

**APPLICATION FOR APPROVAL OF
THE DEVELOPMENT PLAN FOR
PARSONS LAKE FIELD
PROJECT DESCRIPTION****GLOSSARY**

%	The symbol for percent.
°	The symbol for degree.
°C	The symbol for degree Celsius.
~	The symbol for about.
≥	The symbol for equal to or greater than.
<	The symbol for less than.
±	The symbol for plus or minus.
µm	The abbreviation for micron.
2-D	The abbreviation for two-dimensional.
3-D	The abbreviation for three-dimensional.
a	The metric symbol for year.
abandonment and reclamation	The act of permanently stopping operations, removing facilities and restoring land to a productive state.
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.
abrupt deviation change	A sudden rise or drop in the hole angle and direction.
access road	A temporary or permanent road that provides access to a pipeline right-of-way or to a facility, and which is not open to the public.
adfreezing	The process by which one object adheres to another by the binding action of ice.
aliasing	A technique used to enable unambiguous reconstruction of a property that has been too coarsely sampled.
ambient temperature	The temperature of the medium surrounding an object, or the atmospheric temperature.

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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.
ANSI	The abbreviation for American National Standards Institute.
anticline	Rock layers folded in the shape of an arch. Anticlines sometimes trap oil and gas.
API	The abbreviation for American Petroleum Institute.
aquifer	A water-saturated, permeable body of rock capable of transmitting significant or usable quantities of groundwater to wells and springs under ordinary hydraulic gradients.
ASME	The abbreviation for American Society of Mechanical Engineers.
ASTM	The abbreviation for American Society for Testing and Materials.
ATV	The abbreviation for all-terrain vehicle.
azimuth	The direction of the wellbore in directional drilling, or the face of a deflection tool in degrees.
base case	The business case that represents a set of assumptions used to establish the design basis, and against which alternatives are compared.
basic safety objective	The level of risk below which it is not necessary to consider any further reduction measures. Activities that involve risks at this level or lower may be permitted without constraint. This may be taken to represent the target of performance.
bbbl	The abbreviation for barrel.
blanket	A layer of unconsolidated material thick enough to mask minor irregularities of the surface of the underlying unit but still thin enough to conform to the general underlying topography. A blanket is greater than 1 m thick and has no constructional forms typical of the materials' genesis. Outcrops of the underlying unit are rare.
blowdown	The act of emptying or depressurizing material in a vessel or pipes.
blowout preventer stack	The assembly of well control equipment, including preventers, spools, valves and nipples, connected to the top of the wellhead.
borrow site	An area that could be excavated to provide material, such as gravel or sand, to be used as fill elsewhere.
bottomhole	The lowest or deepest part of a well.

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bridge plug	A temporary plug used during well testing that can be drilled through later.
build-and-hold profile	A process in which the wellbore angle is built up from vertical at a planned rate, then the angle is held constant to the bottomhole target.
CAPP	The abbreviation for the Canadian Association of Petroleum Producers.
casing	Steel pipe placed in an oil or gas well as drilling progresses, to prevent the wall of the hole from caving in during drilling, to prevent seepage of fluids, and to provide a means of extracting petroleum if the well is productive.
casing string	The entire length of all the casing run in a well.
cathodic protection	A method of protecting a metal structure from corrosion by making its surfaces cathodic and controlling the location of anodic areas to reduce corrosion damage to tolerable levels.
CDD	The abbreviation for Commercial Discovery Declaration.
CEC	The abbreviation for Canadian Electrical Code.
cf	The abbreviation for cubic feet.
CO	The chemical formula for carbon monoxide.
CO₂	The chemical formula for carbon dioxide.
COGOA	The abbreviation for <i>Canada Oil and Gas Operations Act</i> .
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 <i>gas turbine</i> .
commissioning	The act of charging a system and doing checkouts to ensure that equipment functions safely before start-up.
ConocoPhillips	The abbreviation for ConocoPhillips Canada (North) Limited.
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.
CPI	The abbreviation for Consumer Price Index.
CRA	The abbreviation for corrosion-resistant alloy.
CSA	The abbreviation for Canadian Standards Association.
dBA	The abbreviation for decibel adjusted.

GLOSSARY

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.
delineation well	A well drilled to evaluate the quality, thickness and areal extent of a reservoir.
delta	An alluvial deposit, usually triangular in shape, at the mouth of a river, stream, or tidal inlet.
dew point	The temperature at which a liquid, e.g., water vapour, at a specified pressure, begins to condense from a gas.
diagenesis	All the changes that take place in a sediment at low temperature and pressure after deposition.
directional drilling	A drilling method in which the wellbore intentionally deviates from the vertical.
dock	A berth or wharf, or an artificially enclosed body of water, for loading and unloading ships and barges.
downhole	Pertaining to the wellbore.
DPA	The abbreviation for Development Plan Application.
drilling mud	The fluid circulated through the wellbore during rotary drilling of a hydrocarbon well or through the borehole for a horizontal directionally drilled watercourse crossing.
DST	The abbreviation for drill stem test.
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.
EG	The abbreviation for ethylene glycol.
EIS	The abbreviation for Environmental Impact Statement.
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.
ExxonMobil	The abbreviation for ExxonMobil Canada Properties.

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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.
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.
fluvial	Relating to, or produced by, the action of a stream or river.
footprint	The amount and shape of the area disturbed.
freshet	A small freshwater stream.
gas pipeline	A system of pipelines, compressor stations and other related facilities that transport natural gas from the gathering system to the southern terminus. Also referred to 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 <i>combustion turbine</i> .
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 Taglu lateral, Niglintgak lateral, Parsons Lake lateral and Storm Hills lateral.
gathering system	A system of pipelines and related facilities that include four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers. Also referred to as the <i>Mackenzie gathering system</i> .
geotechnical	Related to the application of scientific methods and engineering principles to civil engineering problems, by acquiring, interpreting and using knowledge of materials of the crust of the earth.
geothermal	Pertaining to heat within the earth.
Gm³	The metric symbol for billion cubic metres.
GNWT	The abbreviation for Government of the Northwest Territories.
granular material	Material deposits that have a granulated surface or structure, such as gravel.
GST	The abbreviation for goods and services tax.
GWC	The abbreviation for gas–water contact.

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H₂S	The chemical formula for hydrogen sulphide.
ha	The metric symbol for hectare.
habitat	The part of the physical environment in which a plant or animal lives.
heavy oil	Crude oil that has a low measure of specific gravity.
heritage resources	Cultural, historic archaeological and paleontological resources that can include pre-contact and post-contact features.
hertz	A unit of frequency.
horst block	A raised elongated block of land bounded by faults on both sides.
hot work	Work that produces sparks, flames or ignition sources, such as welding, or using electrical tools, combustion engines and nonexplosion-proof electronic equipment.
HSE	The abbreviation for health, safety and environment.
HSE & SD	The abbreviation for health, safety and environment and sustainable development.
HTC	The abbreviation for Hunters and Trappers Committee.
hydrate, gas	A mixture of water and gas that forms a solid plug in a gas pipeline under certain conditions.
hydraulics	The branch of science and technology concerned with the mechanics of fluids, especially liquids.
hydrocarbons	Organic compounds of hydrogen and carbon whose densities, boiling points and freezing points increase as their molecular weights increase. Petroleum is a mixture of many different hydrocarbons.
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.
Hz	The abbreviation for hertz.
ice road	A secondary road made of compact snow or ice, often plowed over a frozen lake or ground, and which is impassable in the summer. Also known as <i>winter road</i> .
ID	The abbreviation for inside diameter.

GLOSSARY

IEEE	The abbreviation for Institute of Electrical and Electronic Engineers.
IGC	The abbreviation for Inuvialuit Game Council.
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.
infrastructure	Basic facilities, such as transportation, communications, power supplies and buildings, which enable an organization, project or community to function.
Inuvik area facility	The gas and NGL processing facility for the Mackenzie Gas Project, to be located near Inuvik.
IPCC	The abbreviation for Intergovernmental Panel on Climate Change.
Ira	The abbreviation for radioactivity index.
IRC	The abbreviation for Inuvialuit Regional Corporation.
ISA	The abbreviation for Instrument Society of America.
J-function	A water saturation curve that relates water saturation to height above the gas-water contact.
k	The abbreviation for permeability.
KB	The abbreviation for kelly bushing.
KCl	The chemical formula for potassium chloride.
kerogen	A solid organic material that yields hydrocarbons on heating and distillation.
key indicator	A factor used to measure the status of a valued environmental component.
keyseats	A small diameter channel worn into the side of a large diameter wellbore.
KI	The abbreviation for key indicator.
km	The metric symbol for kilometre.
km²	The metric symbol for square kilometres.
kPa	The metric symbol for kilopascal.
lateral, pipeline	A pipe that branches away from the central and primary part of the system.

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laydown area	An area for placing pipe or tubing in a horizontal position on a pipe rack, or for storing other construction materials temporarily.
LEL	The abbreviation for lower explosive limit.
LiDAR survey	An aerial survey method that uses an instrument in which a ruby laser generates intense infrared pulses in beam widths as small as 30 seconds of arc. Beam reflections and scattering effects of clouds, smog layers and some atmospheric discontinuities are measured by radar technologies. It can also be used for tracking weather balloons, smoke puffs and rocket trails. Derived from laser infrared radar.
line of strike	The direction taken by a structural surface, such as a fault plane, as it intersects the horizontal. Also known as a <i>strike</i> .
logistics	The activities associated with procuring, maintaining and transporting materials, equipment and personnel.
Mackenzie gathering system	A system of pipelines and related facilities that include four gathering pipelines, the Inuvik area facility, the NGL pipeline and related facilities, such as valves, pig launchers and receivers. Also referred to as the <i>gathering system</i> .
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 referred to as the <i>gas pipeline</i> .
magnitude, of effect	An attribute of a project-specific environmental effect. Effect magnitude is either none, low, moderate or high.
magnitude, high	The project effect on the key indicator will exceed its established guideline levels or standards.
magnitude, low	The project will affect the key indicator, but the effect is unlikely to be detectable, i.e., it is less than 5% of established guideline levels or standards for that indicator.
magnitude, moderate	The project will have a detectable effect on the key indicator, i.e., greater than 5% of guideline values and standards, but the predicted effect is within established guideline levels or standards for that indicator.
magnitude, none	The project will not change the key indicator.
maximum intended inventory	The maximum amount of a given hazardous material that, for safety reasons, is allowed on site.
MD	The abbreviation for measured depth.

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mD	The abbreviation for millidarcy.
measured depth	The total length of the wellbore, measured along its actual course through the earth. Measured depth can differ from true vertical depth, especially in directionally drilled wellbores.
mitigation	The elimination, reduction or control of the adverse environmental effects of the project, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means.
MLA	The abbreviation for Member of the Legislative Assembly.
Mm³	The metric symbol for million cubic metres.
molecular sieves	Synthetic zeolites, packaged in bead or pellet form, used in recovering contaminants or impurities from liquid and vapour product streams by selected adsorption, and as a catalyst.
monobore-style completion	A well completion method in which the internal diameter of the final completion is the same from total depth to surface.
MPa	The metric symbol for megapascal.
ms	The abbreviation for milliseconds.
mss	The abbreviation for metres subsea.
N/A	The abbreviation for not applicable.
NACE	The abbreviation for National Association of Corrosion Engineers.
natural gas	A compressible mixture of hydrocarbons with a low specific gravity that occurs naturally in a gaseous form.
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, with little or no methane or ethane.
NEB	The abbreviation for National Energy Board.
NFPA	The abbreviation for National Fire Protection Association.
NGL	The abbreviation for natural gas liquid.
NOB	The abbreviation for net overburden.
NO_x	The chemical formula for oxides of nitrogen.

GLOSSARY

NWT	The abbreviation for Northwest Territories.
O&M	The abbreviation for operations and maintenance.
OD	The abbreviation for outside diameter.
OEM	The abbreviation for original equipment manufacturer.
OGIP	The abbreviation for original gas-in-place.
OH&S	The abbreviation for occupational health and safety.
operating procedures manual	A controlled collection of site-specific operating procedures.
OWC	The abbreviation for oil–water contact.
pad	The surface parts of a multiwell drilling or production site, including wells, buildings, piping and electrical facilities.
PBR	The abbreviation for polished bore receptacle.
permafrost	Perennially frozen ground, occurring wherever the temperature remains below 0°C for several years.
permeability	The capacity of a porous rock, soil or sediment for transmitting a fluid without damage to the structure of the medium.
PhiE	The abbreviation for effective porosity.
pig	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.
pigging	The act of pushing a device through a pipeline in order to physically clean deposits from the inner surface of the pipeline, or to remove liquids.
PIP	The abbreviation for Preliminary Information Package.
PMT	The abbreviation for project management team.
polished bore receptacle	A device made up in the casing string into which the bottom of the tubing string is placed or landed.
POTC	The abbreviation for Pipeline Operations Training Committee.
PPE	The abbreviation for personal protective equipment.
ppm	The abbreviation for parts per million.

GLOSSARY

pre-stack time migration	A geophysical process that attempts to position correctly or focus seismic data before the common mid-point stacking process.
proponents	The two organizations (ConocoPhillips and ExxonMobil) that are undertaking the Parsons Lake field development.
public consultation	The process of involving affected parties in the design, planning and operation of a project. The process requires that the proponents give the parties to be consulted notice of the matter in sufficient form and detail to allow them to prepare their views on the matter. They are also given a reasonable amount of time to prepare their views and an opportunity to present their views to the proponents, who consider the views presented, fully and impartially.
pup joint	A length of drill or line pipe, tubing or casing shorter than range (6.26 m) for drill pipe in length.
PVT	The abbreviation for pressure-volume-temperature.
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).
RCMP	The abbreviation for Royal Canadian Mounted Police.
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.
recompletion	After the initial completion of a well, the action and techniques of re-entering the well and redoing or repairing the original completion to restore the well's productivity.
reservoir	A subsurface, porous, permeable rock body containing a natural accumulation of oil or gas, or both.
residual effects	Effects that are present after mitigation is applied.
revegetation	The process of providing denuded land with a new cover of plants.
RFT	The abbreviation for repeat formation test.

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right-of-way	The right of passage or of crossing over someone else's land. Also, an easement in lands belonging to others that is obtained by agreement or lawful appropriation for public or private use.
risk assessment	The process by which the results of a risk analysis are used to make decisions on the acceptability of the risk.
RTU	The abbreviation for remote terminal unit.
R_w	The abbreviation for formation water resistivity.
safe operating limits	Process parameter limits beyond which the process is unsafe to operate and administrative controls are necessary to prevent hazards normally identified during risk assessments.
sandstone	A consolidated rock composed of sand grains cemented together.
SCADA	The abbreviation for Supervisory Control and Data Acquisition.
SCAL	The abbreviation for special core analysis.
scf	The abbreviation for standard cubic feet.
SDL	The abbreviation for Significant Discovery Licence.
sediment	Fragmented material from weathered rocks and organic material that is suspended in, transported by and eventually deposited by water or air.
seismic program	A study to obtain detailed information from earth vibrations that are produced naturally or artificially (as in geophysical prospecting).
service rig	A hoist and engine, mounted on a wheel chassis with a self-erecting mast, that is used to service wells.
shale	A fine-grained laminated or fissile sedimentary rock made up of silt or clay-size particles.
SHARE	The abbreviation for Safety, Health and Respect for the Environment, a ConocoPhillips industry and contractor safety initiative.
shutdown	The act of stopping work temporarily or stopping a machine or piece of equipment in operation.
Significant Discovery Licence	A licence, issued under the provisions of the Canada Petroleum Resources Act, which allows the licence holder to explore, drill and test for petroleum and to develop frontier lands to produce petroleum.
silt	A term used for detrital rocks that consist predominantly of particles ranging in size from 1/16 to 1/256 mm.

GLOSSARY

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.
slick line	A slender, small diameter, rod-like or thread-like piece of metal that is used for lowering special tools, such as perforating guns, into a well.
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.
spawning habitat	A particular type of area where a fish species chooses to reproduce. Preferred habitat (substrate, water flow and temperature) varies from species to species.
SSSV	The abbreviation for subsurface safety valve.
staging site	A location where equipment is stored, maintained or readied for work.
stakeholders	People who have the ability to significantly affect or be affected by the company's ability to achieve its goals.
start-up	The act of starting up new machinery or equipment after commissioning, or re-starting up machinery or equipment after a temporary shutdown or decommissioning.
stockpile	A storage supply of something, such as line pipe or soil, to be used later.
straddle packer	Two packers separated by a spacer of variable length. A straddle packer may be used to isolate sections of open hole to be treated or tested or to isolate certain areas of perforated casing from the rest of the perforated section.
strike	The direction taken by a structural surface, such as a fault plane, as it intersects the horizontal. Also known as a <i>line of strike</i> .
sub	A short, threaded piece of pipe used to adapt parts of the drilling string that cannot otherwise be screwed together because of differences in thread size or design.
sustainable development	A method of conducting corporate business to promote economic growth, a healthy environment and vibrant communities, now and into the future.
S_w	The abbreviation for water saturation.
sweet natural gas	Gas that has no more than the maximum sulphur content, as defined by the specifications for the sales gas from a plant or by a legal body.

GLOSSARY

synthetic seismogram	A modelled seismic reflection, trace manufactured by convoluting an assumed seismic wavelet with a reflectivity series derived from well logs.
t	The metric symbol for tonne.
task risk assessment	A risk assessment carried out on activity-based items on specific or related jobs or operations.
Tcf	The abbreviation for trillion cubic feet.
thermokarst	An irregular land surface formed in a permafrost region by melting ground ice.
thermosiphon	A closed system of tubes connected to a water-cooled engine which permits natural circulation and cooling of the liquid by using the difference in density of the hot and cold portions.
TOC	The abbreviation for total organic carbon.
topography	The configuration of a surface, including its relief and natural and artificial features.
TR-SCSSSV	The abbreviation for tubing-retrievable surface controlled subsurface safety valve.
traditional harvest	Activities involving the harvest of traditional resources, such as hunting and trapping, fishing, gathering medicinal plants, and travelling to engage in these activities.
traditional knowledge	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.
tubing	Relatively small-diameter pipe that is run into a well to serve as a conduit for the passage of oil and gas 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.
TVD	The abbreviation for true vertical depth.
unconformity	Surface of contact between two groups of strata that represent a hiatus in the geological record.
V_{sh}	The abbreviation for volume of shale.

GLOSSARY

valued component	Resources or environmental features that are important to human populations, have regional, national or international profiles, or if altered from their existing status, will be important in evaluating the impacts of development or human actions and in focusing management or regulatory policy.
VC	The abbreviation for valued component.
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. Also known as a <i>watercourse crossing</i> .
WCB	The abbreviation for Workers' Compensation Board.
wellbore	The hole drilled by the bit in a well.
wellhead	The equipment installed at the surface of the wellbore.
well log	The record produced by various sensors in an instrument package lowered down a borehole.
winter road	A secondary road made of compact snow or ice, often plowed over a frozen lake or ground, and which is impassable in the summer. Also known as <i>ice road</i> .
wireline	A slender, small diameter, rod-like or thread-like piece of metal that is used for lowering special tools, such as perforating guns, into a well.
wireline unit	A service vehicle or unit on which the spool or wireline is mounted for use in downhole wireline work.
workover	One or more of a variety of remedial operations performed on a producing oil or gas well, to try to increase production.
XRD	The abbreviation for X-ray diffraction.

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