

# CARE Reporting Definitions

Effective for the 2015 Reporting Period Onwards

As at February 2015

REVENUE REPORTING	
COVER PAGE	
Cleaned Crude Bitumen	<i>Crude bitumen from which impurities have been removed sufficiently to allow it, when blended with diluent, to be transported by pipeline or truck or any other means of transportation.</i>
Density (Cleaned Crude Bitumen)	<i>Bitumen Density – a measure of the mass of a substance per unit of volume (i.e., kg/m<sup>3</sup>) the mass occupies, usually reported at standard temperature and pressure (STP). For bitumen, the density measurement is the value derived from a representative bitumen sample that has been prepared and measured according to generally accepted standard practices (i.e., ASTM4052).</i>
Sulphur Content (Cleaned Crude Bitumen)	<i>The amount of sulphur, as a percentage of volume, contained within the cleaned crude bitumen at the royalty calculation point. Measured as a percentage of volume (i.e., (sulphur m<sup>3</sup>/bitumen stream m<sup>3</sup>) x 100% = Sulphur %).</i>
Total Acid Number - TAN (Cleaned Crude Bitumen)	<i>Total Acid Number is the amount of potassium hydroxide in milligrams that is needed to neutralize the acid in one gram of cleaned crude bitumen. Measured in mg KOH/g.</i>
Stream Name	<i>Bitumen blend that comes from a specific area with a consistent quality or bitumen that comes from a heated pipeline Choose the Stream Name from the drop down. If the Stream Name does not appear in the drop down menu, use Other Stream and enter the name in the If Other Stream cell. If the moniker changes before it reaches the Point of Sale, please specify the new moniker in the notes section and contact the department for a Secondary Blend Revenue form.</i>
Product Type	<i>Bitumen or blended bitumen Dilbit - Dilbit is an abbreviation of 'diluted bitumen.' The bitumen has been blended with</i>

	<p><i>condensate or naphtha or other types of diluents excluding synthetic crude oil to meet pipeline specification.</i></p> <p><i>SynBit - The bitumen has been blended with synthetic crude oil.</i></p> <p><i>SynDilBit – The bitumen that has been blended with synthetic crude oil and condensate.</i></p> <p><i>Railbit - Diluted bitumen with a lower diluent content than Dilbit that does not meet pipeline specs, and is railed.</i></p> <p><i>If the Product Type does not appear in the drop down menu, use Other and enter the name in the If Other Product Type cell.</i></p>
<b>BITUMEN/BITUMEN BLEND REVENUE</b>	
Arm’s Length Transactions	<i>Where an operator sells goods and services to a non-affiliated entity, these transactions would be considered at arm’s length.</i>
Non Arm’s Length Transactions	<p><i>Where an operator sells goods and services to an affiliated entity, these transactions would be considered at non-arm’s length.</i></p> <p><b>Note:</b> <i>Affiliate rules are defined in section 2 of the Oil Sands Royalty Regulation, 2009 and take as a base subsection 1206(5) of the Income Tax Regulations under the Income Tax Act (Canada).</i></p>
Month of Sale	<i>The month in which the transfer of title occurs.</i>
Point of Sale (POS)	<i>The location where the title transfer of the product occurs. If the transfer occurs in Canada, identify the hub or terminal. If title transfer occurs in the US, identify the State and Petroleum Administration Defense District (PADD).</i>
Point of Sale (POS) Facility Type	<i>Identifies if the sale point is at a pipeline terminal, rail terminal, trucking terminal, upgrader terminal, refinery terminal or other.</i>
Product Volumes	<i>Bitumen blend stream volumes sold as measured in cubic metre. Identify in the footnote section whether the sales volumes contain sales volumes subject to conventional royalty calculations (PSR). Enter volumes sold at Arm’s Length and Non-Arm’s Length transactions.</i>

Product Price	<i>The consideration received in Canadian dollars per cubic meter for the blended bitumen stream volumes sold. If multiple sales occur at the same point of sale then report the weighted average price. For each Point of Sale, enter Product Prices for volumes sold at Arm's Length transactions.</i>
Handling Charge	<i>As defined under the Regulation, the cost to transport the oil sands product from the RCP to a sales point relating to sales volumes sold in that month and reported on the GFE or MRC. Such costs may include prorated pooled costs relating to cost of service for use of the pipeline and pipeline tariffs and trucking costs incurred.</i>  <i><b>Note:</b> Enter one monthly total for all Arms' Length Volumes transacted in the month for the stream, irrespective of Point of Sale.</i>
<b>BITUMEN BLEND NETBACK CALCULATION</b>	
Month of Sale	<i>The month in which transfer of title occurs.</i>
Blend Volume	<i>Identify the volume of bitumen blend crossing the RCP. Report the volume in cubic metre.</i>
Diluent Type	<i>The type of diluent blended with the bitumen to meet pipeline specifications. E.g. Butane, condensate, synthetic crude oil etc. Use drop down menu to select Diluent Type. If the Diluent Type does not appear in the drop down list choose Other, and enter the Diluent Type in the Notes section.</i>
Diluent Volume	<i>Diluent Volume is the volume of diluent (per diluent type) contained in the bitumen blend crossing the RCP. Report the volume in cubic metre. If diluent is added after the RCP yet before the Point of Sale, assume that the diluent is added at the RCP.</i>
Diluent Price	<i>The price of diluent (per diluent type) used in the bitumen blend. If pooled diluent is used then the weighted average price should be reported.</i>
Shrinkage Volume	<i>Identify the shrinkage volume resulting from the blending of hydrocarbons with disparate densities. Report the volume in cubic metre.</i>

Diluent Sent back to Project	<i>Identify if the diluent was sent back to the OSR Project or to the diluent pool outside the OSR ring fence. Report “Yes” or “No” in the field.</i>
<b>DILUENT SUPPLIED TO PROJECT</b>	
Month of Supply	<i>The month in which the transfer of title occurs.</i>
Diluent Type	<i>The type of diluent blended with the bitumen to meet pipeline specifications. Choose from the drop down menu butane, condensate, synthetic crude oil (SCO), Suncor N (OSN) or other. If Other is selected, indicate the information in the notes.</i>
Diluent Density	<i>Density is defined as the mass of a substance per unit volume. Provide the diluents density in kg/m3. If diluent is pooled, identify the blended density of the diluent.</i>
Diluent Pool Location	<i>The location where the diluent is injected into the diluent pool. The physical location of the diluent pool where the weighted average price (WAP) is calculated for application to the OSR Project. If referencing a pipeline, add the location of the pipeline.</i>
Volume	<i>Volume of diluent from the diluent pool that goes to the OSR Project. Report volumes in cubic metre. This does not have to match with the volumes reported in the GFE/MRC-1 forms.</i>
Price	<i>The diluent purchased price in Canadian dollars per cubic metre. If diluent is pooled, report the weighted average price.</i>
Arm’s Length Transactions	<p><i>Where an operator sells goods and services to a non-affiliated entity, these transactions would be considered at arm’s length.</i></p> <p><b>Note:</b> <i>Enter the diluent volume supplied at Arm’s Length as a percentage of total diluent volume supplied.</i></p>
Non Arm’s Length Transactions	<i>Where an operator sells goods and services to an affiliated entity, these transactions would be considered at non-arm’s length.</i>

	<i><b>Note:</b> Affiliate rules are defined in section 2 of the Oil Sands Royalty Regulation, 2009 and take as a base subsection 1206(5) of the Income Tax Regulations under the Income Tax Act (Canada).</i>
Mode of Transportation	<i>The method of transporting the diluent to the OSR Project. Report pipeline, rail, truck or other on separate lines. If Other is selected, indicate the information in the notes.</i>
Transportation Costs in the Price	<i>Identify if the diluent price includes the transportation cost. Report “Yes” or “No” in the field.</i>
Transportation Costs	<i>Costs associated with transporting diluent from the diluent pool location, where the weighted average price (WAP) calculation is triggered, to the OSR Project.</i>
<b>TRANSPORTATION COSTS</b>	
Month	<i>The month in which the transportation costs are incurred.</i>
Origin	<i>For initial transportation identify the OSR Project. In addition to the OSR project, please identify at least the Albertan hub (e.g., Hardisty or Edmonton) if title transfer occurs outside of Alberta.</i>
Destination	<i>For each mode of transportation, identify the point where the product was unloaded, reaches an Albertan hub or reaches its title transfer point. For Albertan hub, identify Hardisty or Edmonton. For US destinations, identify State and Petroleum Administration Defense District (PADD).</i>
Mode of Transportation	<i>The method of transporting the sales product from the RCP to the title transfer point of sale. Report pipeline, rail, truck or other on separate lines. If Other is selected, indicate the information in the notes.</i>
Pipeline Name(s)	<i>Indicates the name(s) of the pipeline(s) if this mode of transportation is used.</i>
Total Transported Volume	<i>Actual transported volumes from the origin to the</i>

	<i>destination. Measured in cubic metres and based on product movement (not necessarily sales).</i>
Transportation Cost	<i>Aggregated transportation costs based on actual invoices or cost of service and product movement related to a title transfer location. If the title transfer occurs in the US, the costs must be disaggregated into a Canadian component and an US component. (i.e., Aggregate costs from the OSR Project location to an Albertan hub and from the Albertan hub to the US State/PADD).</i>
If Using Rail, Committed?	<i>Identify if the operator has volume committed by rail (take or pay agreements). Choose “Yes” or “No” from the drop down menu.</i>
Includes Diluent Return	<i>Identifies if diluent return line costs are included in the transportation costs. Choose “Yes” or “No” from the drop down menu.</i>
<b>OTHER OIL SANDS PRODUCTS REVENUE</b>	
Month of Sale	<i>The month in which transfer of title occurs.</i>
Other Oil Sands Product	<i>As defined in the Regulation. Examples include coke, sulphur (excluding sulphur from solution gas) etc.</i>
Volume	<i>Volume of the Other Oil Sands Product. State specific product unit.</i>
Price	<i>Price per other oil sands product type in Canadian dollars per product unit.</i>
Arm’s Length Transactions	<i>Where an operator sells goods and services to a non-affiliated entity, these transactions would be considered at arm’s length.</i>
Non Arm’s Length Transactions	<i>Where an operator sells goods and services to an affiliated entity, these transactions would be considered at non-arm’s length.</i>  <b>Note:</b> <i>Affiliate rules are defined in section 2 of the Oil Sands Royalty Regulation, 2009 and take as a base subsection 1206(5) of the Income Tax Regulations under the Income Tax Act (Canada).</i>
Mode of Transportation	<i>The method of transporting the sales product from the Project to the title transfer point of sale.</i>

	<i>Report pipeline, rail, trucking or any other means of transportation on separate lines. If Other is selected, indicate the information in the notes.</i>
Origin	<i>For initial transportation identify the OSR Project. In addition to the OSR project, please identify at least the Albertan hub (e.g Hardisty or Edmonton) if title transfer occurs outside of Alberta.</i>
Destination	<i>The location where the title transfer of the product occurs. For Albertan hub, identify Hardisty or Edmonton. For US destinations, identify State and Petroleum Administration Defense District (PADD).</i>
Transportation Cost	<i>Cost incurred to transfer the product from the OSR Project to the destination (title transfer point) in Canadian dollars.</i>
Other Handling Costs	<i>Costs other than transportation that are incurred to move the product to the destination.</i>

**COST REPORTING**

Please note that the costs reported in the CARE Cost workbook are Oil Sands Royalty (OSR) Project allowed costs only. CARE Costs must reconcile with the End of Period Statement (EOPS) for the OSR Project.

**CAPEX**

Administrative and Support Facilities	<i>Costs related to all administration buildings, operations' offices, on-site housing, cafeterias, recreation facilities, warehouses, training facilities, maintenance and fabrication shops, wash bays, emergency services buildings, camps, etc. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Bitumen Production Facilities and Equipment (In-Situ)	<i>For all primary, enhanced oil recovery (EOR), steam assisted gravity drainage (SAGD), cyclical steam stimulation (CSS) and other thermal in-situ Projects, this only includes equipment at or near the producing wells including artificial lifts, storage for chemicals, supplies and additives, chemical injection facilities, water injection facilities, additives injection facilities, steam injection facilities, diluent blending, metering and measurement equipment and bitumen storage tanks. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Capitalization Methodology	<i>Description of the capitalization policy adopted/used by the company. (e.g. Successful Efforts methodology, Full Cost methodology) Expressed as a narrative identifying dollar threshold determination and useful life measurement.</i>
Co-Generation Plant(s)	<i>Plants to generate electric energy concurrently with thermal energy. Only includes the approved OSR Project costs for the cogeneration plant(s), and associated infrastructure, supplying steam and electricity to the Project. It is necessary to segregate the capital associated with the generation of electricity from that used for generation of steam. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>



Delineation and Exploration (Mining)	<i>This relates to resource evaluation activities that determine the boundaries or the extent of a reserve within the OSR Project land. Includes seismic, core-hole testing, mapping, delineation and all other related, incidental costs incurred on project lands.</i>
Delineation and Exploration (In-Situ)	<i>This relates to well activities that determine the boundaries or the extent of a reservoir or well activities within the OSR Project Land. Includes seismic, core-hole testing, and all other related, incidental costs incurred on Project lands.</i>
Development (In-Situ)	<i>This relates to well activities that develop and produce the reservoir. Includes drilling, completions, re-completions (in case of switching technology, e.g. primary to Enhanced Oil Recovery), workovers and all other related, incidental costs.</i>
Emulsion Treating & Cleaning (Including Water Treatment) (In-Situ)	<i>For in-situ Projects, include all costs associated with processing of emulsion, including gas separators and processing equipment, treaters, water reclamation and waste water disposal facilities, heaters, pumps, process tanks, solids waste removal or other waste product removal from the treatment of oil sands substances and disposal, solid waste landfills and salt caverns, processing related diluent blending and/or recovery, vapour and sulphur recovery, metering and measurement devices, communications, buildings and shelters. Also includes all costs associated with treatment, storage and distribution of water for the purpose of water flood injection, potable water supply, etc. Includes the costs of any capital assets used to source the water and transport it to the royalty Project. Also includes all capital costs for water source/disposal facilities including wells.</i>
Environmental Compliance Costs	<i>This includes allowed costs incurred to meet the regulatory and compliance standards and environmental laws applicable to the Project. As per section 1(1)(f) of the Oil Sands Allowed Costs (Ministerial) Regulation, “environmental laws” means legally enforceable obligations in respect of the environment imposed by Acts or regulations of the Government of Alberta or Canada or bylaws of a municipality in Alberta, and includes any levies or charges based on levels of production, consumption or emissions, but does not include taxes. This includes</i>

	<i>complying with Board or Alberta Environment requirements regarding Project air, water quality, wildlife, soil monitoring for the Project.</i>
Extraction / Tailings (Mining)	<i>Separation of hydrocarbons from their source and water from the sand and clay to enable incorporation of solids into reclamation landscapes and recycling of water back into the operations. Within the extraction and tailings facilities, this may include separators, froth treatment equipment, chemical handling and storage, water systems, steam systems, tumblers, primary separation vessels, analyzers and scales, naphtha, vapour and diluent recovery units, tailings oil recovery facilities, water reclamation, tailings distribution, pumps, control systems, etc. and buildings or shelters to house these facilities. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Gathering, Distribution & Storage (In-Situ)	<i>Includes all gathering systems, “in-Project” pipelines, bitumen storage and handling, water or steam distribution pipelines, power distribution systems, lighting systems, etc. Gathering system means a pipeline or pipeline system, including installations and equipment associated with the pipeline or pipeline system, which transports bitumen, solution gas used for Project operations and other oil sands products to a delivery point.</i>
Mining Equipment and Activities (Mining)	<i>Includes all activities, facilities and assets in the mine pit and external tailings of a mine. This may include water systems, tailings units including pumps and pipelines, retaining walls, dumps, ramps, overburden and inter-burden handling, breakers, crushers, cyclo-feeders, conveyor systems, scales, etc. within the mine and external tailings area. Also includes all in-mine trucks, heavy haulers, shovels, drag-lines, reclaimers, dozers, graders, loaders, buses, etc. associated with mining operations. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Reclamation & Abandonment	<i>Activities for the stabilization, contouring, maintenance, conditioning or reconstruction of the surface of land resulting in the land being</i>

	<i>able to support a range of activities similar to its previous use before oil sands development. By law, industry must post financial security equivalent to the cost of reclamation before beginning oil sands activity. Funds are provided to the Environmental Protection Security. Fund as required by law and the fund is returned to industry when reclamation certificates are issued. Provide aggregated capital costs for reclamation and abandonment related assets.</i>
Research	<i>Costs for allowable in-house or third party research directly attributable to the Project as per the regulations. Costs to fund technology to solve a problem of immediate applicability to the particular Project, e.g., improving bitumen froth treatment in the Project facility; improving SAGD performance in a particular reservoir. Note: Any consideration received from the technology developed in the Project the cost of which were allowed costs in the Project must be included as other net proceeds.</i>
Steam Generation & Distribution (In-Situ)	<i>Includes the cost of capital assets used solely for the purpose of generating steam for use in an Oil Sands Project. The assets will be those between a boiler feed water metering facility at the inlet to the plant and the wellheads of all the steam injection wells on a Project. Steam plants may be located at a central facility or remotely located at various points within an approved royalty Project. Also includes all costs associated with the sourcing of water for the purpose of steam generation, including capital costs for water source facilities including wells. Capital assets for steam generation within a co-generation facility are excluded from this category. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Strategic Capital	<i>Capital expenditure to increase gross margin or decrease cost, e.g. through increased production capacity, product differentiation or reduced energy consumption.</i>
Sustaining Capital	<i>Capital expenditure required to preserve the integrity of the asset, includes investment to mitigate one-off or recurring Health Safety Security Environment (HSSE) and reputation risks, HSSE investment required by law without</i>

	<i>which the unit/site would not have an operating license. Capital expenditures required to sustain production levels of the Project including costs for replacement production wells.</i>
Transportation Infrastructure (In-Situ)	<i>Includes all Project roads, bridges, marine and air transportation infrastructure facilities, airstrips, hangers, docks, fixed radio, meteorological or navigation equipment, hangers, docks, but excluding vehicles, aircraft, helicopters, boats, barges, etc. Also includes all or an allowable portion of any off Project transportation infrastructure required to access the Project.</i>
Upgrading Facilities	<i>The process that converts bitumen and heavy crude oil into a lighter crude oil by increasing the ratio of hydrogen to carbon, either by removing carbon (coking) or adding hydrogen (hydro-processing). Includes all bitumen processing (i.e., upgrading) equipment, downstream of the Extraction plant, intended to produce synthetic crude oil. Such equipment may include diluent recovery facilities, cokers, hydrogen units, hydro-treaters, sulphur units, sour water treaters, water systems, interconnecting piping, feed, chemical and product storage tanks, pumps and compressors, electrical equipment and distribution systems and buildings or shelters to house all such equipment. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations.</i>
Utility Plants (Mining)	<i>Includes all plants providing utility type services to the Project including but not limited to raw water, treated and potable water, solid or liquid waste treatment, process steam, electricity, hydrogen, air, natural gas, syngas, etc. This category specifically excludes co-generation facilities whose costs must be reported separately. May also include all or an allowable portion of any off Project buildings and structures directly attributable to the Project in accordance with the Regulations. Note: For in-situ Projects this cost would be reported under the category Emulsion Treating &amp; Cleaning. In addition, for in-situ Projects that construct specific utility purpose facilities within the Project this cost should be segregated and</i>

	<i>reported in the “Other” cost category.</i>
<b>OPEX</b>	
Contract Services and Equipment Rental	<i>Provide the total costs of all third party contracted services including the costs of labour, hardware, software, equipment (excluding long term equipment rentals/leases identified below), professional services, performance inducements, bonuses, etc. for all contracts. Includes aggregate costs for third party provided utilities including services as water, sewer, compressed air and communications. Equipment Rental costs include aggregated costs associated with equipment rental or leases.</i>
Energy – Other	<i>Provide the cost of any other purchased energy (e.g. hydrogen, steam, etc.) consumed on the Project and includes the provision of non-arm’s length supplied energy commodities.</i>
Environmental Compliance Costs	<i>See definition in CAPEX section of this glossary.</i>
Labour Compensation – On Site	<i>Labour Compensation is defined as costs specifically tracked and assigned to a function or facility incurred on-site of the Project. Provide total compensation costs for all Project employees including salaries, benefits, bonuses, stock options and any other form(s) of remuneration whether fixed or variable. It also includes shared labour costs including total costs for all supplied corporate services, such as engineering, marketing, accounting, legal, human resources, etc. whose time is directly attributable to the Project and are incurred on-site of the Project. Costs include compensation (salaries, benefits, bonuses, stock options and any other form(s) of remuneration whether fixed or variable).</i>
Labour Compensation – Off Site	<i>Labour Costs is defined as costs specifically tracked and assigned to a function or facility incurred off-site of the Project. Provide total compensation costs for all Project employees including salaries, benefits, bonuses, stock options and any other form(s) of remuneration whether fixed or variable. It also includes shared labour costs including total costs for all supplied corporate services, such as engineering, marketing, accounting, legal, human resources, etc. whose time is directly attributable to the Project and are incurred off-site of the Project. Costs include compensation (salaries, benefits, bonuses, stock options and any other form(s) of</i>

	<i>remuneration whether fixed or variable).</i>
Municipal/Provincial Taxes & Fees	<i>Includes the aggregate of all taxes and fees paid to municipal and provincial governments.</i>
No. of On Site Employees (Annual Number - Full Time Equivalent)	<i>The total number of operator employed permanent staff whose principal place of work is at the royalty Project and whose compensation is charged to the Project as a component of the operating cost.</i>
Processing Fees (Arm's Length and Non-Arm's Length)	<i>Includes the cost of all fees paid to arm's length and non-arm's length parties for processing oil sands products.</i>
Purchased Energy – Electricity	<i>Provide the cost of all purchased electricity consumed in the Project.</i>
Purchased Energy – Natural Gas	<i>Provide the cost of all purchased natural gas consumed in the Project. This includes solution gas “deemed to be sold from one Project to another for consumption purposes so the receiving Project has a purchase cost.”</i>
Purchased Feedstock (Arm's Length and Non-Arm's Length)	<i>Include the cost of all bitumen, or any other oil sands products, purchased from arm's length and non-arm's length parties for processing within the Project.</i>
Supplies & Materials	<i>Provide costs for all supplies and materials purchased for the Project, including but not limited to chemicals, injectants, transportation fuels, office and administrative supplies, cleaning supplies, spare parts, maintenance items, etc.</i>
Research	<i>See definition in CAPEX section of this glossary.</i>
<b>Volumetric</b>	
Bitumen	<i>The principal hydrocarbon resource produced from an OSR Project in designated oil sands areas. Measured in m3. Note: On this form for volumetric data pertaining to bitumen, third party volumes means any volumes that do not originate at the OSR Project.</i>
Coke	<i>One of the products of a thermal cracking process used to convert long chain bitumen hydrocarbon into shorter chain gases and gas oils coke. Coke is a material that is essentially pure carbon. Measured in tonnes.</i>
Consumed	<i>A product utilized or expended in an approved oil sands process.</i>
Delivered to the Royalty Calculation Point (RCP)	<i>As defined in the Oil Sands Royalty Regulation 2009 (OSRR, 2009), Part 4, Section 30.</i>
Diluent	<i>A hydrocarbon fluid that is used to dilute bitumen and heavy oil so as to reduce its viscosity for easier transportation. Measured in</i>

	<i>m3.</i>
Electricity	<i>Electricity may be generated on a Project site, normally using gas fired generators, or from a co-generation plant where steam is also produced. It may also be purchased from or sold to a third party through an electrical power transmission grid. Measured in KWh.</i>
Natural Gas	<i>Naturally occurring mixtures of hydrocarbon gases and vapours, mostly methane (CH4) and may be used as a thermal energy source or as a source of hydrogen for various hydro-treating processes. Note: This includes solution gas as defined in the Oil Sands Royalty Regulation 2009 (OSRR2009) Part 1 Section 1(1)(rr). Measured in 10<sup>3</sup> m3.</i>
Processed	<i>Processing means the action of creating new product(s) from existing product(s) by:</i> <ul style="list-style-type: none"> <li>• <i>Extracting component gases and/or liquids from a product;</i></li> <li>• <i>Combining two or more products; and</i></li> <li>• <i>Altering the state in which a product exists (i.e., changing a product from a solid state to a liquid state).</i></li> </ul>
Produced	<i>Produced means unsold, unprocessed substance composed of products recovered from a formation, which originates at the first point of separation/measurement after the wellhead or surface and ends at the next processing point.</i>
Purchased	<i>A product or service purchased for use in an approved oil sands process.</i>
Solvents	<i>Solvents are fluids, capable of dissolving with the oil they contact, injected into a reservoir to form a single liquid that can move through the reservoir to a producing well more easily than the original crude oil. Measured in m3.</i>
Steam	<i>Steam refers simply to vaporized water. It is a two-phase mixture of liquid water and steam produced from a generator or boiler. Higher quality steam has higher vapour content. In thermal recovery operations, it is injected into reservoirs to reduce the viscosity of the bitumen so it will flow more easily to a producing well bore or to provide heat to a variety of processing plants. Measured in tonnes/day and reported in cold water equivalent (CWE) m3. Steam is measured in the number of meters cubed of cold water that will be vaporized to generate the steam.</i>

Sulphur	<i>Elemental sulphur is produced from a process to remove hydrogen sulphide from produced hydrocarbons including bitumen, heavy oil and solution gas. It may be shipped to market in liquid or solid form or, due to ongoing limited markets and low prices, is often stored by pouring molten sulphur into large solid blocks pending its sale. Measured in tonnes.</i>
Synthetic Crude Oil	<i>A mixture mainly of pentanes and heavier hydrocarbons which may also contain sulphur compounds that is derived from crude bitumen and is liquid at the conditions under which its volume is measured. The output of a process employed to “upgrade” (through the addition of hydrogen or the rejection of carbon) bitumen into a marketable product as feedstock for multiple downstream refineries. Measured in m3.</i>
Tailings	<i>Tailings are the waste material that is obtained as a result of separating bitumen from oil sands at an Extraction Plant in an oil sands mining operation. Tailings are principally water but contain significant amounts of clay, residual hydrocarbon, heavy metals, and other impurities. Measured in m3.</i>
Water	<i>In the context of a royalty Project, it may refer to ground water, produced water, surface fresh water, processed or treated water, waste water, etc. Measured in m3.</i>



<b>SUBSURFACE REPORTING</b>	
<b>RESERVOIR AND RESERVES</b>	
Bitumen Density	<i>A measure of the mass of a substance per unit of volume (i.e., kg/m<sup>3</sup>) the mass occupies, reported at standard reference conditions (temperature and pressure of 15oC and 101.325 kPa, respectively). For bitumen, the density measurement is the value derived from a representative bitumen sample that has been prepared and measured according to generally accepted standard practices (e.g., ASTM D5002: Standard Test Method for Density and Relative Density of Crude Oils by Digital Density Analyzer).</i>
Bitumen Viscosity	<i>A measure of the resistance of a fluid to flow and normally measured in centipoises (“cP”). It is commonly perceived as "thickness". For bitumen, the viscosity is often measured in centistokes (cSt) at a wide range of temperatures using viscometers (e.g., Brookfield rotational viscometer).</i>
Deposit Thickness	<i>Provide the weighted average thickness of the recoverable oil sands deposit within the royalty Project.</i>
Depth to Top of Deposit	<i>The distance from the top of the oil sands deposit to the surface measured in meters.</i>
Estimated Ultimate Recovery Factor (EUR)	<i>The percentage of quantity of fluid that is potentially recoverable from original bitumen in place (OBIP)</i>
Initial Proven Reserves	<i>Defined in either COGEH or SPE - PRMS as bitumen reserves within the company defined Project area having a "high degree of certainty" (90% probability) of being produced using current technology at current prices, with current commercial and regulatory terms and conditions prior to first production at inception of the OSR Project application. For OS Projects approved prior to June 30, 2009, operators may determine the “As at Date” to provide the DOE with a historical date. Operator defined date must be December 31, 2008 or earlier. Note: Report gross reserves calculated prior to royalty determination.</i>

Initial Proven + Probable Reserves	<p><i>Defined in either COGEH or SPE - PRMS as bitumen reserves within the company defined Project area that is reasonably probable (50% probability) of being produced using current or likely technology at current prices, with current commercial and regulatory terms and conditions prior to first production at inception of the OSR Project application.</i></p> <p><i>For OS Projects approved prior to June 30, 2009, operators may determine the “As at Date” to provide the DOE with a historical date. Operator defined date must be December 31, 2008 or earlier.</i></p> <p><i>Note: Report gross reserves calculated prior to royalty determination.</i></p> <p><i>Canadian Oil and Gas Evaluation Handbook (COGEH), Society of Petroleum Engineers – Petroleum Resource Management System (SPE-PRMS)</i></p>
Methodology Used to Determine Reserves	<p><i>As per Canadian Oil and Gas Evaluation Handbook (COGEH)</i></p> <p><i>Society of Petroleum Engineers –Petroleum Resource Management System (SPE-PRMS)</i></p>
Mine Area	<p><i>The total expected surface area of the mine, excluding any sterilized area. Measured in m2.</i></p>
Ore Grade	<p><i>A measure of the richness of the ore (amount of bitumen within the oil sands deposit) at an oil sands mining operation. The ore grade is usually based on the ore quality that is fed to the extraction process. In general,</i></p> <p><i>Low ore grade – approximately 8% bitumen</i></p> <p><i>Medium ore grade - approximately 10% bitumen</i></p> <p><i>High ore grade - approximately 13% bitumen</i></p> <p><i>Measured in wt% bitumen.</i></p>
Oil Saturation	<p><i>The measurement of the fraction, or percentage of the total pore volume of the reservoir occupied by bitumen. Measured as a percentage.</i></p>
Original Bitumen in Place (OBIP)	<p><i>The original oil in place is the total hydrocarbon content of an oil reservoir before the commencement of production. Oil in place should not be confused with oil “reserves” that are the technically and economically recoverable portion of it. Provide the calculated OBIP for the producing horizon within the area as defined by the operator.</i></p>
Permeability - Horizontal	<p><i>The measure of ease with which a fluid flows in a</i></p>

	<p><i>horizontal direction through the connected pore space of reservoir rock ability typically measured in Darcie's or milliDarcies.</i></p> <p><i>Permeability should be measured as the absolute permeability using 100 percent saturation of a liquid (brine) in the reservoir. Provide a weighted average permeability of the bitumen producing zone within the royalty Project.</i></p> <p><i>Average – weighted average permeability of the bitumen producing zone within the royalty Project.</i></p> <p><i>Range – range across the Project area</i></p>
Permeability – Vertical	<p><i>The measure of ease with which a fluid flows in a vertical direction through the connected pore space of a reservoir rock ability typically measured in Darcie's or milliDarcies.</i></p> <p><i>Permeability should be measured as the absolute permeability using 100 percent saturation of a liquid (brine) in the reservoir.</i></p> <p><i>Average – weighted average permeability of the bitumen producing zone within the royalty Project.</i></p> <p><i>Range – range across the Project area</i></p>
Porosity	<p><i>The percentage of pore volume or void space that can contain fluids. Provide a weighted average porosity of the producing zone within the royalty Project.</i></p>
Project Area	<p><i>Defined as the area consistent with the operator's current life plan for the Project. Identify all OSR Project(s), AER Approved Project Area(s) and Approved OS leases. Plat style map to be submitted to depict operator's definition of Project area with corresponding township, range and section.</i></p>
Remaining Proven Reserves	<p><i>Defined in either COGEH or SPE - PRMS as remaining bitumen reserves within the company defined Project area having a "high degree of certainty"(90% probability)of being produced using current technology at current prices, with current commercial and regulatory terms and conditions as of December 31 of the previous calendar date.</i></p> <p><i>Note: Report gross reserves calculated prior to royalty determination.</i></p>
Remaining Proven + Probable Reserves	<p><i>Defined in either COGEH or SPE - PRMS as remaining bitumen reserves within the company defined Project area that is reasonably probable (50% probability)of being produced using</i></p>

	<p><i>current or likely technology at current prices, with current commercial and regulatory terms and conditions as of December 31 of the previous calendar date.</i></p> <p><i>Note: Report gross reserves calculated prior to royalty determination.</i></p>
Reservoir Area	<p><i>The area used to determine the bulk volume of crude bitumen deposit measured in meters squared.</i></p> <p><i>For land based approvals the reservoir area is the entire royalty Project area.</i></p> <p><i>For well based approvals the reservoir are is the well drainage area.</i></p>
Reservoir Depth	<p><i>Provide the weighted average depth from surface to the top of the producing zone within the royalty Project.</i></p>
Reservoir Net Pay	<p><i>Defined as the thickness of the porous, permeable interval of the reservoir containing oil sands reserves which are anticipated to be economically recoverable. Calculated as the weighted average reservoir net pay over the entire royalty Project area.</i></p>
Reservoir Pressure - Initial	<p><i>The initial reservoir pressure at the reference elevation of a pool upon discovery.</i></p>
Reservoir Temperature - Initial	<p><i>The initial reservoir temperature at the reference elevation of a pool upon discovery.</i></p>
Reservoir Thickness	<p><i>Calculated as the weighted average thickness of the oil sands zone over the entire royalty Project area.</i></p>