventative and mitigative measure implemented to address erosion control issues and an assessment of any re-vegetation programs;
 - h) Identification or update of all fuel storage locations and containment details;
 - i) A list of any spills and unauthorized discharges;
 - j) Any updates or revisions to the approved Spill Contingency Plan;
 - k) Any updates or revisions to the approved Waste Management Plan;
 - l) A summary of any closure and reclamation work completed during the year and an outline of any work anticipated for the next year; and
 - m) Any other details on Water Use or Waste disposal requested by the Board.

Schedule 2: Conditions Applying to Spill Contingency Planning

- Spill amounts reportable to the NWT/NU 24-hour Spill Report Line (NWT/NU Spills Working Agreement, April 2008).

TDG Class	Substance for NWT 24 Hour Spill Line	Immediately Reportable Quantities
1 2.3 2.4 6.2 7 None	Explosives Compressed gas (toxic) Compressed gas (corrosive) Infectious substances Radioactive Unknown substance	Any amount
2.1 2.2	Compressed gas (flammable) Compressed gas (non-corrosive, non-flammable)	Any amount of gas from containers with a capacity greater than 100 L
3.1 3.2 3.3	Flammable liquids	> 100 L
4.1 4.2 4.3	Flammable solids Spontaneously combustible solids Water reactant	> 25 kg
5.1 9.1	Oxidizing substances Miscellaneous products or substances excluding PCB mixtures	> 50 L or 50 kg
5.2 9.2	Organic peroxides Environmentally hazardous	> 1 L or 1 kg
6.1 8 9.3	Poisonous substances Corrosive substances Dangerous wastes	> 5 L or 5 kg
9.1	PCB mixtures of 5 or more ppm	> 0.5 L or 0.5 kg
None	Other contaminants (e.g. crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, waste water, etc.)	> 100 L or 100 kg
None	Sour natural gas (i.e. contains H ₂ S) Sweet natural gas	Uncontrolled release or sustained flow of 10 minutes or more

In addition, all releases of harmful substances, regardless of quantity, are to be reported to the NWT spill line if the release is near or into a water body, is near or into a designated sensitive environment or sensitive wildlife habitat, poses imminent threat to human health or safety, poses imminent threat to a listed species at risk or its critical habitat, or is uncontrollable.

Schedule 3: Conditions Applying to Closure and Reclamation

1. The Closure and Reclamation Plans referred to in Part H, items 1 and 2 shall include, but not be limited to, the following:
 - a) Project description;
 - b) Closure and end land use goals, objectives, and criteria;
 - c) Community engagement associated to closure and reclamation planning;
 - d) Identification of the project environment including natural runoff Waters from the development site, the natural physiography, chemistry, biology and traditional environments and consideration of the impacts of any changes in these environments;
 - e) Requirements for closure and reclamation including but not limited to:
 - i) The restoration of natural drainage and the restoration of stream banks at the operation site(s);
 - ii) The potential for groundwater contamination and any associated remediation plans;
 - iii) The plans for re-vegetation of disturbed sites;
 - iv) Identification of any facilities or areas which may have been affected by development such that potential pollution problems exist and any associated remediation plans;
 - f) A phased approach and implementation schedule for closure and reclamation;
 - g) Maps delineating all disturbed areas, borrow material locations, and site facilities; and
 - h) A proposal identifying measures by which reclamation costs will be financed by the Licensee upon closure.
2. Sumps shall be closed according to the following:
 - a) The finalized edition of *Directive 50: Drilling Waste Management* (Directive 50) adopted or published by the Energy Resources Conservation Board of Alberta current at the time of construction and/or operation of any particular drilling Sumps.

Annex A Schedule

Supplemental information to be submitted by Licensee as required through Licence Conditions

Licence Condition	Report Title/Require Action	Timeline for Submission
B.1	Water Use Fee	October 22 each year
B.2 (Schedule 1, item 1)	Annual Report	March 31 each year
D.1 (Schedule 2, item 1)	Waste Management Plan	February 22, 2014
D.3	Waste Management Plan Review	Annually
D.14	Decant analysis and reporting	As soon as possible
F.1	Notification of Modifications	60 days prior to beginning work
F.3	As-built plans and drawings of Modifications	Within 90 days of completion
G.1	Spill Contingency Plan	February 22, 2014
H.1 (Schedule 3, item 1)	Component-specific Closure and Reclamation Plans	6 months prior to component closures
H.6	Closure and Reclamation Plan Review	Annually
H.7	Closure and Reclamation Updates	In Annual Report

Mackenzie Valley Land and Water Board

Chair

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