

12. Glossary

12.1 Glossary of Abbreviations:

2D	2 Dimensional seismic: recorded as broadly spaced lines (1 – 5km)
3D	3 Dimensional seismic: recorded as a finely spaced lines (15 – 30m)
APPEA	Australian Petroleum Production and Exploration Association
AS	Australian Standard
BTEX	Benzene Toluene Ethylene Xylene
Capex	Capital expenditure
DCQ	Daily Contracted Quantity
DES	Derrick Equipment Set
DISR	Department of Industry, Science and Resources
DNV	Det Norske Veritas
EBM	Ester Based Mud
EIS	Environmental Impact Statement
ERD	Extended Reach Drilling
ESD	Emergency Shut-Down
ESDV	Emergency Shut-Down Valve
FBHP	Flowing Bottom Hole Pressure
FPSO	Floating Production, Storage and Offtake vessel
FTHP	Flowing Tubing Head Pressure
FSO	Floating Storage and Offtake vessel
HAZID	Hazard Identification
HAZOP	Hazard Operation
HP	High Pressure
IMO	International Maritime Organisations
JV	Joint Venture
JVP	Joint Venture Partners
LNG	Liquefied Natural Gas
LoI	Letter of Intent
LP	Low Pressure
LPG	Liquified Petroleum Gas
LTOBM	Low Toxicity Oil Based Mud
MDQ	Maximum Daily Quantity
NAGV	North Australia Gas Venture
NOI	Notice of Intent
NWS	North-West Shelf
OBM	Oil Based Mud
PAWA	Power And Water Authority
P(SL)A	Petroleum (Submerged Lands) Act (1967)
PCUQ	An offshore platform containing Processing, Compression, Utilities and accommodation Quarters
RFSU	Ready For Start Up
RVP	Reid Vapour Pressure
SETA	Self Erecting Tender Assist rig
SETR	Self Erecting Tender Rig
SBM	Synthetic Based Mud
SR-1	Sunrise-1 well
SR-2	Sunrise-2 well
SS-1	Sunset-1 well

SSETR	Semi-Submersible Self Erecting Tender Rig
SSIV	Sub-Sea Isolation Valve
TAD	Tender Assisted Drilling
TEG	Tri-Ethylene Glycol
WBM	Water Based Mud
WEL	Woodside Energy Limited
ZOCA	Zone Of Cooperation – zone A

12.2 Glossary of Units:

%	percent
‰	parts per thousand
bar	absolute pressure in bars
bara	bar absolute
barg	bar gauge
bbl	barrel (1 barrel = 159 L)
cm	Centimetre
cm/s	centimetres per second
dB re 1 μ Pa-m	decibels re 1 micro Pascal of pressure at 1 metre
Hz	Hertz
kg	Kilogram
kg/m ³	kilogram per cubic metre
kl	Kilolitre
km	Kilometre
km ²	square kilometres
km/day	kilometres per day
km/hr	kilometres per hour
kts	knots or nautical miles per hour
L/s	litre per second
m	Metre
MD	MilliDarcy
Mm	Millimetre
m/s	metres per second
m ³	cubic metre
M ³ /s	cubic metres per second
mg/l	milligram per litre
ml	Millilitre
MI	million litre
mL/d	million litres per day
MMbbl	million barrels
Mss	metres subsea
MMscf/d	Million standard cubic feet per day
ppm	parts per million
psia	absolute pressure in pounds per square inch
Scf	standard cubic feet
Tcf	Trillion cubic feet
TJ/d	TeraJoules per day
ug/g	microgram per gram
ug/L	microgram per litre
Mm	micrometres
T	tonne (1 tonne of oil = 1,500 L)
tpa	tonne per annum

12.3 Glossary of Terms:

Abandonment	Final plugging of wells, and/or permanent dismantling, etc. of a production platform or other installation.
Annulus	The space between the drill string and well bore.
Anoxic	Lacking oxygen.
Australian Standard (AS)	An Australian Standard which provides criteria and guidance on design, materials, fabrication, installation, testing, commissioning, operation, maintenance, re-qualification and abandonment.
Barrel/Barrelage	42 US Gallons (approximately 159 litres). The traditional unit of measure of oil volume.
Bathymetry	Measurement of the changing ocean depth to determine the sea floor topography.
Benthic	Bottom dwelling.
Benthos	All biota living upon or in the sediment of an aquatic habitat.
Bioaccumulation	The accumulation of contaminants in organisms at levels above that of the ambient environment.
Bioavailability	A substance in a chemical and physical form that allows it to affect organisms or be accumulated by them.
Biodiversity	The variety of all life forms the different biota, the genes they contain and the ecosystems they form.
Biota	The plants, animals and micro-organisms of a region.
Bit	A drilling bit. Those chiefly in use are the steel roller-cutter, and the diamond-insert bit and PDC bit for hard formations, which penetrates by scratching or abrading the rock rather than by crushing or pulverising like the roller bit. There is also the annular diamond-insert core bit, for cutting and retrieving rock samples (in conjunction with a core barrel).
Blowout	Uncontrolled or uncontrollable release of downhole pressure upward through the well-bore or casing. Although the main danger is fire, the gases are also toxic, and in floating operations a gas blowout may include a threat to the stability of the rig itself. (See Mud)
Casing	The steel pipe that is cemented into a well to prevent the wall from caving in and to stop unwanted fluids from entering the hole from the surrounding rocks.
Cetaceans	The group containing whales, dolphins and porpoises.
Christmas Tree	The manifold, or arrangement of pipework connections and valves which is installed on the wellhead prior to production. As well as outlets for production, the tree will provide for the injection of mud to “kill” the well, and for the insertion of downhole maintenance tools and wirelines.
Condensate (Gas Condensate)	Light hydrocarbon fractions produced with natural gas which condense into liquid at normal temperatures and pressures associated with surface production equipment.
Contaminant	Any physical, chemical or biological substance or property which is introduced into the environment.
Crustacea	The group of animals containing crabs, prawns and shrimps.
Cuttings	The small chips or flakes of rock retrieved from a well by the circulation of the mud. They are studied and logged by the well-site geologist.
DNV OS-F101 (2000)	An international standard which provides criteria and guidance on design, materials, fabrication, installation, testing, commissioning, operation, maintenance, re-qualification and abandonment.
Deviated Well/Hole	A well whose path has been deliberately diverted from the vertical.

	Although relatively costly to drill, they are used particularly offshore to reach distant parts of a reservoir from a single platform. Deviated, or directional drilling up to 60° to 70° from the vertical is now fairly common. Greater deviation is possible with special equipment.
Ec ₅₀	The concentration of a given contaminant that will cause a sublethal effect in a 50% of a collection of organisms over a given period of time. Effects can be larval abnormalities, reproductive impairment, growth inhibition or fertilisation success.
Environment	The surroundings of an organism including the other biota with which it interacts.
Environmental Management Plan	A procedure that identifies potential impacts and methodologies necessary to prevent or mitigate them.
Environmental Management System	A set of procedures incorporated into a documented framework that defines the environmental policy and organisational responsibility for planning, recording, auditing, and resolving non-conformances through a process of review leading to continual improvement of an organisations environmental management.
Epicentre	The location on the surface of the Earth directly above the focus, or place where an earthquake originates.
Epifauna	Benthic animals that move about on the sea bed or are firmly attached to it.
Exploration/Exploration Well	Exploration is the process of identifying a prospective hydrocarbon region and structure, mainly by reference to regional, and specific, geochemical, geological and geophysical (seismic) surveys. An Exploration Well is a well drilled to test a potential but unproven hydrocarbon trap or structure where good reservoir rock and a seal or closure combine with a potential source of hydrocarbons.
Fauna	Collectively, the animal life of any particular region.
Flora	Collectively, the plant life of any particular region.
Formation	A rock deposit or structure of homogeneous origin and appearance.
Grey Water	Water resulting from washing or cooking.
Habitat	The specific place where a particular organism lives.
Infauna	Animals that live within the sediments of aquatic environments.
Invertebrate	Collective term for all animals which do not have a backbone or spinal column.
Lc ₅₀	The concentration of a given contaminant that will result in a 50% mortality of a collection of organisms over a given period of time.
Macrofauna	Animals whose shortest dimension is greater than or equal to 0.5 mm.
Macrophyte	An individual alga large enough to be seen easily with the unaided eye.
Mud	Mud is the name given to drilling fluid which is mainly a mixture of water, or oil distillate, and 'heavy' minerals such as Bentonite or Barites. Mud is pumped into a well at densities calculated to provide a hydrostatic pressure sufficient to overcome downhole formation pressures. (See eg Gas Kick). In addition, the mud is continuously circulated down to the bit, and returns in the annular space outside the drill-string, bringing with it rock cuttings for inspection and keeping the well clean. It is also engineered to maintain a thin protective layer of filter-cake on the bore hole wall, without excessive weight which would decrease the weight on the bit and hence penetration (see Drill String), and also possibly lead to differential sticking and formation damage. Mud is pumped from the mud pit (or tank) via the standpipe, rotary hose and gooseneck to the swivel, and into the drill stem. On return from down hole it is recovered and rock cuttings removed by the shale shakers before re-circulation. A Mud Log is the record of mud make-up and analysis of cuttings recovered.

Organism	Any living entity.
Pelagic	Pertaining to marine organisms which belong to the open seas living free from direct dependence on the bottom or the shore.
Phytoplankton	The planktonic organisms capable of photosynthesis.
Pollution	Degradation or impairment of the purity of the environment by causing a condition that is hazardous to public health, safety aesthetics or welfare, or to biota.
Polychaete	Segmented marine worms of the class Polychaeta.
Production String	Tubing The string of pipe installed inside the casing of a production well, to a point just above the reservoir through which the fluids are produced. It may be 2 inch to 5 inch diameter or more, depending on the production flow and pressures anticipated.
Production Well/Producer	A development well specifically for the extraction of reservoir fluids.
Production And Tree	Wellhead The assembly of casing head, tubing head, connections and well-control valves fitted to a producing well. The "Christmas Tree" is the name given to the complete assembly of valves, connecting flanges etc.
Reserves/Recoverable Reserves	Oil or gas that it is anticipated can be produced. Technical Reserves are theoretically producible at a gross operating margin by eg. normal primary or secondary recovery methods, while Commercial Reserves are restricted to volumes recoverable at an acceptable profitability. The detailed definitions are important in oil and gas financial and other information.
Reservoir	A porous, fractured or cavities rock formation with a geological seal forming a trap for producible hydrocarbons. A common exploration maxim is that a prospective target must possess a related Source rock, Structure and Seal.
Separator	A process vessel used to separate gases and various liquids in a hydrocarbon stream. A Wellhead Separator is the first process vessel in a production operation, operating at or near wellhead pressures.
Shale Shakers	See Mud. Screens for extracting rock cuttings from circulating drilling mud.
Spud String	To commence the actual drilling of the well. See Joint, Drill-string, Casing, etc. Any number of connected joints of tubulars run in the well.
Tie-In	The action of connecting one pipeline to another or to equipment. Hence "pipeline tie-in" commonly describes the connection itself.
Toxicity	The quality or degree of being poisonous, or harmful, to humans or biota.
Turbidity	Measure of the clarity of a water body.
Wastewater	Domestic, industrial and municipal effluent.
Well Testing	Testing in an exploration or appraisal well is directed at estimation of reserves in communication with that well, in addition to well productivity.
Wellhead	"Wellhead" is descriptive of a location or function rather than a specific item of equipment. See Production Wellhead.
Zooplankton	Animal members of the plankton.

