This glossary contains definitions of certain technical terms used in this Prospectus in connection with our business. These terms and their given meanings may not correspond to industry standard definitions or usage of these terms.

Technical Terms

"1P"	Proved Reserves
"2P"	Proved plus Probable Reserves
"3P"	Proved plus Probable plus Possible Reserves
"2D"	Two-dimensional seismic data, being an interpretive data that allows a view of a vertical cross-section of subsurface strata beneath a prospective area
"3D"	Three-dimensional seismic data, being geophysical data that depicts the subsurface strata in three dimensions. 3D seismic data typically provides a more detailed and accurate interpretation of the subsurface strata than 2D seismic data
"air shed"	A part of the atmosphere that behaves in a coherent way with respect to the dispersion of emissions and that acts as a geographical boundary for the monitoring of quality standards
"amphipora"	Rock forming sponges of Mid-Paleozoic reef complexes
"AOSTRA"	Alberta Oil Sands Technology Research Authority
"apex"	the thickest point of a formation
"API"	American Petroleum Institute, a trade association for the oil and natural gas industry in the United States, of which our Company is not a member
"API° gravity" or "API°"	American Petroleum Institute gravity, which is a measure of how heavy or light a petroleum liquid is compared to water. If a petroleum liquid's API gravity is greater than 10 degrees, it is lighter and floats on water; if less than 10 degrees, it is heavier than water and sinks. API gravity is thus a measure of the relative density of a petroleum liquid and the density of water, but it is used to compare the relative densities of petroleum liquids. A higher API gravity indicates a lighter and less dense liquid

"Assets"	A resource controlled by an enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise
"barrel"	A unit of volume equal to 42 US gallons
"best estimate"	At least a 50% probability (P50) that the quantities actually recovered will equal or exceed the best estimate
"bioturbation"	The displacement and mixing of sediment particles (i.e. sediment reworking) and solutes (i.e. bio-irrigation) by fauna (animals) or flora (plants)
"bitumen"	A naturally occurring heavy viscous form of crude oil measured at 10 API° or less and with viscosity greater than 10,000 milliPascal seconds
"bottom water"	A reservoir interval that is primarily saturated with water and is immediately below and in communication with the bitumen zone
"Bow River"	Bow River Blend, a conventional heavy sour crude oil blend that contains crude oil that has been blended with lighter hydro carbon diluents, such as condensate, to meet the required density and sulphur content
"brachipods"	A phylum of marine animals that have hard "valves" (shells) on the upper and lower surfaces. They are hinged at the rear end, while the front can be opened for feeding or closed for protection
"cap rock"	A relatively impermeable rock, commonly shale, that forms a barrier or seal above reservoir rock so that injected or *in situ* fluids cannot migrate beyond the reservoir
"CAPP"	Canadian Association of Petroleum Producers, an association representing Canada's upstream oil, oil sands and natural gas industry, of which our Company is not a member
"casing"	large diameter pipe that is assembled and inserted into a recently drilled section of a well and typically held in place with cement. Casing prevents contamination, provides strong foundations for the well, seals off high pressure zones from the surface and provides a smooth internal well for installing production equipment.
"carbonate"	A class of sedimentary rock whose chief mineral constituents (95% or more) are calcite, aragonite and dolomite. Limestone, dolostone (or

	dolomite) and chalk are carbonate rocks. Carbonate rocks are common hydrocarbon reservoir rocks
"CERI"	The Canadian Energy Research Institute, an independent, non-profit research institute founded in 1975 that is committed to the analysis of energy economics and related environmental policy issues in the production, transportation, and consumer sectors
"condensate"	a low density mixture of hydrocarbon liquids that is commonly used as a diluent
"CHOPS"	Cold Heavy Oil Production with Sand, a technique used for the extraction of conventional heavy oil in which sand is pumped out of the well bore with oil, leading to improved recovery
"clastic"	Sediment consisting of weathered fragments derived from pre-existing rocks and transported elsewhere and redeposited before forming another rock. Examples of common clastic sedimentary rocks include siliciclastic rocks such as conglomerate, sandstone, siltstone and shale
"clinoforming"	the forming of an underwater land formation
"CO_2"	Carbon dioxide
"cogeneration of power"	generating steam and electric power at the same time from the same energy source
"Cold Lake Blend"	Cold Lake Blend, a bitumen blend heavy sour crude oil that contains crude oil and bitumen that have been blended with lighter hydrocarbons diluents, such as condensate, to meet the required density and sulphur content
"cold production"	A non-thermal production process for heavy oil. During the cold production process, heavy oil and sand are produced simultaneously through the use of a pump, which causes reservoir pressure to decrease
"completion"	the process of making a well ready for production
"contingent resources"	Quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations but the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies

"conventional heavy oil"	A heavy crude oil produced through conventional means without thermal stimulation that is measured at 20 API° or less. Our conventional heavy oil development at Muskwa utilises CHOPS for primary production without any thermal stimulation, but due to the nature of the oil produced at Muskwa it falls under the 'Bitumen' classification (quantified as crude oil with API gravities lower than 10 degrees and viscosities greater than 10,000 milliPascal seconds).
"Cretaceous"	a geological period and system of the Mesozoic era spanning from approximately 145.5 to 65.5 million years ago
"crude oil"	a combustible hydrocarbon usually processable into a variety of petrochemicals
"CSOR"	Cumulative steam to oil ratio
"CSS" or "Cyclic Steam Stimulation"	Cyclic steam stimulation, an *in situ* process used to recover bitumen from oil sands. In this method, the well is put through cycles of steam injection, soak and oil production. First, steam is injected into a well at a temperature in excess of 175 to 250 degrees celsius for a period of weeks to months; then, the well is allowed to sit for days to weeks to allow heat to soak into the formation and, later, the hot oil is pumped out of the well for a period of weeks or months. Once the production rate falls off, the well is put through another cycle of injection, soak and production
"CSUG"	Canadian Society for Unconventional Gas, a formal not-for-profit society, registered in Alberta in 2002, of which our Company is not a member
"delineation"	determination of the physical boundary of something
"delineation well"	A well that is so closely located to another well penetrating an accumulation of petroleum that there is a reasonable expectation that another portion of the accumulation will be penetrated by the first mentioned well. The drilling of the first-mentioned well is necessary in order to determine the physical extent, reserves and commercial value of the accumulation
"deltaic"	The adjective form of delta. A delta is an area of deposition or the deposit formed by a flowing sediment-laden current as it enters an open or standing body of water, such as a river spilling into a gulf
"Devonian"	The Devonian period is a geologic period and system of the Paleozoic era spanning from 416 to 359.2 million years ago

"dilbit"	A blend of diluents and bitumen
"diluent"	Lighter viscosity petroleum products that are used to dilute bitumen for transportation in pipelines
"dolomite"	A rhomboidal calcium-magnesium carbonate mineral with the chemical formula $CaMg(CO_3)_2$
"Dry Well"	A well found to be incapable of producing oil or gas in sufficient quantities to justify completion as a producing oil or gas well
"Edmonton Par"	Edmonton Par, a light sweet crude oil
"EOR" or "enhanced oil recovery"	Enhanced oil recovery involves the recovery of oil through the injection of water, solvents and gas to displace oil *in situ*
"estuarine"	The adjective form of estuary. An estuary is a semi-enclosed coastal environment of deposition in which a river mouth permits freshwater to contact and mix with seawater
"exsolution"	A process through which gas separates from bitumen.
"extra heavy crude oil"	Crude oil normally measured at 10 API° or less
"first steam"	When steam is first injected into a well pair
"fracking"	The abbreviation for hydraulic fracture stimulation, a process whereby fluid and sand particles (suspended in the fluid), are pumped into the well causing the geological formation to crack open (fracture), which creates a better conduit for the reservoir fluids to flow into the well bore
"free water knockouts"	vertical or horizontal vessels used upstream of a treater to remove excess free water from the oil-water emulsion
"floatstone dolomite"	A dolomitic floatstone is a carbonate rock containing a few bioclasts or other fragments more than 2 mm in diameter, widely spaced, and embedded in sand- or mud-size carbonate sediment that forms over 90% of a rock. They are later recrystallised to dolomite
"GOB"	Gas over bitumen
"heavy crude oil"	Crude oil normally measured at 20 API° or less

"heterolithic stratification"	A closely interbedded deposit of sand and mud, generated under considerably variable current flow. Sediments of unlike type contained in a single strata. Inclined hererolithic stratification (or defined as "**IHS**") involves an inclination of such strata
"high estimate"	At least a 10% probability (P10) that the quantities actually recovered will equal or exceed the high estimate
"horizontal drilling"	Drilling horizontally rather than vertically through a reservoir, thereby exposing more of the well to the reservoir and increasing production
"*in situ*"	"In place" and, when referring to oil sands, means a process for recovering bitumen from oil sands by means other than surface mining, such as SAGD or CSS
"LACT"	Lease automatic custody transfer, which is a measuring device used for the measurement of fluids in transit from a production lease to a truck, other lease, pipeline or other tankage and operates automatically to provide an accurate disclosure of volumes for the negotiated transfer of custody of those volumes between two parties
"lenticular"	a formation with a lense-shaped cross section
"light crude oil"	Crude oil normally measured at 30 API° or lighter
"LLB" or "Lloyd Blend"	Lloydminster Blend, a conventional heavy sour crude oil blend that contains crude oil that has been blended with lighter hydrocarbon diluents, such as condensate, to meet the required density and sulphur content
"low estimate"	At least a 90% probability (P90) that the quantities actually recovered will equal or exceed the low estimate
"makeup water"	water needed to replace that which is lost by the facility evaporation or reservoir leakage during the SAGD process
"medium crude oil"	Crude oil normally measured between 20 API° and 30 API°
"NCG"	Non-condensable gas
"net pay"	a reservoir or portion of a reservoir that contains economically producible hydrocarbons and which meet local criteria (such as minimum porosity, permeability and hydrocarbon saturation) is net pay

"Oil Plays"	a deposit of oil in a reservoir under development or being pursued
"Overriding royalty"	a percentage share of production, or the value derived from production free from all production costs paid by the lessee or working interest owner
"Payout"	The point at which all costs of leasing, exploring, drilling and operating have been recovered from production
"permeability"	Measure of the ability of a rock to conduct a fluid through its interconnected pores (pore throat) when that fluid is at 100% saturation. A rock may be highly porous and yet impermeable if it has no pore throat. Permeability is measured in millidarcies
"petroleum"	A naturally occurring mixture consisting of hydrocarbons in the gaseous, liquid or solid phase, as defined by PRMS
"PIIP"	Quantity of petroleum initially in place that is estimated, as of a given date, to exist in naturally occurring accumulations. It includes that quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations prior to production plus those estimated quantities in accumulations yet to be discovered. It is a measure that derived from an aggregation of the total reserves, contingent resources and prospective resources held by a person whether they are recoverable or unrecoverable.
"PNG Licence"	A petroleum and natural gas lease pursuant to which the Crown grants the holder the right to develop and use oil sands resources existing under the Oil Sands Tenure Regulation on a primary or a continued basis
"porosity"	The ratio of void space to the bulk volume of rock containing that void space. Porosity can be expressed as a fraction or percentage of pore volume in a volume of rock
"possible reserves"	Those quantities of petroleum which by analysis of geosciences and engineering data are less likely to be recoverable than probable reserves
"Primary Recovery Scheme"	a plan using only the natural energy of the reservoir to recover oil. The main drive mechanisms for primary recovery are typically solution gas drive, gas cap drive and water (aquifer) drive
"probable reserves"	Those quantities of petroleum which by analysis of geosciences and engineering data are less likely to be recovered than proved reserves but more certain to be recovered than possible reserves

"production pad"	an area of land that has been cleared and made suitable for drilling and production activities
"prospective resources"	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoir and under defined economic conditions, operating methods and government regulations
"proved reserves"	Those quantities of petroleum, which, by analysis of geosciences and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods, and government regulations
"PRMS"	the Petroleum Resources Management System published by the Society of Petroleum Engineers, American Association of Petroleum Geologists, World Petroleum Council, and Society of Petroleum Evaluation Engineers in March 2007, as amended from time to time
"PV10%"	means the present value of estimated future net revenues to be generated from the production of proved reserves and discounted using an annual discount rate of 10%
"recovery factor"	The percentage of PIIP in a reservoir that ultimately can be recovered at a specific point in time
"reserves"	Those quantities of petroleum anticipated to be commercially recoverable by the application of development projects to known accumulations from a given date forward under defined conditions. Reserves are classified according to the degree of certainty associated with the estimates
"SAGD" or "steam assisted gravity drainage"	An *in situ* recovery process used to produce heavy crude oil and bitumen. Two parallel horizontal wells, which are generally 5 metres apart, are drilled for the SAGD process. Steam is injected to the upper steam injector and a steam chamber is developed above the injector. With the growth of the steam chamber, mobilised bitumen drains to the producer below the injector and is lifted to the surface through an artificial lift system
"saturation"	The fraction or percentage of the pore volume occupied by a specific fluid (e.g. oil, gas, water, etc.)

"SCO" or "synthetic crude oil"	Crude oil produced by upgrading bitumen to a mixture of hydrocarbons similar to light crude oil, produced either by the removal of carbon (coking) or the addition of hydrogen through hydrotreating. It is considered synthetic because its original composition mark has been altered in the upgrading process
"seismic"	A method by which the physical attributes in the outer rock shell of the earth are determined by measuring, with a seismograph, the rate of transmission of shock waves through the various rock formations
"seismic data"	detailed information obtained by carrying out seismic work
"seismic work"	an exploration method in which strong low-frequency sound waves are generated on the surface to find subsurface structures that may contain reserves
"shoreline complex"	a stratified sedimentary package composed largely of clastic material located parallel to and adjoining the edge of a standing water body that may contain depositional environments ranging from wave base through to beach and back barrier marsh
"**shut-in hearing"**	hearing of the ERCB to determine whether a well or a group of wells should be suspended
"So"	Bitumen saturation
"SOR"	Steam to oil ratio
"Total PIIP"	The sum of discovered and undiscovered PIIP components, as defined in the Competent Persons' Reports at Appendix IV to this Prospectus
"treaters"	a vessel operated under pressure to separate liquids and natural gas from oil
"unconventional oil"	Heavy oil (excluding extra heavy oil sourced from Venezuela) and natural bitumen derived from oil sands, chemical additives, gas-to-liquids and coal-to-liquids (and excluding biofuels)
"VRU"	Vapour Recovery Unit
"working interest"	a proportional interest in a lease granting its owner the right to explore, develop and produce resources from a property and to receive revenues in proportion to the working interest over the property and incur costs in proportion to the working interest over the property

"WCS" or "Western Canadian Select"	Western Canadian Select, a conventional heavy sour crude oil blend that contains crude oil that has been blended with lighter hydrocarbon diluents, such as condensate, to meet the required density and sulphur content
"WTI"	West Texas Intermediate, a light sweet crude oil

Abbreviations

Units of Measure

ac	acre
bbl	barrel
bbls	barrels
bbl/d	bbls per calendar day
GJ	gigajoule
km	kilometres
km²	square kilometres
kPa	kilopascal
m	metres
Mbbl	thousand bbls
Mbbl/d	thousand bbls per calendar day
MMbbl	million bbls
MMbbl/d	million bbls per calendar day

Conversion

Conversion Factors — Imperial to Metric

°F-32	x	0.556	=	°C
bbl (@60°F)	x	0.1590	=	m^3 (@ 15°C), oil, Pentanes Plus
Mcf (@ 14.65, 60°F)	x	0.028	=	1,000 cubic metres (10^3m^3) (@ 101.325 kPa, 15°C)
acres	x	0.4047	=	hectares (ha)
$/Mcf (1,000 Btu gas)	x	0.9482	=	dollars per gigajoule ($/GJ)
Btu	x	1054.615	=	joules (J)
feet (ft)	x	0.3048	=	metres (m)
miles (mi)	x	1.6093	=	kilometres (km)
$/bbl	x	6.2893	=	$/$m^3$ (average for API gravity from 30°-50°C)
GOR (scf/bbl)	x	0.1780	=	gas/oil ratio (GOR) (m^3/m^3)
pounds (Lb)	x	0.4536	=	kilograms (kg)

Unless otherwise indicated, gross reserves or gross production are reserves or production attributable to our interests prior to deduction of royalties; net reserves or net production are reserves or production net of such royalties. Gross or net production reported refers to sales volume, unless otherwise indicated. Unless otherwise indicated, oil commodity prices are quoted after the effect of hedging gains and losses.