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19 GLOSSARY, ACRONYMS AND ABBREVIATIONS

19.1 Glossary

Word	Definition
Abandonment	The decommissioning of facilities, including the plugging of wells and removal of offshore structures following production of reserves
Abiotic	Non-biological; a process not mediated or resulting from the activity of organisms. Ocean currents and weather are examples of abiotic processes
Advection	The process of, or referring to the transport of one fluid mass (air, water) by the movement of another
Aerobic	A process requiring the presence of air or oxygen
Alcids	A group of shorebirds, predominantly of northern coasts, including auks, puffins, murre and guillemots
Anomaly	A geological feature, especially in the subsurface, distinguished by geological, geophysical or geochemical means, that is different from the general surroundings and is often of potential economic value, (e.g., a magnetic anomaly)
Anoxic	Deficient in oxygen
Anthropogenic	Derived or resulting from human activity
Artificial Reef	An underwater artificial structure that provides habitat similar to that provided by a natural reef
Artificial Reef Effect	The effect generated by the placement of an undersea structure in an area where previously there were no similar habitats. Benthic organisms colonize the structure and, subsequently, fish and other organisms are attracted to it in search of food
Astronomical Tides	The alternate rise and fall of the surface of oceans, seas and the bays, rivers, connected with them, caused by the gravitational attraction of the sun and moon
Baleen	Comb-like semi-rigid plates with frayed edges that hang from the roof of a baleen whale's mouth; used when feeding to filter prey from the water
Ballast	(a) A relatively heavy material, such as lead, iron or water, placed in a ship to ensure stability or to maintain the proper draft or trim; (b) To pump seawater into empty fuel tanks of a ship to ensure its stability or suitable draft and trim for seaworthiness
Ballast Water	Water carried in tanks on a vessel (e.g., tanker) to maintain sea-going stability
Barite	A mineral (barium sulphate); used as a weighting material for drilling because of its high specific gravity
Bathymetry	The measurement of depths of water in oceans, seas and lakes; also the information derived from such measurements
Bedrock	A general term for the rock, usually solid, that underlies soil or other unconsolidated, superficial material

Word	Definition
Benthos	Marine plants and animals that live on, in, or attached to the ocean bottom
Bentonite	A clay formed from volcanic ash decomposition
Bergy Bit	A piece of floating glacier having a sail greater than 1.5 m but less than 5 m and a water plane area greater than 20 m ² but less than 300 m ² . Size approximates that of a small house and mass is between 120 and 5,400 t
Bilge	The nearly horizontal part of a ship's bottom
Biocide	A chemical agent that destroys bacteria
Biofouling	The encrustation of submerged structures by barnacles and molluscs , seaweeds and other marine life; also known as marine fouling
Biomass	The amount of living matter of a specified type given as a concentration per unit area or volume
Biota	The flora and fauna of a region
Bioturbation	The churning and stirring of a sediment by organisms
Bloom	Rapid growth of a population of planktonic organisms
Blowout	A change in the gas or oil pressure of the well, that cannot be handled by the well's control system, resulting in uncontrolled flow
Blowout Preventer (BOP)	A stack or an assembly of heavy duty valves attached to the top of the casing to control well pressure
Borehole	The hole in the earth made by the drill; the uncased drill hole from the surface to the bottom of the well
By-catch	Organisms that are caught commercially but are not the target species, (e.g., haddock is often a by-catch of the cod fishery)
Caisson	A large-diameter pipe that houses a submudline wellhead
Chlorophyll	A green pigment found in all algae and higher plants. Responsible for light capture in photosynthesis
Climax	A community that has reached a steady-state under a particular set of environmental conditions
Cobble	A rounded rock fragment between 64 and 256 mm in diameter
Comprehensive Study Report (CSR)	A level of environmental assessment required pursuant to CEAA Sections 16(1)(2)
Continental Shelf	Gently sloping, shallowly submerged marginal zone of the continents extending from the shore to an abrupt increase in bottom inclination; greatest average depth less than 183 m, slope generally less than 1 to 1,000, local relief less than 18.3 m, width ranging from very narrow to more than 320 km
Crude Oil	Unrefined petroleum
Delineation Wells	Wells drilled after the initial exploration well to give a better understanding of the extent and performance of the reservoir
Demersal	Referring to animals, usually fish, associated with, but not living on, the sea bottom

Word	Definition
Detrital	Particles occurring in sedimentary rocks that were derived from pre-existing igneous, sedimentary or metamorphic rocks, or other pre-existing material
Detritus	Dead or decaying organic matter, and associated microorganisms that are responsible for its decomposition
Development Application	The official title of all the documentation submitted in support of the development of Hebron Project
Diatoms	Microscopic algae characterized by "pill-box like" cell walls containing silica
Dinoflagellate	A chiefly marine one-celled organism with resemblances to both plants and animals. Hard parts preserved as microfossils are important for dating and correlating Mesozoic and Cenozoic deposits
Drilling Mud	A special mixture of clay, water and chemical additives pumped down the wellbore through the drill pipe and drill bit to cool the rapidly rotating bit, lubricate the drill pipe as it turns in the wellbore, and carry rock cuttings to the surface; may have a water base or a synthetic oil base fluid
Ecosystem	The complex of a community and its environment functioning as an ecological unit in nature
Endangered	Descriptive of a species that is in danger of extinction within all or part of its range (the region to which it is native)
Environmental Impact Statement (EIS)	A document that attempts to predict the environmental effects a major development might have on the human and natural environments of a given geographic area. An EIS is prepared to enable industry, government and the public to consider the environmental and socio-economic costs and benefits of a development project. Based on the information in the EIS, decisions can be made on whether to proceed with the development project
Epifauna	Benthic animals living attached to or crawling over the bottom
Fault	A fracture or fracture zone along which there has been displacement of the sides relative to each other parallel to the fracture. The displacement may be a few millimetres or many kilometres
Fecundity	Potential reproductive capacity of an organism or population. In fish, fecundity is measured by the number of eggs
Flare	An arrangement of piping and burners used to burn combustible vapours - a part of emergency pressure relief system
Flaring	Disposal of surplus combustible vapours by burning at the discharge of the flare tower
Flatfish	Fish with a flattened body and both eyes on one side of the head. Includes plaice, flounder and halibut
Flowline	(a) A pipeline that takes fluids from a single well or a series of wells to a gathering centre. (b) Seabed piping that connects field components such as wells, manifolds and riser bases
Formation Water	See produced water
Geology	The study of the structure, origin, history and development of the Earth
Geostrophic	Pertaining to deflecting force resulting from the Earth's rotation

Word	Definition
Grain	A general term for sedimentary particles of all sizes (from clay to boulders), as used in the expressions “grain size”, “fine-grained” and “coarse-grained”
Gravity Base Structure (GBS)	The base of an offshore drilling and production platform, usually made of concrete, and of such weight that it is held securely on the ocean bottom without the need for piling or anchors
Grey Water	Water that has been used for washing, showers, laundry, or in the galley and contains no hydrocarbons or high concentrations of chemicals
Groundfish	Species of fish that are collected by bottom gear trawls (e.g., cod, haddock and flounder)
Growler	The smallest category of iceberg size, with a sail extending less than 1.5 m above sea level and a water plane area of approximately 20 m ² . Comparable in size to a car and having a mass of less than 120 t
Gyre	Circular movement of water masses
Habitat	The place where an animal or plant lives, often characterized by some physical condition (e.g., stream habitat)
HADD	Harmful alteration, disruption or destruction (of fish habitat)
Hebron Unit	Comprises the four Hebron Significant Discovery Licences (SDL 1006, SDL 1007, SDL 1009 and SDL 1010)
Hertz (Hz)	Unit of sound frequency equal to one cycle per second
Heterotrophs	Organisms that receive nourishment by ingesting and breaking down organic matter from the surrounding water
Hurricane	A tropical cyclone with sustained wind speeds over 118 km/h, usually accompanied by rain, thunder and lightning
Hydroids	Typical colonial polyps with variously branched bushy or feathery growths. Each polyp has a crown of tentacles around the mouth
Ichthyoplankton	Collective term for fish eggs and larvae when planktonic
ICOADS	International Comprehensive Ocean-Atmosphere Data Set
Inhibitor	A substance that is capable of stopping or retarding a chemical reaction
Injection Water	Water pumped into the formation to maintain reservoir pressure (secondary recovery technique); offshore, injection water is filtered seawater treated with biocides , an oxygen scavenger and scale inhibitor
Interannual	Year-to-year
Isobath	A line on a map or chart connecting points of equal water depth
Isopods	A group of crustaceans
Juvenile	Fish past the larval stage of development, but not yet large enough to be caught in the commercial fishery (e.g., cod remains juvenile for approximately four years)
Larvae	The first immature phases of many animals after hatching of eggs and before assuming the adult form and habit
Manifolds	A piece of equipment where the fluids from several wells are received and combined

Word	Definition
Megaripple	A large, gentle, ripple-like feature composed of sand in subaqueous environments having a wavelength greater than 1 m or a ripple height greater than 10 cm. Wavelengths reach 100 m and amplitude approximately 0.5 m; may be formed by tidal currents
Mitigation	A procedure designed to reduce or negate the possible harmful effects of a substance or process on a species, habitat or environment
Mollusc	An animal possessing an external or vestigial calcium carbonate shell; including clams, snails and squid
Nursery Area	An area that supports fish during their first year of life
Operations Phase	The period following First Oil until cessation of all oil production from the Hebron Field, includes post-First Oil development drilling, offshore installation activities, production, operations, maintenance, well abandonment , decommissioning and removal from the Hebron Field of all facilities, equipment and vessels used in the production system
Operator	When capitalized in this document, refers to ExxonMobil Canada Properties (EMCP)
Pack Ice	Any area of sea ice, except fast ice, composed of a heterogeneous mixture of ice of varying ages and sizes and formed by the packing together of pieces of floating ice
Pebbles	Smooth rounded stones ranging in diameter from 2 to 64 mm
Pelagic Species	Animals which live or feed within the water column
Petroleum	Oil and natural gas
Photosynthesis	The use of the sun by plants to combine water and carbon dioxide into simple sugars
Phytoplankton	Planktonic (<i>i.e.</i> , floating or swimming) photosynthesizing organisms that are mostly single-celled, although some are colonial; some are capable of swimming, while others are incapable of independent motion
Plankton	Plant (phytoplankton) and animal (invertebrate (zooplankton) and fish eggs and larvae (ichthyoplankton)) organisms that drift with ocean currents
Platform	A large structure used during the development and production phases to support such facilities as the drilling rigs, living quarters, production equipment and helipads
Plume	a column of one fluid or gas moving through another
Polychaete	A marine worm with true body segments and hard spines
Pool	A unique accumulation of petroleum whose limits are established by subsurface geologic factors
Porosity	The volume of the pore space expressed as a percentage of the total volume of the rock mass
Primary Production	Carbon fixation during photosynthesis by plants including phytoplankton
Produced Water	Water brought up from hydrocarbon bearing strata during the extraction of oil and/or gas and can include formation water, injection water , small volumes of condensed water and trace amounts of treatment chemicals

Word	Definition
Production Platform	An offshore structure equipped to receive oil or gas from offshore wells where primary processing, compression and pumping are carried out before transportation of the oil or gas to shore
Productivity	(a) Production rate of oil, gas or water per unit differential pressure; (b) The rate of production of new biomass by populations of organisms
Recruitment	The addition of individuals to a population through reproduction and immigration
Reserves	That part of an identified resource from which a usable mineral or energy commodity can be economically and legally extracted at the time of determination
Reservoir	A subsurface rock body in which gas or oil has accumulated; most reservoir rocks are porous and permeable, usually limestones, sandstones or dolomites (or a combination)
Residual Environmental Effect	Those environmental effects remaining after enhancement and mitigation measures have been applied
Resource	An initial volume of oil and gas that is estimated to be contained in a reservoir
Rig	Refers to the combination of equipment used to drill wells
Riser	A section of pipe involving vertical or near-vertical flow
Satellite	In this document, satellite refers to a remote facility or installation that cannot operate entirely independently of a central facility
Scour	(a) Seafloor trench caused by the ploughing motion of an iceberg grounding on the ocean floor. (b) Seafloor erosion caused by strong currents, resulting in the redeployment of bottom sediments and formation of holes and channels
Sea Ice	Any ice floating in the sea
Sediment	Solid material, both mineral and organic, that is being or has been transported from its site of origin by air, water or ice, and has come to rest on the Earth's surface either above or below sea level
Seismic	Pertaining to, characteristic of or produced by earthquakes or Earth's vibration
Seismicity	The phenomenon of Earth's movements; seismic activity
Sessile	Organisms that are fixed to substrate
Shuttle Tanker	A ship with large tanks in the hull for carrying oil or water back and forth over a short route
Significant Discovery License (SDL)	The document of title by which lands are held within a Significant Discovery Area. Ownership of a Significant Discovery License must be homogeneous; therefore, there may be several Significant Discovery Licenses comprising a Significant Discovery Area if ownership of the Significant Discovery Area is multi-partied
Silt	A detrital particle smaller than a very fine sand grain and larger than coarse clay, having a diameter in the range of 0.004 to 0.0625 mm

Word	Definition
Stock	A species, group or population that maintains and sustains itself over time in a definable area. A stock is characterized by constancy of the genetic information in the gene pool, and constancy of expression of particular characters controlled either genetically or environmentally. Examples include maintenance of colour variations or particular growth rates
Storm Surge	A rise above normal water level due to the action of wind on the water surface and the rise in level because of atmospheric pressure reduction
Stratification	Division of the water column into layers, or strata, because of differences in water density, structure or temperature
Surficial	Characteristic of, pertaining to, formed on, situated at, or occurring on the Earth's surface; especially, consisting of unconsolidated residual, alluvial or glacial deposits lying on the bedrock
Tectonic	Of, or relating to the deformation of the Earth's crust; the forces involved in or producing such deformation, and the resulting forms
Template	Template in this context refers to the subsea structure designed to support a collection of wells
Thermocline	A temperature gradient as in a layer of sea water, in which the temperature decrease with depth is greater than that of the overlying and underlying water
Threatened Species	In Canada, an indigenous species that is likely to become endangered if the factors affecting its vulnerability are not reversed
Topside Facilities	All the oil and gas separation, treatment and production equipment and related equipment such as compressors, flares and accommodations located on top of an offshore facility
Transshipment Facility	An intermediate onshore facility that receives and stores crude oil from oilfield shuttle tankers and subsequently transfers the oil to market via tanker
Tree	a) An arrangement of valves placed on top of a well to control flow from the well b) An arrangement of valves and fittings attached to the tubing head to control flow and provide access to the tubing string (also referred to as a Christmas tree)
Trophic Level	The position an organism occupies in the food web, determined by the number of energy transfer steps needed to get to that point
Tropical Storm	A tropical cyclone with sustained wind speeds from 61 to 118 km/h
Tsunami	A long-period sea wave produced by a submarine earthquake, also known as a seismic sea wave. It may travel for thousands of kilometres
Upwelling	Light surface water transported away from a coast (by action of winds parallel to it) and replaced near the coast by heavier subsurface water
Viscosity	The measure of the resistance of a fluid to flow; the lower the viscosity number, the more readily the fluid will flow
Water-based Mud (WBM)	A drilling mud in which the continuous phase is water
Water Column	The vertical dimension of a body of water (<i>i.e.</i> , the water between a reference point or area on the surface and one located directly below it on the bottom)
Wave Hindcasting	Prediction of waves based on past meteorological conditions

Word	Definition
Well Completion	The final sealing-off of a drilled well from the borehole with valving and safety and flow-control devices, following final cementing and perforation of the casing at the production zone and removal of the drilling apparatus from the borehole
Wellhead	The equipment installed at the top of the wellbore used to support the casing strings and upon which the tree is installed; it controls the rate of flow of liquid and gas from the well
Zooplankton	The animal component of those organisms drifting or weakly swimming in the ocean, largely at the mercy of prevailing currents

Note: Bolded words within a definition are themselves defined

19.2 Acronyms

Acronym	Definition
ACAP	Atlantic Coastal Action Program
API	American Petroleum Institute
asl	Above sea level
BIO	Bedford Institute of Oceanography
BOEMRE	US Bureau of Ocean Energy Management, Regulation and Enforcement
BTEX	Benzene, toluene, ethylbenzene, xylene
CAC	Criteria air contaminants
CAPP	Canadian Association of Petroleum Producers
CCG	Canadian Coast Guard
CCME	Canadian Council of Ministers of the Environment
CEAA	<i>Canadian Environmental Assessment Act</i>
CEA Agency	Canadian Environmental Assessment Agency
CFU	Compact Flotation Unit
CH ₄	Methane
CHS	Canadian Hydrographic Service
CIS	Canadian Ice Service
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ eq	Carbon dioxide equivalents
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CPA	Closest Point of Approach
CPAWS	Canadian Parks and Wilderness Society
CSA	<i>Canada Shipping Act</i>
CWS	Canadian Wildlife Society
DFO	Fisheries and Oceans Canada

Acronym	Definition
DSM	Drilling Support Module
EBSA	Ecologically and Biological Significant Area
ECM	Environmental Compliance Monitoring
ECRC	Eastern Canada Response Corporation
EEM	Environmental Effects Monitoring
EEZ	Exclusive Economic Zone
EL	Exploration Licence
ENGO	Environmental Non-Governmental Organization
EOC	Emergency Operations Centre
EPP	Environmental Protection Plan
FEED	Front-end Engineering and Design
FFAW	Fish, Food and Allied Workers Union
FGCP	Fishing Gear Compensation Program
FLO	Fisheries Liaison Officer (on-board)
FPSO	Floating Production, Storage and Offloading (facility)
FRCC	Fisheries Resources Conservation Council
GHGs	Greenhouse gases
GLC	Ground-level concentration
H ₂ S	Hydrogen sulphide
H _{max}	Maximum individual wave height
H _s	Significant Wave Height
HSE	Hibernia South Extension
HUC	Hookup and Commissioning
IBA	Important Bird Area
ICOADS	International Comprehensive Ocean-Atmosphere Data Set
ICS	Incident Command System
IIP	International Ice Patrol
IPCC	Intergovernmental Panel on Climate Change
MANMAR	Manual of Marine Observations
MCP	Marine Code of Practice
MMS	US Minerals Management Service
MODU	Mobile Offshore Drilling Unit
MOU	Memorandum of Understanding
MP / HP	Medium pressure / high pressure
MSL	Mean Sea Level
N ₂ O	Nitrous oxide
N&C	Notification and Communications
NAAQ	National Ambient Air Quality
NAF	Non-Aqueous Fluid used for drilling (e.g., SBM)

Acronym	Definition
NAFO	Northwest Atlantic Fisheries Organization
NAO	North Atlantic Oscillation
NARRT	North American Regional Response Team
NEB	National Energy Board
NLDEC	Newfoundland and Labrador Department of Environment and Conservation
NMCA	National Marine Conservation Area
NMFS	US National Marine Fisheries Service
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides
NOAA	US National Oceanic and Atmospheric Administration
NPRI	National Pollutant Release Inventory
OIM	Offshore Installation Manager
OLS	Offshore Loading System
OSC	On-Scene Commander
OSP	Oil Spill Response
OSRP	Oil Spill Response Plan
OWTG	Offshore Waste Treatment Guidelines
PAH	Polycyclic Aromatic Hydrocarbon
PAL	Provincial Aerospace Ltd.
PBGB LOMA	Placentia Bay-Grand Banks (PBGB) Large Ocean Management Area (LOMA)
PM	Particulate Matter
PTS	Permanent Threshold Shift
PWRI	Produced water re-injection
RA	Responsible Authority
REET	Regional Environmental Emergency Team
ROV	Remote Operated Vehicle
RV	Research Vessel
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
SBM	Synthetic-based mud
SO ₂	Sulphur dioxide
SOP	Standard Operating Procedure
SPOC	Single Point of Contact
SSH&E	Safety, Security, Health and Environment
THmax	Wave period associated with Hmax
Tp	Peak wave period
TPH	Total Petroleum Hydrocarbons
TPM	Total Particulate Matter

Acronym	Definition
TSP	Total Suspended Particulate
TSS	Total Suspended Solids
TTS	Temporary Threshold Shift
UPM	Utilities and Processing Module (Integrated Deck)
VDS	Volatile Deposited Solids
VEC	Valued Ecosystem Component
VFA	Volatile Fatty Acid
VME	Vulnerable Marine Ecosystem
VOC	Volatile Organic Compound
VSP	Vertical Seismic Profile
VTMP	Vessel Traffic Management Plan
WHGBS	Wellhead Gravity-base Structure
WHMIS	Workplace Hazardous Management Information System

19.3 Abbreviations (units of measure)

Abbreviation	Definition
bbl	Barrel (approximately 159 L)
BF	Beaufort Force
cm	centimetre
dB	Decibel
h	Hour
Hz	Hertz
kbd	Thousand barrels per day
kHz	Kilohertz
km	Kilometre
km ²	Square kilometre
km ³	Cubic kilometre
L	Litre
m	Metre
m ³	Cubic metre
m ³ /day	Cubic metre per day
Mbbl	Thousand barrels
MBO	Million barrels of oil
mg	Milligram
mg/L	Milligram per Litre
mm	Millimetre
MSCFD	Thousand Standard Cubic Feet Per Day
MW	Megawatt

Abbreviation	Definition
nm	nautical mile
ppb	Parts per billion
ppm	Parts per million
s	Second
t	Metric tonne
µg	Microgram
µm	Micrometre