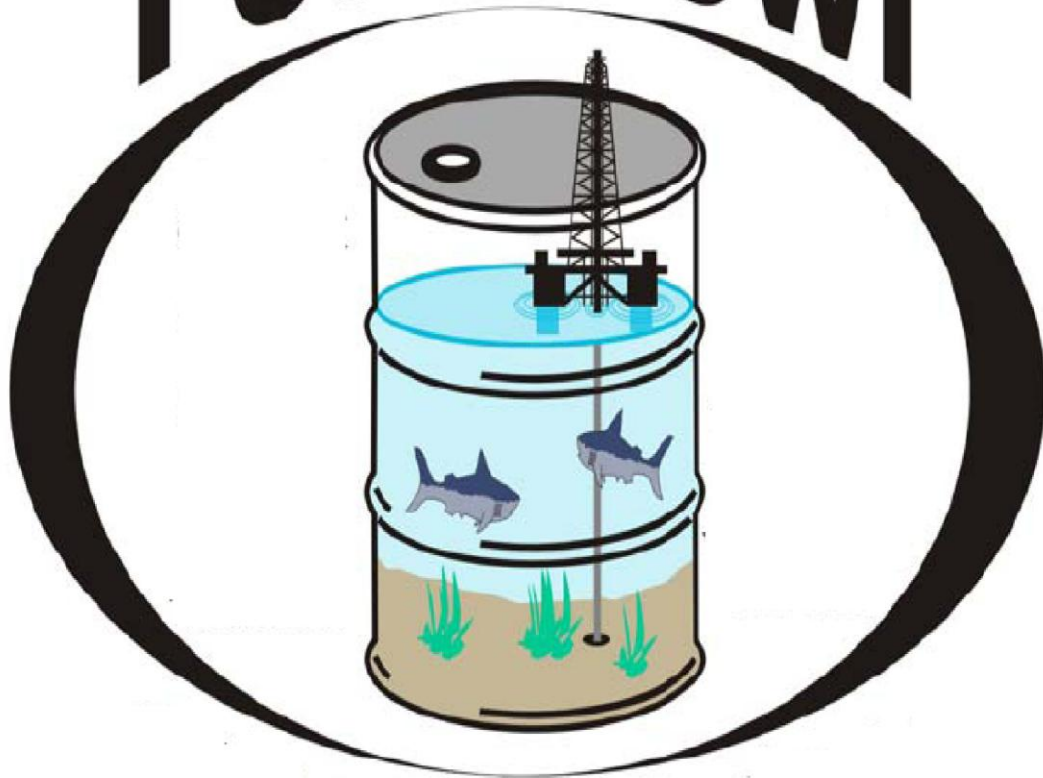


# PetroBowl



## 2012 SPE CUPB Competition Department

**100 Basic Terminologies for Petroleum Industry**

*--Making your Outlook Brighter*



## 100 Basic Terminologies for Petroleum Industry

1. Natural gas produced with crude oil from the same reservoir. --**Associated gas**
2. An arch-shaped fold in rock in which rock layers are upwardly convex. The oldest rock layers form the core of the fold, and outward from the core progressively younger rocks occur—**Anticline**
3. The space between two concentric objects, such as between the wellbore and casing or between casing and tubing—**Annulus**
4. This is a specific gravity scale developed by the American Petroleum Institute for measuring the relative density of various petroleum liquids--**API gravity**
5. The phase of petroleum operations that immediately follows successful exploratory drilling. During appraisal, delineation wells might be drilled to determine the size of the oil or gas field and how to develop it most efficiently--**Appraisal**
6. Reservoir pore fluid pressure that is not similar to normal saltwater gradient pressure ---**Abnormal pressure**
7. Natural gas produced from a reservoir that does not contain significant quantities of crude oil. --**Non-associated gas**
8. A unit of measure for oil and petroleum products that is equivalent to 42 U.S. gallons. --**Barrel**
9. A depression in the crust of the Earth, caused by plate tectonic activity and subsidence, in which sediments accumulate-- **Basin**
10. The uncontrolled flow of gas, oil or other fluids from a well. -- **Blowout**
11. The equipment installed at the wellhead to control pressures in the annular space between the casing and drill pipe or tubing during drilling, completion, and work over operations. See also Christmas tree. --**Blowout preventer (BOP)**
12. Naturally occurring, inflammable organic matter formed from kerogen in the process of petroleum generation that is soluble in carbon disulfides--**Bitumen**
13. A general term that refers to various salts and salt mixtures dissolved in an aqueous solution. Saline liquid usually used in completion operations-- **Brine**
14. A measure of the heating value of a fuel --**British thermal unit (BTU)**
15. Metal pipe inserted into a wellbore and cemented in place to protect both subsurface formations (such as groundwater) and the wellbore. --**Casing**
16. A method of drilling whereby an important tool or bit(suspended in the well from a steel cable) is dropped repeatedly on the bottom of the hole to crush the rock--**Cable-tool drilling**
17. The method used to permanently seal annular spaces between casing and borehole walls--**Cementing**
18. The assembly of valves, pipes, and fittings used to control the flow of oil and gas from a well. --**Christmas tree**
19. A long, small diameter pipe flexible enough to be stored on and deployed from a large, truck-mounted roll. Used to replace jointed pipe in certain types of drilling, completion, and work over operations. -- **Coiled tubing**
20. An engine used to increase the pressure of natural gas so that it will flow more

- easily through a pipeline –**Compressor**
21. hydrocarbon usually produced with natural gas, that are liquid at normal pressure. (Associated gas is gas produced with oil) –**Condensate**
22. The physical process by which sediments are consolidated, resulting in the reduction of pore space as grains are packed closer together—**Compaction**
23. An assembly of valves spools and pressure gauges and chokes fitted to the wellhead of a completed well to control production--**Christmas tree**
24. Water trapped in the pores of a rock during formation of the rock-- **Connate water**
25. A cylindrical sample of the formation being drilled--**Core**
26. Oil at sufficiently low pressure that it contains no dissolved gas or a relatively thick oil or residue that has lost its volatile components--**Dead oil**
27. a well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive; a well drilled in a proven field for the purpose of completing the desired spacing pattern of production. – **Development well**
28. A condition whereby the drillstring cannot be moved (rotated or reciprocated) along the axis of the wellbore --**Differential sticking**
29. A method to test a subsurface formation for gas and oil by isolating the layer and allowing the fluids to flow into the drillstem--**Drillstem test**
30. A term used to describe tools, equipment, and instruments used in the wellbore, or conditions or techniques applying to the wellbore. –**Down hole**
31. When referring to the oil and gas industry, this term indicates the refining and marketing sectors of the industry. More generically, the term can be used to refer to any step further along in the process. –**Downstream**
32. The small pieces of rock created as a drill bit moves through underground formations while drilling. – **Drill cuttings**
33. The combination of the drillpipe, the bottom hole assembly and any other tools used to make the drill bit turn at the bottom of the wellbore--**Drill string**
34. Any exploratory or development well that does not find commercial quantities of hydrocarbons. – **Dry hole**
35. Exploration and production. The "upstream" sector of the oil and gas industry--**E&P**
36. Refers to a variety of processes to increase the amount of oil removed from a reservoir, typically by injecting a liquid (e.g., water, surfactant) or gas (e.g., nitrogen, carbon dioxide). –**Enhanced oil recovery (EOR)**
37. A hole drilled: a) to find and produce oil or gas in an area previously considered unproductive area; b) to find a new reservoir in a known field, i.e., one previously producing oil and gas from another reservoir, or c) to extend the limit of a known oil or gas reservoir. –**Exploratory well**
38. a trap for oil or gas in which the closure, forming the trap, results from the presence of one or more faults--**Fault trap**
39. An area consisting of a single reservoir or multiple reservoirs all grouped on, or related to, the same individual geological structural feature or stratigraphic

- condition. The field name refers to the surface area, although it may refer to both the surface and the underground productive formations. –**Field**
40. Anything left in a wellbore-- **Fish**
41. the effort to recover tools, pipe or other objects from the wellbore that may have become detached-- **Fishing**
42. The reduction in permeability in reservoir rock due to the infiltration of drilling or treating fluids into the area adjacent to the wellbore. –**Formation damage**
43. The application of hydraulic pressure to the reservoir formation to create fractures through which oil or gas may move to the wellbore. –**Fracturing**
44. The conversion of natural gas to a liquid form so that it can be transported easily. Typically, the liquid is converted back to natural gas prior to consumption. –**Gas-to-Liquids (GTL)**
45. A standard adopted by the American Petroleum Institute for measuring the density of a liquid. Gravity is expressed in degrees with lower numbers indicating heavier liquids and higher numbers indicating lighter liquids. – **Gravity**
46. A naturally occurring organic compound comprising hydrogen and carbon—**Hydrocarbon**
47. a well used for injecting air, steam or fluids into all underground formation--**Injection well**
48. A casing string that generally set in place after the surface casing and before the production casing--**Intermediate casing (technical casing)**
49. A long square or hexagonal steel bar with a hole drilled through the middle for a fluid path. It is used to transmit rotary motion from the rotary table or to the drillstring during drilling--**Kelly**
50. A legal document conveying the right to drill for oil and gas, or the tract of land on which a lease has been obtained where the producing wells and production equipment are located –**Lease**
51. The cost of producing oil from a well or lease –**Lifting costs**
52. A casing string that does not extend to the top of the wellbore, but instead is anchored or suspended from inside the bottom of the previous casing string--**Liner**
53. To conduct a survey inside a borehole to gather information about the subsurface formations; the results of such a survey. – **Log**
54. the reduced or total absence of fluid flow up the annulus when fluid is pumped through the drillstring-- **Lost circulation**
55. This is a famous equation. Basically it is a statement of the conservation at any state of matter and is a method of accounting for the volumes and quantities of fluids initially present in, produced from, injected into, and remaining in a reservoir at any state of depletion--**Material Balance Equation**
56. A term sometimes used to refer to those industry activities that fall between exploration and production (upstream) and refining and marketing (downstream). The term is most often applied to pipeline transportation of crude oil and natural gas. –**Midstream**
57. a oil recovery process in which a fluid , capable of mixing completely with the oil,

- is injected into the oil reservoir to increase recovery--**Miscible flooding**
58. The ratio of permeability to viscosity--**Mobility**
59. The small platform that the derrickman stands on when tripping pipe--  
**Monkeyboard**
60. A naturally occurring mixture of hydrocarbon gases that is highly compressible and expansible--**Natural gas**
61. The portions of gas from a reservoir that are liquefied at the surface in separators, field facilities, or gas processing plants. NGL from gas processing plants is also called liquefied petroleum gas (LPG). – **Natural gas liquids (NGL)**
62. Outer Continental Shelf, a term used primarily in the U.S. for the offshore areas under federal jurisdiction. –**OCS**
63. the amount of crude oil estimated to exist in a reservoir underlying a pool or field area--**Oil in place**
64. A depleted well or dry hole that has been (typically) filled with cement and marked with all surface equipment removed. –**P&A (plugged and abandoned)**
65. the rock strata which constitutes the oil and gas reservoir--**Pay zone**
66. A device used to perforate oil and gas wells in preparation for production--**Perforating gun**
67. A measure of the ability of a rock to transmit fluid through pore spaces—  
**Permeability**
68. A complex mixture of naturally occurring hydrocarbon compounds found in rock--**Petroleum**
69. A topographic feature consisting of a large flat area at a relatively high-- **Plateau**
70. A ratio between the volume of the pore space in reservoir rock and the total bulk volume of the rock.--**Porosity**
71. The water extracted from the subsurface with oil and gas. It may include water from the reservoir, water that has been injected into the formation and any chemicals added during the production/treatment process. –**Produced water**
72. A storage place for the kelly—**Rathole**
73. This is a kind of bit, it is under the bottom of drilling stem and designed to crush rock effectively. It has conical cutters or cones that consists of roller cone, bearing and spiked teeth--**Roller cone bit.**
74. A percentage interest in the value of production from a lease that is retained and paid to the mineral rights owner– **Royalty**
75. The process of separating liquid and gas hydrocarbons and water. This is typically accomplished in a pressure vessel at the surface, but newer technologies allow separation to occur in the wellbore under certain conditions. –**Separation**
76. A fine-grained, fissile, detrital sedimentary rock formed by consolidation of clay- and silt-sized particles into thin, relatively impermeable layers. It is the
77. most abundant sedimentary rock--**Shale**
78. To close valves on a well so that it stops production, or a well on which the valves have been closed. –**Shut in**
79. A multiphase-fluid flow regime characterized by a series of liquid plugs separated by a relatively large gas pockets. In vertical flow, the bubble is an axially

- symmetrical bullet shape that occupies almost the entire cross-sectional area of the tubing. The resulting flow alternates between high-liquid and high-gas composition. Name this type of flow--***Slug flow***
80. A dimensionless factor calculated to determine the production efficiency of a well by comparing actual conditions with theoretical or ideal conditions. Its positive value indicates some damage or influences that are impairing well productivity. Its negative value indicates enhanced productivity, typically resulting from stimulation--***Skin factor***
81. Oil containing free sulfur or other sulfur compounds whose total sulfur content is in excess of 1 percent. --***Sour crude oil***
82. Natural gas containing hydrogen sulfide. --***Sour gas***
83. The distance between wells producing from the same reservoir. Spacing is often expressed in terms of acres, e.g., 40-acre spacing, and is often established by regulatory agencies. --***Spacing***
84. The term used for several processes to enlarge old channels, or create new ones, in the producing formation of a well designed to enhance production. Examples include acidizing and fracturing. --***Stimulation***
85. A mechanical device that must simultaneously suspend the weight of the drillstring, provide for rotation of the drillstring beneath it while keeping the upper portion stationary, and permit high-volume flow of high-pressure drilling mud from the fixed portion to the rotating portion without leaking--***Swivel***
86. pump mounted in the well rather than on the surface--Submersible pump
87. A device that turns the drillstring. It consists of one or more motors (electric or hydraulic) connected with appropriate gearing to a short section of pipe called a quill, that in turn may be screwed into a saver sub or the drillstring itself--***Topdrive***
88. A wellhead component that supports the tubing hanger and provides a means of attaching the Christmas tree to the wellhead--***Tubing head***
89. Drilling under conditions where the pressure being exerted inside the wellbore (from the drilling fluids) is less than the pressure of the oil or gas in the formation. -- ***Underbalanced drilling***
90. The placement of gases or fluids into an underground reservoir through a wellbore. Maybe used as part of enhanced oil recovery or water flooding processes or for disposal of produced water. --***Underground injection***
91. The exploration and production portions of the oil and gas industry. --***Upstream***
92. The ability or measurement of a fluid's resistant to flow--***Viscosity***
93. The injection of water into an oil reservoir to —push additional oil out of the reservoir rock and into the wellbores of producing wells. --***Waterflooding***
94. The equipment at the surface of a well used to control the pressure; the point at which the hydrocarbons and water exit the ground --***Wellhead*** (the equipment used to maintain the surface control of a well).
95. Maintenance work performed on an oil or gas well to improve or maintain the production. --***Well servicing***
96. A generic term used to describe the assembly of downhole tubulars and

equipment required to enable safe and efficient production from an oil or gas well- **Well completion**

- 97. Natural gas containing significant amounts of liquefiable hydrocarbons. – **Wet gas**
- 98. A well drilled in an area where no current oil or gas production exists. Also called a —rank wildcat—**Wildcat well**
- 99. Operations on a producing well to restore or increase production. A workover may be performed to stimulate the well, remove sand or wax from the wellbore, to mechanically repair the well, or for other reasons – **Workover**
- 100. West Texas Intermediate, a type of crude oil commonly used as a price benchmark –**WTI** ■