

%	The symbol for percent.
µm	The symbol for micrometres.
~	The symbol for about.
<	The symbol for less than.
>	The symbol for greater than.
±	The symbol for plus or minus.
≤	The symbol for less than or equal to.
≥	The symbol for greater than or equal to.
°	The symbol for degree.
°C	The symbol for degree Celsius.
a	The metric abbreviation for annum.
A-weighted	A frequency-response adjustment of a sound-level meter that makes its reading conform, very roughly, to human response. The human ear is most sensitive to sound at mid frequencies, i.e., 500 to 4,000 Hz, and is progressively less sensitive to sound at frequencies above and below this range. A-weighted sound level is the most commonly used descriptor to quantify the relative loudness of various types of sounds with similar or differing frequency characteristics.
AB	The abbreviation for Alberta.
abandonment and reclamation	The act of permanently stopping operations, removing facilities and restoring land to a productive state.
ablation till	Loose, permeable surface material such as clay, sand, gravel and boulders deposited by the melting of glacial ice.
Aboriginal person	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.

access agreement	An agreement that reserves the right to access lands and establishes a framework within which site-specific authorizations or agreements are obtained.
access road	A temporary or permanent road that provides access to a pipeline right-of-way, facility borrow site or infrastructure site.
acid deposition	The deposition of acid-forming compounds, i.e., sulphur and nitrogen, in the environment through wet and dry processes. Although wet acid deposition is often referred to as acid rain, other forms of precipitation, e.g., dew, snow and hail, can also be a source of wet deposition.
Active I watercourse	A water channel that has a perennial flow or is partially frozen to the channel bed during winter.
Active II watercourse	A water channel that is frozen to the bed or that has no flow during winter.
active thermokarst	The process by which characteristic landforms are currently developing as a result of thawing of ice-rich permafrost or melting of massive ice.
adfreezing	The process by which one object adheres to another by the binding action of ice.
adverse effect	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.
air test	A procedure involving pressurizing a pipeline with air and monitoring pressure maintenance.
airstrip	An airfield or aircraft runway without airport facilities.
alkalinity	The total quantity of base in water that can be determined by titration with a strong acid.
alluvial	Relating to or consisting of alluvium, or deposited by running water.
alluvial fan	A triangular deposit of sediment left by a stream that has lost velocity upon entering a broad, relatively flat valley.

alluvium	A deposit of sediment left by a stream on the stream's channel or floodplain.
all-weather road	A paved, or gravel, road that is open to traffic all year.
ambient temperature	The temperature of the medium surrounding an object, or the atmospheric temperature.
anadromous species	Fish that travel up freshwater streams from the sea to spawn.
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.
anthropogenic	Materials made or modified by humans.
anticline	Rock layers folded in the shape of an arch. Anticlines sometimes trap oil and gas.
APG	The abbreviation for the Aboriginal Pipeline Group.
appurtenances, pipeline	A supplementary component, associated with and attached to a pipeline, that is necessary for safe and efficient operations. Common pipeline appurtenances include valves and valve control equipment, pigging facilities and cathodic protection apparatus.
aquatic	Growing in, living in, or frequenting water. Also, occurring, or situated in, or on, water.
aquifer	A water-saturated, permeable body of rock capable of transmitting substantial or usable quantities of groundwater to wells and springs under ordinary hydraulic gradients.
archaeological site	Where an archaeological artifact is found.
ATV	The abbreviation for all-terrain vehicle.
aufeis	New ice that continues to form onto old ice.
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.

backhoe	An excavating machine, fitted with a hinged arm with a rigidly attached bucket, used for excavating ditches.
barge landing	Location along a watercourse that is developed for the loading and unloading of cargo barges.
base case	A set of assumptions used to establish the design basis and against which alternatives are compared.
baseline	A surveyed condition that serves as a reference point to which later surveys or assessments are coordinated or correlated.
bbf	The abbreviation for barrel.
bcf/d	The abbreviation for billion cubic feet per day.
BDR	The abbreviation for the Beaufort Delta Region.
bedding	The division of sediment or sedimentary rock into parallel layers (beds) that can be distinguished from each other by such features as chemical composition and grain size.
bedrock	The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
bench	A terrace of level earth or rock that is raised and narrow and that breaks the continuity of a descending slope.
bentonite	A type of clay derived from the alteration of volcanic ash.
berm	A mound or wall of earth.
best management practice	A practice or combination of practices that will be implemented by the proponent and considered to be an effective and practical (including technological, economical and regulatory considerations) means of planning, constructing, operating and decommissioning the project.
BH	The abbreviation for borehole.
biocide	A chemical additive that destroys biological contaminants.

biophysical	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.
block valve	A device, positioned at intervals along a pipeline, that opens or shuts off the pipeline completely, or serves as an automatic or semi-automatic safety device.
blowdown	The act of emptying or depressurizing material in a vessel or pipes.
blowdown valve	A valve installed to depressurize the pipeline.
blowout	An uncontrolled flow of gas, oil or other well fluids from a well.
blowout preventer stack	The assembly of well-control equipment, including preventers, spools, valves and nipples, connected to the top of the wellhead.
bog	Peatlands consisting primarily of sphagnum mosses, with poor nutrient status and acidic conditions.
borehole	The hole made by drilling or boring into the ground to study stratification, to obtain natural resources or to release underground pressures.
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.
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.
bottomhole	The lowest or deepest part of a well.
bridging documents	Agreements created between organizations, company departments or contractors working on the same location. They document clear responsibilities for all parties involved in the event an emergency response is required for that location.

browse	Evidence of damage induced by feeding on the vegetation of the area by moose.
brush	Low growing, dense, multi-stemmed, woody shrubs (e.g., willow).
BTEX	The abbreviation for benzene, toluene, ethyl benzene, and xylene.
carbonate	One of several minerals containing one central carbon atom with strong covalent bonds to three oxygen atoms and typically having ionic bonds to one or more positive ions.
carbonate rock	A rock, such as limestone, that contains at least 50% carbonates.
cathodic protection	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.
CCG	The abbreviation for the Canadian Coast Guard.
CCME	The abbreviation for the Canadian Council of Ministers of the Environment.
CCP	The abbreviation for Community Conservation Plan.
CEAA	The abbreviation for the Canadian Environmental Assessment Act. Also, the abbreviation for the Canadian Environmental Assessment Agency.
centroid	A point representing the centre of a site of irregular shape.
cfm	Cubic feet per minute.
CH₄	The chemical formula for methane.
characteristic species	Wildlife species that are typically found in a certain area.
civil construction	The planning, design, construction and maintenance of fixed structures and ground facilities for industry, transportation, use and control of water, or occupancy.
clastic	Rock formed from weathered rock debris that has been physically transported and deposited.

cm	The metric symbol for centimetre.
CNT Trail	Right-of way of the Canadian National Telegraph trail built in the 1940s for communication purposes.
CO	The chemical formula for carbon monoxide.
CO₂	The chemical formula for carbon dioxide.
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.
coating, pipe	A material that forms a continuous film over the surface of a pipe, and that can be used internally or externally to prevent corrosion damage.
COGOA	The abbreviation for Canada Oil and Gas Operations Act.
coke breeze	A carbonaceous backfill that is used to reduce groundbed resistance by increasing the effective size of the anode and to provide a surface upon which oxidation reactions could occur, thereby prolonging anode life.
colluvium	A general term applied to any loose, heterogeneous, and incoherent mass of soil or rock fragments deposited chiefly by mass-wasting, usually at the base of a steep slope or cliff, e.g. talus, cliff debris, and avalanche material.
combined effects	The total effect of the three anchor fields, the gathering system and the pipeline corridor.
combustion turbine	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 gas turbine.
commissioning	The act of charging a system and doing checkouts to ensure that equipment functions safely before start-up.
compression, gas	The process of increasing the pressure on gas to cause it to flow. Natural gas is usually compressed for pipeline transportation.

compressor station	A facility containing equipment that is used to increase pressure to compress natural gas for transportation in a pipeline.
conductance	The measure of electrical conductance in a water sample. Conductance is an indicator of salinity.
conduction, soil	The movement of energy, such as heat, through soil, by transmitting from one grain to another through point contacts, without movement of the soil.
coniferous forest	Typically, evergreen trees or plants that are cone bearing, such as spruce trees.
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.
continuous permafrost	A category of permafrost where more than 90% of all ground is frozen. Permafrost distribution along the Mackenzie Valley varies from extensive and continuous in the north to discontinuous and sporadic in the south.
COSEWIC	The abbreviation for the Committee on the Status of Endangered Wildlife in Canada.
CP	The abbreviation for cathodic protection.
critical habitat	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> .
critically imperiled	Critically imperiled globally (G), nationally (N), or subnationally (N) because of extreme rarity or other factors making it essentially vulnerable to extirpation.
Crown lands	Land owned and managed by the federal government of Canada. Occasionally, this term is used to refer to land that is owned and managed by the Northwest Territories territorial government.
culvert	A transverse and totally enclosed drain under a road.

cumulative effects	Changes to the environment caused by an action, including projects and activities, in combination with other past, present and future human actions.
custody transfer	The process of changing ownership of, or responsibility for, quantities of gas, petroleum or petroleum products.
custody transfer meter	A flowmeter that measures the minimum and maximum flow rates, operating pressures and temperatures of a pipeline's contents at the point of custody transfer. Any losses or gains resulting from inaccurate measurement of a custody-transfer meter are the responsibility of the pipeline company.
CWS	The abbreviation for the Canadian Wildlife Service.
dam and pump	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.
dB	The abbreviation for decibel.
dBA	The abbreviation for decibel adjusted.
DCR	The abbreviation for the Deh Cho Region.
DD	The abbreviation for decimal degrees.
deciduous	Trees that lose their leaves at the end of each growing season.
decommissioning	The act of taking a processing plant or facility out of service and isolating equipment, to prepare for routine maintenance work, suspending or abandoning.
decompose	A process whereby dead plants and animals are broken into nutrients and minerals by decomposing organisms, heat, water, and wind.
deep anode groundbed	A series of vertical anodes, installed in a drilled hole, that are used in place of shallow groundbeds, in situations where the soil resistivity is high at the surface.
dehydration	The process of removing water or water vapour from gas or oil.
delta	An alluvial fan having its apex at the mouth of a stream.

deltaic	Of, or relating to, a delta.
demobilization	The process of moving people, supplies and equipment from the work site to another location.
denning site	A location where a bear creates its den.
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.
DFO	The abbreviation for the Department of Fisheries and Oceans Canada.
DFO protocol	Criteria established by the department of Fisheries and Oceans Canada to determine the suitability of lakes as potential water sources.
diadromous species	Fish that migrate between salt and fresh waters.
DIAND	The abbreviation for the Department of Indian Affairs and Northern Development, predecessor to Indian and Northern Affairs Canada (INAC).
direction	Referring to an effect, the ultimate long-term trend of the effect. It can be adverse, neutral or positive, or a combination of these.
directional drilling	A drilling method in which the wellbore is intentionally steered from the vertical.
discontinuous permafrost	A category of permafrost where some of the underlying ground is unfrozen. Permafrost distribution along the Mackenzie Valley varies from extensive and continuous in the north to discontinuous and sporadic in the south.
ditch plug	Usually a bentonite (clay) mix that is placed inside the trench, surrounding the pipe. The plug is used to force groundwater to the surface or to limit subterranean movement of water within the pipeline trench.
ditch, pipeline	A long, narrow excavation dug in the earth in which a pipeline is buried. Also known as a <i>trench</i> .
ditching	The act of excavating trenches.

DNR	The abbreviation for the Department of Natural Resources, Canada, (also known as Natural Resources Canada).
dock	A berth or wharf, or an artificially enclosed body of water, for loading and unloading ships and barges.
DOI	The abbreviation for the Department of Industry, Canada, (also known as Industry Canada).
dolomite	A kind of sedimentary rock resembling limestone but consisting almost entirely of the mineral dolomite. A light coloured mineral made up of calcium, magnesium, carbon and oxygen.
dolostone	A sedimentary rock composed primarily of dolomite, a mineral made up of calcium, magnesium, carbon, and oxygen. Dolostone is thought to form when magnesium ions replace some of the calcium ions in limestone, to which dolostone is similar in both appearance and chemical structure.
domestic waste	The waste products, such as sewage, typically generated in camps.
DOT	The abbreviation for the Department of Transportation.
double-handling	The process of moving borrow material more than is necessary.
dragging	The act of pulling an object behind a piece of equipment to level the driving surface on snow or ice. It helps to remove snow drifts or knock down ruts.
drainage	Water in a given surface area that flows off by stream or subsurface conduits.
drumlin	A long, spoon-shaped hill that develops when pressure from an overriding glacier reshapes a moraine. Drumlins range in height from 5.0 to 50 m and in length from 400 to 2,000 m. They slope down in the direction of the ice flow.
dune	A usually asymmetrical mound or ridge of sand that has been transported and deposited by wind. Dunes form in both arid and humid climates.
dune, longitudinal	One of a series of long, narrow dunes lying parallel both to each other and to the prevailing wind direction. Longitudinal dunes range from 60 m to 100 km in length and from 3.0 to 50 m in height.

easement	A written contractual agreement under which a company acquires the right to use land for a pipeline or power line. The agreement sets out the rights of the company and rights of the landowner for the use of the right-of-way.
EC	The abbreviation for Environment Canada.
ECO₂	The chemical formula that is equivalent carbon dioxide values.
ecological zone	A regional ecological area used by 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 ecozone.
ecoregion	An ecological area that has broad similarities in soil, relief and dominant vegetation. Also referred to as an ecoclimatic region.
EFR	The abbreviation for environmental field report.
EIS	The abbreviation for environmental impact statement.
elasticity	The property whereby a solid material changes its shape and size under action of opposing forces, but recovers its original configuration when the forces are removed.
emissions	Substances discharged into the air, e.g., by a smokestack or an automobile engine.
emissions, fugitive	Emissions not caught by a capture system.
EMS	The abbreviation for environmental management system.
Enbridge	Enbridge Pipelines (NW) Inc.
ENR	The abbreviation for the Department of Environment and Natural Resources, GNWT. Formerly known as RWED.

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
Environment Canada 1981	Federal Ambient Air Quality Objectives from <i>The Clean Air Act</i> .
environmental effect	For a project, any change that the project might cause in the biophysical environment. Also, any change to the project that might be caused by the environment.
environmental impact assessment	The process of evaluating the biophysical, social and economic effects of a proposed project.
environmental impact statement	A report containing the environmental impact assessment.
ephemeral watercourse	A watercourse that is present for only a short time.
erosion	The wearing away of the land surface by running water, wind, ice or other geological agents, including such processes as gravitational creep.
erratic	Masses of stone (gravel, etc.) which have been transported from their original resting places by water, ice, or other causes.
ESD	The abbreviation for emergency shutdown.
esker	A winding ridge of irregularly stratified sand, gravel and cobbles, deposited under a glacier by a rapidly flowing glacial stream.
EUB	The abbreviation for the Alberta Energy and Utilities Board (also known as the AEUB).
excess ice	The volume of ice in the ground which exceeds the total pore volume that the ground would have under natural unfrozen conditions.
exotic species	All species of plants (and animals) not naturally occurring, either presently or historically, in any ecosystem.

facies	The total features of a sedimentary rock, including sedimentary structure, lithology and ichnofacies, that characterize a sediment as having been deposited in a given sedimentary environment.
facilities	Structures of the gathering and gas pipeline systems, including compressor and pump stations, block valves, pigging facilities, heater stations and meter stations.
FAS-FAE	The abbreviation for fetal alcohol syndrome/fetal alcohol effects.
fen	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.
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.
flare stack	A chimney used to dispose of surplus hydrocarbon gases by igniting them in the atmosphere.
flash drum	A vessel in which volatile liquids are vaporized, by either heat or vacuum.
flocculant	A chemical used in water treatment to precipitate suspended sediment.
flow line	A pipe through which gas travels from a well to processing equipment or to storage. The pipe is either buried, or installed above ground.
flume	An open channel constructed of steel, reinforced concrete or wood.
fluvial	Relating to, or produced by, the action of a stream or river.
footprint	The amount and shape of an area disturbed by, for example, facility construction.
forage	Grasses, herbs and small shrubs that are used by wildlife for food.
freeze depressant	A material, usually a liquid such as methanol or glycol, added to a fluid to lower its freezing point.

friable permafrost	Permafrost in which the soil particles are not held together by ice, or ice bonding in the soils is very weak.
frost boil	A small mound of soil material, presumed to have been formed by frost action, (also known as frost heave).
frost bulb	A frozen zone, typically formed around a chilled pipe, in otherwise unfrozen ground.
frost heave	The lifting and distortion of a surface caused by the expansion of a volume of soil resulting from the formation of excess ice within the soil. The volume of ice in the frozen soil is greater than the pore volume of the initially thawed soil. Frost heave occurs where a chilled pipeline freezes moisture in the surrounding soil along an unfrozen span interval.
fur bearer	An animal whose coat, when dressed as a pelt, is of value in the marketplace.
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 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> .
gas turbine	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 combustion turbine.
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 (also known as GIS).
geotechnical	Referring to the use of scientific methods and engineering principles to acquire, interpret, and apply knowledge of earth materials for solving engineering problems.
geotextile liner	Flexible, permeable fabrics used for filtration and erosion control purposes to prevent sediments and other substances from entering watercourses.
geothermal	Pertaining to heat within the earth.
GHG	The abbreviation for greenhouse gases.
GIS	The abbreviation for geographic information system.
GLA	The abbreviation for Gwich'in Land Administration.
glacial drift	A load of rock material transported and deposited by a glacier. Glacial drift is usually deposited when the glacier begins to melt.
glacial till	The unsorted sedimentary material, consisting of a mixture of clay, silt, sand, gravel and boulders, that is deposited directly from glacial ice and therefore not sorted. Also known as <i>till</i> or <i>glacial drift</i> .
glaciofluvial	Land feature whose origin is related to the processes associated with glacial meltwater.
glaciofluvial materials	The material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice.
glaciolacustrine	Related to lakes fed by melting glaciers, or to the deposits forming in the lakes.
GLUPB	The abbreviation for the Gwich'in Land Use Planning Board.
GLWB	The abbreviation for the Gwich'in Land and Water Board.

glycol	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.
GNWT	The abbreviation for the Government of the Northwest Territories.
GNWT RWED 2002	The abbreviation for the Government of Northwest Territories Ambient Air Standards.
GNWT, DoT	The abbreviation for the GNWT, Department of Transportation.
GPR	The abbreviation for ground-penetrating radar.
GPS	The abbreviation for global positioning system.
grading, pipeline	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.
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.
gravimetric	Relating to measurement by weight.
gray water	Wastewater from laundry, showers, sinks and kitchens.
ground bed	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.
ground ice	A general term referring to all types of ice contained in freezing and frozen ground.
ground-truthing survey	Measuring various properties, such as temperature and land use, conducted on the ground to validate or calibrate observations made from satellites or aircraft.
groundwater	The water within the earth that supplies water wells and springs.

GRRB	The abbreviation for the Gwich'in Renewable Resource Board.
GSA	The abbreviation for the Gwich'in Settlement Area.
GSC	The abbreviation for the Geological Survey of Canada.
GTC	The abbreviation for Gwich'in Tribal Council.
ha	The metric symbol for hectare.
habitat	The place or environment where a plant or animal naturally and normally lives and grows.
HADD	The abbreviation for harmful alteration, disruption or destruction of fish habitat.
hardness	A measure of the amount of alkaline earth compounds, such as calcium and magnesium, dissolved in water.
HDD	The abbreviation for horizontal directional drilling.
heat pipes	Closed steel tubes that remove heat from the soil and operate when air temperatures are less than soil temperatures.
heater station	A facility where natural gas is heated to prevent the formation of hydrates, or the freezing of unfrozen ground.
helipad	A cleared landing area for helicopters, located at camps and facilities.
heritage resources	Cultural, historic, archaeological and paleontological resources, including pre-contact and post-contact features.
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.
horizontal directional drilled crossing	A water crossing constructed using a pipeline construction technique in which 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> .
HSS	The abbreviation for Health and Social Services.

human environment effect	Any effect of the project on a social or economic condition or service, including direct effects as well as effects resulting from a change in the environment.
human health	A state of complete physical, mental and social well-being, and the ability to adapt to the stresses of daily life.
hummock	A rounded or conical mound or hillock, generally of equal dimensions and not ridge-like.
hummocky moraine	A strongly undulating surface of ground moraine, with a relative relief of up to 100 m, and showing steep slopes and deep, enclosed depressions.
hydrate, gas	A mixture of water and gas that forms a solid plug in a gas pipeline under certain conditions.
hydraulics	The branch of engineering concerned with the mechanics of fluids, especially liquids.
hydrocarbons	The 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.
hydrogeology	The science dealing with the occurrence of groundwater, its use and its functions in modifying the earth, primarily by erosion and deposition.
hydrology	The science that treats the occurrence, circulation, distribution and properties of the waters of the earth and their reaction with the environment.
hydrostatic testing	A 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. The 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> .

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>
ice lenses	<p>A dominantly horizontal, lens-shaped body of ice of any dimension. The term is commonly used for layers of segregated ice. Ice lenses can range in thickness from hairline to more than 10 m. Thick, extensive ice lenses are better termed massive ice beds.</p>
ice road	<p>A 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 winter road.</p>
ice wedge	<p>A massive, generally wedge-shaped body with its apex pointing downward, composed of foliated or vertically banded ice. The size varies from 10 cm to 3 m wide at the top, tapering to a feather-edge at a depth of 1 to 10 m.</p>
ice, excess	<p>The volume of ice in the ground that exceeds the total pore volume the ground would have under natural unfrozen conditions.</p>
ice, ground	<p>All types of ice contained in freezing and frozen ground.</p>
ice, massive	<p>Large masses of ground ice, including ice wedges, pingo ice, buried ice and large ice lenses.</p>
ice, pingo	<p>A perennial frost mound consisting of a core of massive ice, produced primarily by injection of water, and covered with soil and vegetation.</p>
ice, pore	<p>Ice occurring in the pores of soils and rocks.</p>
ice, segregated	<p>Ice formed by the migration of pore water to the freezing plane where it forms into discrete lenses, layers, or seams ranging in thickness from hairline to 10 m. It commonly occurs in alternating layers of ice and soil.</p>

ice, vein	Ice of any origin occupying cracks in permafrost, and occurring as horizontal layers or lenses, tabular sheets, wedges and reticulate nets.
ID	The abbreviation for inside diameter.
IFA	The abbreviation for Inuvialuit Final Agreement.
IGC	The abbreviation for the Inuvialuit Game Council.
ILA	The abbreviation for the Inuvialuit Land Administration.
IMDG	The abbreviation for International Maritime Dangerous Goods.
Imperial	Imperial Oil Resources Ventures Limited.
INAC	The abbreviation for Indian and Northern Affairs Canada.
incident	A specific unplanned event or sequence of events that has an unwanted and unintended effect on people's safety or health, on property or the environment, or on regulatory compliance.
inelastic deformations	The deformations caused by a material's inability to sustain a deformation without permanent change in size or shape.
infrastructure	The basic facilities, such as transportation, communications, power supplies and buildings, that enable an organization, project or community to function.
in-service test	A procedure that involves pressurizing a pipeline with hydrocarbon product and monitoring pressure maintenance.
interconnection facility	A facility at which two or more pipelines interconnect. In the MGP, there is an interconnect facility at Norman Wells and near the Alberta border. These facilities will be owned by Enbridge and NGTL, respectively, and will be the subject of a separate regulatory process. The only MGP equipment at these sites is a pig receiver and a block valve.
Inuvik area facility	The processing facility to be located near Inuvik where gas and liquids will be processed and separated, then delivered to the gas and NGL pipelines.
invasive species	An introduced species that out competes native species for space and resources.

I-O Model	The abbreviation for the Input-Output Model.
IRC	The abbreviation for the Inuvialuit Regional Corporation.
IRHSSA	The abbreviation for Inuvik Regional Health and Social Services Authority.
isolated open-cut water crossing	A type of water crossing technique in which a culvert or flume is laid across the watercourse to house the pipe and reduce the disruption to the aquatic resources.
ISR	The abbreviation for the Inuvialuit Settlement Region.
IUCN	International Union for Conservation of Nature and Natural Resources (World Conservation Union).
J	The metric symbol for joule.
J-function	A water saturation curve that relates water saturation to height above the gas-water contact.
joule	The unit of energy or work in the metre-kilogram-second system of units, equal to the work done by a force of 1 newton. Also known as a newton-metre of energy.
Joule-Thomson expansion	The adiabatic, irreversible expansion of a fluid flowing through a porous plug or partially opened valve. Also known as Joule-Thomson process.
JRP	The abbreviation for Joint Review Panel.
kame	A deposit, composed largely of material sorted by moving water, formed in direct contact with glacier ice.
kame delta	A deposit, often triangular, formed where a glacial stream entered into a proglacial lake. The ice-contact margin of the kame delta is often slumped and mixed with till.
kame terrace	A deposit, often sloping down-valley more steeply than the valley floor, formed as a deposit between a melting glacier or stagnant ice lobe and a higher valley wall or lateral moraine and left standing after the ice disappears. The ice content margin of the kame terrace is often slumped and mixed with till.

karst	Topography characterized by caves, sinkholes, disappearing streams, and underground drainage. Karst forms when groundwater dissolves pockets of limestone, dolomite, or gypsum in bedrock.
keq	An air quality unit that refers to the number of equivalent hydrogen ions. One keq = one kmol H ⁺ . For sulphur, one molecule is equivalent to two hydrogen ions. Each molecule of nitrogen is equivalent to one hydrogen ion.
kettle	A basin or bowl-shaped depression in surficial materials often containing a lake that was formed by the melting of a detached block of stagnant ice that was buried in the morainal deposit.
key indicator	A factor used to measure the status of a valued component.
kg	The metric symbol for kilogram.
kg/m³	The metric symbol for kilograms per cubic metre.
kg/s	The metric symbol for kilograms per second.
kilometre post	A marker for each kilometre along the centerline of the right-of-way used for reference points.
km	The metric symbol for kilometre.
km²	The metric symbol for square kilometres.
KP	The abbreviation for kilometre post.
L	The metric symbol for litre.
L/d	The metric symbol for litres per day.
lake crossing	A stationary body of water crossed by the pipeline.
large watercourse	A water channel that appears with a name on 1:50,000 Government of Canada topographic maps and has perennial flow.
lateral	A gathering pipeline that connects the production area facilities to the Inuvik area facility.
lateral, pipeline	A pipe that branches away from the central and primary part of the system.

laydown area	An area for placing pipe or tubing in a horizontal position on a pipe rack, or for storing other construction materials temporarily.
L_{eq}	The single number descriptor commonly used in most international standards for environmental sound measurements. The L _{eq} value, expressed in dBA, is the energy-averaged, A-weighted sound level for the complete measurement interval.
limestone	A sedimentary rock composed primarily of calcium carbonate.
line pipe	Sections of pipe that can be welded together to form a pipeline.
liquefaction	A change in the phase of a substance to the liquid state. Usually, this is a change from the gaseous to the liquid state, especially of a substance that is a gas at normal pressure and temperature.
logistics	The activities associated with procuring, maintaining and transporting materials, equipment and personnel.
longitudinal dune	One of a series of long, narrow dunes lying parallel both to each other and to the prevailing wind direction. Longitudinal dunes range from 60 m to 100 km in length and from 3.0 to 50 m in height.
LoO	The abbreviation for Licence of Occupation (right-of-way from INAC).
looping, pipeline	A method of increasing capacity on a pipeline, by laying additional pipe alongside part, or all, of an existing pipeline.
M	The metric symbol for mega (million or 10 ⁶).
m	The metric symbol for metre.
m/s	The metric symbol for metres per second.
m³	The metric symbol for cubic metre.
m³/d	The metric symbol for cubic metres per day.
m³/h	The metric symbol for cubic metres per hour.
MACA	The abbreviation for the GNWT Department of Municipal and Community Affairs.

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 gathering system	A system of pipelines and related facilities that includes four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers.
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> .
magnitude	Relating to an effect, the severity or intensity of the effect. It is rated as low, moderate or high.
massif	A large topographic or structural feature, usually of greater rigidity than the surrounding rock.
massive ice	A comprehensive term used to describe large masses of ground ice, including iced wedges, pingo ice, buried ice and large ice lenses.
maximum intended inventory	The maximum amount of a given hazardous material that, for safety reasons, is allowed on site.
medium sand	Material that passes a No. 10 (2.00 mm) sieve and is retained on a No. 40 (0.425 mm) sieve.
mesotrophic	Refers to a waterbody with a moderate level of nutrients, i.e., sustaining a moderate abundance of algae.
meter	An instrument for measuring and indicating, or recording, the volume of natural gas or NGL that has passed through it.
meter station	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.
mg/m³	The metric symbol for milligrams per cubic metre.

mitigation	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, restorations, compensation or other means.
mixedwood forest	A forest that includes deciduous and coniferous trees.
mm	The metric symbol for millimetre.
mobile camp	The front-end camps that accommodate the initial workforce involved in pre-construction activities.
mobilization	The movement of people or equipment to the work site.
modular fabrication	The process of assembling components into larger constructed modules in areas remote from the construction site. Also known as <i>modularization</i> .
modularization	The process of assembling components into larger constructed modules in areas remote from the construction site. Also known as <i>modular fabrication</i> .
module	A standardized part or 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.
molecular sieves	The synthetic zeolites, packaged in bead or pellet form, used in recovering contaminants or impurities from liquid and vapour product streams by selected adsorption, and used as a catalyst.
monitoring	Periodic inspection to meet the following objectives: <ul style="list-style-type: none">• observe and report on compliance with approved conditions• confirm effectiveness of approved protective measures• verify the accuracy of impact predictions• identify any effects not predicted in the impact assessment
moraine	An accumulation of glacial drift deposited by a glacier.
MSC	The abbreviation for the Meteorological Service of Canada.
muskeg	A water-soaked layer of decaying plant material, 1 to 3 m thick, on top of the overburden. Muskeg supports the growth of shallow root trees, such as black spruce and tamarack.

mutual aid agreements	Agreements made between companies working in the same areas and made with other agencies as required. These agreements list the type of response equipment and resources the companies are willing to supply in the event of an emergency. These agreements are typical in the oil and gas industry where sharing of equipment and resources may be required.
MVEIRB	The abbreviation for Mackenzie Valley Environmental Impact Review Board.
MVLUR	The abbreviation for Mackenzie Valley Land Use Regulations.
MVLWB	The abbreviation for the Mackenzie Valley Land and Water Board.
MVRMA	The abbreviation for the <i>Mackenzie Valley Resource Management Act</i> .
MW	The abbreviation for megawatt.
N/A	The abbreviation for not applicable.
N₂	The chemical formula for nitrogen.
N₂O	The chemical formula for nitrous oxide.
NACE	The abbreviation for the National Association of Corrosion Engineers.
native seed	A seed that is native to the ecological region being considered.
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.
n-C₄	The chemical formula for normal butane.
n-C₅	The chemical formula for normal pentane.
NDE	The abbreviation for nondestructive examination.
NEB	The abbreviation for the National Energy Board.

NEBA	The abbreviation for the <i>National Energy Board Act</i> .
NG	See non-granular.
NGL	The abbreviation for natural gas liquid.
NGL pipeline	The pipeline connecting the Inuvik area facility with the Enbridge Pipeline facilities at Norman Wells.
NGTL	The abbreviation for NOVA Gas Transmission Ltd.
Niglintgak field	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.
Niglintgak lateral	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.
NO₂	The chemical formula for nitrogen dioxide.
NOB	The abbreviation for net overburden.
nominal pipe size	The outside diameter of a pipe, expressed in inches.
non-furbearing mammals	Mammals whose pelts have little economic value, and therefore are not typically trapped for their fur.
non-granular (NG)	Non-granular material including sands, silts, and cohesive soils. It is unsuitable for most construction purposes, except non-structural fills.
non-native species	A species that is not native to the ecological region being considered.
normals, temperature	Long- term average conditions of temperature.
North	The Arctic, or the northern part of a province.
NO_x	The chemical symbol for oxides of nitrogen.
NPS	The abbreviation for nominal pipe size.
NTCL	The abbreviation for Northern Transportation Company Limited.

NTS	The abbreviation for not to scale.
nutrient	An environmental substance, i.e. element or compound, such as nitrogen or phosphorus, that is necessary for the growth and development of plants and animals.
NW	The abbreviation for northwest.
NWT	The abbreviation for the Northwest Territories.
NWTWB	The abbreviation for the Northwest Territories Water Board.
O&M	The abbreviation for operations and maintenance.
O₃	The chemical formula for ozone.
OD	The abbreviation for outside diameter.
OEM	The abbreviation for original equipment manufacturer.
OH&S	The abbreviation for occupational health and safety.
OhmMapper	A geophysical survey method using electrical resistivity.
oligotrophic	Refers to a waterbody that contains low levels of nutrients, i.e., sustains a low level of algae.
open cut water crossing	A type of water crossing technique that involves crossing a watercourse by cutting directly through it to lay the pipe.
operations phase	The phase of a project during which the pipeline and associated facilities are operated.
OPR	The abbreviation for onshore pipeline regulations of the National Energy 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 cover	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.

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.
outwash plain	A plain of glaciofluvial deposits of stratified drift from meltwater-fed, braided, and overloaded streams beyond a glacier's morainal deposits.
overburden	All material, including soil, sand, silt or clay, that lies on top of the pipeline.
overpressure protection equipment	Valves that mechanically monitor pressure and automatically close if a predetermined pressure is exceeded.
overwintering habitat	The habitat used during the winter as a refuge and for feeding.
oxygen scavenger	A chemical additive that removes dissolved oxygen from fluid systems.
ozone	A form of oxygen formed naturally in the upper atmosphere by a photochemical reaction with solar ultraviolet radiation.
PAI	The abbreviation for potential acid input.
palaeontological sites	Sites bearing evidence of multi-cellular invertebrate and vertebrate faunal remains, and plant materials that have been fossilized or otherwise preserved.
Parsons Lake field	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.
Parsons Lake lateral	The gathering pipeline connecting the Parsons Lake gas conditioning facility to a connection point at the Storm Hills pigging facility.
particulate matter, respirable	Fine particulate matter that is small enough to be breathed deeply into the respiratory tract.
passerine	Any perching bird of the order Passeriformes, having feet with three toes pointing forward and one pointing backward, including sparrows and most land birds.

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.
perennial spring	A spring that flows continuously throughout the year.
permafrost	Perennially frozen ground, occurring wherever the temperature remains below 0°C for several years.
permafrost, continuous	A category of permafrost where more than 90% of all ground is frozen.
permafrost, discontinuous	A category of permafrost where some of the underlying ground is unfrozen.
permafrost, friable	Permafrost in which the ice bonding between soil particles is very weak or nonexistent.
permafrost, ice-bonded	Ice-bearing permafrost in which the soil particles are cemented together by ice.
permafrost, poorly-bonded	Ice-bearing permafrost in which few of the soil particles are held together by ice.
permafrost, well-bonded	Ice-bearing permafrost in which all the soil particles are held together by ice.
permeability	The capacity of a porous rock, soil or sediment for transmitting a fluid without damage to the structure of the medium.
permitted area	The area within the boundary that defines the borrow site.
pH	The measure of relative acidity or alkalinity of a liquid.
physiognomic	Based on the external appearance, physical structure or growth form of a plant or plant community.
pig	An in-line scraper, i.e., brush, blade cutter or swab, that is forced through a pipeline by fluid pressure, to remove scale, sand, water and other foreign matter from the interior surface of a pipeline.
pig launcher	A facility on the pipeline for inserting and launching a pig.

pig receiver	A piping arrangement whereby an incoming pig can be diverted into a receiving cylinder, isolated and then removed.
pig trap	A device that traps a pig, once it has been pushed through a pipeline.
pig, smart	An inspection tool that is equipped with data-collection devices that relay detailed information about a pipeline to the operator as a pig travels down the pipe.
pigging	The act of pushing a device through a pipeline to physically clean deposits from the inner surface of the pipeline, remove liquids, or monitor.
pigging facilities	Receivers and launchers for the pipeline in-line inspection and cleaning tool.
pingo ice	A perennial frost mound consisting of a core of massive ice, produced primarily by injection of water, and covered with soil and vegetation.
PIP	The abbreviation for <i>Preliminary Information Package</i> .
pipe rack	Horizontal supports for oilfield tubular goods, such as casing, including liners, drill pipe, tubing and line pipe.
pipeline corridor	The 1 km-wide area, defined for the purpose of the EIS biophysical baseline and effects assessment studies, 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.
piston engine	A type of engine characterized by the reciprocating motion of pistons in a cylinder. Also known as a <i>displacement engine</i> and a <i>reciprocating engine</i> .
pit run material	Material as found in natural deposits.
PLA	The abbreviation for pipeline agreement.
plain	A level or very gently sloping, unidirectional (planar) surface with gradients up to and including 3° (5%). Local surface irregularities generally have a relief of less than 1 m.
plasticity	Putty-like behaviour of soil when wet, which affects workability.
PM_{2.5}	Respirable particulate matter.

polygons	The arrangements of rock, soil and vegetation formed on a level or gently sloping surface by frost action.
poorly-bonded permafrost	Ice-bearing permafrost in which few of the soil particles are held together by ice.
pore ice	Ice occurring in the pores of soils and rocks.
potable water	Water with qualities that are suitable or could be readily made suitable for human consumption.
POTC	The abbreviation for the Pipeline Operations Training Committee.
potential acid input	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.
PPE	The abbreviation for personal protective equipment.
ppm	The abbreviation for parts per million.
ppmw	The abbreviation for parts per million by weight.
precipitation	Any or all forms of water particles, whether liquid or solid, that fall from the atmosphere and reach the ground.
prehistoric archaeological resources	Archaeological sites, objects and affiliated materials that represent occupation by Aboriginal peoples before the arrival of European goods, people and the historic records that characterize their culture (in North America).
pressure testing	A 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. 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> .
private lands	Land that is owned and managed in the Northwest Territories by the Inuvialuit, Gwich'in and Sahtu peoples according to their respective land claims settlement.

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.
processing facility	A facility designed to dehydrate and condition raw gas for transport through the gathering system.
procurement	The activities that must take place to obtain, on schedule and at optimum price, materials or services needed to construct a project.
production	The operation of bringing raw natural gas to the surface for processing.
production area	The area that encompasses all project components located north of the Inuvik area facility, including the 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, defined for the purpose of the EIS biophysical baseline and effects assessment studies.
project proponents	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.
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.
pup joint	A length of drill or line pipe, tubing or casing shorter than 6.26 m.
PWNHC	The abbreviation for the Prince of Wales Northern Heritage Centre.
PWS	The abbreviation for the GNWT Department of Public Works and Services.
Q1	The abbreviation for the first quarter of the year (January 1 to March 31).
Q2	The abbreviation for the second quarter of the year (April 1 to June 30).

Q3	The abbreviation for the third quarter of the year (July 1 to September 30).
Q4	The abbreviation for the fourth quarter of the year (October 1 to December 31).
R	The abbreviation for watercourse run habitat. There are three quality classes: <ul style="list-style-type: none">• deep run (R1), with a maximum depth exceeding 1.5 m and an average depth equal to or greater than 1.0 m• moderately deep run (R2), with a maximum depth equal to or exceeding 1.0 m and an average depth greater than 0.75 m• shallow run (R3), with a maximum depth of 0.75 m and an average depth of less than 0.5 m.
raptor	A bird of prey that is known for its predatory habits of feeding on other animals.
raw natural gas	Natural gas from the ground that has not been processed. In the MGP, the raw natural gas consists of natural gas and natural gas liquids in a two-phase flow.
RCMP	The abbreviation for the Royal Canadian Mounted Police.
reciprocating engine	A type of engine characterized by the reciprocating motion of pistons in a cylinder. Also known as a <i>displacement engine</i> and a <i>piston engine</i> .
reclamation	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 may 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 contaminated site and revegetation, where necessary. Reclamation is not considered complete until the goals for reclamation have been achieved.
reconnaissance survey	A high-level biophysical survey that does not include a detailed sample regime.
repeater tower	A tower with a repeater used to transmit mobile and remote radio signals over a larger area.

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 sampling.
reserves, proven	Granular material whose occurrence, distribution, thickness and quality is supported by ground-truth information, such as geotechnical drilling, test pitting, and exposed stratigraphic sections.
reported	Unranked, national or subnational rank not yet assessed.
residual effects	Environmental or human environmental effects that remain after mitigation. Effects that are present after mitigation has been applied.
revegetation	The process of providing denuded land with a new cover of plants.
right-of-way	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.
riparian	Situated or dwelling on the margin of a river or other waterbody.
ripping	Mechanically breaking up frozen or consolidated ground in preparation for excavation.
rip-rap	A loose assemblage of broken stones erected in water, on a water bank or on soft ground as a foundation and for erosion protection. Also refers to a road made of logs (corduroy road) laid crosswise to the direction of travel.
riser	A vertical piece of equipment rising from an underground pipeline to the surface to allow for the control of valves and similar appurtenances.
ROW	The abbreviation for right-of-way.
RRC	The abbreviation for Renewable Resources Council.
RWED	The abbreviation for the Department of Resources, Wildlife, and Economic Development, GNWT.

safe operating limits	The process parameter limits beyond which the process is unsafe to operate and administrative controls are necessary to prevent hazards normally identified during risk assessments.
sand	Particles of rock between 0.062 and 2 mm in diameter.
sandstone	A clastic rock composed of particles that range in diameter from 0.062 to 2 mm. About 25% of all sedimentary rocks are sandstones.
SARA	The abbreviation for the <i>Species at Risk Act</i> .
SCADA	Supervisory control and data acquisition.
scalping	The removal or scraping of a layer by a bulldozer, grader or similar machinery.
scarify	Physical disturbance of compacted site surface material without actually turning it over, generally used as an aid to reclamation and revegetation efforts.
scarp	The steep cliff face that is formed by a slump.
scour	The erosion within a stream bed caused by the flow of water or ice.
scrubber	A device that uses a liquid to remove solid or liquid particles from a gas stream.
sedimentary rock	A rock made from the consolidation of solid fragments, as of other rocks or organic remains, or by precipitation of minerals from solution.
segregated ice	Ice formed by the migration of pore water to the freezing plane where it forms into discrete lenses, layers, or seams ranging in thickness from hairline to greater than 10 m.
segregation potential	A parameter in the empirical equation used to estimate frost heave rate. The temperature gradient, multiplied by the segregation potential, equals the heave rate.
SEIA	The abbreviation for socio-economic impact assessment.
shale	A sedimentary rock composed of detrital sediment particles less than 0.004 mm in diameter. Shales tend to be red, brown, black, or gray and usually originate in relatively still waters.

shared responsibility	Because human environment effects involve many aspects of everyday individual, family, community and public services conditions, the responsibility for managing these effects must be shared. The project will do its part, but will need the full and active cooperation, support and involvement of potentially affected individuals, families, communities and governments to effectively meet this challenge.
Shell	Shell Canada Limited.
shoofly	Access to or from a pipeline right-of-way or a bypass around an obstacle.
shutdown	The act of stopping work temporarily or stopping a machine or piece of equipment in operation.
sideslope	A lateral surface slope across a road or right-of-way providing an uneven surface.
siding, railroad	A short railroad track connected to the main track at one or more points and used to move railroad cars, to free traffic on the main line or for temporary storage of cars.
silt	Passes a No. 2 (0.075 mm) 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.
skid	A plank or roller on which a heavy object is placed to facilitate moving.
slash	Woody debris, e.g., limbs and branches, that is removed from large timber.
slug catcher	A vessel or series of pipes to collect liquids at the inlet of a pipeline facility, such as a compressor station.

slump	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. Slumping is common on natural cliffs and banks and on the sides of artificial cuts and fills.
SLUPB	The abbreviation for the Sahtu Land Use Planning Board.
SPDLUP	The abbreviation for Sahtu Preliminary Draft Land Use Plan.
SLWB	The abbreviation for the Sahtu Land and Water Board.
SMA	The abbreviation for special management area.
SO₂	The chemical formula for sulphur dioxide.
soil	The top few metres of regolith, generally including some organic matter derived from plants.
southern terminus	The southernmost point of the Mackenzie Valley pipeline, where the gas pipeline connects to the NGTL system.
sp.	The abbreviation for species (singular).
span lengths	The occurrence and length of unfrozen and frozen soil intervals.
spawning habitat	A particular type of area where a fish species chooses to reproduce. Preferred habitat (substrate, water flow, temperature) varies from species to species.
species	A group of organisms that actually or potentially interbreed and are reproductively isolated from all other such groups, i.e., a taxonomic grouping of genetically and morphologically similar individuals. It is the taxonomic category below genus.
species at risk	An extirpated, endangered or threatened species or a species of special concern, as defined in the <i>Species at Risk Act</i> .
spoil	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.
spoil side	The side of the pipeline right-of-way on which spoil material is stored. Generally on the opposite side of the construction activities.

spp.	The abbreviation for species (plural).
spread	A designated length of pipeline construction that is intended to be constructed by a single pipeline contractor over a single construction season.
spud barge	A barge that carries a crane or other similar equipment, which can be firmly grounded at the edge of the water, to act as a temporary dock to facilitate the offloading of cargo barges.
SSA	The abbreviation for the Sahtu Settlement Area.
staging area	An area used by migratory birds to prepare for, or rest during, migratory flights.
staging site	A location where equipment is stored, maintained or readied for work.
stakeholders	People or organizations with an interest or share in an undertaking, such as a commercial venture.
stakeholders	People or organizations with an interest in, or who are affected by, or share in an undertaking, as the Mackenzie gas project.
start-up	The act of starting up new machinery or equipment after commissioning, or re-starting machinery or equipment after a temporary shutdown or decommissioning.
STI	The abbreviation for sexually transmitted infections.
stockpile	A supply of materials, such as line pipe or granular materials, to be used later.
Storm Hills lateral	The gathering pipeline connecting the Storm Hills pigging facility to a connection point at the inlet of the Inuvik area facility.
stratosphere	A layer of atmospheric air above the troposphere and below the mesosphere extending to about 55 km above the earth's surface, where the temperature begins to increase with altitude.
stringing	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.

subdrain	A pervious backfilled trench containing a pipe with perforations or gravel for the purpose of intercepting groundwater or seepage and directing it away from the pipeline trench.
subsidence	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.
sweet natural gas	A gas that has very little or no sulphur content.
t	The metric symbol for tonne.
Taglu field	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.
Taglu lateral	The gathering pipeline connecting the Taglu field pad facility to a connection point at the Storm Hills pigging facility.
talik	The permanently unfrozen ground in regions of permafrost. Usually applies to a layer that lies above the permafrost, but below the active layer, that is, when the permafrost table is deeper than the depth reached by winter freezing from the surface.
TBD	The abbreviation for to be determined.
TC	The abbreviation for Transport Canada.
Tcf	The abbreviation for trillion cubic feet.
TCPL	The abbreviation for TransCanada Pipelines Limited.
TDS	The abbreviation for total dissolved solids.
temporary camp	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.
temporary workspace	Space adjacent to a permanent right-of-way, which is required during the construction period only, and is not required for operation of the pipeline.
tensile stress	The condition developed by a material under tension.

terrace	A single or assemblage of step-like forms, each of which consists of a scarp face and a horizontal or gently inclined surface above.
thaw bulb	An area of thawed ground in permafrost terrain surrounding a pipeline.
thaw settlement	The settlement that occurs when a warm pipeline thaws the surrounding frozen soil.
thaw unstable soils	Soils, generally containing a high percentage of ice, which are prone to settlement and/or loss of strength when thawed.
thermal conductivity	The quantity of heat that will flow through a unit area of a substance in unit time under a unit temperature gradient.
thermodynamics	The science of the relationship between heat and other forms of energy, such as mechanical and electrical.
thermoelectric generator	A form of electrical generator, in which a burner, fuelled directly off of a gas pipeline, heats a thermopile. The resulting temperature differential across the thermopile produces a flow of electrons that is used to power communications or valving equipment.
thermokarst	The process by which characteristic landforms result from the thawing of ice-rich permafrost or the melting of massive ice.
thermokarst lake	A lake occupying a closed depression formed by settlement of the ground following thawing of ice-rich permafrost or the melting of massive ice.
thermokarst terrain	The often irregular topography resulting from the melting of excess ground ice and subsequent thaw settlement.
thermokarst topography	An irregular land surface formed in a permafrost region by melting ground ice.
thermokarst, active	The process by which characteristic landforms are currently developing as a result of thawing of ice-rich permafrost or melting of massive ice.
thermo-syphon	Self-contained, passive heat transfer units used to maintain thermal regimes in permafrost for increased soil strength and stability.

till	The unsorted sedimentary material deposited directly by, and underneath, a glacier, consisting of a mixture of clay, silt, sand, gravel and boulders. Also known as glacial till.
timberline	The altitudinal level on a mountain, above which no trees grow. Also known as <i>tree line</i> .
TK	The abbreviation for traditional knowledge.
TLUR	The abbreviation for Territorial Land Use Regulations of the GNWT.
TOC	The abbreviation for total organic carbon.
topography	The configuration of a surface, including its relief and natural and artificial features.
total dissolved solids	A measure of the total concentration of chemicals that are dissolved in water or that are in particulate form smaller than a standard-size filter, i.e., 0.45 microns, in water. These chemicals are usually salts, such as calcium, sodium, chloride and sulphate ions (also known as TDS).
total organic carbon	A measure of the dissolved and particulate inorganic carbon, most of which is in the form of carbon dioxide (CO ₂), and carbonate (CO ₃) and bicarbonate (HCO ₃) compounds (also known as TOC).
total suspended solids	A measure of the total concentration of suspended solids in water (also known as TSS).
TP	The abbreviation for test pit.
traditional knowledge	Cultural knowledge that is based on direct observation or information passed on orally from other community members, developed from the experience of living on the land.
travel lane	The portion of the right-of-way used for travel by vehicles and equipment.
tree line	The altitudinal level on a mountain above which no trees grow. Also known as <i>timberline</i> .
trench, pipeline	A long, narrow excavation dug in the earth in which a pipeline is buried. Also known as a <i>ditch</i> .
trencher	A piece of equipment used to excavate the trench.

trencher lane	A surveyed line that is used to guide the trencher operator to ensure the correct placement of the trench within the pipeline right-of-way.
trenchless crossing	A water crossing technique used in pipeline construction in which the pipe is buried under the riverbed at depths much greater than in 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 directional drilled crossing</i> (HDD).
TSS	The abbreviation for total suspended solids.
tubing	A relatively small-diameter pipe that is run into a well to serve as a conduit for oil and gas to pass to the surface.
tundra	A vast treeless zone, lying between the ice cap and the timberline of North America and Eurasia, that has a permanently frozen subsoil.
turnaround	A period during which a plant is shut down completely for repairs, inspections, or modifications that cannot be made while the plant is operating.
unconformity	The surface of contact between two groups of strata that represent a break in the geological record.
utilities	The supply of electricity, natural gas, water, sewer drains and other services.
UTM	The abbreviation for Universal Transverse Mercator.
valued component	A characteristic or feature that represents important human environment conditions identified by assessment specialists, communities or stakeholders.
VC	The abbreviation for valued component.
vegetated channel	An ephemeral watercourse that might be a depression or swale. This kind of watercourse experiences flow primarily only during spring runoff. It has no discernable banks or evidence of annual sediment transport.

vegetation types of concern	Vegetation communities that are within a small area, might have a slow recovery time, are areas that contain large number of plant species unique to the plant community, have rare plant species associated with the plant community or have the potential for disproportionate project effects relative to the vegetation's extent on the landscape.
vein ice	A comprehensive term for ice of any origin occupying cracks in permafrost. It occurs in various forms, including horizontal layers or lenses, tabular sheets, wedges and reticulate nets.
veneer	A mantle of unconsolidated materials too thin to mask the minor irregularities of the surface of the underlying material. It is between about 10 cm and 1 m thick and possesses no constructional form typical of the material genesis.
VHF	The abbreviation for very high frequency.
VOC	The abbreviation for volatile organic compound.
volatile organic compound	Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, methane, ethane, metallic carbides or carbonates, and ammonium carbonate, that evaporates readily and participates in atmospheric photochemical reactions, including the formation of ozone (also known as VOC).
volumetric	Relating to measurement by volume.
V_{sh}	The abbreviation for volume of shale.
vugh	A cavity or hollow in rock or lode, created by mining, that is often lined with crystals. Also known as a vugg or vug.
waste management plan	The system developed to track and control emissions and waste, and evaluate pollution-prevention steps.
wastewater	Water that is mostly vapour condensed from natural gas and any free water produced with the natural gas.
water crossing	A location where a pipeline crosses a stream or a river.
water table	The surface of the saturated zone of permeable rocks beneath the earth's surface.

watercourse	A natural or artificial channel with perennial or intermittent flow and definable bed and banks.
waterfowl	Aquatic birds, especially swimming game birds, such as swans, ducks and geese.
WCB	The abbreviation for the Workers' Compensation Board.
weeds	Opportunistic species that follow human disturbance of the habitat, a plant growing where it is not desired, or a plant out of place (Alberta Agriculture 1998).
well-being	Everything that affects the experience of life, including the circumstances of physical existence and the quality of relationships.
well-bonded permafrost	Ice-bearing permafrost in which all the soil particles are held together by ice.
wellness	Includes physical, emotional and mental health, and relationship well-being.
wetlands	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.
wheel ditcher	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.
windrow	A linear stockpile of material cleared, graded or excavated from the right-of-way.
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> .
winterization	The process of maintaining temperature in a piping system by heating the system with mechanical or electrical components. Also known as heat tracing.
WMP	The abbreviation for waste management plan.
WNW	The abbreviation for west-northwest.

work side	The side of the pipeline right-of-way that construction activities such as stringing, welding, coating and lowering-in take place.
wrinkling, pipe	The waviness around the edges of a pipe wall.
WSW	The abbreviation for west-southwest.

