

## GLOSSARY

<b>%</b>	The symbol for percent.
<b>abandonment and reclamation</b>	The act of permanently stopping operations, removing facilities and restoring land to a productive state.
<b>abiotic</b>	Nonliving components, physical or chemical, of the environment, such as temperature, light and nutrients.
<b>Aboriginal</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>adverse effect</b>	The impairment of, or damage to, the environment or health of humans, or damage to property, or loss of reasonable enjoyment of life or property.
<b>aeolian</b>	Materials eroded, transported or deposited by wind action, usually including poorly graded, well-sorted medium to fine sand and coarse silt that is sorted and noncompacted.
<b>alluvial</b>	Pertaining to, or consisting of, alluvium, or material deposited by flowing water.
<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>anthropogenic</b>	Materials made or modified by humans.
<b>APG</b>	The abbreviation for Aboriginal Pipeline Group.
<b>aquatic</b>	Growing in, living in, or frequenting water. Also, occurring, or situated in, or on, water.
<b>ARI</b>	The abbreviation for Aurora Research Institute.
<b>ASTIS</b>	The abbreviation for Arctic Science and Technology Information System.
<b>A-weighting</b>	Adjusting sound levels measured to account for the frequency content of the measured sound based on a frequency response similar to that heard by the human ear.

<b>baseflow</b>	A portion of the stream discharge that is derived from natural storage, i.e., outflow from groundwater, large lakes or wetlands, or sources other than rainfall that create surface runoff.
<b>baseline</b>	A surveyed condition that serves as a reference point to which later surveys or assessments are coordinated or correlated.
<b>BDR</b>	The abbreviation for Beaufort Delta Region.
<b>bedrock</b>	Solid rock that underlies soil or any other unconsolidated surficial cover.
<b>biophysical</b>	Referring to the air, noise, aquatic (groundwater, hydrology, water quality and fisheries) and terrestrial (soils, landforms, permafrost, vegetation and wildlife) conditions in the project area.
<b>bog</b>	Waterlogged, spongy ground consisting primarily of mosses that can decay and develop into peat.
<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>BTEX</b>	The abbreviation for benzene, toluene, ethylbenzene and xylene.
<b>clay</b>	A soil particle less than 2 µm in diameter.
<b>climate</b>	The prevailing weather conditions of an area. Climate is a measure of the long-term averages, i.e., normals, of key atmospheric variables, such as temperature, precipitation and wind.
<b>climate change</b>	The change in long-term climate normals.
<b>COGOA</b>	The abbreviation for <i>Canada Oil and Gas Operations Act</i> .
<b>colluvium</b>	Loose, heterogeneous and incoherent deposit of soil material or rock fragments usually deposited by mass-wasting.
<b>compliance monitoring</b>	Monitoring to ensure that: <ul style="list-style-type: none"><li>• the environmental mitigation outlined in the environmental protection and reclamation plans is implemented</li><li>• work proceeds in compliance with regulations and the proponents' environmental policies</li></ul>
<b>compressor station</b>	A facility containing equipment that is used to increase pressure to compress natural gas for transportation in a pipeline.

<b>Construction Phase</b>	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.
<b>consultants group</b>	The group of companies retained by the project proponents to conduct the biophysical and socio-economic impact assessments and mitigation planning. The group includes AMEC Earth and Environmental Limited (AMEC), IMG Golder Corporation, KAVIK-AXYS Inc. and TERA Environmental Consultants. Also known as <i>environmental consultants group</i> .
<b>critical habitat</b>	The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species, according to the <i>Species at Risk Act</i> .
<b>Cryosols</b>	Soils formed in either mineral or organic materials, with permafrost within 1 m of the surface, or within 2 m if the active layer of the soil profile has been strongly cryoturbated. They can be associated with wetlands, tundra or taiga forest conditions
<b>cumulative effects</b>	Changes to the environment caused by an action, including projects and activities, in combination with other past, present and future human actions.
<b>dB</b>	The symbol for decibel.
<b>dBA</b>	The symbol for A-weighted decibel.
<b>DCR</b>	The abbreviation for Deh Cho Region.
<b>delta</b>	An area of alluvial deposits, usually triangular in shape, at the mouth of a river or stream.
<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>discharge</b>	The rate of flow at a given moment, expressed as volume per unit of time.
<b>DTFN</b>	The abbreviation for Dene Tha' First Nation.

<b>ecological zone</b>	A regional ecological area used on the Mackenzie Gas Project to describe regional vegetation differences based on changes in climate, physiography, terrain, soil and permafrost with increasing latitude along the Mackenzie Valley. Also known as <i>ecozone</i> .
<b>ecozone</b>	A regional ecological area used on the Mackenzie Gas Project to describe regional vegetation differences based on changes in climate, physiography, terrain, soil and permafrost with increasing latitude along the Mackenzie Valley. Also known as <i>ecological zone</i> .
<b>effects monitoring</b>	Monitoring conducted to: <ul style="list-style-type: none"><li>• confirm the accuracy of predicted effects</li><li>• determine the effectiveness of mitigation and enhancement measures</li></ul>
<b>EIA</b>	The abbreviation for environmental impact assessment.
<b>EIS</b>	The abbreviation for Environmental Impact Statement.
<b>environment</b>	The components of the earth, including: <ul style="list-style-type: none"><li>• land, water and air, including all layers of the atmosphere</li><li>• all organic and inorganic matter and living organisms</li><li>• the interacting natural systems that include all components referred to in the previous bullets</li></ul>
<b>environmental consultants group</b>	The group of companies retained by the project proponents to conduct the biophysical and socio-economic impact assessments and mitigation planning. The group includes AMEC Earth and Environmental Limited (AMEC), IMG Golder Corporation, KAVIK-AXYS Inc. and TERA Environmental Consultants. Also known as <i>consultants group</i> .

<b>environmental effect</b>	<p>For a project, any change that the project might cause in the biophysical environment. Also, any effect of any project-induced change on:</p> <ul style="list-style-type: none"><li>• health and socio-economic conditions</li><li>• physical and cultural heritage</li><li>• the current use of lands and resources for traditional purposes by Aboriginal people</li><li>• any structure, site or thing that is of historical, archaeological, paleontological or architectural significance</li></ul> <p>Also, any change to the project that might be caused by the environment.</p>
<b>environmental impact assessment</b>	<p>The process of evaluating the biophysical, social and economic effects of a proposed project.</p>
<b>environmental impact statement</b>	<p>A report containing the environmental impact assessment.</p>
<b>environmentally sensitive area</b>	<p>An area designated in regional or local land use plans, or by a local, regional, provincial or federal government body as being sensitive to disturbance, or identified by an applicant as being sensitive for some reason.</p>
<b>ephemeral drainage</b>	<p>Drainage that only occurs for a short time, usually after periods of rainfall or snowmelt, and that discontinues during dry seasons.</p>
<b>ericaceous shrub</b>	<p>A low, woody shrub in, or related to, the plant family Ericaceae, i.e., heather family</p>
<b>esker</b>	<p>A winding ridge of irregularly stratified sand, gravel and cobbles, deposited under a glacier by a rapidly flowing glacial stream.</p>
<b>facilities</b>	<p>Structures of the gathering and gas pipeline systems, including compressor and pump stations, block valves, pigging facilities, heater stations and meter stations.</p>
<b>fen</b>	<p>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.</p>
<b>FFG</b>	<p>The abbreviation for formula financing grant.</p>

<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.
<b>gas conditioning facility</b>	A facility located at each anchor field that collects raw gas from the wells, and dehydrates and conditions the product for transport through the gathering system.
<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 existing Alberta system south of the Northwest Territories–Alberta boundary. Also known as the <i>Mackenzie Valley pipeline</i> .
<b>gathering pipelines</b>	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.
<b>gathering system</b>	A system of pipelines and associated facilities that include four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers.
<b>geographic extent</b>	The quantitative measurement of the area within which an effect occurs.
<b>glaciofluvial</b>	Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice
<b>glaciolacustrine</b>	Pertaining to lakes fed by melting glaciers, or to the deposits forming in the lakes
<b>groundwater</b>	Subsurface water that is recharged by infiltration and enters streams through seepage and springs.
<b>GHG</b>	The abbreviation for greenhouse gas.
<b>GIS</b>	The abbreviation for geographic information system.
<b>groundwater</b>	Subsurface water that is recharged by infiltration and enters streams through seepage and springs.

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<b>GSA</b>	The abbreviation for Gwich'in Settlement Area.
<b>GSCI</b>	The abbreviation for Gwich'in Social and Cultural Institute.
<b>GTC</b>	The abbreviation for Gwich'in Tribal Council.
<b>GNWT</b>	The abbreviation for the Government of the Northwest Territories.
<b>habitat</b>	The place or environment where a plant or animal naturally and normally lives and grows.
<b>heritage resources</b>	Cultural, historic, archaeological and paleontological resources, including pre-contact and post-contact features.
<b>HRIA</b>	The abbreviation for heritage resource impact assessment.
<b>HTC</b>	The abbreviation for hunters' and trappers' committee.
<b>human health</b>	A state of complete physical, mental and social well-being, and the ability to adapt to the stresses of daily life.
<b>hummock</b>	A rounded or conical mound or hillock, usually of equal dimensions and not ridge-like.
<b>hydrology</b>	The science dealing with the waters of the earth, including their properties, circulation, distribution and reaction with the environment.
<b>ICCs</b>	The abbreviation for industrial and commercial centres.
<b>ICRC</b>	The abbreviation for Inuvialuit Cultural Resource Centre.
<b>IFA</b>	The abbreviation for <i>Inuvialuit Final Agreement</i> .
<b>infrastructure</b>	Basic facilities, such as transportation, communications, power supplies and buildings, which enable an organization, project or community to function.
<b>Inuvik area facility</b>	The gas processing facility to be located near Inuvik where gas and liquids will be processed and separated, then delivered to the gas and NGL pipelines.
<b>ISR</b>	The abbreviation for Inuvialuit Settlement Region.
<b>key indicator</b>	A factor used to measure the status of a valued component.
<b>KI</b>	The abbreviation for key indicator.

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<b>km</b>	The metric symbol for kilometre.
<b>lateral</b>	A gathering pipeline that connects the production area facilities to the Inuvik area facility.
<b>limestone</b>	A sedimentary rock composed chiefly of calcium carbonate (CaCO <sub>3</sub> ), principally in the form of calcite.
<b>LSA</b>	The abbreviation for local study area.
<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, wells, gathering pipelines and associated facilities, work camps, material stockpiling and shipping sites, roads, borrow sites, and other associated infrastructure.
<b>Mackenzie Valley 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 existing Alberta system south of the Northwest Territories–Alberta boundary. Also known as the <i>gas pipeline</i> .
<b>migratory bird</b>	Any migratory bird as referred to in the <i>Migratory Birds Convention Act</i> , including the sperm, eggs, embryos, tissue cultures and parts of the bird.
<b>mitigation</b>	The elimination, reduction, or control of a project's adverse effects, including restitution for any damage to the environment caused by such effects through avoidance, replacement, restoration, compensation or other means.
<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>moraine</b>	An accumulation of glacial drift deposited by a glacier. It is well compacted to noncompacted material that is nonstratified and contains a heterogeneous mixture of particle sizes, often in a matrix of sand, silt and clay.
<b>MSA</b>	The abbreviation for master service agreement.

<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>NEB</b>	The abbreviation for the National Energy Board.
<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 Canada Limited, which includes three well pads, one gas conditioning facility, flow lines and supporting infrastructure. The gas conditioning facility might be barge-based or land-based.
<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>NGO</b>	The abbreviation for nongovernment organization.
<b>NO<sub>2</sub></b>	The chemical symbol for nitrogen dioxide.
<b>NTS</b>	The abbreviation for national topographic system.
<b>Operations Phase</b>	The phase of a project during which the pipeline and associated facilities are operated.
<b>organic matter</b>	The fraction of a soil that contains plant and animal residues in various stages of decomposition
<b>PAI</b>	The abbreviation for potential acid input.
<b>Parsons Lake field</b>	The anchor field to be developed by ConocoPhillips Canada (North) Limited and ExxonMobil Canada Properties. Initially, the field will consist of the north pad, which will have one pad for the well sites and gas conditioning facility. A second well pad will be developed five to 10 years after the north pad.

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<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 ground temperature remains below 0°C for two or more consecutive years.
<b>plant community</b>	A distinct grouping of plant species often associated with a particular set of environment conditions, such as terrain, soil, permafrost and water. Also known as <i>vegetation community</i> .
<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>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>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, defined for the purpose of the EIS biophysical baseline and effects assessment studies.
<b>PM<sub>2.5</sub></b>	Respirable particulate matter with a nominal diameter smaller than 2.5 µm.
<b>potential acid input</b>	The sum of the wet and dry deposition of sulphur and nitrogen compounds that have the potential to contribute to acidification of the receiving environment.
<b>PPA</b>	The abbreviation for project permit application.
<b>production area</b>	The area that encompasses all project components located north of the Inuvik area facility, including Niglintgak, Taglu and Parsons Lake fields, the gathering pipelines and associated facilities, infrastructure, and the 1-km-wide buffer area surrounding each of these project components.

<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>project-specific effect</b>	An effect caused by the project. Such effects are sometimes referred to as direct effects as they only include the project's contribution to the effect (as opposed to cumulative effects, in which case other projects would contribute to the effect).
<b>project, the</b>	The abbreviation for the Mackenzie Gas Project.
<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 prior to the disturbance, depending on the goal of the process. Reclamation includes the management of a contaminated site and revegetation where necessary.
<b>Regosol soils</b>	Azonal soils from deep unconsolidated deposits that have no definite genetic horizon. They do not exhibit weathering or horizon formation typical of other soils, and are associated with active landforms, such as floodplains, colluvial slopes, beaches, thaw slumps and debris flows.
<b>residual effects</b>	Environmental or socio-economic effects that remain after mitigation. Effects that are present after mitigation has been applied.
<b>right-of-way</b>	The pipeline easement in which the pipeline will be installed and operated. The pipeline right-of-way width for the project will vary from 30 to 50 m, depending on pipe size and the number of pipes to be installed in the trench.
<b>riparian</b>	Situated or dwelling on the margin of a river or other waterbody.
<b>rotational work</b>	Work and accommodation away from home for a designated period.
<b>RSA</b>	The abbreviation for regional study area.
<b>sedimentary rock</b>	Rock formed by the deposition and lithification of material derived from existing rocks.

<b>SEIA</b>	The abbreviation for socio-economic environmental impact assessment.
<b>Shale</b>	A fine-grained laminated or fissile sedimentary rock made up of silt or clay-sized particles. It usually comprises about one-third quartz, one-third clay materials and one-third minerals, such as carbonates, iron oxides, feldspars and organic matter.
<b>silt</b>	Fine soil particles between 0.002 and 0.05 mm in diameter, carried by flowing water and deposited as sediment on the bottom or shore of a lake or stream.
<b>sinkhole</b>	A closed surface depression in regions of karst topography produced by the subsurface limestone geology or the collapse of cavern roofs.
<b>SO<sub>2</sub></b>	The chemical symbol for sulphur dioxide.
<b>socio-economic effect</b>	For a project, any effect on a social or economic element, including direct effects as well as effects resulting from a change in the environment.
<b>species at risk</b>	An extirpated, endangered or threatened species or a species of special concern, as defined in the <i>Species at Risk Act</i> .
<b>species of special status</b>	Species listed under provincial jurisdiction or of recognized local importance because they are vulnerable, threatened, endangered or extirpated.
<b>SSA</b>	The abbreviation for Sahtu Settlement Area.
<b>STI</b>	The abbreviation for sexually transmitted infections.
<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>study area</b>	The area within the spatial boundaries of the scope of the biophysical environmental and socio-economic effects assessment.
<b>Taglu field</b>	The anchor field to be developed by Imperial Oil Resources Limited, consisting of one site that will include the well pads, gas conditioning facility, flow lines and supporting infrastructure.
<b>Taglu lateral</b>	The gathering pipeline connecting the Taglu gas conditioning facility to a connection point at the Storm Hills pigging facility.

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<b>thermokarst</b>	The melting of permafrost by heat transfer from waterbodies, either streams or lakes.
<b>TK</b>	The abbreviation for traditional knowledge.
<b>traditional knowledge</b>	Cultural knowledge that is based on direct observation or information passed on orally from other community members, developed from centuries of experience of living off the land.
<b>valued component</b>	Characteristic or feature that represents important environmental or socio-economic conditions identified by assessment specialists, communities or stakeholders.
<b>vegetation community</b>	A distinct grouping of plant species often associated with a particular set of environmental conditions such as terrain, soil, permafrost and water. Also known as <i>plant community</i> .
<b>vegetation type</b>	A vegetation community or complex of communities that can be identified on air photos and is large enough to map. Vegetation types are clearly defined and named.
<b>VC</b>	The abbreviation for valued component.
<b>waterbody</b>	A body of water up to the high-water mark, including canals, reservoirs, oceans and wetlands, but not including sewage or waste treatment lagoons.
<b>water crossing</b>	A location where a pipeline or access road crosses a stream, river or lake.
<b>watershed</b>	A region or area draining into a particular stream or river.
<b>weather</b>	The state of the atmosphere at a place and time considering temperature, cloud cover, humidity, wind and precipitation.
<b>wetlands</b>	A broad group of wet habitats where the water table is usually at or near the surface, or the land is covered by shallow water.

