

GENERAL

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LAND USE APPLICATIONS TO THE MACKENZIE VALLEY LAND AND WATER BOARD

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access road	A temporary or permanent road that provides access to a pipeline right-of-way, facility, borrow site or infrastructure site.
all-weather road	A paved, or gravel, road that is open to traffic all year.
anchor fields	The three natural-gas fields, Taglu, Parsons Lake and Niglintgak, whose production will provide the initial volume of gas shipped in the Mackenzie Valley pipeline.
APG	The abbreviation for the Aboriginal Pipeline Group.
backfill	The fill material used to cover a completed pipeline. Adequate fill material is provided above and below the pipe to prevent damage caused by loose rock, abrasion, shifting or washouts.
bedrock	The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
borrow material	Unconsolidated earth materials, such as sand, gravel and till, that are taken from one location (borrow pit) and used at another location.
borrow pit	An excavated area created to provide material that can be used as fill at another site.
borrow site	An area that could be excavated to provide material, such as gravel or sand, to be used as fill, where required, by the project. This term is also used to refer to quarries.
borrow source	A location that has naturally occurring earth construction materials including sand, gravel, fine-grained material or rock. A borrow source may contain more than one borrow site.
CNT Trail	Right-of-way of the Canadian National Telegraph trail built in the 1940s for communication purposes.
coarse gravel	Particles of rock that will pass a 75 mm sieve and be retained on a 19 mm sieve.
coarse sand	Material that passes a No. 4 (4.75 mm) sieve and is retained on a No. 10 (2.00 mm) sieve.

ConocoPhillips	ConocoPhillips Canada (North) Limited.
construction phase	The phase of a project preceding the operations phase, during which project facilities and infrastructure are assembled and installed, and connected and tested to ensure that they operate as designed.
Crown lands	Land owned and managed by the government of Canada. Occasionally, this term is used to refer to land that is owned and managed by the Northwest Territories government.
DCR	The abbreviation for Deh Cho Region.
deposit	A naturally occurring accumulation of sand, gravel or other unconsolidated mixture with most of the particles in the sand and gravel grain size range.
DIAND	The abbreviation for the Department of Indian Affairs and Northern Development, predecessor to Indian and Northern Affairs Canada (INAC).
EIS	The abbreviation for environmental impact statement.
environment	The components of the earth, including: <ul style="list-style-type: none">• land, water and air, including all layers of the atmosphere• all organic and inorganic matter and living organisms• the interacting natural systems that include all components referred to in the previous bullets
environmental impact statement	A report containing the environmental impact assessment.
esker	A winding ridge of irregularly stratified sand, gravel and cobbles, deposited under a glacier by a rapidly flowing glacial stream.
facilities	Structures of the gathering and gas pipeline systems, including compressor and pump stations, block valves, pigging facilities, heater stations and meter stations.

facility sites	These include gas and NGL processing facilities, metering and custody transfer stations, compressor and pump stations, and heater stations. In the ISR, facilities include the Storm Hills pigging facility and receipt meter stations located at Niglintgak, Taglu and Parsons Lake gas conditioning facilities.
fine gravel	Particles of rock that will pass a 19 mm sieve and be retained on No. 4 (4.75 mm) sieve.
fine sand	Material that passes a No. 40 (0.425 mm) sieve and is retained on a No. 200 (0.075 mm) sieve.
gas conditioning facility	A facility located at each anchor field, which collects raw gas from the wells, and dehydrates and conditions the product for transport through the gathering system.
gas pipeline	The proposed Mackenzie Valley pipeline that would extend from the Inuvik area facility, parallel to the NGL pipeline along the Mackenzie River to Norman Wells, and continue south to connect to an extension of the existing Alberta system south of the Northwest Territories-Alberta boundary.
gas, natural	A compressible mixture of hydrocarbons with a low specific gravity that occurs naturally in a gaseous form and is mostly methane.
gathering pipelines	Four pipelines, also known as laterals, that transport natural gas and NGLs from the anchor fields to the Inuvik area facility. These include the Niglintgak lateral, Taglu lateral, Parsons Lake lateral and Storm Hills lateral.
gathering system	A system of pipelines and associated facilities that includes four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers. Also known as the <i>Mackenzie gathering system</i> .
geographic information system	A system that uses computers to manage information concerning geographical locations, plant assets, engineering, maintenance and operational performance.
geotechnical	Referring to the use of scientific methods and engineering principles to acquire, interpret, and apply knowledge of earth materials for solving engineering problems.
GLA	The abbreviation for Gwich'in Land Administration.

GLUPB	The abbreviation for the Gwich'in Land Use Planning Board.
GNWT	The abbreviation for the Government of the Northwest Territories.
GNWT, DoT	The abbreviation for the GNWT, Department of Transportation.
granular material	See “granular resources”.
granular resources	The material deposits that have a granulated surface or structure, such as gravel. Also known as <i>granular material</i> or borrow material.
gravel	Particles of rock that will pass a 75 mm sieve and be retained on a NO. 4 (4.75 mm) sieve.
GSA	The abbreviation for the Gwich'in Settlement Area.
GTC	The abbreviation for Gwich'in Tribal Council.
ha	The metric symbol for hectare.
historic archaeological resources	Sites, artifacts, structures and documents that relate to the influx of Euro-Canadians in the region, and date to the last 250 years.
ice content	<p>The amount of ice contained in frozen or partially frozen soil or rock. Ice content is normally expressed in one of two ways:</p> <ul style="list-style-type: none">• dry-weight basis (gravimetric), as the ratio of the mass of the ice in a sample to the mass of the dry sample, expressed as a percentage• volume basis (volumetric), as the ratio of the volume of ice in a sample to the volume of the whole sample, expressed as a fraction <p>The volumetric ice content cannot exceed one, whereas the gravimetric ice content can greatly exceed 100%.</p>
IFA	The abbreviation for Inuvialuit Final Agreement.
ILA	The abbreviation for the Inuvialuit Land Administration.
Imperial	Imperial Oil Resources Ventures Limited.

INAC	The abbreviation for Indian and Northern Affairs Canada.
infrastructure	The basic facilities, such as transportation, communications, power supplies and buildings, that enable an organization, project or community to function.
IRC	The abbreviation for the Inuvialuit Regional Corporation.
ISR	The abbreviation for the Inuvialuit Settlement Region.
ISR private development	Land use activities that pertain to the gathering pipeline segments, pipeline appurtenances, borrow sites and other infrastructure that will be required in the Inuvialuit Settlement Region (ISR), on private land for the Mackenzie Gas Project.
JRP	The abbreviation for Joint Review Panel.
kilometre post	A marker for each kilometre along the centerline of the right-of-way used for reference points.
KP	The abbreviation for kilometre post.
limestone	A sedimentary rock composed primarily of calcium carbonate.
m	The metric symbol for metre.
m³	The metric symbol for cubic metre.
Mackenzie gas project	A project that will develop three onshore natural gas anchor fields in the Mackenzie Delta and transport natural gas by pipeline to market in northwestern Alberta by 2009. The project comprises the anchor fields, wells, gathering pipelines and associated facilities, work camps, material stockpiling and shipping sites, roads, borrow sites and other associated infrastructure.
Mackenzie Valley pipeline	The proposed gas pipeline that would extend from the Inuvik area facility, parallel to the NGL pipeline along the Mackenzie River to Norman Wells, and continue south to connect to an extension of the TransCanada PipeLines Alberta system south of the Northwest Territories–Alberta boundary. Also known as the <i>gas pipeline</i> .
medium sand	Material that passes a No. 10 (2.00 mm) sieve and is retained on a No. 40 (0.425 mm) sieve.

mm	The metric symbol for millimetre.
MVLWB	The abbreviation for the Mackenzie Valley Land and Water Board.
N/A	The abbreviation for not applicable.
natural gas	A compressible mixture of hydrocarbons with a low specific gravity that occurs naturally in a gaseous form and is mostly methane.
natural gas liquids	Hydrocarbons that are gaseous in the reservoir, but that will separate out in liquid form at the pressures and temperatures at which separators normally operate. The liquids consist of varying proportions of butane, propane, pentane and heavier fractions.
NEB	The abbreviation for the National Energy Board.
NGL pipeline	The pipeline connecting the Inuvik area facility with the Enbridge Pipeline facilities at Norman Wells.
non-granular (NG)	Non-granular material including sands, silts, and cohesive soils. It is unsuitable for most construction purposes, except non-structural fills.
North, the	The Arctic, or the northern part of a province.
NWT	The abbreviation for the Northwest Territories, also NT.
NWTWB	The abbreviation for the Northwest Territories Water Board.
organic clay	A soil that would be classified as clay except that its liquid limit value after oven-drying is less than 75% of its liquid limit value before oven-drying. It has sufficient organic content to influence the soil properties.
organic silt	A soil that would be classified as silt except that its liquid limit value after oven-drying is less than 75% of its liquid limit value before oven-drying. It has sufficient organic content to influence the soil properties.
overburden	All material, including soil, sand, silt or clay, that lies on top of the pipeline.

peat	Material composed primarily of vegetable tissues in various stages of decomposition, usually with an organic odour, a dark brown to black colour, a spongy consistency, and a texture ranging from fibrous to amorphous.
Plasticity	Putty-like behaviour of soil when wet, which affects workability.
polygons	The arrangements of rock, soil and vegetation formed on a level or gently sloping surface by frost action.
probable reserves	Granular material whose existence and extent has been inferred on the basis of several different types of direct or indirect evidence, including topography, landform characteristics, airphoto interpretation, extrapolation of stratigraphy, geophysical data, and/or sampling.
project proponents	The five organizations (Imperial Oil Resources Ventures Limited, the Aboriginal Pipeline Group, ConocoPhillips Canada (North) Limited, Shell Canada Limited and ExxonMobil Canada Properties) that are undertaking the Mackenzie gas project.
project, the	The Mackenzie gas project.
proven reserves	Granular material whose occurrence, distribution, thickness, and quality is supported by ground-truth information, such as geotechnical drilling, test pitting, and/or exposed stratigraphic sections.
quarry	An area that could be excavated to provide rock for the project. After crushing, the rock can be used as fill. Borrow sites also include quarries.
reserves, probable	Granular material whose existence and extent has been inferred on the basis of several different types of direct or indirect evidence, including topography, landform characteristics, airphoto interpretation, extrapolation of stratigraphy, geophysical data, and/or sampling.
reserves, proven	Granular material whose occurrence, distribution, thickness and quality is supported by ground-truth information, such as geotechnical drilling, test pitting, and/or exposed stratigraphic sections.
riparian	Situated or dwelling on the margin of a river or other waterbody.

sand	Particles of rock between 0.062 and 2 mm in diameter.
Shell	Shell Canada Limited.
silt	Passes a No. 2 (0.075mm) sieve. A fine-grained soil, or the fine-grained portion of a soil, with a plasticity index less than 4. It is non-plastic or very slightly plastic and exhibits little or no strength when air dry.
silt, organic	A soil that would be classified as silt except that its liquid limit value after oven-drying is less than 75% of its liquid limit value before oven-drying. It has sufficient organic content to influence the soil properties.
site-specific operating procedures	A series of steps to be carried out in a given order for a job or task at a specific facility or field.
soil	The top few metres of regolith, generally including some organic matter derived from plants.
stockpile	A supply of materials, such as line pipe or granular materials, to be used later.
t	The metric symbol for tonne.
TLUR	The abbreviation for Territorial Land Use Regulations of the GNWT.
topography	The configuration of a surface, including its relief and natural and artificial features.
winter road	A secondary road made of compact snow or ice, often plowed over a frozen lake or ground, and that is impassable in the summer. Also known as an <i>ice road</i> .

TITLE **ISR and GSA Crown Quarrying Permit Application**
SECTION Appendices
SUBJECT A: Fee Calculation

[Table A-1](#) and [Table A-2](#) provide summaries of the fees required for the proposed quarrying activities on Crown land in the ISR and GSA.

Table A-1: ISR Quarrying Permit Application Fee Calculation

Borrow Site	Quarrying Permit Application Fee	Quantity to be Excavated (m ³)	Borrow Material Type	Royalty (@ \$1.50/m ³)
1.002P	\$150	51,000	Granular	\$76,500
2.022P	\$150	51,000	Granular	\$76,500
2.020P	\$150	15,000	Granular	\$22,500
2.029P	\$150	50,000	Granular	\$75,000
2.029PB	\$150	30,000	Granular	\$45,000
20.038P	\$150	13,000	Rock	\$19,500
Totals:	\$900	210,000		\$315,000

Table A-2: GSA Quarrying Permit Application Fee Calculation and ISR/GSA Total

Borrow Site	Quarrying Permit Application Fee	Quantity to be Excavated (m ³)	Borrow Material Type	Royalty (@ \$1.50/m ³)
2.052P	\$150	188,000	Rock	\$282,000
2.061P	\$150	75,000	Granular	\$112,500
20.073P	\$150	176,000	Rock	\$264,000
2.064BP	\$150	62,000	Rock	\$93,000
5.013P	\$150	69,000	Granular	\$103,500
5.020P	\$150	293,000	Granular	\$439,500
Totals:	\$900	863,000		\$1,294,500
ISR plus GSA Totals:	\$1,800	1,073,000		\$1,609,500

Table B-1: Inuvialuit Land Management Category Designation of Proposed Borrow Site Development Activities

Borrow Site No.	Kilometre Post (KP)	Inuvialuit Land Management Category ^a	Does Proposed Land Use Conform to Community Conservation Plans?
1.002P	T25.1	C	Yes
2.022P	T62.6	C	Yes
2.020P	T66.4	C	Yes
2.029P	T71.5	C	Yes
2.029PB	T73.3	C	Yes
20.038P	S46.8	B	Yes

NOTE:

^aLand management categories are defined next (Community of Inuvik 2000).

Category A

Lands and waters where there are no known significant and sensitive cultural or renewable resources. Lands and waters shall be managed according to current regulatory practices.

Category B

Lands and waters where there are cultural or renewable resources of some significance and sensitivity but where terms and conditions associated with permits and leases shall assure the conservation of these resources.

Category C

Lands and waters where cultural or renewable resources are of particular significance and sensitivity during specific times of the year. These lands and waters shall be managed so as to eliminate, to the greatest extent possible, potential damage and disruption.

Category D

Lands and waters where cultural or renewable resources are of particular significance and sensitivity throughout the year. As with Category C, these areas shall be managed so as to eliminate, to the greatest extent possible, potential damage and disruption.

Category E

Lands and waters where cultural or renewable resources are of extreme significance and sensitivity. There shall be no development on these areas. These lands and waters shall be managed to eliminate, to the greatest extent possible, potential damage and disruption. This category recommends the highest degree of protection.

Table B-2: Gwich'in Land Use Designation of Proposed Borrow Site Development Activities

Borrow Site No.	Kilometre Post (KP)	Special Management Zone (Name)	Conservation Zone (Name)	General Use Zone	Does Proposed Land Use Conform to Gwich'in Land Use Plan?
2.052P	0.0	Transportation	-	-	No
2.061P	0.0	Transportation	-	General use	No
20.073P	0.0	Transportation	-	-	No
2.064BP	22.8	-	-	General use	Yes
5.013P	146.1	Lakes Around Travaillant Lake	-	-	Yes
5.020P	156.9	-	-	General use	Yes

TITLE **ISR and GSA Crown Quarrying Permit Application**
SECTION Appendices
SUBJECT C: Foldout Map

Map No.	Title	Revision
107-0000-011-563 001	Inuvialuit Settlement Region/Gwich'in Settlement Area Crown Borrow Site Map	D

