

## GLOSSARY

<b>%</b>	The symbol for percent.
<b>°</b>	The symbol for degree.
<b>°C</b>	The symbol for degree Celsius.
<b>&lt;</b>	The symbol for less than.
<b>&gt;</b>	The symbol for greater than.
<b>a</b>	The metric symbol for year.
<b>abandoned well</b>	A well not in use because it was a dry hole originally or because it has ceased to produce.
<b>abandonment</b>	The act of permanently stopping operations, discontinuing service, removing facilities and restoring land to a productive state.
<b>Aboriginal person</b>	Any Indian, Inuit or Métis person who was born in the Northwest Territories or who is descended from an Aboriginal person born in the Northwest Territories.
<b>access road</b>	A temporary, permanent, or winter road that provides access to a facility, camp site, borrow site, barge landing site or a pipeline right-of-way and that is not open to the public.
<b>Active I water crossing</b>	A water channel that has a perennial flow or is partially frozen to the channel bed during winter.
<b>Active II water crossing</b>	A water channel that is frozen to the bed or that has no flow during winter.
<b>adfreezing</b>	The process by which one object adheres to another by the binding action of ice.
<b>all-weather road</b>	A paved or unpaved, i.e., gravel, road that is open to traffic all year.
<b>anchor fields</b>	The three natural gas fields, Niglintgak, Taglu and Parsons Lake, whose production will provide the initial volume of gas shipped in the project pipelines.
<b>APG</b>	The abbreviation for Aboriginal Pipeline Group.
<b>aspect</b>	The compass orientation towards which a slope faces.

---

<b>backfill</b>	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.
<b>backhoe</b>	An excavating machine, fitted with a hinged arm with a rigidly attached bucket, used for excavating ditches.
<b>baseline</b>	A surveyed condition that serves as a reference point to which later surveys are coordinated or correlated.
<b>bedrock</b>	The solid rock underlying soil or any other unconsolidated surficial cover.
<b>biophysical environment</b>	An environment that includes air, noise, aquatic (hydrogeology, hydrology, water quality and fisheries) and terrestrial (soils, landforms, permafrost, vegetation and wildlife) conditions.
<b>block valve</b>	A device, positioned at intervals along a pipeline, that controls the rate of flow in the pipeline, opens or shuts off the pipeline completely, or serves as an automatic or semi-automatic safety device.
<b>blowdown</b>	The act of emptying or depressurizing material in a vessel or pipeline.
<b>blowdown valve</b>	A valve installed to depressurize the pipeline.
<b>blowout</b>	An uncontrolled flow of gas, oil or other well fluids from a well.
<b>borehole</b>	The hole made by drilling or boring into the ground to study stratification, to obtain natural resources or to release underground pressures.
<b>borrow material</b>	Earth material, such as gravel or sand, that is taken from one location to be used as fill at another location.
<b>borrow site</b>	An area that could be excavated to provide material, such as gravel or sand, to be used, where required, by the project.
<b>breakup, spring</b>	The time of year when the temperature rises sufficiently to thaw ice, causing it to break up in rivers, allowing them to become navigable.
<b>bridge plug</b>	A downhole tool, composed primarily of slips, a plug mandrel, and a rubber-sealing element, and that is run and set in casing to isolate a lower zone while an upper section is being tested or cemented.
<b>capital expenditure</b>	The amount of money spent during a particular period to acquire or improve long-term assets, such as property, plant or equipment.

---

<b>casing</b>	Large pipe in which a carrier pipeline is contained. Often used when a pipeline passes some roads to shield the pipeline from the usually high load stresses of a particular location. Local regulations identify specific locations where casing is mandatory. Also, steel pipe placed in an oil or gas well as drilling progresses, to prevent the wall of the hole from caving in during drilling, to prevent seepage of fluids, and to provide a means of extracting petroleum if the well is productive.
<b>casing string</b>	The entire length of all the joints of casing run in a well.
<b>cathodic protection</b>	A method of protecting a metal structure from corrosion by making its surfaces cathodic and controlling the location of anodic areas so that corrosion damage can be reduced to tolerable levels.
<b>chain trencher</b>	A piece of equipment used to excavate a trench.
<b>combustion turbine</b>	A heat engine that converts the energy of fuel into work by using compressed, hot gas as the working medium and that usually delivers its mechanical output through a rotating shaft. Also known as a <i>gas turbine</i> .
<b>commissioning</b>	The act of filling the pipeline and conducting tests to ensure that the pipeline and facilities function safely and properly before start-up.
<b>compression, gas</b>	The process of increasing the pressure on gas to reduce its volume or cause it to flow. Natural gas is usually compressed for pipeline transportation.
<b>compressor station</b>	A facility containing equipment that is used to increase pressure to compress natural gas for transportation in a pipeline.
<b>conductor</b>	A substance or medium that conducts heat, light, sound, or especially an electric charge.
<b>confluence</b>	The place where two watercourses meet and flow together to form one.
<b>construction phase</b>	The phase of a project preceding the operations phase, during which project facilities are assembled, installed on their foundations, connected and tested to ensure that they operate as designed.
<b>construction right-of-way</b>	Land used during the pipeline construction that might include both the permanent right-of-way and temporary workspace.
<b>cooler</b>	A component of a facility site that cools the temperature of gas.
<b>cuttings injection well</b>	A wellbore into which drilling cuttings are injected for disposal.

---

<b>dam and pump</b>	A technique used for pipeline construction, at isolated trenched watercourse crossings, in which a dam blocks water flow upstream and downstream of the crossing and a pump moves the water around via hoses.
<b>decommissioning</b>	The act of taking a processing plant or facility out of service and isolating equipment, to prepare for routine maintenance work, suspending or abandoning.
<b>Deh Cho interim land withdrawal process</b>	A process that allows for land within the Deh Cho region to be protected (withdrawn) from development for up to five years, pending a final agreement between the federal government and the Deh Cho First Nation. Lands can be protected if they are a source of food or medicine, of cultural or spiritual significance, ecologically sensitive or important to watershed protection. Either surface and subsurface rights or subsurface rights only can be withdrawn.
<b>dehydration</b>	The process of removing water or water vapour from gas or oil.
<b>delta</b>	An alluvial deposit, usually triangular, at the mouth of a river, stream or tidal inlet.
<b>demobilization</b>	The process of moving people, supplies and equipment from the work site to another location.
<b>dense-phase design</b>	A pipeline design in which operating pressures are increased so that natural gas and natural gas liquids behave like a single fluid.
<b>depth of cover</b>	The distance from the top of a pipe to ground level after the trench has been backfilled.
<b>disposal well</b>	A well into which process and other wastewater is injected.
<b>ditch</b>	A long, narrow excavation dug in the earth in which a pipeline is buried. Also known as a <i>pipeline trench</i> .
<b>downhole</b>	Pertaining to the wellbore.
<b>drainage</b>	Water in a given surface area that flows off by stream or subsurface conduits.
<b>dredging</b>	The process of deepening a waterway or channel with a machine that digs, gathers, or pulls out bottom sediments and materials.

---

<b>drilling cuttings</b>	The fragments of rock dislodged by the drill bit and brought to the surface in the drilling mud. Washed and dried cuttings samples are analyzed by geologists to obtain information about the formations drilled.
<b>drilling solids</b>	The solid components of drilling mud. They may be added intentionally, barite, for example, or they may be introduced into the mud from the formation as the bit drills ahead. Also known as <i>mud solids</i> .
<b>EIS</b>	The abbreviation for environmental impact statement.
<b>emissions</b>	Substances discharged into the air, e.g., by a smokestack or an automobile engine.
<b>Enbridge</b>	The abbreviation for Enbridge Pipelines (NW) Inc.
<b>environmental effect</b>	For a project, any change that the project might cause in the biophysical or socio-economic environment. Also, any change to the project that might be caused by the environment.
<b>environmental impact assessment</b>	The process of evaluating the biophysical, social and economic effects of a proposed project.
<b>environmental impact statement</b>	A report containing the environmental impact assessment.
<b>erosion</b>	The wearing away of the land surface by running water, wind, ice or other geological agents, including such processes as gravitational creep.
<b>ESD</b>	The abbreviation for emergency shutdown.
<b>esker</b>	A winding ridge of irregularly stratified sand, gravel and cobbles deposited under the ice by a rapidly flowing glacial stream.
<b>facilities</b>	Gathering and gas pipeline systems, including compressor and pump stations, block valves, pig launchers and receivers, heater stations and meter stations.
<b>fault</b>	A fracture in rock along which the adjacent rock surfaces are differentially displaced.
<b>feasibility study</b>	A study of the practicability of a proposed project.
<b>feller buncher</b>	A piece of tracked machinery that is used to harvest trees by grasping, cutting and placing the trees systematically on the ground.

---

<b>fen</b>	Low land, such as peat land, that is wholly or partly covered by water, especially in the upper regions of old estuaries and around lakes. These areas do not drain naturally.
<b>flare stack</b>	A chimney used to dispose of surplus hydrocarbon gases by igniting them in the atmosphere.
<b>flare system</b>	An arrangement of piping and burners used to dispose of surplus combustible vapours by igniting them in the atmosphere.
<b>flash drum</b>	A vessel in which volatile liquids are vaporized, by either heat or vacuum.
<b>flow line</b>	A pipe through which gas travels from a well to processing equipment or to storage. The pipe is either buried, or installed above-ground.
<b>flow test</b>	A preliminary test to confirm flow rate through a tool before going downhole.
<b>footprint</b>	The amount and shape of the area disturbed.
<b>frost bulb</b>	A frozen zone, typically formed around a chilled pipe, in otherwise unfrozen ground.
<b>frost heave</b>	The raising of a surface caused by ice in the underlying soil. This movement results from alternate thawing and freezing. Frost heaving generates stress on vertical support members of pipelines in the Arctic and, as a result, also on the pipeline itself.
<b>G</b>	The metric symbol for giga (billion or $10^9$ ).
<b>gas compression</b>	The process of increasing the pressure on gas to reduce its volume or cause it to flow. Natural gas is usually compressed for pipeline transportation.
<b>gas conditioning facility</b>	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.
<b>gas hydrate</b>	A mixture of water and gas that forms a solid plug in a gas pipeline under certain conditions.
<b>gas pipeline</b>	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>Mackenzie Valley pipeline</i> .

<b>gas turbine</b>	A heat engine that converts the energy of fuel into work by using compressed, hot gas as the working medium and that usually delivers its mechanical output through a rotating shaft. Also known as a <i>combustion turbine</i> .
<b>gathering pipelines</b>	Four pipelines, also known as laterals, which 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.
<b>gathering system</b>	A system of pipelines and related facilities that include four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers.
<b>geotechnical</b>	Related to the application of scientific methods and engineering principles to civil engineering problems, by acquiring, interpreting and using knowledge of materials of the crust of the earth.
<b>geothermal</b>	Pertaining to heat within the earth.
<b>glacial till</b>	Unsorted sedimentary material deposited directly by, and underneath, a glacier, consisting of a mixture of clay, silt, sand, gravel and boulders. Also known as <i>till</i> .
<b>glycol</b>	A group of compounds, such as ethylene glycol and diethylene glycol, used to dehydrate gaseous or liquid hydrocarbons, to inhibit the formation of hydrates, or to cool fluids (liquid or gas), by acting as a heat transfer medium.
<b>Gm<sup>3</sup></b>	The metric symbol for billion cubic metres.
<b>GMAW</b>	The abbreviation for gas metal arc welding.
<b>grade, pipe</b>	A designation of the pipe based on strength. Grade designation is nondimensional, but numerically equivalent to the specified minimum yield strength in megapascals. Grade 359 pipe material is equivalent to Grade X-52. Grade 550 pipe material is equivalent to Grade X-80.
<b>grading</b>	The process of constructing a work area to facilitate moving personnel, equipment and material onto and along a right-of-way. The process includes levelling, cutting and filling. The travel surface is similar to a winter road.
<b>granular material</b>	Material deposits that have a granulated surface or structure, such as gravel.

---

<b>ground bed</b>	In cathodic protection, an interconnected group of impressed-current anodes that absorbs the damage caused by generated electric current. An impressed-current anode is an anode to which an external source of positive electricity is applied.
<b>heater station</b>	A facility where natural gas is heated to prevent the formation of hydrates.
<b>heat medium</b>	A static or flowing material, such as steam, used to transfer heat from a primary source to another material.
<b>heat medium heater</b>	A device that increases the temperature of a heat transfer fluid for use in changing the temperature of another fluid.
<b>helipad</b>	A cleared landing area for helicopters, located at camps and facilities.
<b>horizontal directionally drilled water crossing</b>	A river crossing technique used in pipeline construction in which the pipe is buried under the riverbed at depths much greater than conventional crossings. An inverted arc-shaped hole is drilled beneath the river and the preassembled pipeline is pulled through it. Also known as a <i>trenchless crossing</i> .
<b>hot bend</b>	A tight bend in a pipeline that is beyond the capabilities of bending machines on the right-of-way. These tight bends in the pipe are made in the factory and shipped to the appropriate location on the right-of-way.
<b>hydrate, gas</b>	A mixture of water and gas that forms a solid plug in a gas pipeline under certain conditions.
<b>hydraulics</b>	The branch of science and technology concerned with the mechanics of fluids, especially liquids.
<b>hydrocarbons</b>	Organic compounds of hydrogen and carbon whose densities, boiling points, and freezing points increase as their molecular weights increase. Petroleum is a mixture of many different hydrocarbons.
<b>hydrostatic testing</b>	The final quality control check of the structural soundness of a pipeline or facility. In this test, the line is filled with water or a glycol–water mixture and pressurized to a designated point. This pressure is maintained for a specific period of time. Any ruptures or leaks revealed by the test are repaired. The test is repeated until no problems are noted. Also known as <i>pressure testing</i> .
<b>ice pad</b>	A level working surface made of compact snow and ice.

<b>ice road</b>	A secondary road made of compact snow or ice, often ploughed over a frozen lake or ground, and which is impassable in the summer. Also known as a <i>winter road</i> .
<b>ice strip</b>	An airstrip made of compact snow and ice.
<b>infrastructure</b>	The basic facilities, such as transportation, communications, electrical power supplies and buildings, that enable an organization, project or community to function.
<b>Inuvik area facility</b>	The facility near Inuvik that processes and separates gas and NGLs delivered from the gathering pipelines and which directs the processed streams to the NGL and gas pipelines.
<b>kilometre post</b>	A marker for each kilometre along the centreline of the right-of-way used for reference points.
<b>km</b>	The metric symbol for kilometre.
<b>knob and kettle terrain</b>	A terrain of conical hills or small ridges of sand or gravel deposited by a glacier (knobs or kames) and bowl-shaped depressions caused by the melting of ice that has broken away from a glacier (kettle holes or kettle basins).
<b>knockout drum</b>	A drum, vessel or trap used to remove fluid droplets from flowing gases.
<b>KP</b>	The abbreviation for kilometre post.
<b>large water crossing</b>	A water channel that appears with a name on 1:50,000 Government of Canada topographic maps, and has a perennial flow and a drainage area greater than 1,000 km <sup>2</sup> .
<b>lateral</b>	A gathering pipeline that connects the production area facilities to the Inuvik area facility.
<b>leak detection</b>	A series of measures used to monitor a pipeline for leaks.
<b>line heater</b>	Equipment used to increase the temperature of natural gas flowing in a pipeline.
<b>line pipe</b>	Sections of pipe that can be welded together to form a pipeline.
<b>liner</b>	A highly flexible lining used for containing combustible liquids, fuels and many oil field chemicals, and designed for easy installation in remote sites.

---

<b>logistics</b>	The activities associated with procuring, maintaining and transporting materials, equipment and personnel.
<b>looping</b>	A method of increasing the capacity of a pipeline system by laying additional pipe alongside part or all of an existing pipeline.
<b>m</b>	The metric symbol for metre.
<b>m<sup>3</sup>/d</b>	The metric symbol for cubic metres per day.
<b>Mackenzie Gas Project</b>	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 and production facilities, a gathering system, a gas pipeline, work camps, material stockpiling and shipping sites, roads, borrow sites, and other associated infrastructure.
<b>main control centre</b>	A central station that will remotely monitor, control and diagnose functions of compressors, block valves and other facilities.
<b>meter</b>	An instrument for measuring and indicating, or recording, the volume of natural gas or NGL that has passed through it.
<b>meter station</b>	A facility where the flow of gas or natural gas liquids is recorded. Meter stations are located at key transfer points, such as the Inuvik area facility where natural gas flows from the gathering system to the Mackenzie Valley pipeline and NGLs to the NGL pipeline.
<b>methanol</b>	A colourless, toxic, flammable liquid alcohol used as antifreeze, and often used to dry a pipeline following hydrostatic testing.
<b>mitigation</b>	The elimination, reduction or control of a project's adverse effects, including restitution for any damage caused to the environment by such effects through avoidance, replacement, restoration, compensation or other means.
<b>Mm<sup>3</sup>/d</b>	The metric symbol for million cubic metres per day.
<b>mobile camp</b>	The front-end camps that accommodate the initial workforce involved in pre-construction activities.
<b>mobilize</b>	To move people or equipment to the work site.

---

<b>module</b>	A standardized part or an independent self-contained unit of facilities or structures, such as buildings, used in construction. The modules are generally prefabricated and packaged in manageable sizes and weights for ease of transportation and assembly on site.
<b>monitoring</b>	Periodic inspection to meet the following objectives: <ul style="list-style-type: none"><li>• observe and report on compliance with approval conditions</li><li>• confirm effectiveness of approved protection measures</li><li>• verify the accuracy of impact predictions</li><li>• identify any effects not predicted in the impact assessment</li></ul>
<b>MPa</b>	The metric symbol for megapascal.
<b>mud solids</b>	The solid components of drilling mud. They may be added intentionally, barite, for example, or they may be introduced into the mud from the formation as the bit drills ahead. Also known as <i>drilling solids</i> .
<b>muskeg</b>	A peat bog or tussock meadow, with variably woody vegetation.
<b>N/A</b>	The abbreviation for not applicable.
<b>natural gas</b>	A compressible mixture of hydrocarbons, with a low specific gravity, that occurs naturally in a gaseous form.
<b>natural gas liquids</b>	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, with little or no methane or ethane.
<b>NGL</b>	The abbreviation for natural gas liquid.
<b>NGL pipeline</b>	The pipeline connecting the Inuvik area facility with the Enbridge Pipeline facilities at Norman Wells.
<b>NGTL</b>	The abbreviation for NOVA Gas Transmission Ltd.
<b>Niglintgak field</b>	The anchor field to be developed by Shell.
<b>Niglintgak lateral</b>	The gathering pipeline connecting the Niglintgak gas conditioning facility to a connection point on the Taglu lateral at the outlet of the Taglu gas conditioning facility.
<b>open cut</b>	A water crossing technique used in pipeline construction where a trench is cut into the riverbed.

---

<b>operations expenditure</b>	Amount of money used during a period to operate a facility or system.
<b>Operations Phase</b>	The phase of a project during which the pipeline and associated facilities are operated.
<b>organic cover</b>	The organic fraction of the soil that includes plant and animal residues in various stages of decomposition, cells and tissues of soil organisms, and substances synthesized by the soil population.
<b>overburden</b>	All material, including soil, sand, silt or clay, that lies on top of the pipeline.
<b>packer fluid</b>	A liquid, usually salt water or oil, but sometimes mud, used in a well when a packer is between the tubing and the casing. Packer fluid must be heavy enough to shut off the pressure of the formation being produced, and must not stiffen or settle out of suspension over long periods of time. It must be non-corrosive.
<b>pad</b>	The surface parts of a multiwell drilling or production site, including wells, buildings, piping and electrical facilities.
<b>Parsons Lake field</b>	The anchor field to be developed by ConocoPhillips Canada (North) Limited and ExxonMobil Canada Properties.
<b>Parsons Lake lateral</b>	The gathering pipeline connecting the Parsons Lake gas conditioning facility to a connection point at the Storm Hills pigging facility.
<b>permafrost</b>	Perennially frozen ground, occurring wherever the temperature remains below 0°C for two or more consecutive years.
<b>pig</b>	An in-line scraper, i.e., brush, blade cutter or swab, that is forced through a pipeline by fluid pressure. The pig is used to remove scale, sand, water and other foreign matter from the interior surfaces of the pipe. In hydrostatic testing, the pig is used inside the line to push air ahead of the test water and to push water out after the test.
<b>pigging</b>	The act of pushing a device (a pig) through a pipeline to physically clean deposits from the inner surface of the pipeline, to remove liquids or to conduct internal inspections of the pipeline.
<b>pigging facility</b>	Facilities for launching and receiving pigs.
<b>pig launcher</b>	A facility on a pipeline for inserting and launching a pig.

<b>pig receiver</b>	A piping arrangement whereby an incoming pig can be diverted into a receiving cylinder, isolated and then removed.
<b>pile cap</b>	Reinforced concrete cast around the head of a group of piles to make them act as a unit to support the imposed load.
<b>pipe grade</b>	A designation of the pipe based on strength. Grade designation is nondimensional, but numerically equivalent to the specified minimum yield strength in megapascals. Grade 359 pipe material is equivalent to Grade X-52. Grade 550 pipe material is equivalent to Grade X-80.
<b>pipe rack</b>	Horizontal supports for oil field tubular goods, such as casing, including liners, drill pipe, tubing and line pipe.
<b>pipeline corridor</b>	The 1-km-wide area that centres on the combined right-of-way for the gas and NGL pipelines, from the Inuvik area facility south to the NGTL interconnect facility in Alberta.
<b>pipeline trench</b>	A long, narrow excavation dug in the earth in which a pipeline is buried. Also known as a <i>ditch</i> .
<b>polymer</b>	A substance consisting of molecules formed from smaller molecules in structural units that repeat. In drilling operations, various organic polymers are applied to thicken drilling fluid and other liquids.
<b>potable water</b>	Water with qualities that are suitable or could be readily made suitable for human consumption.
<b>preliminary route</b>	An initial pipeline route that was composed of the Polar Gas route from the anchor fields to Norman Wells, and the Enbridge pipeline right-of-way from Norman Wells to the Northwest Territories–Alberta boundary.
<b>pressure testing</b>	The final quality control check of the structural soundness of a pipeline or facility. In this test, the line is filled with water or a glycol–water mixture and pressurized to a designated point. This pressure is maintained for a specific period of time. Any ruptures or leaks revealed by the test are repaired. The test is repeated until no problems are noted. Also known as <i>hydrostatic testing</i> .
<b>processing facility</b>	A facility designed to dehydrate and condition raw gas for transport through the gathering system.
<b>procurement</b>	The activities that must take place to obtain, on schedule and at optimum price, materials or services needed to construct a project.
<b>production</b>	The operation of bringing raw natural gas to the surface for processing.

---

<b>production area</b>	The area that encompasses all project components from the Inuvik area facility north, including the anchor fields, the gathering pipelines and associated facilities, infrastructure, and the 1-km-wide buffer area surrounding each of these components.
<b>production well</b>	A well through which gas is produced.
<b>project, the</b>	The abbreviation for the Mackenzie Gas Project.
<b>Project Definition Phase</b>	<p>This phase was office based, with focused field studies and community involvement, and includes the following:</p> <ul style="list-style-type: none"><li>• conceptual and preliminary engineering design</li><li>• socio-economic and environmental studies and assessments</li><li>• public consultation</li><li>• northern benefit programs development</li><li>• regulatory application and review</li></ul> <p>The Project Definition Phase began in January 2002 and is scheduled to end after project approval.</p>
<b>project proponents</b>	The five organizations (Imperial Oil Resources Ventures Limited, the APG, ConocoPhillips Canada (North) Limited, Shell Canada Limited and ExxonMobil Canada Properties) that are undertaking the Mackenzie Gas Project.
<b>proposed route</b>	The pipeline route identified in the application. This route incorporates revisions to the refined route arising from community consultation and a detailed route reconnaissance in 2003.
<b>proposed site</b>	The project infrastructure and facility locations identified in the application that have been assessed through desktop studies, detailed reconnaissance and community consultation.
<b>pumping station</b>	A facility containing equipment that is used to increase the pressure of a liquid, such as NGL, for further transportation in a pipeline.
<b>raw natural gas</b>	Natural gas from the ground that has not been processed.
<b>reclamation</b>	The process of re-establishing a disturbed site to a former or other productive use, not necessarily to the same condition that existed before disturbance. The land capability might be at a level different, i.e., lower or higher, than that which existed before the disturbance, depending on the goal of the process. Reclamation includes the management of a disturbed site and revegetation where necessary.

---

<b>refined route</b>	A transitional pipeline route that was based on revisions to the preliminary route of the laterals and gas pipeline following a desktop study, detailed route reconnaissance in 2002 and assessment of numerous alternative routes.
<b>reservoir</b>	A subsurface, porous, permeable rock body containing a natural accumulation of oil or gas, or both.
<b>restoration</b>	The process of returning the land to a productive state and near-original contour upon abandonment of a facility.
<b>return lines</b>	Small diameter pipelines used to return feedstock from a processing facility to a well site.
<b>right-of-way</b>	The pipeline easement in which the pipeline will be installed and operated.
<b>ripping</b>	The act of scarifying or loosening subsoils with a multi-shank ripper to alleviate subsoil compaction.
<b>route reconnaissance</b>	An aerial and, where warranted, ground visual survey of potential route alternatives.
<b>ROW</b>	The abbreviation for right-of-way.
<b>SAW</b>	The abbreviation for submerged arc welding.
<b>scour hole</b>	A depression caused by water erosion often immediately downstream of a large boulder.
<b>scrubber</b>	A device that uses a liquid to remove solid or liquid particles from a gas stream.
<b>separator</b>	A vessel located at the entrance to a hydrocarbon facility that separates the incoming stream into different components, such as gas and liquids.
<b>Shell</b>	The abbreviation for Shell Canada Limited.
<b>shielded metal arc welding</b>	Arc welding in which heating with an electric arc between the electrode and the work produces fusion of the electrode covering which shields the work.
<b>shrink sleeve</b>	A protective coating for the pipeline designed to form a tight seal around a weld when heat is applied.

GLOSSARY

---

<b>shutdown</b>	The act of stopping work temporarily or stopping a machine or piece of equipment in operation.
<b>side bend</b>	A deflection in the horizontal plane of the pipe, made to accommodate a change in direction of the pipeline.
<b>sideboom tractor</b>	A piece of equipment used to lower pipeline sections into a ditch.
<b>single-phase design</b>	A pipeline design that requires separate pipelines for natural gas and for NGLs.
<b>skid</b>	A plank or roller on which a heavy object may be placed to facilitate moving.
<b>slash</b>	Woody debris, e.g., limbs and branches, that is removed from large timber.
<b>slug catcher</b>	A vessel or series of pipes to collect liquids at the inlet of a compressor station.
<b>slump</b>	A type of landslide characterized by the downward slipping of a mass of rock or unconsolidated debris, moving as a unit or several subsidiary units, characteristically with backward rotation on a horizontal axis parallel to the slope. Common on natural cliffs and banks and on the side of artificial cuts and fills.
<b>SMAW</b>	The abbreviation for shielded metal arc welding.
<b>spoil</b>	Subsoil material that is excavated from a pipeline trench and from areas subject to grading, and that is to be kept separate from surface soil.
<b>spread</b>	The necessary equipment and crew needed to build a pipeline. Spreads are like moving assembly lines and can consist of one hundred pieces of equipment and over five hundred workers.
<b>spring breakup</b>	The time of year when the temperature rises sufficiently to thaw ice, causing it to break up in rivers, allowing them to become navigable.
<b>stabilizer</b>	A component of a facility site that stabilizes gas.
<b>staging site</b>	A location where equipment is stored, maintained or readied for work.
<b>start-up</b>	The act of recommencing work or starting up machinery or equipment after a temporary shutdown or decommissioning.
<b>stockpile</b>	A storage supply of something, such as line pipe or soil, to be used later.

---

<b>Storm Hills lateral</b>	The gathering pipeline connecting the Storm Hills pigging facility to a connection point at the inlet of the Inuvik area facility.
<b>stringing</b>	The process of delivering and distributing line pipe and joints where and when they are needed along the right-of-way. Pipe is strung to prevent the movement of people, animals and vehicles from being impeded.
<b>subsidence</b>	Occurs when the soil replaced over the pipeline ditch line sinks lower than the natural grade and could create a channel for water movement along the ditch line.
<b>sump</b>	A pit or tank which receives and temporarily stores drainage at the lowest point in a circulating or drainage system.
<b>sweet natural gas</b>	Gas that has no more than the maximum sulphur content, as defined by the specifications for the sales gas from a plant or by a legal body.
<b>t</b>	The metric symbol for tonne.
<b>Taglu field</b>	The anchor field to be developed by Imperial Oil Resources Limited.
<b>Taglu lateral</b>	The gathering pipeline connecting the Taglu field pad facility to a connection point at the Storm Hills pigging facility.
<b>tank farm</b>	An area in which a number of large-capacity storage tanks are located, generally used for crude oil or petroleum products.
<b>temporary camp</b>	A stationary or mobile camp built to temporarily house between 40 and 1,350 people. Temporary camps use diesel power generators to generate electrical power and include a potable water and waste management system.
<b>terrain</b>	The physical surface features of a tract of land.
<b>thaw settlement</b>	Settlement that results from ice melting in the soil. Settlement depends on thaw depth, ice content and soil gradation.
<b>thermocarst</b>	An irregular land surface formed in a permafrost region by melting ground ice.
<b>tie-in</b>	A collective term for the construction tasks bypassed by regular crews on pipeline construction. Tie-in includes welding road and river crossings, valves, portions of the pipeline left disconnected for hydrostatic testing, and other fabrication assemblies, as well as taping and coating the welds.

<b>till</b>	Unsorted sedimentary material deposited directly by, and underneath, a glacier, consisting of a mixture of clay, silt, sand, gravel and boulders. Also known as <i>glacial till</i> .
<b>topography</b>	The configuration of a surface, including its relief and natural and artificial features.
<b>travel lane</b>	The portion of the right-of-way used for travel by vehicles and equipment.
<b>trencher</b>	A piece of equipment used to excavate the trench.
<b>trenchless crossing</b>	A river crossing technique used in pipeline construction in which the pipe is buried under the riverbed at depths much greater than conventional crossings. An inverted arc-shaped hole is drilled beneath the river and the preassembled pipeline is pulled through it. Also known as a <i>horizontal directionally drilled water crossing</i> .
<b>tundra</b>	A vast treeless zone, lying between the ice cap and the timberline of North America and Eurasia, that has a permanently frozen subsoil.
<b>turbine, gas</b>	A heat engine that converts the energy of fuel into work by using compressed, hot gas as the working medium and that usually delivers its mechanical output through a rotating shaft. Also known as a <i>combustion turbine</i> .
<b>two-phase design</b>	A pipeline design that requires a single pipeline for natural gas and NGLs.
<b>upset conditions</b>	An abnormal process operation that might result in flaring or shutdown, depending on the degree of upset.
<b>vegetated channel</b>	A watercourse with ephemeral flow, no discernible banks or sediment transport, and a drainage area less than 15 km <sup>2</sup> . It is primarily a shallow flow through shrubs and trees during spring runoff or rainfall. It is dry most of the year.
<b>waste management plan</b>	The system developed to track and control emissions and waste, and evaluate pollution-prevention steps.
<b>watercourse</b>	A natural or artificial channel with perennial or intermittent flow and definable bed and banks.
<b>well pad</b>	The base used to support drilling and related equipment.

<b>well target</b>	The desired subsurface location believed to have the highest probability for hydrocarbon production.
<b>wellbore</b>	The hole drilled by the bit in a well. Also called a <i>borehole</i> or hole.
<b>wellhead</b>	The equipment installed at the surface of the wellbore.
<b>wheel ditcher</b>	A ditching machine for pipeline construction that has a large, rotating set of toothed scoops on a wheel that lift dirt out of the ditch and feed it onto a conveyor mounted on the side of the machine.
<b>windrow</b>	A linear stockpile of material cleared, graded or excavated from the right-of-way.
<b>winter road</b>	A secondary road made of compact snow or ice, often ploughed over a frozen lake or ground, and which is impassable in the summer. Also known as an <i>ice road</i> .
<b>wireline unit</b>	A service vehicle or unit on which the spool or wireline is mounted for use in downhole wireline work.

