

Glossary

3D Seismic	A petroleum exploration method that shows the seismic reflectors in three dimensions. It is usually displayed on a computer monitor. The record can be rotated and slices (time or horizontal slices) taken out at various levels.
4C Seismic	A seismic survey that records not only the usual compressional waves (P waves) but also shear waves (S waves). It is used to better determine rock types and locate fractures.
4D Seismic	The seismic difference between several 3D seismic surveys run at different times over the same reservoir during production from that oil field. Changes in seismic responses from the reservoir such as amplitude can show the flow of fluids through the reservoir.
Appraisal Well	A well drilled out from the side of a discovery well to determine the area of a new field.
Associated gas	Natural gas that is in contact with crude oil in the reservoir.
Barrel	A quantity or unit equal to 158.9074 litres (42 United States gallons) liquid measure, at a temperature of sixty degrees Fahrenheit and under one atmosphere pressure.
Barrels of oil equivalent	The amount of natural gas that has the same heat content as an average barrel of oil. It is about 6000 cf of gas.
Basement rock	Unproductive rocks underlying sedimentary rocks. It is usually an igneous or metamorphic rock.
Christmas tree	A subsea production system similar to a conventional land tree except it is assembled complete for remote installation on the sea floor with or without diver assistance. The marine tree is installed from the drilling platform; it is lowered into position on guide cables anchored to foundation legs implanted in the ocean floor. The tree is then latched mechanically or hydraulically to the well head by remote control.
Condensate	A hydrocarbon mixture composed primarily of molecules with 5, 6 and 7 carbon atoms. It is liquid under surface conditions but is a gas mixed with natural gas under subsurface reservoir conditions. Condensate is very light in density and is transparent to yellowish in color. It is almost pure gasoline in composition.
Crude Oil	A liquid composed of over one hundred different types of hydrocarbon molecules. The molecules range from 5 to more than 60 carbon atoms in length. Crude oil colors range from black to

	greenish to yellowish to transparent.
Deepwater	Beyond 400 metre bathymetry.
Delineation well	A well drilled to the side of a discovery well to determine the extent of the new field.
Development well	A well drilled in the known extent of a field.
Discovery well	An exploratory well that encounters a new and previously untapped hydrocarbon deposit; a successful wildcat well.
Electrical log	A wireline resistivity log. It is often run with a spontaneous potential or natural gamma ray log.
Exploration	The phase in which a possible hydrocarbon region is being investigated, either by geological or geophysical surveys or by exploratory drilling. Successful exploration is followed by appraisal and development.
Exploration operations	Operations conducted in the contract area pursuant to the contract in searching for Petroleum and in the course of an Appraisal Programme and shall include but not be limited to aerial, geological, geophysical, geochemical, palaeontological, palynological, topographical and seismic surveys, analysis, studies and their interpretation, investigations relating to the subsurface geology including structural test drilling, stratigraphic test drilling, drilling of Exploration Wells and Appraisal Wells and other related activities such as surveying, drill site preparation and all work necessarily connected therewith that is conducted in connection with Petroleum exploration.
Exploration well	A well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity (be it of structural, stratigraphic, facies or pressure nature) to at least a depth or stratigraphic level specified in the Work Programme.
Facies	A distinctive part of a rock layer such as a sandstone facies.
Fault	A break in the rocks along which there has been movement of one side relative to the other side. Faults are either dip-slip or strike slip.
Field	The surface area directly above one or more producing reservoirs on the same trap such as an anticline.
FPSO vessel	A ship that is stationed above or near an offshore oil field. Produced fluids from subsea completion wells are brought by flowlines to the

	vessel where they are separated and treated.
Gas in place	The amount of gas in the pores of a reservoir.
Geologist	A scientist who identifies and studies rocks. A petroleum geologist searches for and exploits oil and gas deposits.
Geology	The science that deals with the history of the earth and its life as recorded in the rocks.
Geophysical exploration	The search for geological structures favourable to the accumulation of hydrocarbons by means of geophysical devices, such as the gravimeter, the magnetometer and the seismometer.
Geophysics	The application of certain familiar physical principles: magnetic attraction, gravitational pull, speed of sound waves, the behavior of electric currents - to the science of geology.
Hydrate	A snow-like substance that can form from water in a flowline as the temperature of natural gas falls. It is composed of ice with methane in the ice crystals.
Hydrocarbons	Organic chemical compounds of hydrogen and carbon atoms. There are a vast number of these compounds and they form the basis of all petroleum products. They may exist as gases, liquids or solids. An example of each is methane, hexane and asphalt.
Improved recovery	oil The methods of water flood and enhanced oil recovery that are used to produce more oil from a depleted reservoir.
Infill drilling	Drilling between producing wells in a developed field to produce petroleum at a faster rate.
Joint venture	A business or enterprise entered into by two or more partners. Joint venture leasing is a common practice. Usually the partner with the largest interest in the venture will be the operator.
Mesozoic	An era of geological time from 248 to 65 million years ago.
Methane	A hydrocarbon composed of CH ₄ . It is a gas under surface conditions and is a major component of natural gas (C ₁).
Miocene	An epoch of time from 24 to 5.3 million years ago. It is part of the Tertiary Period.
Natural gas	Gaseous forms of petroleum consisting of mixtures of hydrocarbon gases and vapors, the more important of which are methane, ethane, propane, butane, pentane, and hexane; gas produced from

	a gas well.
Oligocene	An epoch of time from 34 to 24 million years ago. It is part of the Tertiary Period.
Operator	The Company who (a) is responsible for maintaining a producing lease & (b) is in charge of operations in working interest area.
Paleocene	An epoch of geological time from 65 to 55 million years ago. It is part of the Tertiary Period.
Pleistocene	An epoch of time, from about 1.8 million years ago to 10,000 years ago, during which glaciers occupied much of the land area. It is part of the Quaternary Period.
Pliocene	An epoch of geological time from 5.3 to 1.8 million years ago. It is a part of Tertiary Period.
Production Sharing Contract	The contract between Government and International/National E&P Company. The E&P Company bears the entire cost of exploration, drilling and production. The E&P Company is reimbursed for expenditures from the oil/gas that is produced. After reimbursement, the oil/gas proceed is split by an agreed formula.
Profit oil	Produced oil that split between a host company and a multinational company by an agreed formula after the multinational company has been reimbursed for expenditure.
Prospect	A location where both geological and economic conditions favor drilling a well.
Recoverable oil	The amount of oil that can be produced from a reservoir under current economic conditions. It is a fraction of the oil in place.
Recovery factor	The percentage of oil and/or gas in place that will be produced from a reservoir.
Reserves	The calculated amount of gas and/or oil that is expected to produced from a well /wells or a field. Proven reserves are calculated with reasonable certainty. Developed reserves can be produced from existing wells whereas undeveloped reserves cannot. Unproven reserves are not as certain due to technical and economic reasons as proven reserves. Probable and possible reserves are even less certain.
Reservoir	A porous and permeable sedimentary rock (sandstone, limestone, dolomite, etc.), containing quantities of oil and/or gas enclosed or surrounded by layers of less permeable or impervious rock; a

	structural trap; a stratigraphic trap.
Royalty	Usually a fixed percentage of a specified crude or gas value per unit produced, to be paid to the host government. It is a fixed charge independent of profit or loss.
Shale	A very common sedimentary rock composed of clay-sized particles. Black shales are source rocks for petroleum.
Shallow water	Upto 400 metre bathymetry.
Tertiary	A period of geological time from 65 to 1.8 million years ago. It is part of the Cenozoic Era.
Well	A hole drilled or bored into the earth, usually cased with metal pipe for the production of gas or oil. Also, a hole for the injection under pressure of water or gas into a subsurface rock formation.
Well log	A continuous record of rock properties measured in a well. Some types are sample, mud and wireline.
Wellhead	The forged or cast steel fitting on the top of a well. It consists of casing heads located on the bottom and a tubing head on the top. It is bolted or welded to the top of the surface casing.
Work over	To have a service Company do work (a workover) such as pullrods or sand cleanout on a producing well. A production rig, either a workover rig or a smaller service or pulling unit is used.