

GLOSSARY OF TECHNICAL TERMS

| Sl. No. | Technical Term | Description |
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| 1. | Alluvial river | Alluvium (from the Latin, <i>alluvius</i> , from <i>alluere</i> , "to wash against") is soil or sediments deposited by a river or other running water. Alluvium is typically made up of a variety of materials, including fine particles of silt and clay and larger particles of sand and gravel. |
| 2. | Appraisal Programme | A programme carried out following a Discovery in the Contract Area for the purpose of appraising Discovery and delineating the Petroleum Reservoirs to which the Discovery relates in terms of thickness and lateral extent and determining the characteristics thereof and the quantity of recoverable Petroleum therein. |
| 3. | Approved Work Programme and Approved Budget | A work programme or Budget that has been approved by the Management Committee pursuant to the provisions of this Contract. |
| 4. | Appurtenant land | Appurtenant land is the portion of land that emerges temporarily/permanently due to shifting/change in river flow. |
| 5. | Asset | It refers to an entity that is involved in production activities from the existing wells and transportation of oil and gas on onshore plants. |
| 6. | Automatic Identification System (AIS) | A system used by ships and vessels Traffic Services (VTS) principally for identification and locating vessels. |
| 7. | Bandalling | Traditional bandalling consists of a framework of bamboo driven into the riverbed and supported by struts. Bamboo matting is fixed to this framework at the water level. |
| 8. | Bank erosion | Bank erosion means the wearing away of rock and soil found along the riverbed and banks. Erosion also involves the breaking down of the rock particles being carried downstream by the river. |
| 9. | Bank Protection | Bank protection is civil construction work on the banks of river to protect from the erosion. |
| 10. | Basin | A Depression in the earth's crust where sedimentary materials are accumulated over the years. With reference to the company it refers to the entity that is involved in exploration related activities. |
| 11. | Block | Area identified in a field which is offered by Government to prospective bidders under New Exploration Licensing Policy, for the purpose of exploration of oil and gas. |
| 12. | Braiding | A braided river is one of a number of channel types and has a channel that consists of a network of small channels separated by small and often temporary islands called braid bars. Braided streams are common wherever a drastic reduction in stream gradient causes the rapid deposition of the stream's sediment load. Braided channels are also typical of river deltas, alluvial fans and pen plains. |
| 13. | Cave hole | The effect of a sharp change in the borehole diameter, such as that caused by a cave or rugose hole, on an induction log. In smooth boreholes of constant diameter, the effect of the borehole is well understood and can be corrected for. |
| 14. | Channel marking | Channel marking is a process which is used for showing the navigational fairway channel. |
| 15. | Clastic | Sediment consisting of broken fragments derived from preexisting rocks and transported elsewhere and re-deposited before forming another rock. Examples of common clastic sedimentary rocks include siliciclastic rocks such as conglomerate, sandstone, siltstone and shale. Carbonate rocks can also be broken and reworked to form clastic sedimentary rocks. |
| 16. | Commercial Discovery | A Discovery of Petroleum reserves which has been declared as a Commercial Discovery in accordance with the provision of Article 10 and/or Article 21 of Production Sharing Contract (PSC). |
| 17. | Deepwater Area | Area falling beyond four hundred (400) metre isobath. |

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| 18. | Delineation Well | Delineation well refers to the well drilled in unproved area to determine the boundaries or the extent of reservoir. |
| 19. | Development | Following discovery, drilling and related activities necessary to begin production of oil or natural gas. |
| 20. | Development Plan | A plan submitted by the Contractor for the development of a Commercial Discovery, which has been approved by the Management Committee or the Government pursuant to Article 10 or Article 21 of PSC. |
| 21. | Differential Global Positioning System (DGPS) | An enhancement to global position system that uses a network of fixed ground based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions. |
| 22. | Directorate General of Hydrocarbon | An organisation, including its successors under the Ministry of Petroleum and Natural Gas. |
| 23. | Discovery | The finding, during Petroleum Operations, of a deposit of Petroleum not previously known to have existed, which can be recovered at the surface in a flow measurable by conventional petroleum industry testing methods. |
| 24. | Dredging | The excavation and removal aspects for deepening or widening of silted waterways and harbours in order to improve navigation. |
| 25. | Effective Day Rate (EDR) | It is a notional rate worked out for evaluation of bids for charter hire of rigs on yearly basis. The formula for calculating EDR is : Mobilisation Fee + Operating Day Rate X 316 days x n + Non Operating Day Rate x 23 days x n + Equipment Breakdown DR x 16 days x n + Moving Day Rate x 10 days x n + Demobilisation fee + Custom Duty - Duty Draw back + Loading/365n (for the contract for 'n' number of years) |
| 26. | Exploration | Searching for oil and/or natural gas, including topographical surveys, geological surveys, seismic surveys and drilling wells. |
| 27. | Exploration Operations | Operations conducted in the Contract Area pursuant to the contract for 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, 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. |
| 28. | Exploratory Well | A Well drilled for the purpose of searching for undiscovered Petroleum accumulations on any geological entity (be it of structural, stratigraphic, faces or pressure nature) to at least a depth or stratigraphic level specified in the Work Programme. |
| 29. | Floating Jetty | A continuous flexible structure beginning above the high water mark and extending down the ramp and on to the water to a point beyond the end of the ramp. As the tide rises and falls, more or less of the jetty is afloat. |
| 30. | FRP Buoys | FRP buoys are Fiber Reinforced Plastic Buoys used for navigation and channel marking. |
| 31. | High level Jetty | A Jetty to be utilised during the period when water level is high. (Monsoon period) |
| 32. | Initial in-place Hydrocarbon (IIP/H) | The estimated quantity of oil and gas in field. |
| 33. | Jetty | A rigid structure built out from the land over the water at a convenient height. Usually the whole deck is at the same level although some may be stepped or sloped. The length is usually such as to ensure at low tide there is water at the end. |
| 34. | Lean Season | Lean Season for IWT is non monsoon period i.e October to March in NW1 and NW2 |

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| 35. | Lighted FRP Buoys | When lights are fixed on FRP buoys with the objective to use for night navigation, it is lighted buoys (FRP make) |
| 36. | Low level Jetty | A Jetty to be utilised during the period when water level is low. (Lean period) |
| 37. | Management Committee | The committee constituted pursuant to Article 6 of PSC. |
| 38. | Meandering | A meander is a bend in a river. A river flowing through a wide valley or flat plain will tend to form a <i>meandering</i> stream course as it alternatively erodes and deposits sediments along its course. The result is a <i>snaking</i> pattern. |
| 39. | Mesozoic kitchen | An area of the subsurface of Mesozoic age (248 to 65 million years) where source rock has reached appropriate conditions of pressure and temperature to generate hydrocarbons |
| 40. | Minimum Work Programme | With respect of each Exploration Phase, the Work Programme specified in Article 5 of PSC with respect of such Phase. |
| 41. | New Exploration Licensing Policy (NELP) | New Exploration Licensing Policy was formulated by the Government of India in 1997-98 to provide a level playing field in which all the parties may compete on equal terms for the award of exploration acreage. This was for accelerating the pace of hydrocarbon exploration in the country through which various blocks including deep-water acreages were offered for competitive bidding. |
| 42. | Object | Object is an interval or section of a well which indicates a likely presence of oil/gas through drilling data as well as study of logs. This section is generally a reservoir under different sedimentary environments and holds hydrocarbon pools. |
| 43. | Offset well | An existing well bore close to a proposed well that provides information for planning the proposed well. In planning development wells, there are usually numerous offsets, so a great deal is known about the subsurface geology and pressure regimes. In contrast, rank wildcats have no close offsets, and planning is based on interpretations of seismic data, distant offsets and prior experience. |
| 44. | Participating Interest | In respect of each Party constituting the Contractor, the undivided share expressed as a percentage of such Party's participation in the rights and obligations under the PSC. |
| 45. | Permanent Jetty | Permanent Jetty is fixed structure built out from the land over the water at a convenient height, which does not float with the level of water. |
| 46. | Petroleum | Crude Oil and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale. |
| 47. | Pontoon | Pontoons are floats used to support a structure on water. |
| 48. | Production Testing | Tests in an oil or gas well to determine its flow capacity at specific conditions of reservoir and flowing pressures. This phase occurs after successful exploration and development drilling from which hydrocarbons are drained from an oil or gas field. |
| 49. | Prospects | Prospects indicate the areas of hydrocarbon accumulation |
| 50. | Repair of Locks | The navigational lock is part of a structure serving dual purpose of controlling salt-water intrusion and navigation. This lock requires repair as and when required. |
| 51. | Reservoir | A naturally occurring discrete accumulation of Petroleum. |
| 52. | Rig Days | No. of days for which rigs were in operation/available during a particular period. |
| 53. | Rig Month | Total No. of days for which rigs were in operation/available during a particular period.rig days divided by 30. |
| 54. | Rigs | It is an equipment used for drilling a well bore. There are various types of rigs like jack-up rigs, floaters, Modular rigs, etc. Further the jack up rigs can be further classified into Cantilever type jack up rigs, Slot type jack up rigs and Mat type jack up rigs. |

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| 55. | River Conservancy works | River conservancy works consists of bandalling, channel marking, dredging, etc. These works are done periodically to keep the required depth of the fairway. |
| 56. | River Training | River training includes design and construction of weirs, barrages, sediment control structures, bank protection, spurs and aprons and water quality control systems in rivers to manage river restoration and flow. |
| 57. | Sediment | Sediment is any particulate matter that can be transported by fluid flow and which eventually is deposited as a layer of solid particles on the bed or bottom of a body of water or other liquid. |
| 58. | Silt change | It is a kind of deposit of sand, which settles down at the bottom. |
| 59. | Spud | Process of starting the well drilling process by removing rock, dirt and other sedimentary material with the drill bit. |
| 60. | Tertiary kitchen | An area of the subsurface of tertiary age where source rock has reached appropriate conditions of pressure and temperature to generate hydrocarbons |
| 61. | Well | A borehole, made by drilling in the course of Petroleum Operations, but does not include a seismic shot hole. |
| 62. | Well head | A wellhead is that part of an oil well which terminates at the surface, whether on land or offshore, where petroleum or gas hydrocarbons can be withdrawn |
| 63. | Work Programme | A work programme formulated for the purpose of carrying out Petroleum Operations |