Glossary of Oilfield Production Terminology (GOT)
(DEFINITIONS AND ABBREVIATIONS)

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FOREWORD

A. This publication is under the jurisdiction of the API Executive Committee on Standardization of Oilfield Equipment and Materials.

B. The purpose of this publication is to provide standards writing groups access to previously used abbreviations and definitions. Standards writing groups are encouraged to adopt, when possible, the definitions found herein.

Attention Users of this Publication: Portions of this publication have been changed from the previous edition. The location of changes has been marked with a bar in the margin. In some cases the changes are significant, while in other cases the changes reflect minor editorial adjustments. The bar notations in the margins are provided as an aid to users to identify those parts of this publication that have been changed from the previous edition, but API makes no warranty as to the accuracy of such bar notations.

Note: This is the first edition of this Glossary.

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This Glossary was adapted from several sources. It includes several terms for which there is no single, commonly accepted definition in the petroleum industry. Therefore, some firms within the industry may use definitions which vary somewhat from those contained herein.

1.1 The following API Publications were reviewed to compile the abbreviations and definitions found in Section 2 of this Bulletin.

1.2 List of Publications

Bul S1, Fourteenth Edition
Spec Q1, Second Edition
Spec 1B, Fifth Edition
RP 2A, Seventeenth Edition
Spec 2B, Third Edition
Spec 2C, Third Edition, with Supp 1
RP 2D, Second Edition
Spec 2E, First Edition, with Supp 1
Spec 2F, Fourth Edition
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RP 5C1, Fifteenth Edition
Bul 5C2, Twentieth Edition
Bul 5C3, Fourth Edition, with Supp 1
Bul 5C4, Second Edition
Spec 5L, Thirty-Sixth Edition
RP 5L1, Third Edition
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RP 5L5, First Edition, with Supp 1
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RP 5L7, First Edition
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Spec 6D, Eighteenth Edition, with Supp 3
Spec 6FA, First Edition
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Spec 7, Thirty-Fifth Edition, with Supp 2
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RP 7C-11F, Fourth Edition
Spec 7F, Fourth Edition, with Supp 1
RP 7G, Twelfth Edition
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Spec 7J, First Edition, with Supp 1
Spec 8A, Eleventh Edition
RP 8B, Fourth Edition, with Supp 2
Spec 9A, Twenty-Third Edition
RP 9B, Ninth Edition
Spec 10, Third Edition, with Supp 1
Bul 10C, Third Edition
Spec 10D, Third Edition
RP 10E, Second Edition
RP11AR, Second Edition
Spec 11AX, Eighth Edition
Spec 11B, Twenty-Second Edition, with Supp 1
RP 11BR, Seventh Edition, with Supp 1
Spec 11C, First Edition
Spec 11E, Fourteenth Edition
RP 11ER, First Edition
RP 11G, Second Edition, with Supp 3
Bul 11K, First Edition
RP 11L, Third Edition, with Supp 1
Spec 11N, Second Edition
Spec 11P, First Edition, with Supp 2
RP 11R, Second Edition
RP 11S, Second Edition
RP 11S1, First Edition
RP 11T, First Edition

RP 11U, Second Edition
RP 500B, Third Edition
Spec 12B, Twelfth Edition, with Supp 2
Spec 12D, Ninth Edition, with Supp 2
Spec 12F, Ninth Edition
Spec 12J, Fifth Edition
Spec 12K, Fifth Edition
Spec 12L, Third Edition, with Supp 1
RP 12N, First Edition
Spec 12P, First Edition
RP 12R1, Third Edition
Spec 13A, Eleventh Edition, with Supp 1
RP 13B, Eleventh Edition, with Supp 1
Bul 13C, First Edition
Bul 13D, Second Edition
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Bul 13F, First Edition
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Spec 14A, Sixth Edition, with Supp 2
RP 14B, Second Edition, with Supp 3
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RP 48, First Edition
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RP 52, First Edition
RP 53, Second Edition
RP 54, First Edition
RP 56, First Edition
RP 57, First Edition
RP 58, First Edition
Bul D4, March, 1963
Bul D8, September 1964
Bul D9, Third Edition
Bul D10, Second Edition
Bul D11, Second Edition
Bul 12A, January 1979
Bul D14, Second Edition
Bul D15, First Edition
Bul D16, First Edition
Bul D17, Second Edition
Bul D19. First Edition
Bul D20, First Edition
Introduction to Oil & Gas Production (ITOGP), 1983
Corrosion of Oil and Gas-Well Equipment (COGWE), 1958
Subsurface Salt Water Injection and Disposal (SSWID), Second Edition
Well Testing (WT), Second Edition
Wireline Operations and Procedures (WLOP), 1983
Gas Lift (GL), Second Edition, 1984
RP T-1, Second Edition
RP T-2, October 1975
RP T-3, First Edition
RP T4, First Edition
RP T-5, Second Edition
RP T-6, First Edition

SECTION 2
ABBREVIATIONS AND DEFINITIONS

2.1 The following abbreviations and definitions were compiled from the API Publications listed in Section 1. Following each definition is, in parentheses, the publications(s) in which it is used. The definitions found herein have not been changed from their use in the indicated publication and in some cases there may be multiple definitions for the same word.

2.2 Abbreviations and Definitions

-A-

AAR – Association of American Railroads

ABANDON – To cease efforts to produce fluids from a well, in depleted formation and to plug the well without adversely affecting the environment. (Bul 10C)

ABANDON – To cease efforts to produce oil or gas from a well, and to plug a depleted formation and salvage all material and equipment. (ITOGP)

ABS – American Bureau of Shipping

ABATEMENT – The act or process of reducing the intensity of pollution; also, the use of some method of abating pollution. (Bul D11)

ABNORMAL OPERATING CONDITION – A condition which occurs in a process component when an operating variable ranges outside of its normal operating limits. (RP 14C)

ABRASIONS OR PEENING – Damage on the pipe resulting from a rubbing or pounding action against other pipe or some protrusion in the vessel. This latter condition may result in the initiation of fatigue cracks at the damaged areas during transit. (RP 5L5)

ABSOLUTE PRESSURE – Pressure measured from absolute zero pressure. It is ordinarily expressed as gage pressure (the pressure reading on a pressure gage) plus atmospheric pressure, and denoted in pounds per square inch absolute (psia). (WLOP)

ABSOLUTE VOLUME – The volume per unit mass, reciprocal of absolute density. (Bul 10C)

ABSORPTION – The penetration or apparent disappearance of molecules or ions of one or more substances into the interior of a solid or liquid. For example, in hydrated bentonite, the planar water that is held between the mica-like layers is the result of absorption. (Bul D11)

ABSORPTION - To soak up as a sponge takes water. (COGWE, ITOGP, SSWID)

AC FIELD – The active magnetic field produced by the use of alternating current. (RP 5A5)

ACCELERATION METHOD. Utilizes the angles at the top and bottom of the course length and from these generates a curve on the assumption that the measured angles change smoothly from top to bottom of the measured course as though under the influence of a constant force of

acceleration. The results obtained are the same as the "Balanced Tangential," "Trapezoidal," and "Vector Averaging" Methods. (Bul D20).

ACCELERATOR – A material which accelerates or speeds up the normal rate of reaction between cement and water, resulting in an increase in the development of early strength, and, in some cases, a decrease in the setting time or thickening time. (Bul 10C)

ACCEPTANCE CRITERIA – Limit of shape, size, and position of discontinuities acceptable within the context of the specific design requirements. (RP 2X)

ACCEPTANCE CRITERIA – Defined limits placed on characteristics of materials, products, or services. (Spec 6A, Spec 16A, Spec Q1)

ACCESS OPENING – An opening which allows communication to the interior of the flame arrestor housing making the mixer, pilot, burner, etc., accessible. This opening is normally closed by a flat plug or plate 3" to 4" in diameter, securely attached to the housing and tightly sealed against the opening. (RP 12N)

ACCESSORY – A secondary part of assembly of parts which contributes to the overall function and usefulness of a machine. (Spec 2C)

ACCLIMATION – The process of adjusting or adapting to changes in climate or environment. (Bul D11)

ACCUMULATOR – A pressure vessel charged with nitrogen gas and used to store hydraulic fluid under pressure for operation of blowout preventers. (RP 53)

ACI – American Concrete Institute

ACID – Any chemical compound containing hydrogen capable of being replaced by positive elements or radicals to form salts. In terms of the dissociation theory, it is a compound which, on dissociation in solution, yields excess hydrogen ions. Acids lower the pH. Examples of acids or acidic substances are: hydrochloric acid, tannic acid, sodium acid pyrophosphate. (Bul D11)

ACID BOTTLE – Early method of measuring the angle of inclination. A glass bottle with hydrofluoric acid was lowered to the bottom and allowed to set until the acid etched the glass. The angle of inclination was determined by the etched line. (Bul D20)

ACID RESISTANCE – The ability of a hardened cement slurry to withstand the softening and corrosive effects of organic or mineral acids, or water solutions of these acids and their salts having a pH lower than 7.0. (Bul 10C)

ACIDITY – The relative acid strength of liquids as measured by pH. A pH value below 7. See pH. (Bul 10C, Bul D11)

ACIDIZING – The practice of injecting acids into rock formations to remove any blocking material or to enlarge the pores to enhance the movement of fluid through the rock. (Bul 10C)

ACIDIZING – The treatment of formations with hydrochloric or other type acids in order to increase production or injection. (ITOGP)

ACIDIZING – The act of pumping an acidic solution into a wellbore to remove materials from the perforations, pipe, and walls of the producing formation or pumping the solution into formations to improve permeability. (RP 54)

ACOUSTIC IMPEDANCE – The factor which controls the propagation of an ultrasonic wave at a boundary interface. It is the product of the material density and the acoustic wave velocity within the material. (RP 2X)

ACT – Automatic Custody Transfer

ACT – Automatic Custody Transfer: A unit designed to automatically move oil from lease storage to pipe line. Normally made up of a pump, back-pressure valve, BS&W monitor, and oil meter. (WT)

ACTIVE ZONE – A region in which the ice moves and deforms. (Bul 2N)

ACTUATION TEST, BLOWOUT PREVENTER – The closing and opening of a blowout preventer unit to assure mechanical functionability. (RP 57)

ACTUATOR – A mechanism for the remote or automatic operation of a valve or choke. (Spec 6A)

ACUTE TOXICITY – Any poisonous effect produced within a short period of time, usually up to 24-96 hrs., resulting in severe biological harm and often death. (Bul D11)

ADAPTER – A pressure containing piece of equipment having API end connections of different nominal sizes and/or pressure ratings, used to connect other pieces of equipment of different API nominal sizes and/or pressure ratings. (Spec 16A)

ADDED MASS – Effective addition to the system mass which is proportional to the displaced mass of water. (RP 2T)

ADDENDUM – The distance between the pitch line and crest of thread. (RP 5B1)

ADDITION – A material added to a cement clinker during manufacture, commonly gypsum/anhydrite and water. (Bul 10C)

ADDITIVE – A material other than cement or water which is added to a cement subsequent to its manufacture to modify properties. Equivalent of admixture in ASTM usage. (Bul 10C)

ADEQUATE VENTILATION – Adequate ventilation is defined as ventilation (natural or artificial) which is sufficient to prevent the accumulation of significant quantities of vapor-air mixtures in concentration above 25% of their lower flammable (explosive) limit (LEL). (RP 500B)

ADEQUATELY VENTILATED AREA – An adequately ventilated area is an area that has a ventilation system (natural or artificial) which prevents the accumulation of gases to an explosive level. Adequate ventilation is provided by a change of air volume each five minutes, or 1.5 cubic feet of air volume flow per minute per square foot of floor area, whichever is greater. (RP 14F)

ADFREEZE- Adhesion between ice and a structural surface. (Bul 2N)

ADHESION – A physical attraction, operating on the molecular level, exerted between the surfaces of bodies in contact. (Bul 10C)

ADHESION – The molecular attraction or force exerted across the surfaces of contact between unlike liquids and solids which resist their separation. (Bul D11)

ADJUSTMENT – Activities associated with the sizing or setting of a SSCSV value as defined in the Manufacturer's Operating Manual. Adjustment may be performed at the well site or other location. Each part installed for the purpose of adjustment should be a qualified part. (RP 14B)

ADJUSTABLE CHOKE – A choke in which the position of a conical needle in a seat can be used to vary the rate of flow through the choke. (WLOP)

ADMINISTRATIVE OR REGULATORY AUTHORITY – Governmental agency or the employer in the absence of governmental jurisdiction. (Spec 2C)

ADMIX – To add one material to another by mixing. Note: Admix should not be used replaceably with addition, additive or admixture. (Bul 10C)

ADSORBED LIQUID – That liquid on the surfaces of solid particles that cannot be removed by draining, even with centrifugal force. (Bul 13C)

ADSORPTION – A surface phenomenon exhibited by a solid (adsorbent) to hold or concentrate gases, liquids, or dissolved substances (adsorptive) upon its surface, a property due to adhesion. For example, that water held to the outside surface of hydrated bentonite is absorbed water. (Bul D11)

ADSORPTION – The accumulation of a thin layer of molecules of gas or liquid on a solid surface. (COGWE, SSWID)

ADSORPTION – The attraction exhibited by the surface of a solid for a liquid or a gas when they are in contact. (ITOGP)

AERATE – Adding air into water by agitation. (SSWID)

AERATION – The technique of injecting air or gas in varying amounts into a fluid. (See Air Cutting.) (Bul 10C)

AERATION – The process of being supplied or permeated with air. (Bul D11)

AERATION – The technique of injecting air or gas in varying amounts into a drilling fluid for the purpose of reducing hydrostatic head. See Air Cutting. (Bul D11)

AEROBIC – With atmospheric oxygen present. (COGWE, SSWID)

AEROBIC – the condition associated with the presence of free oxygen in an environment; living, active, or occurring only in the presence of oxygen. (Bul D11)

AEROBIC BACTERIA – Bacteria that are active primarily in the presence of oxygen. (SSWID)

AEROSOL – Suspension of liquid or solid particles in air or gas. (Bul D11)

"A" FRAME – See Gantry also called Mast. (Spec 2C)

AGENCY – An organization or part of an organization selected by the owner to perform examinations as required by the specification or purchase order. (RP 2X)

AGENCY PERSONNEL – Technicians employed and trained by an independent organization, offered to the operator on a contract basis, for assisting in the construction inspections. (RP 2X)

AGER – A water filled pressure chamber used to apply external pressure to gas lift valves to flex the bellow during the pressure setting operation. (GL)

AGGLOMERATE – A mass of particles or substances closely associated and clustered together. (Bul D11)

AGGLOMERATION – The grouping of individual particles. (Bul D11)

AGGREGATE – An essentially inert material of mineral origin having a particle size predominately greater than 10 mesh. Also a group of two or more individual particles held together by strong forces which are not subject to dispersion by normal mixing or handling. (Bul 10C)

AGGREGATE – A group of two or more individual particles held together by strong forces. Aggregates are stable to normal stirring, shaking, or handling as powder or a suspension. They may be broken by drastic treatment such as ball milling a powder or by shearing a suspension. (Bul D11)

AGGREGATION – Formation of aggregates. In drilling fluids, aggregation results in the stacking of the clay platelets face to face. The viscosity and gel strength decrease in consequence. (Bul D11)

AGING – Natural or artificial curing of cement, cement slurries, and hardened cement paste during which various physico-chemical changes take place. (Bul 10C)

AGMA – American Gear Manufacturers Association

AIEE – American Institute of Electrical Engineers

AIR CURTAIN – A method for mechanical containment of oil spills. Air is bubbled through a perforated pipe causing an upward water flow that retards the spreading of oil. Air curtains may also be used as barriers to prevent fish from entering a polluted body of water. (Bul D11)

AIR CUTTING – The inadvertent mechanical incorporation and dispersion of air into a well-fluid system. See Aeration. (Bul 10C)

AIR CUTTING – The inadvertent mechanical incorporation and dispersion of air into a drilling-fluid system. (Bul D11)

AIR POLLUTION – The presence of contaminates in the air in concentrations that interfere directly or indirectly with human health, safety, comfort, or with the full use and enjoyment of property. (Bul D11)

AIR-QUALITY CRITERIA – The levels of pollution and lengths of exposure at which adverse effects on health and welfare occur. (Bul D11)

AIR-QUALITY STANDARDS – The prescribed level of pollutants in the outside air that cannot be exceeded legally during a specified time in a specified geographic area. (Bul D11)

AISC – American Institute of Steel Construction

AISI – American Iron and Steel Institute

ALKALI – Any compound having marked basic properties. See Base. (Bul 10C, Bul D11)

ALKALINITY – The combining power of a base measured by the maximum number of equivalents of an acid with which it can react to form a salt. In water analysis, it represents the carbonates, bi-carbonates, hydroxides, and occasionally the borates, silicates, and phosphates in the water. It is determined by titration with standard acid to certain datum points. (Bul 10C)

ALKALINITY – The combining power of a base measured by the maximum number of equivalents of an acid with which it can react to form a salt. In water analysis, it represents the carbonates, bi-carbonates, hydroxides, and occasionally the borates, silicates, and phosphates in the water. It is determined by titration with standard acid to certain datum points. See API RP

13B for specific directions for determination of phenolphthalein (P) and methyl orange (M) alkalinities of the filtrate in drilling fluids and the alkalinity of the mud itself (P). Also, see (P), (M), and (P). (Bul D11)

ALL-ELECTRIC RIG – A rotary drilling rig using power from electric power line. (Bul D10)

ALLOWABLE – The amount of oil or gas that a well is authorized by the state regulatory agency to produce during a given period. (ITOGP)

ALLOWABLE – The producing rate of a well, lease or unitized property, as established by existing rules and regulations of governing bodies. Usually based on depth, and/or well capacity, for a specific period of time such as one day or one month. (WT).

ALLOWABLE ROPE HOLD – The "nominal" breaking strength of the rope divided by a design factor. (Spec 2C)

ALLOY – A metal composed of two or more elements, at least one of which has good metallic properties. (COGWE, SSWID)

ALLOY – A metal composed of two or more elements, combined to produce certain metallic properties. (WLOP)

ALTERNATING CURRENT (AC) – Alternating current is current that reverses its direction of flow at regular intervals. (RP 5A5)

ALUMINUM STEARATE – An aluminum salt of stearic acid used as a defoamer. See Stearate. (Bul D11)

AMINE – A compound generally used to "sweeten" sour fluids or gases. (SSWID)

AMPERE (A or amp) – A unit of electrical current. (RP 5A5)

AMPERE-TURNS (A-t) – The product of the number of turns in a coil and the number of amperes of current flowing through it. This is a measure of the magnetizing strength of the coil. For example: 800 amperes in a 6 turn coil = 800 x 4800 A-t. (RP 5A5)

AMPLIFICATION REDUCTION FACTOR (C) – Coefficient applied to bending term in interaction equation for members subjected to combined bending and axial compression to account for overprediction of secondary moment given by the amplication factor $1/(1 - f/F')$. (Bul 2U)

AMPLIFIER – A device to increase or amplify electric impulses. (RP 2X)

AMPLITUDE (See related term: Stroke) – The distance from the mean position to the point of maximum displacement. In the case of a vibrating screen with circular motion, amplitude would be the radius of the circle. In the case of straight-line motion or elliptical motion it would be one-half of the total movement or one-half of the major axis of the ellipse; thus one-half stroke. (Bul 13C)

AMPLITUDE ECHO – The vertical height of an A-scan received signal, measured from base-to-peak or peak-to-peak. (RP 2X)

ANAEROBIC – With atmospheric oxygen absent. (COGWE, SSWID)

ANAEROBIC – Refers to life or processes that occur in the absence of oxygen. (Bul D11)

ANALYSIS, DRILLING-FLUID OR MUD – Examination and testing of the drilling fluid to determine its physical and chemical properties and condition. (Bul D11)

ANGLE BEAM – A wave train traveling at an angle, measured from the normal to the test surface to the centerline of the beam. (RP 2X)

ANGLE DROP-OFF – Rate of change (degrees/100 ft) of the inclination angle in the section of the wellbore that is decreasing toward vertical (refer to "Drop Off"). (Bul D20)

ANGLE INDICATOR – BOOM – An accessory which measures the angle of the boom above horizontal. (Spec 2C)

ANGLE OF ATTACK – Angle between the wellbore inclination/direction and the dip inclination/direction. (Bul D20)

ANGLE OF BUILDUP – Rate of change (degrees/100 ft) of the inclination angle in the section of the hole where the inclination from the vertical is increasing (refer to "Buildup"). (Bul D20)

ANGLE OF DRIFT – Refer to "Angle of Inclination." (Bul D20)

ANGLE OF INCLINATION – That angle in degrees, taken at one or at several points of variation, from the vertical as revealed by a deviation survey; sometimes called the inclination or angle of deviation. (Bul D20)

ANGLE OF INCIDENCE – The included angle between the direction of the transmitted wave and the normal to the interface at the point of incidence. (RP 2X)

ANGLE OF REFLECTION – The angle defined by the direction of the reflected wave and the normal to the interface at the point of incidence. The angle of reflection is equal to the angle of incidence. (RP 2X)

ANGLE OF REFRACTION – The angle between the refracted rays of an ultrasonic beam and the normal to the refracting surface. (RP 2X)

ANGLE OF TWIST – The azimuth change through which the drill stem must be turned to offset the twist caused by the reactive torque of the downhole motor. (Bul D20)

ANGLE TESTING – A testing method in which transmission is at an angle to one test surface. (RP 2X)

ANGLE TRANSDUCER - A transducer that transmits or receives the acoustic energy at an acute angle to the surface to achieve a special effect such as the setting-up of shear waves in the part being inspected. (RP 2X)

ANGLE UNIT – Refer to "Inclinometer." (Bul D20)

ANHYDRITE – See Calcium Sulfate. (Bul 10C)

ANHYDRITE – See Calcium Sulfate. Anhydrite is often encountered while drilling. It may occur as thin stingers or massive formations. (Bul D11)

ANHYDROUS – Without water. (Bul 10C, Bul D11)

ANILINE POINT – The lowest temperate at which equal volumes of freshly distilled aniline and an oil which is being tested are completely miscible. This test gives an indication of the character (paraffinic, naphthenic, asphaltic, aromatic, mid-continent, etc.) of the oil. The aniline point of diesels or crudes used in drilling fluid is also an indication of the deteriorating effect these materials may have on natural or synthetic rubber. The lower the aniline point of an oil the more severe it usually is in damaging rubber parts. (Bul D11)

ANION – A negatively charged atom or radical, such as Cl-, OH-, etc. in solution of an electrolyte. (Bul 10C)

ANION - A negatively charged atom or radical, such as Cl-, OH-, etc. in solution of an electrolyte. Anions move toward the anode (positive electrode) under the influence of an electrical potential. (Bul D11)

ANISOTROPIC FORMATION THEORY – Stratified or anisotropic formations are assumed to possess different drillabilities parallel and normal to the bedding planes, with the result that the bit does not drill in the direction of the resultant force. (Bul D20)

ANNULAR FLOW – Formation fluids are produced up through the tubing-casing annulus and recovered at the surface. (GL)

ANNULAR PACKOFF – A mechanism that seals off annular pressure between the OD of a suspended tubular member or hanger and the ID of the head or thru spool which the tubular member passes or hanger is suspended. (Spec 6A)

ANNULAR PREVENTER – A device which can seal around any object in the wellbore or upon itself. Compression of a reinforced elastomer packing element by hydraulic pressure effects the seal. (RP 53)

ANNULAR SPACE – The space around a pipe (casing or tubing) suspended in a wellbore is often termed the ANNULUS, and its outer wall may be either the wall of the borehole or the casing. (ITOGP)

ANNULAR SPACE – Space surrounding pipe in the wellbore. The outer wall of the annular space may be open hole or it may be pipe. (RP 54)

ANNULAR VELOCITY – The velocity of a fluid moving in the annulus. (Bul 10C, Bul D11)

ANNULUS – The space between tubing and casing. (GL)

ANNULUS (ANNULAR SPACE) – The space surrounding pipe suspended in the well bore. The outer wall of the annulus may be the wall of the bore hole or it may be larger pipe. (Bul 10C, SSWID, WLOP)

ANNULUS OR ANNULAR SPACE – The space between the drill string and the wall of the hole or casing. (Bul D11)

ANODE – The portion of a corrosion cell which corrodes. Oxidation always occurs at anode. (COGWE)

ANODE – The portion of a corrosion cell which corrodes. Oxidation always occurs at anode. Usually a piece of sacrificial metal connected to equipment for corrosion protection. (SSWID)

ANSI – American National Standards Institute.

ANTHRACITE MEDIUM – A type of coal which is commonly used in water filters. (SSWID)

ANTIDEGRADATION CLAUSE – A provision in air-quality and water-quality laws that prohibits deterioration of air or water quality in areas where the pollution levels are presently below those allowed. (Bul D11)

ANTIFOAM – (See Defoamer.) A substance to prevent foam formation by greatly decreasing the surface tension. (Bul 10C)

ANTIFOAM – A substance used to prevent foam by greatly increasing the surface tension. See Defoamer. (Bul D11)

AOGA – Alaska Oil and Gas Association

AOSC – Association of Oilwell Serving Contractors

APERTURE – (See Related Term: Mesh.) An opening; in a screening surface the clear opening between wires. (Bul 13C)

APEX – See Preferred Term: Underflow Opening. (Bul 13C)

APEX VALVE – See Preferred Term: Underflow Opening. (Bul 13C)

APEX – American Petroleum Institute

API – American Petroleum Institute

API – Abbreviation for American Petroleum Institute, with headquarters in Washington, D.C. This is the trade association for the petroleum industry. The Institute's Production Department is located at 211 N. Ervay, Suite 1700, Dallas, TX 75201. (ITOGP)

API – American Petroleum Institute. Founded in 1920, this national oil industry trade association maintains a headquarters office in Washington, D.C., and a Production Department office in Dallas, Texas. It is also used as a slang expression for a job well done (that work is strictly API), or for utter confusion (it's API today, two engines are down). Standards for many items of drilling and producing equipment are produced by industry committees of the Production Department, including specifications for wire rope and solid wire line. (WLOP)

API CEMENT CLASSES – A classification system for well cements defined in API Spec 10. (Bul 10C)

API GRAVITY – The gravity (weight per unit volume) of crude oil or other related fluids as measured by a system recommended by the American Petroleum Institute. It is related to specific gravity by the following formula:

$$\text{Deg API} = \frac{141.5}{\text{Sp gr 60 F/60F}} - 131.5$$

(Bul D11)

API GRAVITY – Specific gravity of crude oil as measured by a system recommended by API. (GL)

API GRAVITY – The standard adopted by API for measuring the density of a liquid, expressed in degrees. It can be converted from specific gravity by the following equation:

$$\text{Degrees API gravity} = \frac{141.5}{\text{Specific gravity}} - 131.5$$

(ITOGP)

API GRAVITY – An arbitrary scale to conveniently express the gravity or density of liquid petroleum products. The scale is derived from "specific gravity" according to the following equation:

$$\text{API gravity} = \frac{141.5}{\text{Specific Gravity}} - 131.5$$

API gravity is expressed in degrees, a specific gravity of 1.0 being equivalent to 10 API. (WLOP)

API MONOGRAM – A registered mark of the American Petroleum Institute. (Spec 6A)

API SAND – Solid particles in a drilling fluid that are too large to pass through a U.S.S. No. 200 screen (74 micron equivalent). See API RP 13B. (Bul 13C)

API WELL NUMBER – A unique numeric identifier for a hole-in-the-ground. The identifier is assigned on the basis of surface location and extends from the surface to total depth. (Bul D12A)

APOA – Arctic Petroleum Operators Association.

APPARENT VISCOSITY – The viscosity a fluid appears to have on a given instrument at a stated rate of shear. It is a function of the fluid's plastic viscosity and the yield point. The apparent viscosity in centipoises, as determined by the direct-indicating viscometer (see Viscometer Direct-Indicating), is equal to ½ the 600-rpm reading. In a Newtonian fluid, the apparent viscosity is numerically equal to the plastic viscosity. See also Viscosity, Plastic Viscosity, and Yield-Point. (Bul 10C, Bul D11)

APPLICATOR – The organization responsible to the purchaser for the application of the coating. (RP 5L2)

APPOINTED – Assigned specific responsibilities by the employer or the employer's representative. (Spec 2C)

APPROACH AND DEPARTURE OBSTRUCTION – Any object which protrudes above the 8 to 1 clearance plane from the edge of the ground cushion area. (RP2L)

APPROACH AND DEPARTURE ZONE – A clear zone available for flight of a helicopter as it approaches or departs from the heliport's designated takeoff and landing area. (RP 2L)

APPROVED – Acceptable to the authority enforcing the rules. (Electrical devices which carry UL, FM or CSA approval are normally acceptable.) (RP 14F)

APPROVED – Means sanctioned, endorsed, accredited, certified, or accepted by a duly constituted and recognized authority or agency. Proper, adequate, sufficient, safe, due, appropriate, reasonable, accepted, periodically, readily, suitable, qualified competent, reliable, experienced, so as to ensure, accessible, frequently, indicative of a general standard of care are defined as n a prudent manner. (RP 54)

AQUATIC PLANTS – Plants that grow in water either growing up from the body of water, growing under the surface, or floating on the surface of the water. (Bul D11)

AQUIFER – An underground bed or stratum of earth, gravel, or porous stone that contains water. (Bul D11)

AQUIFER – A water-bearing rock strata. In a water-drive field the aquifer is the water zone of the reservoir underlying the oil zone. (ITOGP)

AQUIFER – A reservoir which bears water in recoverable quantity. (SSWID)

ARC BURNS - Localized points of surface melting caused by arcing between electrode or ground and pipe surface. (Bul 5T1)

ARCING – Current flow through a gap, often accompanied by intense heat and light. (RP 5A5)

ARCING DEVICE – A device which during its normal operation produces an arc with sufficient energy to cause ignition of an ignitable mixture. (RP14F)

AREA – See Location. (RP 500B)

AREAL EXTENT – Space or degree to which a thing is extended. Generally used to describe the distance to the outer boundaries of a reservoir. (SSWID)

ARTIFICIAL DISCONTINUITY OR NOTCH – Reference discontinuities such as holes, grooves or slots which are introduced into a reference standard to provide reproducible sensitivity levels for inspection equipment. (See reference standard.) (RP 5A5)

ARTIFICIAL ICE ISLAND – A grounded mass of mostly manmade ice. (Bul 2N)

ARTIFICIAL LIFT – The application of energy from an outside source to life reservoir fluids from a producing well. (GL)

ARTIFICIAL LIFT – Any method used to raise oil and gas to the surface after reservoir energy has declined to the point at which the well no longer produces by natural flow. The most common methods of artificial lift are sucker-rod pumps, hydraulic pumps, submersible pumps, and gas lift. (WLOP)

ARTIFICIAL LIFT EQUIPMENT – Equipment installed on, or in a well, to remove fluids from a well when it is no longer able to produce these fluids with its own energy, i.e. conventional rod pumping unit, hydraulic pump, submersible pump, gas lift, etc. (WT)

ASA – American Standards Association.

ASBESTOS – Mineral fiber (as amphibole) with numerous industrial uses; a hazardous air pollutant when inhaled. (Bul D11)

ASBESTOS – Term applied to many fibrous silicate minerals, some forms of which are used in certain drilling fluids. (Bul D11)

A-SCAN – A method of data presentation on a CRT (cathode ray tube) utilizing a horizontal bases line that indicates distance, or time, and a vertical deflection from the base line which indicates amplitude. (RP 2X)

A-SCAN DISPLAY – A cathode ray tube display in which the received signal is displayed as a vertical excursion from the horizontal sweep time trace, the horizontal distance between any two signals represents the material distance between the two conditions causing the signals. (RP 2X)

ASCE – American Society of Civil Engineers.

ASME – American Society of Mechanical Engineers.

ASME SPPE ACCREDITATION PROGRAM – Refers to the accreditation program described in ANSI/ASME SPPE-1 and SPPE-2 (formerly OCS-1 and OCS-2) and the ASME procedure for accreditation. (RP 14B, Spec 14)

ASNT – American Society for Nondestructive Testing

ASPHALT – A natural or mechanical mixture of solid or viscous bitumens found in natural beds or obtained as a residue from petroleum. Asphalt, blends containing asphalt, and altered asphaltic materials (e.g., air-blown, chemically modified, etc.) have been added to certain drilling fluids for such widely different purposes as a component in oil-base drilling fluids, lost-circulation material, emulsifier, fluid-loss-control agent, wall-plastering agent, etc. (Bul D11)

ASSE – American Society of Safety Engineers

ASSEMBLER – An agent who connects the SSV/USV actuator and SSV/USV valve and performs the functional test in accordance with API Spec 14D. (RP 14H, Spec 14D)

ASSIMILATION – The transformation and incorporation of nutrient by an organism or ecosystem. (Bul D11)

ASSOCIATED GAS – Natural gas which is in contact with crude oil in the reservoir. (ITOGP)

ASTM – American Society for Testing and Materials

ASTEM CEMENT TYPES – See Cement, ASTM Types (Bul 10C)

ATMOSPHERE – The layer of air surrounding the earth. (Bul D11)

ATMOSPHERIC PRESSURE – The pressure exerted over the surface of the earth b the weight of the atmosphere. At sea level, this pressure is approximately 14.7 pounds per square inch (psi). (WLOP)

ATMOSPHERIC SERVICE – Refers to operation at gauge pressures between ½ ounce per square inch vacuum and 5 pounds per square inch pressure. (RP 14C)

ATMOSPHERIC ZONE – The part of a structure above the splash zone. (Bul 2N)

ATOM – The smallest particle of matter which can enter into chemical combination, i.e., iron (Fe), oxygen (O), hydrogen (H), carbon (C), chlorine (Cl). (COGWE, SSWID)

ATOM – According to atomic theory, the smallest quantity of an element which is capable of entering into chemical combination or that can exist alone. (Bul D11)

ATOMIC NUMBER – A number, characteristic of an element, which designates the place of the element in the periodic table. This number represents the net positive charge on the nucleus of an atom and is also equal to the number of protons within the nucleus. In a neutral atom, the atomic number necessarily equals the number of electrons outside the nucleus. (Bul D11)

ATTAPULGITE CLAY – A fuller's earth type of clay, a hydrous magnesium aluminum silicate, used as a thickener principally in salt-water drilling fluids. (Bul 10C)

ATTAPULGATITE CLAY – A colloidal, viscosity-building clay used principally in salt-water drilling fluids. Attapulgite, a special fullers earth, is a hydrous magnesium aluminum silicate. (Bul D11)

ATTENUATION – The loss in acoustic energy which occurs between any two points of travel (this loss may be due to absorption, reflection, etc.), or the controlled reduction in sensitivity within the instrument. (RP 2X)

ATTENUATOR – A device for introducing attenuation, usually calibrated in decibels (db). (RP 2X)

AUDIOMETER – An instrument for measuring hearing sensitivity and calibrated in decibels. (Bul D11)

AUDIT – A documented investigation conducted by the manufacturer to verify that applicable requirements are being implemented. (Spec Q1)

AUSTENITE – A solid solution of one or more elements in face-centered cubic iron. (Bul D20)

AUSTENITIC – A non-magnetic (face-centered cubic) state of iron or an iron alloy. (COGWE)

AUSTENITIC – A non-magnetic state of iron or an iron alloy. (SSWID)

AUSTENITIC STAINLESS – A stainless steel whose structure is austenitic at room temperature and which is used for non-magnetic drill collars, etc. (Bul D20)

AUTHORIZED – Appointed by a duly constituted administrative or regulatory authority. (Spec 2C)

AUTHORIZED FACILITY – A facility authorized under the applicable quality assurance program (Appendix A of API Spec 14A. ASME – SPPE or other) specified by the operator on his purchase order. (RP 14H, Spec 14A, Spec 14B, Spec 14D)

AUTHORIZED PERSON – A person assigned by the employer to perform or supervise the performance of a specific type of duty or duties or to be at a specific location(s) at the work site. (RP54)

AUTOCLAVE EXPANSION – A measurement or test made as provided in ASTM C 151: Test for Autoclave Expansion of Portland Cement, Book of ASTM Standards, Part 13. (Bul 10C)

AUTOMATICALLY FIRED VESSEL – A fired vessel with the burner fuel controlled by an automatic temperature or pressure controller. (RP 14C)

AUTOMATION – The automatic, self-regulating control of equipment, systems, or processes. (ITOGP)

AUTOMATION – Equipment installed to provide unattended continuous operation according to a pre-set program. (WT)

- B-

BABBITT – Metal from which engine bearings are made. Usually consists of tin, copper, and antimony. (WLOP)

BACK-OFF – To unscrew. (Bul 10C)

BACK OFF – To unscrew one threaded piece (such as a section of pipe) from another. (ITOGP)

BACK OFF – To unscrew one threaded piece from another. (WLOP)

BACK PRESSURE – The pressure resulting from restriction of full natural flow. (Bul 10C)

BACK PRESSURE – The pressure existing within the producing string at the surface in a gas lift well. Also used to designate the fluid pressure at the level of gas injection, the pressure against which the operating valve injects gas. (GL)

BACK PRESSURE – The pressure resulting from restriction of full natural flow of oil or gas. (ITOGP)

BACK PRESSURE VALVE – A valve that permits flow in only one direction. (RP 57)

BACK PRESSURE VALVE – A one-way check valve that is installed through the X-mas tree, into the tubing hanger, and prevents well fluids from flowing out of the well. (Spec 6A)

BACK PRESSURE VALVE – A valve designed to control flow rates in such a manner that upstream pressure remains constant. May be operated by diaphragm, spring, or weighted lever. (WT)

BACK REFLECTION – The signal received from defects or other reflecting surfaces. (RP 2X)

BACK REFLECTION – In ultrasonic testing, the signal received from the back surface of the pipe wall. (RP5A5)

BACK UP – To hold one section of an object, such as a pipe or a nut, while another is being screwed into or out of it. A BACK-UP WRENCH refers to any wrench being used to hold the pipe or bolt. (ITOGP)

BACKFLOW – Fluid flow in a process component opposite to the normal flow direction. (RP 14C)

BACKGROUND LEVEL – With respect to pollution, amounts of pollutants present due to natural sources. (Bul D11)

BACKGROUND NOISE – Extraneous signals caused by signal sources within the ultrasonic testing system, including the material in test. (RP 2X)

BACKPRESSURE – (See Related Term: Differential Pressure.) The pressure opposing flow from a solids separation device. (Bul 13C)

BACKSCATTER – Secondary radiations resulting from the interaction between the primary gamma radiations form the source and the pipe wall. (RP 5A5)

BACKUP – Refers to the act of "backing up" or preventing rotation of one section of pipe while another is screwed out of or into it. Also applied to screwing nuts on or off bolts. A backup wrench refers to any wrench being used to hold the pipe or bolt. Backup tong is applied to the pipe tongs suspended in the derrick and used to hold a section of pipe while another section is screwed out of our into it by use of other tongs. The backup man is the crew member who operates the backup tongs. The backup position refers to the work station of the backup man. (RP54)

BACKWARD STATION METHOD – Refer to "Tangential Method." (Bul D20)

BACTERIA – Single-celled microorganisms that lack chlorophyll. Some bacteria are capable of causing human, animal, or plan diseases; others are essential in pollution control processes because they break down organic matter in water and air. (Bul D11)

BAD OIL – Oil not acceptable for delivery to the pipeline purchaser because of too high BS&W; oil requiring additional treating. (ITOGP)

BAFFLES – Plates or obstructions built into a tank or other vessel to change the direction of fluid flow. (ITOGP)

BAIL – To recover bottom-hole fluids, samples, or drill cuttings by lowering a cylindrical vessel, called a "bailer," to the bottom of a well, filling it, and retrieving it. Also, a link of steel attached to pipe elevators for living. (WLOP)

BAILER – A long cylindrical container, fitted with a valve at its lower end, used to remove water, sand, mud, or oil from a well. (WLOP)

BALANCE, MUD – A beam-type balance used in determining fluid density. (Bul 10C)

BALANCE, MUD – A beam-type balance used in determining drilling fluid density. It consists primarily of a base, graduated beam with constant-volume cup, lid, rider, knife edge, and counterweight. (Bul D11)

BALANCED TANGENTIAL METHOD – Uses the inclination and direction angles at the top and bottom of the course length in a manner so as to tangentially balance the two sets of measured angles over the course length. Results obtained are the same as the "Acceleration," "Trapezoidal," and "Vector Averaging" Methods. (Bul D20)

BALL AND SEAT – Parts of the valves in a plunger-type oil well pump. (ITOGP)

BALLAST – See Counterweight. (Spec 2C)

BAND BRAKE – Circular type of brake either of external contracting type or internal expanding type, having a band lined with heat and wear resistant friction material. (Spec 2C)

BAND CLUTCH – Circular type of clutch either of external contracting type or internal expanding type, having a band lined with heat and wear resistant friction material. (Spec 2C)

BAND-STRAPPING – A method of attaching plastic or metal sheeting to a cylindrical structure by use of metal bands which encircle the sheeting and secure it in place. (COGWE, SSEID)

BARITE – A native crystalline barium sulfate, which occurs in snow-white crystalline masses, or grayish, reddish, and greenish ores with a specific gravity of 4 to 4.6. It is used for increasing the density of well cement slurries and drilling fluids (synonym BARYTES, HEAVY SPAR). Bul 10C)

BARITE, BARYTES, OR HEAVY SPAR – Natural barium sulfate used for increasing the density of drilling fluids. If required, it is usually upgraded to a specific gravity of 4.20. The barite mineral occurs in white, grayish, greenish, and reddish ores or crystalline masses. (Bul D11)

BARIUM SULFATE – $BaSO_4$. See Barite. (Bul 10C, D11)

BARREL – A volumetric unit of measure used in the petroleum industry consisting of 42 gallons. (Bul D11)

BARREL – The lagging or body portion of a wire rope drum. (Spec 2C)

BARREL – (BBL OR bbl) – A common unit of liquid volume measurement in the petroleum industry. One barrel (1bbl) is equivalent to 42 gallons (158.97 liters). (WLOP)

BARREL OF CEMENT – A dry weight measure of cement equal to 4 cu. Ft. (0.11 m^3) or 376 lb. (171 kg). (Bul 10C)

BARREL OF CEMENT SLURRY – 42 gallons (0.16 m^3) of cement slurry. (Bul 10C)

BARREL EQUIVALENT – A laboratory unit used for evaluating or testing drilling fluids. One gram of material, when added to 350 mL of fluid, is equivalent to 1 lb. (0.45 kg) of material when added to one 42-gallon (0.16 m^3) barrel of fluid. (Bul 10C, Bul D11)

BASE – A compound of a metal, or a metal-like group, with hydrogen and oxygen in the proportion to form an OH- radical, which ionizes in aqueous solution to yield excess hydroxyl ions. Bases are formed when metallic oxides react with water. Bases increase the pH. Examples are caustic soda and lime. (Bul 10C, Bul D11)

BASIC EXCHANGE – The replacement of cations associated with the clay surface by those of another species, e.g., the conversion of sodium clay to calcium clay. (Bul 10C, Bul D11)

BASE LINE – The "distance" trace (horizontal) across the A-scan CRT display. (RP 2X)

BASE (MOUNTING) – See Pedestal. (Spec 2C)

BASIC SEDIMENT AND WATER (BS&W) – The water and other extraneous material present in crude oil. (ITOGP)

BASIC SIZE – The theoretical or nominal standard size from which all variations are measured. (RP 5B1)

BASICITY – The relative base strength of liquids as measured by pH. A pH value above 7. See pH. (Bul 10C)

BASICITY – pH value above 7. Ability to neutralize or accept protons from acids. (Bul D11)

BATCH – A definite amount of oil, mud, chemicals, cement, or other material in a treatment or operation. (ITOGP)

BATCH – The quantity of coating material manufactured at one time in a single vessel and identified by a unique batch number. (RP 5L2)

BATCH – The quantity of material produced during a continuous production run of not more than 8 hours. (RP 5L7)

BATTERY – Sometimes termed Tank Battery, is an area where storage tanks are installed to receive produced fluids. May include several tanks, and/or separation and treating equipment. (WT)

BATTERY (TANK BATTERY) – The production handling equipment on the lease. (ITOGP)

BAY – The section of cylinder between rings. (Bul 2U)

BAY INSTABILITY – Simultaneous lateral buckling of the shell and stringers with the rings remaining essentially round. (Bul 2U)

BBL – Barrel, a unit of liquid volume measurement. Sometimes shown as bbl. One bbl contains 42 gallons. (SSWID, WT)

BBL/D – Barrels per day. (WLOP)

BCPMM – Barrels condensate per million. Barrels of condensed liquid per million cu. ft. gas. (WT)

B/D – The abbreviation for barrels per day. Other related abbreviations are: BPD for barrels per day; BOPD for barrels of oil per day; BWPD for barrels of water per day; BLPD for barrels of liquid per day. (ITOGP)

B/D – Barrels per day. (Alternate for BBL/D usually used in drilling reports.) (WLOP)

BEACH – Area between the liquid pool and the solids discharge ports in a decanting centrifuge. (Bul 13C)

BEAM – The walking beam of a pumping unit. (ITOGP)

BEAM ANGLE – The beam angle or angle of incidence is the angle between the normal to a plan surface of the specimen and the axis of the beam in the specimen. It is a function of the specimen material. (RP 2X)

BEAM SPREAD – The divergence of the sound beam as it travels through a medium. (RP 2X)

BEAM WELL – A well whose fluid is being lifted by rods and pump actuated by a beam pumping unit. (ITOGP)

BEAN – A type of choke used to regulate the flow of fluid from a well. Different sizes of beans are used for different producing rates. (ITOGP)

BEAN – The orifice or designed restriction causing the pressure drop in velocity type SSCSVs. (RP 14B, Spec 14A)

BEARING – Refer to "Azimuth." (Bul D20)

BEARING RACEWAY – The surface of the bearing rings which contact the rolling element (balls or rollers) of the swing bearing assembly. (Spec 2C)

BEARING RING – The rotating and stationary rings that house the rolling elements (balls or rollers) of the swing bearing assembly. (Spec 2C)

BED DEPTH – Thickness of the layer of material traversing a screen surface. (Bul 13C)

BELL HOLE – A bell-shaped hole dug beneath a pipeline to provide room for use of tools by workers. (ITOGP)

BELL NIPPLE (MUD RISER FLOW NIPPLE) – A piece of pipe, with inside diameter equal to or greater than the blowout preventer bore, connected to the top of the blowout preventer or marine riser with a side outlet to direct the drilling fluid returns to the shale shaker or pit. Usually has a second side outlet for the fill-up line connection. (RP 53)

BELLOWS – The responsive element of a gas life valve. It performs the same functions the diaphragm operated valve. It provides an area for pressure to act on and to move the valve stem. (GL)

BENCH MARKS – Permanent reference points of known elevation usually placed on concrete foundations, or on top of an iron stake driven securely into the ground. (SSWID)

BENDING MOMENT – The moment tending to bend the drill string or bottom-hole assembly (refer to "Moment"). (Bul D20)

BENDING STRESS – When the drill stem buckles, each cross-section is subjected to a bending moment generating a tensile stress on one side and a compressive stress on the other. As the drill stem rotates these stresses reverse and, consequently, can cause fatigue of the metal. (Bul D20)

BENT SUB – Sub used on top of a downhole motor to give a non-straight bottom assembly. One of the connecting threads is machined at an angle to the axis of the body of the sub. (Bul D20)

BENTONITE – A highly plastic, highly colloidal clay, largely consisting of the mineral montmorillonite, a hydrated aluminum silicate. (Bul 10C)

BENTONITE – A plastic, colloidal clay largely made up of the mineral sodium montmorillonite; a hydrated aluminum silicate. For use in drilling fluids, bentonite has a yield in excess of 85 bbl/ton. The generic term "bentonite" is neither an exact mineralogical name or is the clay of definite mineralogical composition. (Bul D11)

BEST RECORD – The largest perfect record known to the National Safety Council for a specific industrial classification, according to Standard Industrial Classification Manual, 1972 edition. (Bul T-5)

BEVEL ANGLE – the angle between the weld preparation (and subsequently the fusion line) and the member surface. (RP 2X)

BHP – Bottom hole pressure.

BHT – Bottom Hole Temperature (F)

BICARB – See Sodium Bicarbonate. (Bul D11)

BIG-EYED BIT – Drill bit with one large sized jet nozzle, used for jet deflection. (Bul D20)

BIMETALLIC CELL – A corrosion cell in which dissimilar metals are connected together electrically both with a metallic path and with a liquid which is corrosive to at least one of the metals. (COGWE, SSWID)

BIOASSAY – An assessment or test made using living organisms as the sensors; e.g., a fish toxicity test. (Bul D11)

BIOCHEMICAL OXYGEN DEMAND (BOD) – A standardized measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. It is measured as the quantity of dissolved oxygen (mg/1) required during stabilization of the decomposable organic mater by aerobic biochemical action. (Bul D11)

BIOCIDE – A chemical agent used to destroy bacteria in water systems. (SSWID)

BIODEGRADABLE – Decomposable as a result of the action of microorganisms. (Bul D11)

BIOLOGICAL OXIDATION – The process by which bacterial and other microorganisms feed on complex organic materials and decompose them. The process is also called biochemical oxidation. (Bul D11)

BIOMONITORING – The use of living organisms to test the suitability of effluent for discharge into receiving waters and to test the quality of such waters downstream from a discharge. (Bul D11)

BIRD CAGE – To flatten and spread the strands of a cable or wire rope. Also the slatted or mesh-enclosed cage used to hoist workmen from crew boats to offshore platforms. (ITOGP)

BIT GEOMETRY – Refers to the geometric construction of a bit; i.e., 3-cone, 4-cone, 2-cone, flat-face, configuration of the teeth, etc. (Bul D20)

BIT HYDRAULIC HORSEPOWER (BHHP) – The hydraulic horsepower equivalent of the gallons per minute and the pressure drop across the bit nozzles.

$$\frac{GPM \times psi}{1{,}714} = BHHP$$

(Bul D10)

BIT STABILIZATION – Refers to stabilization of the downhole assembly near the bit; a stabilized bit is forced to rotate around its own axis. (Bul D20)

BLACK CRESTED THREAD – A thread that does not have a full crest because the original (black) mill surface has not been completely removed. (Bul 5T1, RP5A5)

BLACK CRESTED THREADS – Threads crests exhibiting the original pipe surface after machine. (RP 5B1)

BLACK LIGHT – A colloquial expression used to describe Ultraviolet Light (UV). See ultraviolet light. (RP 5A5)

BLACK WATER – A term generally used to describe water that contains products of corrosion caused by bacterial action. (SSWID)

BLADE – See Preferred Term: Flute (Bul 13C)

BLANK FLANGE – A solid disk used to dead-end, or close off, a companion flange. (WLOP)

BLANK LINER – A liner without perforations or slots (ITOGP)

BLANK OFF – To close off by sealing or plugging. (ITOGP)

BLEED – To drain off liquid or gas, generally slowly, through a valve called a bleeder. To BLEED DOWN, or BLEED OFF, means to slowly release the pressure of a well or of pressurized equipment. (ITOGP)

BLEEDER VALVE – A small valve on a pipeline, pump, or tank from which samples are drawn or to vent air or oil; sample valve. (ITOGP)

BLEEDING – Separation of the liquid phase in a cement slurry due to settling of solids. See Free Water. (Bul 10C)

BLIND – To close a line to prevent flow. (ITOGP)

BLIND FLANGE – (Also a BLANK FLANGE.) A solid disc used to dead end a companion flange. (ITOGP)

BLIND RAM – An integral part of a "blowout preventer," serving as the closing element. The ends of a blind ram are not intended to fit around the drill pipe but to seal against each other and shut off completely the space below. (See Ram.) (WLOP)

BLIND RAMS (BLANK, MASTER) – Rams whose ends are not intended to seal against any drill pipe or casing. They seal against each other to effectively close the hole. (RP 53)

BLIND/SHEAR RAMS – Blind rams with a built-in cutting edge that will shear tubulars that may be in the hole, thus allowing the blind rams to seal the hole. Used primarily in subsea systems. (RP 53)

BLINDING – (See Related Term: Coating and Plugging.) A reduction of open area in a screening surface caused by coating or plugging. (Bul 13C)

BLISTER – A raised spot on the surface of pipe caused by expansion of gas in a cavity within the pipe wall. (Bul 5T1)

BLOCKS, CROWN AND TRAVELING – The fixed upper and movable lower blocks respectively of the block and tackle assembly on a rig that raises and lowers the drill string or tubing. (RP 54)

BLOOIE LINE – Flow line for air or gas drilling. (Bul D11)

BLOWDOWN VALVE – An automatically operated normally open valve used to vent the pressure from a process station on shutdown. (RP 14C)

BLOWOUT – An uncontrolled flow of well fluids from the wellbore. (Bul 10C)

BLOWOUT – An uncontrolled flow of well fluids and/or formation fluids from the wellbore caused by the formation pressure being greater than the hydrostatic head of the fluid in the hole. See Underground Blowout. (Bul D11)

BLOWOUT – An uncontrolled flow of gas, oil, or other fluids from a well. (ITOGP)

BLOWOUT – An uncontrolled flow of well fluids and/or formation fluids from the wellbore or into lower pressured subsurface zones (underground blowout). (RP 53, RP 54)

BLOWOUT – A temporary uncontrolled flow of gas, oil, or other well fluids from a well to the atmosphere. A well blows out when formation pressure exceeds the pressure being applied to it by the column of drilling fluids and measures are unsuccessful in rectifying this situation. Early day gushers were blowouts. (WLOP)

BLOWOUT PREVENTER – A device attached immediately above the casing, which can be closed to shut off the hole should a blowout threaten. (Bul 10C)

BLOWOUT PREVENTER (BOP) – The equipment installed at the wellhead for the purpose of controlling pressures in the annular space between the casing and drill pipe (or tubing) during drilling, completion and certain workover operations. (ITOGP)

BLOWOUT PREVENTER – A device attached to the casinghead that allows the well to be sealed to confine the well fluids in the wellbore. (RP 53)

BLOWOUT PREVENTER – A device attached to the wellhead that allows the well to be sealed with or without a string of pipe or wireline in the wellbore. (RP 54)

BLOWOUT PREVENTER AND PLATFORM (BOP) – Equipment installed at the surface, below the drilling floor on land and platform rigs and on the seafloor of floating offshore rigs to prevent the escape of pressure either in the annular space between the casing and drill pipe or in an open hole during drilling and completion operations. Also used during some workover operations. (WLOP)

BLOWOUT PREVENTER, ANNULAR TYPE – A device which can form a seal in the annular space around any object in the wellbore or upon itself. Compression of a reinforced elastomer packing element by hydraulic pressure effects the seal. (RP 57)

BLOWOUT PREVENTER DRILL – A training procedure to determine that rig crews are familiar with correct operating practices to be followed in the use of blowout prevention equipment. A “dry run” of blowout preventive action. (RP 53)

BLOWOUT PREVENTER OPERATING AND CONTROL SYSTEM (CLOSING UNIT) – The assembly of pumps, valves, lines, accumulators, and other items necessary to open and close the blowout preventer equipment. (RP 53)

BLOWOUT PREVENTER, RAM TYPE – A device designed to form a seal on the hole with no pipe or in the annular space with pipe in the hole. The equipment can use pipe rams, blind rams, or blind/shear/cutter rams to affect the required seal, according to equipment availability, arrangement of the equipment, and/or existing well conditions. Pipe rams have ends contoured to seal around pipe to close and seal the annular space. Blind rams have ends not intended to seal against any tubulars, rather they seal against each other to effectively close and seal the wellbore. Blind/shear/cutter rams are blind rams equipped with a built-in cutting edge that wil shear tubulars that may be in the hole, thus allowing the blind rams to close against each other and seal the wellbore. (RP57)

BLOWOUT PREVENTER REMOTE CONTROL – A control that actuates the blowout preventer from a position apart from the blowout preventer. (RP 54)

BLOWOUT PREVENTER STACK – The assembly of well control equipment including preventers, spools, valves, and nipples connected to the top of the casinghead. (RP 53)

BLOWOUT PREVENTER TEST TOOL – A tool to allow pressure testing of the blowout preventer stack and accessory equipment by sealing the wellbore immediately below the stack. (RP 53)

BLPD – Barrels of total liquid per day.

BLUFF BODY – An opaque object located in a fluid flow stream and developing a high drag force because it lacks streamlining. (RP 2T)

BLUNT START – The removal of the partial thread at the entering end of thread. (RP 5B1)

BOD – The amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter in an effluent. See Biochemical Oxygen Demand. (Bul D11)

BODY – Any portion of API equipment between end connections, with or without internal parts, which contains wellbore pressure. (Spec 6A, Spec 16A)

BOILERHOUSE – To make up a report on a condition as fact without knowledge of its accuracy. Sometimes referred to as "doghouse." (Bul D11)

BOILERHOUSE – To make up or fake a report without actually doing the work. (ITOGP)

BOLL WEEVIL – Any inexperienced worker or "hand." (ITOGP)

BOLL WEEVIL – An inexperienced rig or oil-field employee (slang). Sometimes the word is shortened simply to "weevil." (WLOP)

BOLTING – Threaded fasteners (studs, nuts, bolts and capscrews) used to assemble pressure containing parts or join end or outlet connections. (Spec 6A,Spec 16A)

BOMB – A tick-walled container, usually made of steel, that is used to receive samples of oil or gas under pressure or to measure and record the pressure at a point in the well. (See Bottom Hole Pressure.) (WLOP)

BOND – Adhering, binding, or joining of two materials; e.g., cement to casing. (Bul 10C)

BONDING – The state of bond between cement and casing and/or formation. (Bul 10C)

BONNET – The part of a valve that packs off and encloses the valve stem. (ITOGP)

BONNET – A pressure-containing closure for a body, other than an API end or outlet connection. (Sec 6A)

BOOM – A floating fence-like device that is used to contain oil on a body of water. (Bul D11)

BOOM – A member hinged to the revolving upperstructure and used for supporting the hoist tackle. (Spec 2C)

BOOM ANGLE – The angle above or below horizontal of the longitudinal axis of the base boom section. (Spec 2C)

BOOM CHORD – A main corner member of a lattice type boom. (Spec 2C)

BOOM EXTENSION – Intermediate section of a telescoping boom. (Spec 2C)

BOOM FOOT PIN – The boom pivot point on the upperstructure. (Spec 2C)

BOOM HOIST MECHANISM – Means for supporting the boom and controlling the boom angle. (Spec 2C)

BOOM HOIST WIRE ROPE – Wire rope that operates on a drum controlling the angle positioning of the boom. (Spec 2C)

BOOM LACING – Structural truss members at angles to and supporting the boom chords of a lattice type boom. (Spec 2)

BOOM LENGTH – The straight line distance form the centerline of boom foot pin to centerline of boom point load hoist sheave pin, measured along the longitudinal axis of the boom. (Spec 2C)

BOOM LIFE CYLINDER – Means for supporting the boom and controlling the boom angle. (Spec 2C)

BOOM POINT SHEAVE ASSEMBLY – An assembly of sheaves and pin built as an integral part of the boom point. (Spec 2C)

BOOM SPLICES – Splicing connections for sections of basic crane boom and additional sections usually of the splice plate type, pin type or butt type. (Spec 2C)

BOOM STOP – A device used to limit the angle of the boom at the highest recommended position. (Spec 2C)

BOOM TIP EXTENSION – See Jib. (Spec 2C)

BOOT – A tall section of large-size pipe used as a surge column on a vessel. (ITOGP)

BOP – Blow Out Preventer

BOPD – Barrels of oil per day

BOREHOLE- The wellbore; the hole made by drilling or boring a well. (Bul D20)

BOREHOLE AXIS – Refer to "Hole Axis." (Bul D20)

BOREHOLE DIRECTION – Refers to the azimuth in which the borehole is heading. (Bul D20)

BOREHOLE DIRECTIONAL SURVEY – Refers to the measurements of the inclinations, azimuths, and specified depths of the stations through a section of borehole. (Bul D20)

BOREHOLE SURVEY CALCULATION METHODS – Refer to "Wellbore Survey Calculation Methods." (Bul D20)

BORESCOPE – A long optical instrument with an illuminating lamp for inspecting the inside surface of a pipe. (RP 5A5)

BOTTOM – See Preferred Term: Underflow Opening. (Bul 13C)

BOTTOM CASING PACKOFF – A mechanism that seals off annular pressure between the OD of a suspended tubular member or hanger and the ID of the spool or trubing head adapter being placed over the suspended tubular or hanger. (Spec 6A)

BOTTOM FLOODING – The behavior of a hydrocyclone when the underflow discharges in a liquid stream. (Bul 13C)

BOTTOM-HOLE – The lowest or deepest part of a borehole. (Bul D20, ITOGP, WLOP)

BOTTOM-HOLE ASSEMBLY – Assembly composed of the bit, stabilizers, reamers, drill collars, subs, etc., used at the bottom of the drill string. Sometimes abbreviated as BHA. (Bul D20)

BOTTOM-HOLE BACK TORQUE – Torque on the drill stem causing a twisting of the string (refer to "Pipe Wind-up Angle"). (Bul D20)

BOTTOM HOLE CHOKE – A device with a restricted opening placed in the lower end of the tubing to control the rate of liquid or gas flow to the surface. (See Choke.) (WLOP)

BOTTOM-HOLE LOCATION – Position of the bottom of the hole given with respect to some known surface location. (Bul D20)

BOTTOM-HOLE ORIENTATIONS SUB – A sub in which a free-floating ball rolls to the low side and opens a port indicating an orientation position (refer to "Hydraulic Orientating Sub"). Sometimes abbreviated as BHO sub. (Bul D20)

BOTTOM HOLE PRESSURE – The pressure in a well at a point opposite the production formation, usually recorded by a bottom hole pressure instrument popularly called a "bomb." The "bomb" houses a precision gage and is usually lowered on a wireline. (See Bomb.) (WLOP)

BOTTOM HOLE PRESSURE – Pressure in a wellbore at the depth of the producing interval. Usually recorded by gage run on wire line. (WT)

BOTTOM HOLE PRESSURE – The pressure at the bottom of a well generally associated with the pore pressure of the formation open to the well. (Bul 10C)

BOTTOM-HOLE ROLL-OFF – Refer to "Roll Off." (Bul D20)

BOTTOM HOLE TEST ADAPTER – See Top Connection. (Spec 6A)

BOTTOM WATER – Water occurring below the oil and gas in a production formation. (ITOGP)

BOTTOMHOLE PRESSURE – Pressure at some given depth in the well, usually opposite the producing formation. (GL)

BOUND LIQUID – See Preferred Term: Adsorbed Liquid. (Bul 13C)

BOUNDARY ECHO – A reflection of an ultrasonic wave from an interface. (RP 2X)

BOWL – The outer rotating chamber of a decanting centrifuge. (Bul 13C)

BOWL – A device that fits in the rotary table or wellhead to hold the wedges or slips that support a string of drill pipe, casing or tubing while tripping in or out of the hole. (ITOGP)

BRACES – Structural members that serve to stiffen the hull structure and provide deck support. (RP 2T)

BRACKISH WATER – Water containing low concentrations of any soluble salts. (Bul 10C, Bul D11)

BRADENHEAD GAS – See Casinghead Gas. (ITOGP)

BRADENHEAD SQUEEZE – The process by which hydraulic pressure is applied to a well to force fluid such as cement outside the wellbore. Annular returns may be prevented by closing the casinghead valves instead of having a packer in the hole. (RP 57)

BRAIDED LINE – See Stranded Line. (WLOP)

BRAKE – A device used for retarding or stopping motion or holding. (Spec 2C)

BRAKE HORSEPOWER (BHP) – The horsepower output of an engine or motor measurable by a special brake or a dynamometer. (Bul D10)

BRAKE SHOE – That part of a shoe-type brake or clutch which makes contact with brake drum. (Spec 2C)

BRAKING CAPACITY – the load which the drawworks brake and auxiliary brake can retard to a constant reasonable speed, or hold. (Bul D10)

BRASS – An alloy of copper (60 percent or over) and zinc. (COGWE, SSWID)

BREAK CIRCULATION – To start movement of the drilling fluid after it has been quiescent in the hole. (Bul D11)

BREAK OUT – To unscrew one section of pipe from another section. (ITOGP)

BREAKING OUT PIPE – Operation of unscrewing of a pipe section. (RP 54)

BREAKOUT, OIL – Oil that has risen to the surface of the drilling fluid which previously had been combined in the fluid as emulsion. (Bul D11)

BREECHING – An extension of the firetube outside of the vessel which is being heated. The arrestor breeching serves as the attachment for the flame arrestor and surrounds the mechanical devices such as mixer, igniter, etc. (RP 12N)

BRIDGE – An obstruction in a well formed by intrusion of subsurface formations. (Bul D11)

BRIDGING – See Preferred term: Plugging. (Bul 13C)

BRIDGING MATERIAL –Fibrous, flaky, or granular material added to a cement slurry or drilling fluid to aid in sealing formations in which lost circulation has occurred. See Lost Circulation Material. (Bul 10C)

BRIDLE – See Floating Harness. (Spec 2C)

BRINE – Water that has a large quantity of salt, especially sodium chloride, dissolved in it. Salt Water. (ITOGP, WLOP)

BRINE – Water containing relatively high to saturation concentrations of common salt (NaCl) and relatively low concentration of other salts of calcium, magnesium, zinc, etc. (Bul 10C)

BRINE – Water saturated with or containing a high concentration of common salt (sodium chloride); hence, any strong saline solution containing such other salts as calcium chloride, zinc chloride, calcium nitrate, etc. (Bul D11)

BRING BOTTOMS UP – To wash rock cuttings form the bottom of the hole to the surface by maintaining circulation after halting the drilling operation. This allows time for the closer inspection of the cuttings and for a decision as to how to proceed when encountering a certain formation. (Bul 10C)

BRING IN A WELL – To complete a well and put it on production. (ITOGP)

BRINGING IN A WELL – The act of completing a well and bringing it into actual production status. (Bul 10C)

BROKEN THREAD – A thread tooth that exhibits a fracture through it, or that has a portion missing with its remaining surfaces having a broken appearance. (Bul 5T1)

BROMINE VALUE – The number of centigrams of bromine which are absorbed by 1 g of oil under certain conditions. This is a test for the degree of unsaturatedness of a given oil. (Bul D11)

BRONZE – An alloy of tin (usually under 12 percent) and copper. Frequently used as a name for brass. (COGWE, SSWID)

BROWNIAN MOVEMENT – Continuous, irregular motion exhibited by particles suspended in a liquid or gaseous medium, usually as a colloidal dispersion. (Bul D11)

BS OR BS&W – Common abbreviation used for base sediment, or base sediment and water. (Bul D11)

BS&W – This term refers to basic sediment and water and is commonly used as a measure of treating performance. Treating performance is highly variable, but most crude oils are treated to a range of 0.2 to 3.0 percent BS&W. ASTM Standard Test No. D96-82 entitled Water and Sediment in Crude Oils is an accepted standard for this test. (Spec 12L)

BS&W – Basic sediment and water. Water and other foreign matter in crude oil produced. This must be reduced to a very small percentage before delivering to crude purchaser. (WT)

BTU (BRITISH THERMAL UNIT) – A measure of the heating value of a fuel. (ITOGP)

BUBBLE CAP – A metal cap designed with openings to cause the upward-flowing gas "bubbles" in a gas-processing tower to intimately contact downward-flowing liquids, causing some of the gas to condense to liquid. Bubble caps are mounted on a perforated-steel BUBBLE-CAP TRAY. (ITOGP)

BUBBLE POINT – The state of a liquid-phase system when it is in equilibrium with an infinitesimal amount of vapor phase. (RP 44)

BUBBLE-POINT PRESSURE – The fluid pressure in a system at its bubble point. (Often used interchangeably with "saturation pressure.") (RP 44)

BUCK UP – To tighten a threaded connection. (ITOGP)

BUCKLE – A distortion, bend, or kink. (Bul D20)

BUFFER – Any substance or combination of substances which, when dissolved in water, produces a solution which resists a change in its hydrogen ion concentration upon the addition of acid or base. (Bul 10C, Bul D11)

BUFFER CAPACITY – The ability of a solution to maintain a definite pH when subjected to the action of certain chemicals. (Bul D11)

BUILD ANGLE – The act of increasing the inclination of the drilled hole; the rate of change (degrees/100 ft.) of the increasing angle in the hole. (Bul D20)

BUILD-AND-HOLD WELLBORE – A wellbore configuration where the inclination is increased to some terminal angle of inclination and maintained at that angle to the specified target. (Bul D20)

BUILDUP – That portion of the hole in which the inclination angle is increased; rate of buildup is usually expressed as the angular increase per 100 feet of measured depth. (Bul D20)

BULKHEAD – Stiffened vertical or horizontal load bearing diaphragm. (RP 2T)

BULL GEAR – See Swing Gear. (Spec 2C)

BULL PLUG – A threaded nipple with a rounded, closed end used to close a wellhead or flowline opening or close off the end of a line. (WLOP)

BULLHEAD SQUEEZE – The process by which hydraulic pressure is applied to a well to force fluid such as cement outside the wellbore. Annular flow (returns) is prevented by a packer set in the casing above the perforation and/or in open hole. (RP 57)

BUMP A WELL (BUMP DOWN – To lower a sucker-rod string on a pumping unit so that the pump hits bottom on the downstroke. (ITOGP)

BUMPER JAR – See Jar. (WLOP)

BUOYANCY – Buoyancy devices or flotation added to the riser joints to reduce their submerged weight. (RP 2R)

BUOYANCY EQUIPMENT – Devices added to tendon or riser joints to reduce their weight in water, thereby reducing top tension requirements. The devices normally used for risers take the form of syntactic foam modules or open-bottom air chambers. (RP 2T)

BURNER SYSTEM – Firing the heater requires a burner system designed for the specific fuel to be used and may be either natural or forced draft design. When multiple U-tubes are used, they should be designed to use separate burners, pilots and stacks. The burner system includes the firing accessories, intake flame arrestors and other optional burner accessories. (Spec 12K)

BURR – A localized point of roughness, or a thin ridge or protrusion, produced by mechanical damage or in machining the thread or chamfer. (Bul 5T1)

BUTT-WELDED PIPE (INCLUDING CONTINUOUS-WELD PROCESS) – Pipe having one longitudinal seam formed by mechanical pressure to make the welded junction, the edges being furnace heated to the welding temperature prior to welding. (Spec 5L)

BWPD – Barrels of water per day

BYPASS – Usally refers to a pipe connection around a valve or other control mechanism. A bypass is installed in such cases to permit passage of fluid through the bypass line while adjustments or repairs are made on the control which is bypassed. (RP 54)

-C –

C-AXIS – The principal crystallographic axis perpendicular to the direction of growth. (Bul 2N)

CAB – An enclosure for the operator and the controls for machine operation. (Spec 2C)

CABLE –
Impervious Sheathed Cable – Cable constructed with an impervious metallic or nonmetallic overall covering that prevents the entrance of gases, moisture or vapors into the insulated conductor or cable.

Jacketed Cable – Cable with a nonmetallic protective covering.

Marine Cable – Same as shipboard cable.

MC Cable – Metal-clad cable as defined by Article 334 of the NEC.

MI Cable – Mineral-insulated metal-sheathed cable as defined by Article 330 of the NEC.

MV Cable – Medium voltage solid dielectric insulated conductor or cable rated 2001 to 35000 volts as defined by Article 326 of the NEC.

Shipboard Cable – Cable constructed in accordance with IEEE Std. 45.

SNM Cable – Shielded nonmetallic-sheathed cable as defined by Article 337 of the NEC.

TC Cable – Power and control tray cable as defined by Article 340 of the NEC. (RP 14F)

CABLE – A flexible electrical conductor. (Spec 2C)

CABLE SEAL – A cable terminator filled with compound and designed to contain an explosion in the enclosure to which it is attached. A conduit seal may also be used as a cable seal. (RP 14F)

CABLE-TOOL DRILLING – A method of drilling a well by allowing a weighted bit at the bottom of a cable to fall against the formation being penetrated. See Rotary Drilling. (Bul 10C)

CABLE-TOOL DRILLING – A method of drilling a well by allowing a weighted bit at the bottom of a cable to fall against the formation being penetrated. See Rotary Drilling. (Bul D11)

CAGE – The part of a pump valve which holds the ball to limit its movement. (ITOGP)

CAKE CONSISTENCY – According to API RP 13B, such notations as “hard,” “soft,” “tough,” “rubbery,” “firm,” etc., may be used to convey some idea of cake consistency. (Bul 10C, Bul D11)

CAKE, FILTER – See Filter Cake. (Bul 10C)

CAKE THICKNESS – The measurement of the thickness of the filter cake deposited by a drilling fluid against a porous medium, most often following the standard API filtration test. Cake thickness is usually reported in 32^{nd} of an inch (0.794 mm). See Filter Cake and Wall Cake. (Bul 10C, Bul D11)

CALCAREOUS COATING – A chalky coating of calcium carbonate and/or magnesium hydroxide. (COGWE, SSWID)

CALCIUM – An alkaline earth element with valence of 2 and an atomic weight of about 40. (Bul 10C)

CALCIUM – One of the alkaline earth elements with a valence of 2 and an atomic weight of about 40. Calcium compounds are a common cause of the hardness of water. It is also a component of lime, gypsum, limestone, etc. (Bul D11)

CALCIUM ALUMINATE CEMENT – The product obtained by pulverizing clinker which consists of hydraulic calcium aluminates formed by fusing or sintering a suitably proportioned mixture of aluminous and calcareous materials. (Bul 10C)

CALCIUM CARBONATE ($CaCO_3$) – A slightly soluble calcium salt (limestone, oyster shells, etc.) sometimes used as a weighting material, and also as a standard unit for expressing hardness of water. (Bul 10C)

CALCIUM CARBONATE ($CaCO_3$) – An insoluble calcium salt sometimes used as a weighting material (limestone, oyster shell, etc.), in specialized drilling fluids. It is also used as a unit and/or standard to report hardness. (Bul D11)

CALCIUM CHLORIDE ($CaCL_2$) – A highly soluble salt which imparts special properties to drilling fluids, but primarily to increase the density of the fluids and to accelerate the hydration reaction of cement and water. See Accelerator. (Bul 10C)

CALCIUM CHLORIDE ($CaCL_2$) – A very soluble calcium salt sometimes added to drilling fluids to impart special properties, but primarily to increase the density of the fluid phase. (Bul D11)

CALCIUM CONTAMINATION – Dissolved calcium ions in sufficient concentration to impart undesirable properties to a drilling fluid. (Bul 10C)

CALCIUM CONTAMINATION – Dissolved calcium ions in sufficient concentration to impart undesirable properties in a drilling fluid, such as flocculation, reduction in yield of bentonite, increase in fluid loss, etc. See also Calcium Sulfate, Gyp, Anhydrite, Lime, Calcium Carbonate. (Bul D11)

CALCIUM HYDROXIDE [$CA(OH)_2$] – The active ingredient of slaked lime and also a hydrolytic constituent of Portland cement. In field technology it is called “lime.” (Bul 10C)

CALCIUM HYDROXIDE – $Ca(OH)_2$ – The active ingredient of slake lime. It is also the main constituent in cement (when wet). This material is referred to as "lime" in field terminology. (Bul D11)

CALCIUM SULFATE – Anhydrite ($CaSO_4$), gypsum ($CaSO_4.2H_2O$), hemihydrate ($CaSO_4$ .1/2 H_2O), or combination of these. (Bul 10C)

CALCIUM SULFATE – Anhydrite: $CaSO_4$; plaster of paris; ($CaSO_4$ .1/2 H_2O); gypsum: $CaSO_4$.$2H_2O$). Calcium sulfate occurs in drilling fluids as a contaminant or may be added to certain drilling fluids to impart special properties. (Bul D11)

CALCIUM-TREATED MUDS – Drilling fluids to which quantities of soluble calcium compounds have been added or allowed to remain from the formation drilled in order to impart special properties. (Bul 10C, Bul D11)

CALCULATION METHODS – Refer to "Wellborne Survey Calculation Methods." (Bul D20)

CALCULATION SHEET – Refer to "Wellbore Survey Calculation Methods." (Bul D20)

CALENDAR YEAR – The period of time from Jan. 1 to Dec. 31, inclusive (Bul T-5)

CALIBRATION – The adjustment of instruments, prior to use, to a known basic reference often traceable to the National Bureau of Standards. (RP 5A5)

CALIBRATION – Comparison and adjustment to a standard of know accuracy. (Spec 6A, Spec 16A, Spec Q1)

CALIBRATION – Measurement correction by comparison to a standard of known dimension. (WT)

CALIPER LOG – A record of the diameter of the wellbore or the internal diameter of tubular goods. The log indicates undue enlargement of the wellbore due to caving, washout, or other causes. (WLOP)

CALIPER SURVEY (LOG) – A well log which measures hole diameter. Also called "section gauge" logs which are made from tools with many "fingers" used to measure the corrosion of casing and tubing. (Bul 10C)

CANT ANGLE – Orientation of sound beam relative to axis of member. (RP 2X)

CAPACITY – See Related Terms: Feed Capacity, Liquid Capacity, Solids Discharge Capacity. (Bul 13C)

CAPACITY – Ability of a reservoir to receive water. (SSWID)

CAPACITY – Maximum throughput, maximum producing rate, or maximum content possible for a given set of conditions. (WT)

CAPACITY INDEX – An indication of the capacity of an injection well to take water. It is usually measured in barrels per hour per pound increase in bottom-hole pressure. (SSWID)

CAPACITY REDUCTION FACTOR (a_{ij}) – Coefficient which accounts for the effects of shape imperfections, non-linear behavior and boundary conditions (other than classical simply supported) on the buckling capacity of the shell. (Bul 2U)

CAPILLARY WATER RISE – The rise of water in a loosely compacted material such as a sand fill, due to capillary forces. (COGWE, SSWID)

CAPITAL INVESTMENT – Funds spent to acquire additions to assets for the betterment of the operation. Depreciation is taken on such expenditures rather than charging them off as expense or operating cost. (SSWID)

CARBON DIOXIDE (CO_2) – A colorless, odorless, nonpoisonous gas that is a normal part of the ambient air. Dissolved in the aqueous phase of drilling fluids, $C0_2$ may contribute to corrosivity of these fluids or to unstable rheological properties. (Bul D11)

CARCINOGEN – A substance or agent producing or inciting cancerous growths in living tissues. (Bul D11)

CASED HOLE – A wellbore in which casing has been run. (ITOGP)

CASING – Pipe used in wells to seal off the borehole. (Spec 6A)

CASING – Steel pipe used in oil wells to seal off fluids from the bore hole and to prevent the walls of the hole form sloughing off or caving. API casing sizes range from 4 ½ in. OD to 20 in. OD inclusive. (RP 5A5)

CASING – Pipe installed in the wellbore and usually cemented in place to retain the borehole dimension and seal off hydrocarbon and water-bearing formations. (RP54)

CASING – Steel pipe placed in an oil or gas well as drilling progresses. The function of casing is to prevent the wall of the hole from caving during drilling, provide control of the well if it tries to blow out, and limit oil or gas production to the zone perforated or open. (WLOP)

CASING CEMENTING – The practice of filling an annulus with cement slurry. (Bul 10C)

CASING FLOW – (Same as annular flow.) (GL)

CASING HANGERS (SLIPS) – A mechanism used to support a casing string in a casing head by gripping the pipe with wedge type members. (See Spec 6A)

CASING HANGERS, THREADED (MANDREL) – A mechanism used to support a casing string in a casing head by means of a male or female thread attached to the casing. (Spec 6A)

CASING HEAD HOUSING – Equipment attached to the uppermost end of the surface casing which serves to suspend and seal a casing string. (Spec 6A)

CASING HEAD SPOOL – Equipment attached to another casing head which serves to suspend and seal a secondary casing string. (Spec 6A)

CASING PRESSURE – Pressure built up in an annulus. (Bul 10C)

CASING PRESSURE – Pressure measured at a wellhead casing outlet. (ITOGP)

CASING PRESSURE – The pressured, measured at the surface, within the well casing. (GL)

CASING PRESSURE – The pressure built up in the annular space between casing strings, casing and tubing, or casing and drill pipe. (WLOP)

CASING STRING – The pipe run in a well, for example: surface string, intermediate string, production string, etc. (ITOGP)

CASINGHEAD – A heavy, steel, flanged fitting that connects to the surface string of casing and provides a housing for the slips and packing assemblies by which intermediate strings of casing are suspended and the annulus sealed off. (WLOP)

CASINGHEAD GAS – Associated and dissolved gas produced with crude oil; oil well gas. (ITOGP)

CASINGHEAD/SPOOL – The part of the wellhead to which the blowout preventer stack is connect. (RP 53)

CAST IRON – An alloy of iron and about 2 to 4 percent carbon.
A. Grey cast iron: The graphite (carbon) is present as flakes. This makes a fracture appear grey.
B. White cast iron: The carbon is present as carbides. With no graphite to color it, a fracture appears metallic white. (COGWE, SSWID)

CASTING – (1) An object at or near finished shape obtained by solidification of a substance in a mold; (2) Pouring molten metal into a mold to produce an object of desired shape. (Spec 6A, Spec 16A)

CATHEAD – A spool-shaped attachment on a winch around which rope is wound for hoisting and pulling. (ITOGP)

CATHODE – The portion of a corrosion cell which does not corrode. Reduction always occurs at cathode. (COGWE, SSWID)

CATHODE RAY TUBE (CRT) – A vacuum tube with a luminescent screen often used for viewing ultrasonic echo signals or for video readout of computer stored data. (RP 5A5)

CATION – The positively charged particle in the solution of an electrolyte which, under the influence of an electrical potential, moves toward the cathode (negative electrode). Examples are: Na^{+}, H^{+}, NH_4^{+}, Ca^{++}, Mg^{++}, Al^{+++}. (Bul D11)

CATLINE – A hoisting or pulling line operated form a cathead. (ITOGP)

CATLINE, CATHEAD – Catline is a line powered by the cathead, which is a concave, rotating, pulley-type device mounted on the end of a shaft of the drawworks. Catlines are used to lift or pull equipment around a rig. (RP 54)

CAT WALK – A narrow walkway. (ITOGP)

CATWALK – Elongated platform adjacent to the rig floor where pipe is laid out and lifted into the derrick. The catwalk is connected to the rig floor by a pipe ramp. (RP 54)

CAUSTIC OR CAUSTIC SODA – See Sodium Hydroxide. (Bul 10C, Bul D11)

CAVE-IN – See Sloughing. Cave-in is a severe form of sloughing. (Bul D11)

CAVERNOUS FORMATION – A formation having voluminous voids. (Bul 10C)

CAVERNOUS FORMATION – A formation having voluminous voids, usually the result of dissolving by formation waters which may or may not be still present. (Bul D20)

CAVING – Collapse of the walls of the wellbore: falling in of the material surrounding the borehole; sloughing. (Bul D20)

CC OR CUBIC CENTIMETER – A metric system unit for the measure of volume. It is essentially equal to the milliliter and commonly used interchangeably. One cubic centimeter of water at room temperature weights approximately 1g. (Bul D11)

CELLAR – A hole dug, usually before drilling a deep well, to allow working space for the casinghead equipment. (ITOGP)

CELLAR – Excavation around the wellhead to provide space for items of equipment at the top of the wellbore. It also serves as a pit to collect drainage of water and other liquids. (RP 54)

CEMENT –
API Classes – Cement (Classes A through J) meeting the applicable requirements of API Spec 10.
ASTM Types – Cement (Types I through V) meeting the applicable requirements of Standard Specifications for Portland Cement ASTM C150.
Common, Regular or Ordinary – A cement intended for use under conditions not requiring moderate to high sulfate resistance. Corresponds to API Class A or Class C which are similar to ASTM Type I or Type III cements, respectively.
Construction – See Common, Regular or Ordinary.
Gel Cement – A cement or cement slurry that has been modified by the addition of bentonite.
Gypsum Cement – Composed primarily of the hemihydrate form of calcium sulfate, $CaSO_4$ – $1/2H_20$ (Plaster of Paris)
High Alumina – See Calcium Aluminate Cement.
High Early – (a) – API Class C cement; (b) ASTM Type III cement.

High Temperature – A cement designed to overcome strength retrogression within the temperature limits designated by the supplier.
Hydraulic Cement – A cement that sets and hardens by chemical interaction with water and that is capable of doing so under water.
Modified Cement – A cement whose properties, chemical or physical, have been altered by additives. This term has been used to refer to specific formulations of gel cement containing certain concentrations of dispersing agent.
Neat – A cement paste or slurry containing no additives.
Well – Cement or mixture of cement with other materials that is intended for us in oil, gas, geothermal or water wells.
Ordinary – See Common, Ordinary or Regular Cement.
Portland – Hydraulic cement produced by pulverizing clinkers consisting essentially of hydraulic calcium silicates and usually containing one or more of the forms of calcium sulfate as an interground addition.
Portland-Blast Furnace Slag – An intimate and uniform blend of Portland cement (or clinker) and fine granulated blast furnace slag in which the amount of slag is within specified limits.
Portland-Pozzolan – A hydraulic cement consisting of an intimate and uniform blend of Portland cement or portland blast furnace slag cement and fine pozzolan produced by intergrinding portland cement clinker and pozzolan, by blending portland cement or portland blast furnace slag cement and finely divided pozzolan, or a combination of intergrinding and blending, in which the amount of the pozzolan constituent is within specified limits.
Regular – See Common Ordinary or Regular Cement.
Retarded Cement – A cement in which the thickening time is extended by adding a chemical retarder.
Slag Cement – See Granulated Blast Furnace Slag.
Slow-Set Cement – A cement in which the thickening time is extended by (1) eliminating the rapid hydrating components in its composition or (2) by adding a chemical retarder. API Classes D, E, and F are slow-set cements.
Suflate-Resistant Cement – Cements which meet applicable requirements of API Spec 10.
Weighted Cement – A cement slurry containing additives to increase its normal density. (Bul 10C)

CEMENT – A mixture of calcium aluminates and silicates made by combining lime and clay while heating. Slaked cement contains about 62.5 percent calcium hydroxide, which is the major source of trouble when cement contaminates drilling fluids. (Bul D11)

CEMENT ADDITIVES – See Additive. (Bul 10C)

CEMENT BOND LOG – A well log of the vibrations of an ultrasonic acoustical signal as it passes through a four phase system of fluid, pipe, cement and formation. If the pipe is not acoustically coupled tightly with a dampening material such as cement, very little energy of the acoustical signal is lost. If the cement is bonded or acoustically coupled tight to the pipe, the energy is extremely dampened and the signal nearly disappears, thereby indicating that the casing is well cemented. The log may consist of (1) a collar log, (2) a transit time curve recording the time of the first arrival of the acoustical signal, (3) an amplitude curve which represents the amplitude of a selected portion of the acoustical wave, and (4) a display of the acoustical wave as x-y signatures or a variable density version of the signatures. (Bul 10C)

CEMENT DENSITY – The specific gravity of a well cement as determined by a method similar to ASTM C 188: Test for Density of Hydraulic Cement. Most portland cements have a specific gravity of about 3.15 when tested by this method. Cement density should not be confused with slurry density. (Bul 10C)

CEMENT DUMP BAILER – A cylindrical container with a valve that is used to release small batches of cement downhole in a remedial cementing operating or for other special purposes. (WLOP)

CEMENT PLUG – A portion of cement placed at some point in the wellbore to effect a sealing action. (WLOP)

CEMENT SYSTEM – The combination of materials which make up well cement formulations. (Bul 10C)

CEMENTATION – The binding or cementing together of unconsolidated particles. (SSWID)

CEMENTING – The process of pumping a cementitious slurry into a well through steel pipe to critical points in the annulus or open hole. Cementing is performed to isolate different zones in the well, protect the pipe from corrosive fluids, support the pipe in the hole, or repair previous cement jobs. (Bul 10C)

CEMENTING – The act of making cement into a slurry and pumping it into a wellbore to perform functions such as supporting casing, isolating formations behind casing, protecting fresh water sands, and sealing perforations in casing. (RP 54)

CEMENTING TIME – The total elapsed time for a cementing operation from the beginning of mixing until the completion of displacement to final depth and complete circulation of any excess slurry to the surface. (Bul 10C)

CENTER PIN (KING PIN) – Vertical pin or shaft which acts as rotation centering device and connects revolving upperstructure and base mount. (Spec 2C)

CENTER POST (KING POST) – A tubular member which acts as the centerline of rotation and as the connective member to the platform. (Spec 2C)

CENTIPOISE (CP) – A unit of viscosity equal to 0.01 poise. A poise equals 1 g per meter-second, and a centipoise is 1 g per centimeter-second. The viscosity of water at 20C is 1.005 cp (1 cp = 0.000672 lb/ft-sec). (Bul D11)

CENTIPOISE – Unit for measuring viscosity; 0.01 poise. (SSWID)

CENTRAL CONDUCTOR (SHOOTING ROD) – A conductor that is passed through the pipe, for the purpose of creating a circular or circumferential magnetic field in the pipe. This term does not imply that the current rod must be centered in the pipe. (RP 5A5)

CENTRALIZERS – Guides which are attached to casing and which serve to keep it centered in the hole. See API Spec 10D. (Bul 10C)

CENTRATE – Clarified liquid discharged from a centrifuge. (Bul D11)

CENTRIFUGAL FORCE – That force which tends to impel matter outward from the center of rotation. (Bul 13C)

CENTRIFUGAL FORCE- Force tending to pull outwardly on a body when it is rotating around a center. (Bul D20)

CENTRIFUGAL SEPARATOR – A general term applicable to any device using centrifugal force to shorten and/or to control the settling time required to separate a heavier mass from a lighter mass. (Bul 13C)

CENTRIFUGE – A centrifugal separator, specifically: a device rotated by an external force for the purpose of separating materials of various specific gravities and/or particle sizes or shapes from a slurry to which the rotation is imparted primarily by the rotating containing walls. (Bul 13C)

CENTRIFUGE – A device for the mechanical separation of high specific gravity solids from a drilling fluid. Usually used on weighted fluids to recover weight material and discard drill solids. The centrifuge uses high-speed mechanical rotation to achieve this separation, as distinguished from the cyclone-type separator in which the fluid energy along provides the separating force. See Cyclone and Desander. (Bul D11)

CENTRIFUGE – A shake-out or grind-out machine. Samples of oil are placed in the machine and whirled at high speed to settle out sediment. BS&W content can be determined in this matter. (ITOGP)

CENTRIPETAL FORCE – See Related Term: Centrifugal Force. That force which tends to propel matter inward. (Bul 13C)

CHAMBER LIFT – A special type of intermittent gas lift which uses the tubing-casing annulus or a “bottle” on the end of the tubing string for the accumulation of formation liquids between cycles. (GL)

CHAMFER – The tapered area on the end of threaded pipe or coupling (eight round or buttress threads). (RP 5A5)

CHAMFER – A conical surface at the end of the pipe. (RP 5B1)

CHASE THREADS – To straighten and clean threads of any kind. (ITOGP)

CHATTER – A wavy surface of the thread flank, root, crest, or chamfer, produced by a vibrating cutter insert. (Bul 5T1)

CHEATER – A length of pipe used to increase the leverage of a wrench. (ITOGP)

CHECK VALVE – A valve that permits flow in one directly only. (ITOGP, WLOP)

CHEMICAL ANALYSIS – Determination of the chemical composition of material. (Spec 6A, Spec 16A)

CHEMICAL BARREL – A container in which various chemicals are mixed prior to addition to the drilling fluid. (Bul 10C, Bul D11)

CHEMICAL OXYGEN DEMAND (COD) – A measure of the amount of oxygen required to oxidize organic and oxidizable inorganic compounds in water. The COD test, like the BOD test, is used to determine the degree of pollution in an effluent. (Bul D11)

CHEMICALS – In drilling-fluid terminology, a chemical is any material that produces changes in the viscosity, yield point, gel strength, and fluid loss, as well as surface tension. (Bul D11)

CHEMOTAXIS – The orientation or movement of a living organism in response to chemical agents. (Bul D11)

CHLORIDE STRESS CRACKING – The stress corrosion cracking of ferrous based alloy steels, which may result when exposed to wellstreams containing water and chlorides under certain conditions of concentration and temperature. Other constituents present, such as oxygen, may contribute to chloride stress cracking. (RP 14H, Spec 14D)

CHLORIDE STRESS CRACKING – The stress corrosion cracking of certain high alloy steels which results when the corrosive media contains chloride ions. (Spec 14A)

CHLORIDE STRESS CRACKING SERVICE – Process streams which contain water and chloride under conditions of concentration and temperature high enough to induce stress cracking of ferrous base alloy materials. Other constituents present, such as oxygen (O_2), may contribute to such chloride stress cracking. (RP 14E)

CHOCK – Block or wedge used beneath a length of pipe so that it cannot roll. (RP 5A5)

CHOKE – A type of orifice installed for the purpose of restricting and controlling flow. (ITOGP)

CHOKE – A type of orifice installed in a line in which fluid is flowing. The purpose is to restrict the flow and control the rate of production. (GL)

CHOKE – A device specifically intended to restrict the flow rate of fluids. (RP 14E)

CHOKE – A device with either a fixed or variable aperture used to control the rate of flow of liquids and/or gas. (RP 53)

CHOKE – Equipment used to restrict and control the flow of fluids. (Spec 6A)

CHOKE – A device to restrict and control the flow rate of well fluids. It may have a positive fixed orifice with removable bean or an adjustable variable orifice. The choke may be located upstream of the coil, between passes in the coil bundle, or on the coil outlet. A submerged or

long nose choke may be used with pressure reduction taking place within the water bath to minimize hydrate formation. (Spec 12K)

CHOKE – A type of orifice installed in a line to restrict flow and control the rate of production. Surface chokes are a part of the "Christmas tree" and contain a choke nipple, or bean, with a small-diameter bore (an orifice) that serves to restrict the flow. Also, chokes are used to control the rate of flow of the drilling mud out of the hole when the well is closed in with the blowout preventer and a "kick" is being circulated out of the hole. (See Adjustable Choke, Bottom-Hole Choke, and Positive Choke.) (WLOP)

CHOKE – A restriction of small internal diameter placed in a production string of pipe to reduce flow rates. A positive choke is commonly a piece of steel bar stock externally threaded, and internally bored to a specific diameter then installed in a special (choke) tee at wellhead. A second type is the adjustable choke which is a special valve having calibrated choke opening dimensions marked on a band around the stem. (WT)

CHOKE AND KILL (C&K) LINES – External conduits arranged parallel to the riser pipe used for circulation of fluids into and out of the formation to control well pressure. (RP 2%)

CHOKE BEAN (FLOW BEAN) – The replaceable orifice part used in positive chokes to control flow rates. (Spec 6A)

CHOKE LINE VALVE – The valve(s) connected to and a part of the blowout preventer stack that controls the flow to the choke manifold. (RP 53)

CHOKE MANIFOLD – As assembly of valves, chokes, gauges, and lines used to control the rate of flow from the well when the blowout presenters are closed. (RP 53)

CHORD – Deep plate girder flange. (Bul 2V)

CHRISTMAS TREE – A term applied to the control valves, pressure gages, and chokes assembled at the top of a well to control the flow of oil and gas. (GL)

CHRISTMAS TREE – The assembly of valves, pipes, and fitting used to control flow of oil and gas from the well. (ITOGP)

CHRISTMAS TREE – Term applied to the valves and fittings assembled at the top of a completed well to control the flow of hydrocarbons and other fluids. (RP 54)

CHRISTMAS TREE – A term applied to the valves and fittings assembled above and starting at the top of the tubing spool on a completed well to control the flow of hydrocarbons and other fluids. (RP 57)

CHRISTMAS TREE – An assembly of valves and fittings attached to the uppermost flange of the tubing head, used to control well production. (Spec 6A)

CHRISTMAS TREE – The valves, pressure gages, and chokes assembled at the top of a well to control the flow of oil and gas after the well has been completed. (WLOP)

CHROMATE – A compound in which chromium has a valence of 6, e.g., sodium bichromate. Chromate may be added to drilling fluids either directly or as a constituent of chrome lignites or chrome lignosulfonates. In certain areas, chromate is widely used as an anodic corrosion inhibitor, often in conjunction with lime. (Bul D11)

CHROME LIGNITE – Mined lignite, usually leonardite, to which chromate has been added. The lignite can also be causticized with either sodium or potassium hydroxide. (Bul 10C)

CHROME LIGNITE – Mined lignite, usually leonardite, to which chromate has been added and/or reacted. The lignite can also be causticized with either sodium or potassium hydroxide. (Bul D11)

CHRONIC BIOASSAY – A test involving a substantial portion of the life span of a fish or other organisms. (Bul D11)

CIRCULAR-ARC METHOD – Refer to "Wellbore Survey Calculation Methods." (Bul D20)

CIRCULAR-ARC METHOD – Uses both sets of measured angles associated with each course length to recreate the wellbore path as a sequence of circular arcs constrained by the measured angles to pass through the end points with inclination and direction angles as measured. (Bul. D20)

CIRCULAR (CIRCUMFERENTIAL) MAGNETIC FIELD – The magnetic field in or surrounding a current carrying conductor pipe, or pipe with an interior current carrying road. (RP 5A5)

CIRCULAR (CIRCUMFERENTIAL) MAGNETIZATION – Circular magnetization is the production of a magnetic field in a pipe wall or coupling such that the magnetic field is oriented circumferentially. (RP 5A5)

CIRCULATE – To cycle fluid through pipe and wellbore while drilling operations are temporarily suspended. This is done to condition the drilling fluid and the well bore before hoisting the drill pipe and to obtain cuttings from the bottom of the well before drilling proceeds. Circulation of the drilling fluid while drilling is suspended is usually necessary to prevent drill pipe from becoming stuck. (Bul 10C)

CIRCULATE – To cycle fluid through pipe and well-bore. (RP 54)

CIRCULATING DEVICE – A flow control device such as a sliding sleeve or side pocket mandrel which is run on production/injection tubing for the purpose of establishing communication between tubing and the tubing annulus. (RP 57)

CIRCULATION – The movement of drilling fluid from the suction pit through pump, drill pipe, bit, annular space in the hole, and back again to the suction pit. The time involved is usually referred to as circulation time. (Bul 10C, Bul D11)

CIRCULATION, LOSS OF (OR LOSS CIRCULATION) – The result of drilling fluid escaping into the formation by way of crevices or porous media. (Bul 10C, Bul D11)

CIRCULATION RATE – The volume flow rate of the circulating drilling fluid usually expressed in gallons or barrels per minute. (Bul 10C, Bul D11)

CIRCUMFERENTIAL MAGNETIZATION – See Circular Magnetization. (RP 5A5)

CLABBERED – A slang term commonly used to describe moderate to severe flocculation of drilling fluid due to various contaminants; also called "gelled-up." (Bul 10C, Bul D11)

CLADDING – A process for covering one metal with a thinner sheet of another to obtain increased corrosion resistance or other desirable properties of the thinner. (COGWE, SSWID)

CLAMP CONNECTION – A pressure sealing device used to join two items without using conventional bolted flange joints. The two items to be sealed are prepared with clamp hubs. These hubs are held together by a clamp containing two to four bolts. (RP 53)

CLARIFICATION – In waste-water treatment, the removal of turbidity and suspended solids by settling, often aided by centrifugal action and chemically induced coagulation. (Bul D11)

CLARIFICATION (CLARIFIER) – Make or become clear. In oilfield terms, generally used to describe removing oil from water. (SSWID)

CLARIFIER – In waste-water treatment, a settling tank and/or centrifugal acceleration device which mechanically removes settleable solids from wastes. (Bul D11)

CLASSIFICATION – The process of approximate grouping of material by density shape or size through the mechanical use of a fluid (air or liquid) medium. (Bul 13C)

CLASSIFICATION –
Class I Location –A Class I location is one in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. (See NEC.)

Class I, Division 1 Location – A Class I, Division 1 location is a location: (1) in which ignitable concentrations of flammable gases or vapors exist continuously, intermittently, or periodically under normal operating conditions; or (2) in which ignitable concentration of such gases or vapors may exist frequently because of repair or maintenance operations or because of leakage; or (3) in which breakdown or faulty operation of equipment or processes might release ignitable concentrations of flammable gases or vapors, and might also cause simultaneous failure of electrical equipment. (See NEC & API RP 500B.)

Class I, Division 2 Location – A Class I, Division 2 location is a location: (1) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquids, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of equipment: or (2) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, but

which might become hazardous through failure or abnormal operation of the ventilating equipment: or (3) that is adjacent to a Class I, Division 1 location, and to which hazardous concentration of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided. (See NEC & API RP 500B.)

GROUP C – Atmospheres that do or may contain hydrogen sulfide (H_2S), or other substances specified by NFPA 497M.

GROUP D – Atmospheres that do or may contain natural gas, hydrocarbons or other substances specified by NFPA 497M.

UNCLASSIFIED LOCATIONS – An unclassified location is a location not classified as Division 1 or Division 2. (RT 14F)

CLASSIFICATION –
Class I Location – A location in which flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class I, Division 1 Location – A location in which ignitable concentrations of flammable gases are expected to exist under normal operating conditions or in which faulty equipment might simultaneously release flammable gases or vapors and also cause failure of electrical equipment. Reference Section 4.2a for a more complete definition.

Class I, Division 2 Location – A location in which flammable gases may be present, but normally are confined within closed systems: are prevented from accumulating by adequate mechanical ventilation; or the location is adjacent to a Division1 location from which ignitable concentrations might occasionally be communicated.
Group A – Atmospheres containing acetylene.
Group B – Atmospheres containing hydrogen and other gases.
Group C – Atmospheres containing hydrogen sulfide and other gases or vapors.
Group D – Atmospheres containing butane, gasoline, hexane, methane, natural gas, propane and most other hydrocarbon gases and vapors encountered in oil and gas production. (RP 500 B)

CLASSIFIED AREA – Any area electrically classified Class I, Group D. Division 1 or 2, following guidelines of API RP 500B. (RP 14C)

CLASSIFY – To group into classes or sizes with systematic relations. (Bul 13C)

CLAY – A plastic, soft, variously-colored earth, commonly a hydrous, silicate of alumina, formed by the decomposition of feldspar and other aluminum silicates. In a true clay, 30% by weight of the solid particles are of diameter less than 0.002 micrometer. (Bul 10C)

CLAY – A plastic, soft, variously-colored earth commonly a hydrous silicate of alumina formed by the decomposition of feldspar and other aluminum silicates. See also Attapulgite, Bentonite, High Yield, Low Yield, and Natural Clays. Clay minerals are essentially insoluble in water but disperse under hydration, shearing forces such as grinding, velocity effects, etc., into the extremely small particles varying from submicron to 100-micron sizes. (Bul D11)

CLAY EXTENDER – An agent which has been added to clay to increase its initial yield. Peptization usually refers to the addition of an electrolyte (i.e., soda ash) to increase the initial yield. A newer term, beneficiation, generally applies to the addition of organic compounds (i.e., polyacrylamide). (Bul 10C)

CLAY EXTENDER – Any of several substances, usually high molecular weight organic compounds that, when added in low concentrations to a bentonite or to certain other clay slurries, will increase the viscosity of the system, e.g., polyvinyl acetatemaleic anhydride copolymer. See Low-solids Muds. (Bul D11)

CLAY SOLIDS – See Preferred Term: Colloidal Solids. (Bul 13)

CLEAN OUT – To remove sand, scale, and other deposits from the well to restore or increase production. (WLOP)

CLEARANCE – Space between the outer diameter of the tool in question and the side of the drilled hole; the difference in the diameter of the hole and the tool. (Bul D20)

CLEARANCE – Clearance in the maximum distance along the axis of jet or bullet between the external gun surface and the surface of the core target. (RP 43)

CLINOGRAPH – An instrument to measure and record inclination. (Bul D20)

CLIP – A U-bolt or similar device used to fasten parts of a wire cable together. (ITOGP)

CLOGGING – See Preferred Term: Plugging (Bul 13C)

CLOSE IN – To temporarily shut in a well that is capable of producing oil or gas; to close the blowout preventers on a well that is being drilled in order to control a "kick." The blowout preventers close off the annulus so that pressure from below cannot flow to the surface. (WLOP)

CLOSED IN – A well capable of producing oil or gas, but temporarily shut in. (ITGOP)

CLOSED-IN BOTTOM-HOLE PRESSURE – Sometimes termed shut-in bottom-hole pressure. Pressure obtained by measurement with instrument at or near producing zone with well shut in at surface to prevent fluid movement. (WT)

CLOSED-IN PRESSURE – See Formation Pressure. (WLOP)

CLOSED TRAVERSE – Term used to indicated the closeness pf two surveys, one survey going in the hole and the second survey coming out of the hole. (Bul D20)

CLOSED WATER-TREATING SYSTEM – A system of treating water in which the water does not come in contact with air. (SSWID)

CLOSING RATIO – The ratio of the wellhead pressure to the pressure required to close the blowout preventer. (RP 53)

CLOSURE – Refer to "Line of Closure." (Bul D20)

CLOSURE BOLTING – Fasteners used to assemble API Spec 16A equipment other than end and outlet connections. (Spec 16A)

CLOTH – See Preferred Term: Screen Cloth. (Bul 13C)

CLUTCH – A means for engagement or disengagement of power. (Spec 2C)

CMC – See Sodium Carboxymethylcellulose. (Bul 10C, Bul D11)

COAGULANT – That agent which produces clotting; to change from a fluid into a thickened mass; to curdle, congeal, or clot. (SSWID)

COAGULATION – In drilling-fluid terminology, a synonym for flocculation. (Bul D11)

COAGULATION – The clumping of particles in order to settle out impurities; often induced by chemicals such as lime or alum. (Bul D11)

COAGULATION – The joining together of finely divided particles of matter suspended in water, forming a mass large enough to settle out of suspension. (SSWID)

COALESCE – To combine into one body. (SSWID)

COALESCENCE – The change from a liquid to a thickened curdlike state by chemical reaction. Also, the combination of globules in an emulsion caused by molecular attraction of the surfaces. (Bul D11)

COALESCER – An agent which helps materials unite into one body or mass. (Coalescene – Combination of globules in an emulsion caused by molecular attraction of the surfaces; union of one or more crystals or aggregates into a simple larger unit.) (SSWID)

COALESCING – Process of causing small dispersed water-in-oil or oil-in-water droplets to combine into larger droplets which are easier to separate by gravity. Coalescing sections provide large surface areas per unit of volume and usually consist of fibrous beds such as excelsior (referred to as hay sections), or compartments of specially designed components. Electrostatic fields are another means of inducing coalescence, commonly referred to as electrostatic treating. (Spec 12L)

COASTAL ZONE – Coastal Waters and the adjacent lands that exert a measurable influence on the uses of the sea and its ecology. (Bul D11)

COASTLINE – The line of ordinary low water along that portion of the coast which is in direct contact with the open sea or the line marking the seaward limit of inland waters. (Bul 12A)

COATING – (See Related Term: Blinding) A condition wherein undersize particles cover the apertures of the screening surface by virtue of stickiness. (Bul 13C)

COATING – The coating film as applied to the substrate. (RP 5L2)

COATING MATERIAL – The liquid material prior to application on the substrate. (RP 5L2)

COHESION – The attractive force between the same kind of molecules, i.e., the force which holds the molecules of a substance together. (Bul D11)

COIL AREA – The coil area is the heat transfer area and is normally calculated using the outside surface area of the pipe. (Spec 12K)

COIL METHOD – A method of magnetization in which pipe is encircled by a current-carrying coil. (RP 5A5)

COIL SHOT – A short pulse of magnetizing current passed through a coil surrounding a pipe for the purpose of longitudinal magnetization. (RP 5A5)

COILS – The fluid to be heated is passed through one or more coils which may be typically arranged as a single pass coil, spit pass coil, or spiral coil. The coil may also be referred to as a tube bundle. The single pass coil is normally a serpentine pattern with only one flow path. This coil may also be arranged to provide two or more parallel flow paths for reduced pressure drop, but it is still referred to as a single pass coil. The split pass coil may be designed for two pressure ratings, allowing for a choke to be located between the two coil sections. Split pass coils are used when it is necessary to use two heating stages to minimize hydrate formation within the coil. The spiral coil is generally used on smaller heaters and is normally a single pass coil. Multiple coils may be used if more than one well stream is processed in the same heater shell. (Spec12K)

COLD WELD – A metallurgically inexact term generally indicating a lack of adequate weld bonding strength of the abutting edges due to insufficient heat and/or pressure. A cold weld may or may not have separation in the weld line. Other more definitive terms should be used whenever possible. (Bul 5T1)

COLLAR – Usually refers to a coupling used to loin two lengths of pipe. (ITOGP)

COLLAR – A coupling device used to join two lengths of pipe. A combination collar is a coupling with left-hand threads in one end and right-hand threads in the other. Sometimes drill collars are called simply collars. (WLOP)

COLLAR LOCATOR – A logging device that detects casing or tubing collars for depth-correlation purposes. It may be operated mechanically or electrically to produce a log showing the location of each casing collar or coupling in a well. When properly interpreted, this log provides an accurate way to measure depths in a well. (WLOP)

COLLECTOR PIPE – A perforated or slotted pipe near the top of the coalescing section in a treater to remove the treated oil as uniformly as possible through this portion of the treater. (Spec 12L)

COLLOID – A state of subdivision of matter which consists either of single large molecules or of aggregations of smaller molecules dispersed to such a degree that the surface forces become an important factor in determining its properties. The size and electrical charge of the particles determine the different phenomena observed with colloids, e.g., Brownian movement. The sizes of colloids range from 1×10^{-7} cm to 5×10^{-5} cm (0.001 to 0.5 microns) in diameter, although the particle size of certain emulsoids can be in the micron range. (Bul D11)

COLLOIDAL – Pertaining to suspended solids so finely divided that they will not settle. (SSWID)

COLLOIDAL COMPOSITION – A colloidal suspension containing one more colloidal constituents. (Bul D11)

COLLOIDAL SOLIDS – Solids particles of less than two micron equivalent spherical diameter. (Bul 13C)

COLLOIDAL SUSPENSION – A stable, homogenous system of very fine particles of matter dispersed uniformly throughout a liquid medium, having properties which differ both from a true solution and from a suspension of larger particles. True colloidal suspensions have particle size range of 5 to 200 micrometers. (Bul D11)

COLLOIDAL SUSPENSION – Finely divided particles of ultramicroscopic size swimming in a liquid. (Bul D11)

COLOR BODIES – Those complex molecules which impart color (usually undesirable) to a solution. (Bul D11)

COLOR CODE – Paint band identification of pipe classification in accordance with appropriate specifications. (RP 5A5)

COLOR UNIT – Measures of the intensity of coloration of water using a platinum-cobalt standard. (Bul D11)

COLUMNAR/ORIENTED ICE – Columnar-grained ice with c-axis orientation in a preferred horizontal direction. (Bul 2N)

COLUMNAR/RANDOM ICE – Columnar-grained ice with c-axis orientation in a random horizontal direction. (Bul 2N)

COMBINATION GAS METAL-ARC WELD AND SUBMERGED-ARC WELD PIPE – Pipe having one longitudinal seam formed by the combination of continuous gas metal-arc welding and automatic submerged arc welding. The gas metal-arc welding process shall be first and followed by the submerged-arc welding process. (Spec 5L)

COMBINED METHOD – Refer to “Mercury Method.” (Bul D20)

COMBUSTIBLE – Capable of burning. (RP14G)

COMBUSTIBLE LIQUID – Any liquid having a flashpoint at or above 100 F (37.8 C). (RP54)

COMBUSTIBLE LIQUID – A liquid having a flashpoint at or above 100°F (37.8°C). Combustible Liquids are subdivided as follows:

> Class II Liquids – A liquid having a flash point at or above 100°F (37.8°C) and below 140° F (60°C).
>
> Class IIIA Liquids – Those having flash points at or above 140°F (60°C) and below 140°F (93°C).
>
> Class IIIB Liquids – Those having flash points at or above 200°F (93°C). (RP 500B)

COMBUSTION – The chemical reaction of rapid oxidation which is accompanied by the emission of light and heat – the flame. Combustion begins when the temperature of the ignitable substance reaches its apparent ignition temperature. This process will be self-sustaining as long as the heat released in combustion maintains the temperature with the flammable range of the ignitable substance. (RP 12N)

COMBUSTION – The oxidation of materials accompanied by the development of heat and usually the production of flame. (RP 14G)

COME-ALONG – A stretching or tightening device. (ITOGP)

COME OUT OF THE HOLE – To pull drill pipe, tubing wireline tools, etc., out of the well. (ITOGP)

COME OUT OF THE HOLE – Withdrawing of the drill pipe from the wellbore. (Bul 10C)

COMMINGLED – Fluids from more than one source mixed to make a single fluid stream. (WT)

COMPENSATED ACCELERATION METHOD – Refer to "Mercury Method." (Bul D20)

COMPOSITE SAMPLE – A fluid containing all elements (components) originally present in fluid at point of origin, i.e., bottom-hole sample containing water, oil and gas. (WT)

COMPRESSION – Act of compressing, or state of being compressed. In the sense of being the opposite of tension. (Bul D20)

COMPRESSION RIDGE – First-year ridge formed primarily by buckling, bending, or local crushing of colliding ice sheets caused by relative motion in the direction perpendicular to their common boundary. Generally composed of loosely stacked angular ice blocks, the ridge tends to be a curvilinear feature with a weaving pattern established by the extent of finger rafting. (Bul 2N)

COMPRESSIONAL WAVE – Waves in which the particle motion or vibration is in the same direction as the propagated wave (longitudinal wave). (RP 2X)

COMPRESSIVE STRENGTH – The degree of resistance of a material to force acting along one of the axis in a manner tending to crush it, usually expressed in pounds of force per square inch of surface affected. (Bul 10C)

COMPRESSOR – A rotating or reciprocating machine, together with its driver and associated scrubbers, coolers, pipe, valves, controls, etc., used to compress gas or air from a lower to a higher pressure. (RP 2G)

COMPUTER PRODUCTION CONTROL (CPC) – An operation wherein field conditions and activities (well testing, lease production, equipment operational and safety status, etc.) are monitored and/or controlled automatically by a computer system. (ITOGP)

CONCENTRIC CONTROL SYSTEM – A system utilizing a concentric tubular arrangement to transmit control signals to the SCSSV. (RP 14B)

CONCENTRIC OPERATIONS – Well operations conducted using small diameter tubing inside conventional tubing or tubingless completions, normally with the Christmas tree in place and using a small rig or hoisting unit. (RP 57)

CONCENTRATION CELL – Metal ion: A corrosion cell in which a potential difference is produced by a difference in concentration of metal ions. Oxygen: A corrosion cell in which a potential difference is produced by differences in oxygen concentration. Region of low oxygen concentration is the anode or corroding area. (COGWE, SSWID)

CONDENSATE – Hydcarbons which are in the gaseous state under reservoir conditions but which become liquid either in passage up the hole or in the surface equipment. (ITOGP)

CONDENSATE – A liquid formed by condensation from a vapor phase. Within the reservoir, “condensate” is a liquid-hydrocarbon phase formed by retrograde condensation from the vapor phase upon pressure reduction. At the surface, “condensate” is a liquid-hydrocarbon phase formed by condensation form the vapor phase upon pressure and/or temperature reduction. (RP 44)

CONDUCTOR PIPE – See Pipe. (Bul 10C)

CONDUCTOR PIPE – A relatively short string of large diameter pipe which is set to keep the top of the hole open and provide a means of returning the upflowing drilling fluid from the wellbore to the surface drilling fluid system until the first casing string is set in the well. Conductor pipe may also be used in well control. Conductor pipe is usually cemented. (RP 53, RP 54)

CONDUCTIVITY – A measure of the quantity of electricity transferred across unit area per unit potential gradient per unit time. It is the reciprocal of resistivity. Electrolytes may be added to the drilling fluid to alter its conductivity for logging purposes. (Bul D11)

CONDUIT SEAL – A sealing fitting poured with cement-like potting compound designed to contain an explosion in the enclosure to which it is attached. (See Section 4.8.) (RP 14F)

CONE – See Preferred Term: Hydrocyclone. (Bul 13)

CONFORMANCE – Compliance with specified requirements. (Spec 6A, Spec 16A, Spec Q1)

CONNATE WATER – Formation water locked in the pores of a formation by capillary action. This water does not flow without introducing strong driving forces or by means of a chemical reaction. (Bul 10C)

CONNATE WATER – Water that probably was laid down and entrapped with sedimentary deposits, as distinguished from migratory waters that have flowed into deposits after they were laid down. (Bul D11)

CONNATE WATER – Fossil sea water trapped within sediments during deposition. (SSWID)

CONNECTION – The joining of two lengths of pipe. (ITOGP)

CONNECTORS – 1. Riser devices used to latch and unlatch risers and lower marine riser packages to subsea equipment. 2. Tendon devices used to latch and unlatch tendons to the foundation system and to connect the tendon to the platform. (RP 2T)

CONSERVATIVE POLLUTANT – A pollutant that is relatively persistent and quite resistant to degradation, such as parachlorobiphenyls. (Bul D11)

CONSISTENCY – A rheological property of matter which is related to the cohesion of the individual particles of a given material, its ability to deform, and its resistance to flow. The consistency of cement slurries is determined in accordance with API Spec 10. It is expressed as Bearden units of consistency (Bc) when determined either on the pressurized consistometer or on the atmospheric pressure consistometer. (Bul 10C)

CONSISTENCY – The viscosity of a non-reversible fluid, in poises, for a certain time interval at a given pressure and temperature. (Bul D11)

CONSISTOMETER – A tester having a stirring apparatus to measure the thickening time of cement slurries under predetermined temperatures and pressures. (Bul 10C)

CONSISTOMETER – A thickening-time tester having a stirring apparatus to measure the relative thickening time of drilling fluid or cement slurries under predetermined temperatures and pressures. (Bul D11)

CONSOLIDATION – A process of solidification of an ice mass by freezing water in voids between ice blocks. (Bul 2N)

CONSTRUCTED ICE – Ice formed by surface flooding, spraying, subsurface convection cells, or other techniques. (Bul 2N)

CONTACT INSPECTION – The method in which the search unit makes direct contact with the material, with a minimum couplant film. (RP 2X)

CONTACT MARKS – Intermittent marks adjacent to the weld line resulting from the electrical contact between the electrodes supplying the welding current and the pipe surface. (Bul 5T1)

CONTACT METHOD – (Current flow method.) A method of magnetizing pipe by passing a current through its wall via prods or hand-held contacts. (RP 5A5)

CONTACT TRANSDUCER – A transducer which is coupled to a test surface either directly or through a thin film of couplant. (RP 2X)

CONTAINMENT – Any method used on an offshore platform to collect and direct escaped liquid hydrocarbons to a safe location. (RP 14C)

CONTAMINANT – Material, usually a mud component, which becomes mixed with the cement slurry during the displacement process, and which has a deleterious effect on cement properties. (Bul 10C)

CONTAMINANT – A harmful or undesirable constituent; any substance that might constitute a health hazard or adversely affect desirable properties of drilling fluids. (Bul D11)

CONTAMINATION – The presence in a drilling fluid of any foreign material that may tend to produce detrimental properties of the drilling fluid. (Bul D11)

CONTEST – Organized competition sponsored by the individual sections of the Industrial Conference of the National Safety Council. Contests are based on incidence rates of occupational injuries and illnesses involving days away from work or death. Contests have only one relationship with the Award Plan – contestant units with perfect records tanking below third place in their contest group or division will receive the appropriate level of award under the Award Plan. (Bul T5)

CONTINUOUS FLOW GAS LIFT – Gas lift operation in which gas is injected continuously into the liquid column. Reservoir fluids and the inject gas are produced from the wellhead at the surface without interruption. (GL)

CONTINUOUS METHOD – A method of searching for flaws while the magnetizing current is being applied. (RP 5A5)

CONTINUOUS PHASE – The fluid phase which completely surrounds the dispersed phases that may be colloids, oil, etc. (Bul D11)

CONTINUOUS REELED TUBING – Tubing stored on a reel that can be run in and out of a well without making a connection. (RP 57)

CONTINUOUS WAVE – A constant flow of ultrasonic waves, as opposed to pulsed. (RP 2X)

CONTOUR (verb) – The gradual tapering by filing or grinding to prevent abrupt changes in the wall thickness. (RP 5A5)

CONTRACTED SWEEP – A contraction of the horizontal sweep on the viewing screen of the ultrasonic instrument. Contraction of this sweep permits viewing reflections occurring over a greater depth of material or duration of time. (RP 2X)

CONTRACTOR – Any person or company who contracts all or any part of oil and gas well drilling or servicing. (RP 54)

CONTROL – To exercise authority over and regulate. (Spec Q1)

CONTROL CYLINDERS – Hypothetical limits in the form of a cylinder around the planned trajectory of the wellbore and in which the borehole is to be maintained. (Bul D20)

CONTROL ECHO – Reference signal from a constant reflecting surface, such as a back reflection (RP 2X)

CONTROL FEATURE – A documented activity to ensure conformance with specific requirements of applicable specifications. (Spec Q1)

CONTROL LINE – An individual conduit utilized to transmit control signals to the SCSSV. (RP 14B)

CONTROL MANIFOLD – The system of valves and piping to control the flow of hydraulic fluid to operate the various components of the blowout preventer stack. (RP 53)

CONTROL PANEL – Switches and devices to start, stop, measure, monitor or signal what is taking place. (ITOGP)

CONTROL PANEL, REMOTE – A panel containing a series of controls that will operate the valves on the control manifold from a remote point. (RP 53)

CONTROL POD – An assembly of subsea valves and regulators which when activated from the surface will direct hydraulic fluid through special apertures to operate blowout preventer equipment. (RP 53)

CONTROLLED AGGREGATION – A condition in which the clay platelets are maintained stacked by a polyvalent cation, such as calcium, and are deflocculated by use of a thinner. (Bul D11)

CONTROLLED AREA – A defined area in which the occupational exposure of personnel to radiation or to radioactive material is under the supervision of an individual in charge of radiation protection. (This applies that a controlled area is one that requires control of access, occupancy, and working conditions for radiation protection purposes.) (RP 5A5)

CONTROLLED DIRECTIONAL DRILLING – The art and science involving the intentional deflection of a wellbore in a specific direction in order to reach a predetermined objective below the surface of the earth. (Bul D20)

CONTROLLED DIRECTIONAL WELL (OR DEVIATED WELL) – A hole purposely deviated from the vertical in specific directions using controlled angles to reach an objective location (target) other than directly under the surface location. (Bul D12A)

CONVENTIONAL MUD – A drilling fluid containing essentially clay and water. (Bul D11)

CONVENTIONAL OPERATIONS – Well operations conducted using a rig equipped with fluid pumps, rotary table, and other equipment designed to perform well workovers, recompletions, and other work which requires removal of the Christmas tree and pulling or manipulation of the tubing. (RP 57)

CONVEYING SPEED – (See Related Term: Gear Ratio.) On a decanting centrifuge, the difference in speeds between the outer bowl and the screw conveyor in rpm. (Bul 13)

CONVEYOR – A mechanical device for moving material from one place to another. In a decanting centrifuge a hollow hub with flute(s) rotating in the same direction but at a slower speed than the centrifuge bowl. (Bul 13C)

COOLER – A refrigerated water bath used to cool pressure charged gas life valves to 60^{o}F when setting them. (GL)

COPOLYMER – A substance formed when two or more substances polymerize at the same time to yield a product which is not a mixture of separate polymers but a complex having properties different from either polymer alone. See Polymer. Examples are polyvinyl acetate-maleic anhydride copolymer (clay extender and selective flocculant), acrylamide-carboxylic acid copolymer (total flocculant), etc. (Bul D11)

COPOLYMER – A molecule formed when two or more unlike polymers are linked together. (COGWE, SSWID)

COPPER-FREE OR LOW COPPER CONTENT ALUMINUM – Aluminum alloys containing 0.4% or less copper. (RP 14F)

CORE-FLOW EFFICIENCY (CFE) – Core-flow efficiency is the ratio of the experimental permeability ratio to the theoretical permeability ratio, $(k_p/k_o)/(k_i/k_o)$, for the same total core penetration. (RP 43)

CORING – The act of procuring a sample of the formation being drilled for geological information purposes. Coring is done by means of a core barrel. (Bul 10C)

CORNER EFFECT – The reflection of a sound beam directed normal to the intersection of two perpendicular planes. (RP 2X)

CORRECTIVE ACTION – Measures taken to rectify conditions adverse to quality and to minimize recurrence. (Spec Q1)

CORRECTIVE JETTING RUNS – Action taken with a directional jet bit to change the direction or inclination of the borehole. (Bul D20)

CORROSION – The adverse chemical alteration or destruction of a metal by air, moisture, or chemicals. (Bul 10C)

CORROSION – The adverse chemical alteration on a metal or the eating away of the metal by air, moisture, or chemicals; usually an oxide is formed. (Bul D11)

CORROSION – Corrosion is defined as the destruction of a metal by chemical or electrochemical reaction with its environment. (Spec 12J)

CORROSION AGENT – Any agent causing corrosion. (COGWE, SSWID)

CORROSION-EROSION – The phenomenon of a protective film of corrosion product being eroded away by the erosive action of the process stream, exposing fresh metal which then corrodes. Extremely high metal weight loss may occur under these conditions. (RP 14E)

CORROSION-FATIGUE FAILURE – Failure of a metal exposed to repeated loading in corrosive service. (COGWE)

CORROSION-FATIGUE FAILURE – Metal in corrosion service exposed to repeated stresses until it fails to function (COGWE, SSWID)

CORROSION PRODUCT – The material which results from a metal combining with its corrosive environment. (COGWE, SSWID)

CORROSION RESISTANT RING GROOVES – Ring grooves lined with metal resistant to metal-loss corrosion. (Spec 6A, Spec 16 A)

CORROSIVE GAS – A gas which when dissolved in water or other liquid causes metal attack. Usually included are hydrogen sulfide (H_2S), carbon dioxide (CO_2) and oxygen (O_2). (RP 14E)

CORROSIVE HYDROCARBON SERVICE – Process streams which contain water or brine and carbon dioxide (CO_2), hydrogen sulfide (H_2S), oxygen (O_2) or other corrosive agents under conditions which cause metal weight loss. (RP 14F)

COUNTERWEIGHT – (Also called “Ballast”) Weight used to supplement the weight of the machine in providing stability for lifting working loads and usually attached to rear of revolving upperstructure. (Spec 2C)

COUPLANT – The couplant, a liquid such as water, oil glycerin, etc., capable of conducting ultrasonic vibrations from the transducer to the material being tested shall be used. (RP 2X)

COUPLANT – A material (usually a liquid) used between ultrasonic transducer and the test specimen to conduct ultrasonic energy between them. (RP 5A5)

COUPLING – A mechanical means for joining two sections of riser pipe in end-to-end engagement. (RP 2R)

COUPLING MILL END – The end of the pipe to which the coupling is applied at the mill. Referred to as the box end of integral joint pipe. (RP 5B1)

COUPLING PRELOAD – Compressive bearing load developed between pin and box members at their interface; this is accomplished by elastic deformation during makeup of the coupling. (RP 2R)

COUPON – Small metal strips which are exposed to corrosive systems for the purpose of determining nature and severity of corrosion. (COGWE)

COUPON – Small metal strip which is exposed to corrosive systems for the purpose of determining the nature and severity of corrosion. (ITOGP)

COUPON – A small metal strip which is exposed to corrosive systems for the purpose of determining nature and severity of corrosion or scale deposition. (SSWID)

COURSE – The axis of the borehold over an interval length. (Bul D20)

COURSE BEARING- The azimuth of the course. (Bul D20)

COURSE DEVIATION – The length of a line made by projecting a course length onto a horizontal plane. In practice, the horizontal displacement between two stations regardless of directions. (Bul D20)

COURSE LENGTH – The difference in measured depth or actual hole length from one station to another. (Bul D20)

COVER MATERIAL – Soil that is used to cover compacted solid waste in a sanitary landfill. (Bul D11)

C.P. – Point in case hold of cementing through perforations. Abbreviation for “casing point.” (Bul 10C)

CPR – Cardiopulmonary resuscitation.

CRACK – A stress-induced separation of the metal which, without any other influence, is insufficient in extent to cause complete rupture of the material. (Bul 5T1)

CRACK – A planar discontinuity formed by separation of previously continuous material. (RP 2X)

CRACKERS – Bottom-hole assembly in which single joints of drill string can be run between drill collars to produce a limber assembly. (Bul D20)

CRATER – The formation of a large funnel-shaped cavity at the top of a hole resulting from a blow-out or occasionally from caving. (Bul D11)

CRATER – To fail. To cave in. (ITOGP)

CREAMING OF EMULSIONS – The settling or rising of the particles of the dispersed phase of an emulsion as observed by a difference in color shading of the layers formed. This can be either upward or downward creaming, depending upon the elative densities of the continuous and dispersed phases. (Bul D11)

CREATED FRACTURES – Induced fractures by means of hydraulic or mechanical pressure exerted on the formation. (Bul D11)

CREEP – Time-dependent increase in strain during a state of constant stress. (Bul 2N)

CREEP – The gradual deformation of metals or plastics under loads applied for a long time. (COGWE, SSWID)

CREST- The top of a thread. (RP 5A5, RP 5B1)

CREST CLEARANCE – The distance between the crest and root of mating threads. (RP 5B1)

CREST TRUNCATION – The distance between the sharp crest (crest apex) and the finished crest. (RP 5B1)

CRIPPLED BIT – By removing one cone, a bit is "crippled" and made to act erratically. Such bits have been used in deflecting holes. (Bul D20)

CRITICAL ANGLE – The incident angle of the sound beam beyond which a specific refracted mode of vibration no longer exists. (RP 2X)

CRITICAL COMPONENT – Any component of the crane whose failure would result in loss of load control or result in structural instability of the machine. (Spec 2C)

CRITICAL COMPONENTS – Those parts which have specified requirements in this document. (Spec 6A)

CRITICAL FLAW – One which is capable of causing failure. (RP 2X)

CRITICAL FLOW – By "critical flow" is meant that the velocity through an orifice or small opening has reached a maximum, and remains a constant. The rate of flow is directly proportional to upstream pressure, and changes only with upstream pressure. Downstream pressure has no effect on flow rate when critical flow velocity is obtained. (WT)

CRITICAL FLOW PROVER – Essentially a steel tube 12" long with provisions for installing an orifice plate at one end. Two sizes are available, either 2" or 4" internal diameter. Two connections are provided on tube – one for a thermometer bulb and the other for connecting a pressure recording meter. (WT)

CRITICAL GAS SATURATIONS – the lowest gas saturation in the reservoir rock at which gas will flow. When the gas saturation is less than the critical value, the permeability to gas is zero. (RP 44)

CROOKED HOLE – Wellbore which has been inadvertently deviated from a straight hole. (Bul D20)

CROOKED HOLE – A wellbore which has inadvertently deviated from the vertical. (ITOGP)

CROOKED HOLE AREA – An area where the subsurface formations are so composed or arranged that it is difficult to drill a straight hole. (Bul D20)

CROOKED-HOLE TENDENCY – A characteristic of the formation, bottom-hole assembly, or drilling practices to cause a crooked hole to be drilled. (Bul D20)

CROSS – A pressure containing fitting with a minimum of four openings. Usually all four openings are at 90^{o} to one another. Crosses may be threaded or flanged (also studded flange). (Spec 6A)

CROSS-OVER POINTS – In multiple layer spooling of rope on a drum, those points of rope contact where the rope crosses the preceding rope layer. (Spec 2C)

CROSS-OVER SEAT – A Special seat for a gas lift valve which directs the pressure applied at the nose of the gas lift valve to the bellows and the pressure applied to the holes in the side of the valve to the under side of the seat. It is used most often in fluid operated valves. (GL)

CROSS TALK – An unwanted condition in which acoustic energy is coupled from the transmitting crystal to the receiving crystal without propagating along the intended path through the material. (RP 2X)

CROSS THREADED – Male and female threads don't mate. (RP 5A5)

CROSSOVER FLANGE – A double or single studded adapter flange with a restricted area sealing means and with a top connection pressure rating above that of the lower connection. (Spec 6A)

CROSSOVER SPOOL – Flanged equipment with a restricted area sealing means, at or near the face of its lower flange. Crossover spools are also provided with suitable means to suspend and seal around an inner string of casing or tubing. A crossover spool has a top connection with a pressure rating above that of the lower connection. (Spec 6A)

CROWD THE BIT – Term used to indicate that more weight is applied to the bit than needed for efficient drilling. A crowded bit will usually increase the inclination or cause an azimuth change. (Bul D20)

CROWN – The curvature of the screen deck or the difference in elevation between the high and low points. (Bul 13C)

CROWN BLOCK ASSEMBLY – The stationary sheave or block assembly installed at the top of a derrick or mast. (Spec 4F)

CRUDE OIL – A mixture of hydrocarbons that exists in the liquid phase in the underground reservoir and remains liquid at atmospheric pressure after passing through surface separating facilities. (ITOGP)

CRYSTAL – A piezoelectric element in a probe or search unit. (RP 2X)

CSA – Canadian Standards Association.

CUBIC CENTIMETER (cc or mL) – A metric system unit for measurement of volume. (Bul 10C)

CU FT – Cubic foot, cubic feet. (WT)

CU FT/BBL – Cubic feet per barrel. Cubic feet of gas per barrel of liquid. (WT)

CUMULATIVE FATIGUE DAMAGE – The total of fatigue damage caused by repeated cyclic stresses. (Bul D20)

CUPRONICKEL – An alloy of copper (70 percent or over) and nickel. (COGWE, SSWID)

CURING – Aging of cement specimens under specified conditions. (Bul 10C)

CURING ATMOSPHERIC PRESSURE – The aging of cement specimens for test purposes at normal atmospheric pressure of 14.7 psi ($1 kg/cm^2$) at sea level and temperature below about 200^oF (93.3^oC) for a designated period of time under certain given conditions of temperature and humidly. (Bul 10C)

CURING PRESSURE – The curing of cement specimens for test purposes, in water at pressures above atmospheric pressure. (Bul 10C)

CURRENT EXPERIENCE – The occupational injury and illness experience of the most recent calendar year. (Bul T5)

CURVATURE IN THE HORIZONTAL PLANE – Projection of the curvature of the hole onto a vertical plane. (Bul D20)

CURVATURE IN THE VERTICAL PLANE – Projection of the curvature of the hole onto a vertical plane. (Bul D20)

CUT – A gouge or distortion in two or more thread crests in a lien wither parallel to the pipe axis or at an angle across the threads. (Bul 5T1, RP 5A5)

CUT – See Related Term: Median Cut. A general term for the effectiveness of a liquid-solids separation device expressed as the particle size that is removed from the feed stream at a given percentage under specified operating conditions. (Bul 13C)

CUT OIL – Oil that contains water, usually in the form of an emulsion. Also called WET OIL. (ITOGP)

CUTTINGS – Small pieces of formation that are the result of the chipping an/or crushing action of the bit. See Samples. (Bul 10C, Bul D11)

CYCLE TIME, DRILLING-FLUID – The time of a cycle, or down the hole and back, is the time required for the pump to move the drilling fluid in the hole. The cycle in minutes equals the barrels of drilling fluid in the hole divided by barrels per minute. (Bul 10C, Bul D11)

CYCLONE – See Preferred Term: Hydrocyclone. (Bul 13C)

CYCLONE – A device for the separation of various particles from a drilling fluid, most commonly used as a desander. The fluid is pumped tangentially into a cone, and the fluid rotation provides enough centrifugal force to separate particles by mass weight. See Centrifuge. (Bul D11)

CYLINDER (IN DIRECTIONAL DRILLING) – Refer to "Control Cylinders." (Bul D20)

CYLINDER – A device which converts fluid power in linear mechanical force and motion. (Spec 2C)

CYLINDER DRILLING – Refers to drilling in which the course of the borehole is held within previously determined limits set by the circumference of imaginary cylinders extending from the surface location to the desired objective of the hole. (Bul D20)

- D-

d – The symbol "d" refers to the nominal internal diameter of a conduit. (RP 6G)

DAC (DISTANCE AMPLITUDE CORRECTION) – (Swept gain, time corrected gain, time variable gain, etc.) Electronic change of amplification to provide equal amplitude from equal reflectors at different depths. (RP 2X)

D&P PLATFORM – A drilling and production platform. Such an offshore platform is a large structure with room to drill and complete a number of wells. (ITOGP)

DAMPING (TRANSDUCER) – Limiting the duration of vibration in the search unit by either electrical or mechanical means. (RP 2X)

DAMPING (ULTRASONICS) – Decrease or decay of ultrasonic wave amplitude with respect to time. (RP 2X)

DARCY – A unit of permeability. A porous medium has a permeability of 1 Darcy when a pressure of 1 atmosphere on a sample 1 cm long and 1sq, cm in cross section will force a liquid of 1-cp viscosity through the sample at the rate of 1 cc per sec. (Bul 10C, Bul D11)

DARCY'S LAW – The rate of flow of a homogeneous fluid through a porous medium is proportional to the pressure or hydraulic gradient and to the cross-sectional area normal to the direction of flow and inversely proportional to the viscosity of the fluid. (Bul 10C, SSWID)

DATE OF MANUFACTURE – The date of manufacturer's final acceptance of finished equipment. (Spec 6A, Spec 16A)

DC FIELD – Either a residual magnetic field or an active magnetic field produced through the use of direct current. (RP 5A5)

DEADLINE – The end of the drilling line which is not reeled onto the hoisting drum of the rotary rig. This end of the drilling line is anchored (usually to the derrick substructure) and does not move as the traveling block is hoisted, hence the term deadline. (RP 54)

DEADMAN – A substantial timer or plug of concrete buried in the earth to which a guy wire or line is attached for bracing a mast or tower. Also a land-side mooring device used with lines and cables when docking a vessel. (ITOGP)

DEAD OIL – Crude oil containing essentially no dissolved gas when it is produced (ITOGP)

DEAD WEIGHT TESTER – A device using calibrated weights to measure pressure accurately. (WLOP)

DEAD WEIGHT TESTER – Pressure instrument where pressure is applied to a hydraulic fluid to lift a small piston connected to a plate on which weights are added as necessary to balance pressure applied. (WT)

DEAD WELL – A well that will not flow by itself. (GL)

DEAD WELL – A well which has ceased to produce oil or gas, either temporarily or permanently. (ITOGP)

DEAD WELL – A well that has ceased to produce oil or gas, either temporarily or permanently; a well that has suffered a kick or blowout and been killed. (WLOP)

DEAD ZONE – The distance in a material from the surface to the nearest inspectable depth. (RP 2X)

DEAD ZONE (ULTRASONIC) – The distance from the front surface of the pipe to the nearest inspectable depth. (RP 5A5)

DEBUG – To detect, locate and correct malfunctions in a computer, instrumentation or other type system. (ITOGP)

DECANTING CENTRIFUGE – A continuously conveying centrifuge which removes solids drained of their free liquid. (Bul 13C)

DECIBEL (db) – A unit of sound intensity, loudness, or pressure level in which 0.0002 microbar of pressure equals zero db sound-pressure level; the threshold of hearing. (Bul D11)

DECIBEL (db) – The unit for measuring the loudness of sounds (ultra sound). 1 db = 10% change, on al logarithmic scale. (RP 2X)

DECK – A vibrating screen component consisting of a support frame, screening surface, and accessories. (Bul 13C)

DECK AREA, CANTILEVER – That portion of the main deck, cellar deck or sub-cellar deck area outside the boundary line of perimeter deck columns. (RP 2G)

DECK AREA, CENTRAL – That portion of the main deck, cellar deck or sub-cellar deck within the boundary line of perimeter deck columns. (RP 2G)

DECK AREA, RIG – That area of the deck necessary for support of drilling or workover operations. (RP 2G)

DECK BEAMS – Secondary structural elements spanning between intermediate girders and/or main girders. (RP 2T)

DECK, CELLAR – A deck located immediately below the main deck. (RP 2G)

DECK, MAIN – The uppermost deck on the structure. (RP 2G)

DECK, PLATE – Flat plate or grating spanning between deck beams. (RP 2T)

DECK RUBBER – See Preferred Term: Support Rubber, (Bul 13C)

DECK SUB-CELLAR – A deck located below the cellar deck. Decks below the cellar deck will be designated as Sub-Cellar Deck, Sub-Cellar Deck B, etc. (RP 2G)

DECLINATION – Refer to "Magnetic Declination." (Bul D20)

DECONTAMINATE – Material added to cements or cement slurries for the specific purpose of counteracting the effects of contamination. (Bul 10C)

DEDENDUM – The distance between the pitch line and root of thread. (RP 5B1)

DEEP PLATE GIRDER – Deep plate grinder with the web stiffened in both the longitudinal and transverse directions. (Bul 2V)

DEFECT – An imperfection whose size, shape, orientation, location or properties make it detrimental to the useful service of the pipe or exceed the accept/reject level of the applicable specification. (RP 5A5)

DEFECT REFLECTION – The oscilloscope presentation of the energy returned by a rejectable flaw in the material. (RP 2X)

DEFLECTED HOLE – Wellbore which is intentionally deviated. (Bul D20)

DEFLECTION TOOLS – Drilling tools and equipment used to change the inclination and direction of the drilled wellbore. (Bul D20)

DEFLOCCULATION – Breakup of flocs of gel structures by use of a thinner. (Bul 10C, Bul D11)

DEFOAMER OR DEFOAMING AGENT – Any substance used to reduce or eliminate foam by reducing the surface tension. See Antifoam. (Bul 10C, Bul D11)

DEFORMED ICE - The antithesis of smooth ice. (Bul 2N)

^{o}F – Degrees Fahrenheit temperature measurement. (WT)

DEHYDRATION – Removal of free or combined water from a material. (Bul 10C)

DEHYDRATION – Loss of water by filtration of cement slurries during or after displacement. (Bul 10C)

DEHYDRATION – Removal of free or combined water from a compound. (Bul D11)

DEHYDRATION – Removal of water and water vapor by any means form a gas, liquid, or solid. Dehydration is an essential step in proper purification of compressed air or gas for respiratory use. (Bul D11)

DELAYED SWEEP – A means of delaying the start of horizontal sweep, thereby eliminating the presentation of early response data. (RP 2X)

DELETED BIT – Refer to “Crippled Bit.” (Bul D20)

DELIQUESCENCE – The liquefaction of a solid substance due to the solution of the solid by absorption of moisture from the air, e.g., calcium chloride. (Bul D11)

DELTA EFFECT – Acoustic energy re-radiated by a discontinuity. (RP 2X)

DEMAGNETIZATION – The process of removing part or all of the existing residual magnetism from the pipe. (RP 5A5)

DEMULSIFIER – A chemical used to “break down” crude oil/water emulsions so the water may be removed from the oil. (ITOGP)

DENSITY – Mass per unit volume. Absolute density considers only the actual volume occupied by the material. Bulk density is mass per unit bulk volume which includes the actual volume of the material plus the volume of trapped air. (Bul 10C)

DENSITY – Matter measured as mass per unit volume expressed in pounds per gallon (ppg), pounds per square inch per 1,000 ft. of depth (psi/1,000 ft), and pounds per cubic ft. (lb./cu. ft). Density is commonly referred to as “weight.” (Bul D11)

DENSITY – The weight of a substance per unit of volume. For instance, the density of a drilling mud may be described as "10 lb. per gallon" or 75 lb. per cubic foot." (ITOGP)

DENT – A depression that is without metal loss and is caused by striking, or being struck by, other objects. (Bul 5T1, RP 5A5)

DENT – A local change in surface contour caused by mechanical impact, but not accompanied by loss of metal. (Bul 5T1)

DEPARTURE – Horizontal displacement of one station form another in an east or west direction. (Bul D20)

DEPLETION DRIVE – See Solution Gas Drive. (ITOGP)

DEPOLARIZE – To increase rare of corrosion reaction by removing a polarizing corrosion product. (COGWE, SSWID)

DEPOSITION – Act of depositing upon the surface of an object. (SSWID)

DERMAL TOXICITY – The ability of a chemical to poison an animal or human by skin absorption. (Bul D11)

DERRICK – A semipermanent structure of square or rectangular cross-section having members that are latticed or trussed on all four sides. This unit must be assembled in the vertical or operation position, as it includes no erection mechanism. It may or may not be guyed. (Spec 4F)

DERRICK (MAST) – The steel tower component of a drilling or well servicing rig which supports the crown block, traveling block, and hoisting lines. Derricks and masts may be stationary structures normally requiring dismantling and disassembly when moved from location to location, or may be portable with the capability of being laid down and raised to and from ground level fully assembled. (RP 54)

DERRICKING – The operation of changing boom angle in a vertical plane. (Spec 2C)

DERRICKMAN – Employee whose work station is in the derrick while pipe or rods are being hoisted or lowered into the hole. (R 54)

DESALINIZATION – salt removal from sea or brackish water. (Bul D11)

DESALTING – This is a form of emulsion treating which may be identical to conventional treaters with the addition of supplemental injection and mixing of low salinity water into the feed emulsion to dilute the brine phase and thereby lower the salt content of the treated crude. Desalting is used both in oil producing areas and refineries. It may consist of one or more states to achieve maximum desalting efficiency. (Spec 12L)

DESAND – To remove the API sand. (Bul 13C)

DESANDER – A hydrocyclone capable of removing a very high proportion of the API sand (particles greater than 74 microns) from a drilling fluid. (Bul 13C)

DESANDER- See Cyclone. (Bul D11)

DESIGN – A detailed plan for a product. (Spec Q1)

DESIGN LIFE – Maximum anticipated operational years of service for the platform, i.e., the period of time from commencement of construction until removal of the structure. (RP 2T)

DESIGN LOAD – That force or combination of forces which a structure is designed to withstand without exceeding the allowable stress in any member. (Spec 4F)

DESIGN PRESSURE – Maximum allowable working pressure at the design temperature. (RP 14E)

DESIGN PRESSURE – The pressure used in the design of a vessel for the purpose of determining the minimum permissible thickness or physical characteristics of the different parts of the vessel. When applicable, static head shall be added to the design pressure to determine the thickness of any specific part of the vessel. (Spec 12L)

DESIGN REQUIREMENTS – The requirements set forth by the manufacturer's engineering authority for materials manufacturing, fabrication, and inspection procedures to be employed in the production of the crane. (Spec 2C)

DESIGN REQUIREMENTS – API Specifications, Manufacturer's Specifications and regulatory requirements used to control the design. (Spec Q1)

DESIGN REVIEW – A re-examination to determine the appropriateness of assumptions and methodology, and accuracy of formulations and calculations used to design a product. (Spec Q1)

DESIGN VARIABLES – Quantities that define for the purpose of structural design or analysis a structural component and material, its state of stress, and the applied loads. (Bul 2V)

DESIGN VERIFICATION – The process of proving design by testing. (Spec Q1)

DESIGNATED – Selected or assigned by the employer or the employer's representative as being qualified to perform specific duties. (Spec 2C)

DESIGNER – The person, firm, corporation or other organization employed by the operator to develop the design, details and specifications for the facility. (RP 2X)

DESILT – To remove the ultra-fine and larger particles. (Bul 13C)

DESILTER – A hydrocyclone capable of removing a very high proportion of the ultra-fine and larger particles from a drilling fluid. (Bul 13C)

DETECT – The act of locating a flaw or imperfection. (RP 5A5)

DETECTABLE ABNORMAL CONDITION – An abnormal operating condition which can be automatically detected. (RP 14C)

DETECTOR OR DETECTOR SHOE – A scanning shoe carrying one or more transducers. Is used to protect transducers from mechanical damage from the pipe surface, etc. (RP 5A5)

DETERGENT – A substance that has cleaning action due to a combination of propreties including lowering of surface tension, wetting action, emulsifying and dispersing action, and foam formation in some cases. The present connotation indicates a synthetic derivative in distinction to soap, which is derived from natural fats and oils. (Bul D11)

DETERGENT – Agent used for cleaning. (SSWID)

DEVELOPMENT WELL – A well drilled in proven territory in a field for the purpose of completing the desired spacing pattern of production. (ITOGP)

DEVIATION – Refer to "Inclination." (Bul D20)

DEVIATION ANGLE – Refer to Angle of Inclination." (Bul D20)

DEVIATION BIT – A bit specifically designed to reduce the tendency to drill a crooked hole. (Bul D20)

DEVIATION CONTROL TECHNIQUES –
Fulcrum Technique – Utilizes a bending moment principle to create a force on the bit to counteract reaction forces which are tending to push the bit in a given direction.
Mechanical Technique – Utilizes bottom-hole equipment which is not normally a part of the conventional drill string to add deviation control. This equipment acts to force the bit to turn the hole in inclination.
Packed-hole Technique – Utilizes the hole wall to minimize the bending of the bottom-hole assembly.
Pendulum Technique – The basic principle involved is gravity or the "plum-bob effect." (Bul D20)

DEVIATION SURVEY – Refer to "Inclination Survey." (Bul D20)

DEVIATION TYPE –
Abnormal Deviation – Usually associated with highly faulted formations having fracture planes on either side of a fault.

Abrupt Deviation – Usually associated with interbedded, aniostropic, or laminar formations.

Drift Deviation – Usually associated with a gradual hole angle change.

Induced Deviation – Man-made, either intentional or unintentional.

Rotational Deviation – Usually results from the bit moving in a slow spiral due to drill stem rotation. (Bul D20)

DEW POINT – The state of a vapor-phase system when it is in equilibrium with an infinitesimal amount of liquid phase. (RP 44)

DEW-POINT PRESSURE – The fluid pressure in a system at its dew point. (Often used interchangeably with "saturation pressure.") (RP 44)

DIATOMACEOUS EARTH – An infusorial earth composed of siliceous skeletons of diatoms and being very porous. Sometimes used for combating lost circulation and as an additive to cement; also has been added to special drilling fluids for a particular purpose. (Bul 10C, Bul D11)

DIATOMACEOUS EARTH FILTRATION – A process in which a filter cake or precoat of diatomaceous earth is used as a filter medium. (SSWID)

DIESEL-ELECTRIC OR GAS-ELECTRIC RIG – A rotary drilling rig using self-generated electric power. (Bul D10)

DIESEL-OIL PLUG – See Gunk Plug. (Bul 10C, Bul D11)

DIFFERENTIAL – A difference in quantity or degree between two measurements or units (as the pressure differential across a choke – i.e., the pressure on one side of the choke compared with the pressure on the other side). (See Differential Pressure). (WLOP)

DIFFERENTIAL ANGLE DECK – A screen deck in which successive screening surfaces of the same deck are at different angles. (Bul 12C)

DIFFERENTIAL GAS LIBERATION – A process whereby gas that is liberated from solution in the oil is removed from contact with the oil as soon as it is liberated. There is a continuous change in the mass and composition of the system. (RP 44)

DIFFERENTIAL PEN – Marking device on an orifice meter recording the difference between upstream pressure and downstream pressure across an orifice plate. Usually calibrated in inches of water difference. (WT)

DIFFERENTIAL PRESSURE – The difference between the inlet and outlet pressures measured near the inlet and outlet openings. (Bul 13C)

DIFFERENTIAL PRESSURE – The difference in pressure between hydrostatic head of the drilling fluid column and the formation pressure at any given depth in the hole. It can be positive, zero, or negative with respect to the hydrostatic head. (Bul 10C, Bul D11)

DIFFERENTIAL PRESSURE – The difference between two fluid pressures (e.g., the difference between the pressure in a reservoir and the pressure in a wellbore drilled into the reservoir; the difference in pressure on either side of a restriction in a pipeline; the difference between the atmospheric pressure at sea level and at 10,000 ft.,etc.) See Differential.) (WLOP)

DIFFERENTIAL-PRESSURE (WALL) STICKING – Sticking which occurs because part of the drill string (usually the drill collars) becomes embedded in the filter cake resulting in a non-uniform distribution of pressure around the circumference of the pipe. The conditions essentially for sticking require a permeable formation and a pressure differential across a nearly impermeable filter cake and drill string. (Bul 10C, Bul D11)

DIFFERENTIAL STICKING – The action of a differential pressure holding the drill stem against the wall of the borehole. (Bul D20)

DIFFERENTIAL WIRING – Electrically connected in opposed series such that the output of one coil effectively opposes the other coil. In search coils, the differential wiring results in equal and opposite voltages being developed when the magnetic field changes equally in each coil. Thus, no net voltage output is produced. (RP 5A5)

DIFFRACTION – The deflection of a wave front when passing the edges of an obstacle. (RP 2X)

DIFFUSE INDICATIONS – (Magnetic particle) Indications that are not clearly defined as, for example, indications of subsurface defects. (RP 5A5)

DIFFUSE REFLECTION – Scattered incoherent reflections caused by rough surfaces or associate interface reflections of ultrasonic waves from irregularities of the same order of magnitude or greater than the wave length. (RP 2X)

DIFFUSION – The spreading, scattering, or mixing of a material (gas, liquid, or solid). Bul 10C, Bul D11)

DILATANT FLUID – A dilatant or inverted plastic fluid is usually made up of a high concentration of well-dispersed solids which exhibits a non-linear consistency curve passing through the origin. The apparent viscosity increases instantaneously with increasing rate of shear. The yield point, as determined by conventional calculations from the direct-indicating viscometer readings, is negative; however, the true yield point is zero. (Bul 10C, Bul D11)

DILUENT – Liquid added to dilute or thin a solution. (Bul 10C, Bul D11)

DILUTION – Increasing the liquid content of a slurry, by addition of water, oil or other fluid constituting the liquid phase. (Bul 13C)

DILUTION RATIO – Ratio of volume of dilution liquid to the volume of raw mud in the feed to a liquid-solid separator. (Bul 13C)

DILUTION RATIO – The ratio of the volume of water of a stream to the volume of incoming waste. The capacity of a stream to assimilate waste is partially dependent upon the dilution ration. (Bul D11)

DILUTION WATER – Water used for dilution of raw mud. (Bul 13C)

DING (E) – A flattened area or indentation on a chamfer or thread crest caused by mechanical impact. (Bul 5T1)

DINGE – See Dent. (RP 5A5)

DIRECT CURRENT (dc) – Refers To an electric current flowing continually in one direction only through a conductor. (RP 5A5)

DIRECT FIRED VESSEL – A vessel in which the temperature of fluids is increased by the addition of heat supplied by a flame. The flame is applied direct to the fluid container. (RP 2G)

DIRECT IGNITION SOURCE – A point of sufficient temperature and heat capacity to ignite a combustible mixture. (RP 14C)

DIRECT-INDICATING VISCOMETER – See Viscometer, Direct-Indicating. (Bul 10C, Bul D11)

DIRECTION – Refers to the azimuth; direction of vertical projection of the hole onto a horizontal plane. (Bul D20)

DIRECTION CONTROL – Refer to "Controlled Directional Drilling." (Bul D20)

DIRECTION OF CLOSURE – The direction of the line of closure. (Bul D20)

DIRECTION OF INCLINATION – The direction of the course. (Bul D20)

DIRECTIONAL DRILLING – Drilling a well at a controlled angle form vertical. (Bul 10C)

DIRECTIONAL DRILLING – Refer to "Controlled Directional Drilling." (Bul D20)

DIRECTIONAL DRILLING CONTRACTOR – A service company that can supply the special deflecting tools, bottom-hole assemblies, survey instruments, and a technical representative to perform the directional drilling aspects of the operation. (Bul D20)

DIRECTIONAL DRILLING DATA SHEET – Data sheet on which a detailed description of the bottom-hole assembly and operating parameters are indicated as a function of depth. (Bul D20)

DIRECTIONAL HOLES – Boreholes purposely drilled in a planned trajectory other than vertical; boreholes drilled using controlled directional drilling methods. (Bul D20)

DIRECTIONAL SERVICE COMPANY – Refer to "Directional Drilling Contractor." (Bul D20)

DIRECTIONAL SIDETRACK OR DIRECTIONAL REDRILL – (Abbreviated as S/T) A drilling effort in which an additional hole is drilled by leaving a previously drilled hole at some depth below the surface and above the total depth. A whipstock is set in the previously drilled hole which is the starting point for the sidetracking operation. This section of new hole is directionally drilled to a new objective bottom hole location (target). (Bul 12A)

DIRECTIONAL SURVEILLANCE – Refer to “Controlled Directional Drilling.” (Bul D20)

DIRECTIONAL SURVEY – Refer to “Borehole Directional Survey.” (BulD20)

DIRECTIONAL TURBODRILL – A turbodrill which can follow the hole curvature developed with a bent sub, usually shorter in length than a straight-hole turbodrill. (Bul D20)

DISCHARGE SPOUT OR LIP – Extension at the discharge end of the screen deck. It may be vibrating or stationary. (Bul 13C)

DISCONTINUITY – A detectable interruption in the material which may or may not have undesirable connotations. (RP 2X)

DISCONTINUITY – An interruption in the normal physical structure or configuration of a pipe such as cracks, laps, seams, pits and laminations. A discontinuity may or may not affect the usefulness of a pipe or exceed critical flaw size. Also called a flaw or imperfection. (RP 5A5)

DISCOVERY WELL – An exploratory well that encounters a new and previously untapped petroleum deposit. A successful WILDCAT WELL. (ITOGP)

DISPERSANT – A cement additive which reduces the initial consistency of cement slurries. (Bul 10C)

DISPERSANT – Any chemical which promotes dispersion of the dispersed phase. (Bul D11)

DISPERSANT – A chemical agent used to break up or disperse concentrations of various liquid or solid materials. In cleaning oil spills, dispersants are used to disperse oil on the water surface. (Bul D11)

DISPERSANT – Agent, compatible with the solvent, which holds very finely divided matter in a dispersed state. (SSWID)

DISPERSED PHASE – The scattered phase (solid, liquid, or gas) of a dispersion. The particles are finely divided and completely surrounded by the continuous phase. (Bul D11)

DISPERSION (OF AGGREGATES) – Subdivision of aggregates. Dispersion increases the specific surface of the particle: hence results in an increase in viscosity and gel strength. (Bul D11)

DISPERSION, SOUND – scattering of an ultrasonic beam as a result of diffuse reflection from a highly irregular incident surface. (RP 2X)

DISPERSOID – A colloid or finely divided substance. (Bul D11)

DISPLACEMENT – The lateral deistance from the surface location to the primary target. (Bul D20)

DISPLACEMENT RATE - The volumetric flow rate at which cement slurry is pumped down the hole. (Bul 10C)

DISPOSAL – The orderly placement or discarding of unwanted material. (Bul D11)

DISPOSAL WELL – A well through which fluid (usually brine) is returned to subsurface formations. (Bul 10C, ITOGP, SSWID)

DISSOCIATION – The splitting up of a compound or element into two or more simple molecules, atoms, or ions. Applied usually to the effect of the action of heat or solvents upon dissolved substances. The reaction is reversible and not as permanent as decomposition; i.e., when the solvent is removed, the ions recombine. (Bul D11)

DISSOLVED GAS – Natural gas which is in solution with crude oil in the reservoir. (ITOGP)

DISSOLVED-GAS DRIVE – See Solution-Gas Drive. (ITOGP)

DISSOLVED OXYGEN (DO) – The oxygen dissolved in water or sewage. Adequately dissolved oxygen is necessary for the life of fish and other aquatic organisms and for the prevention of offensive odors. Low dissolved oxygen concentrations generally are due to discharge of excessive organic solids having high BOD, the result of inadequate waste treatment. (Bul D11)

DISSOLVED SOLIDS – The total amount of dissolved material, organic and inorganic contained in water or wastes. Excessive dissolved solids make water unpalatable for drinking and unsuitable for industrial use. Measurements are expressed as ppm or mg/liter (mg/l). (Bul D11)

DISTILLATION – Process of first vaporizing a liquid and then condensing the vapor into a liquid (the distillate), leaving behind non-volatile substances, the total solids of a drilling fluid. The distillate is the water and/or oil content of a fluid. (Bul D11)

DISTORTION ENERGY THEORY – Failure theory defined by the following equation where the applied stresses are positive for tension and negative for compression. (Bul 2U, 2V)

$$F_A^2 - f_a f_0 + f_0^2 + F_y^2$$

DIVERGENCE – Spreading of ultrasonic waves after leaving search unit, a function of diameter and frequency. (RP 2X)

DIVERTER - A diverter is a device used to direct tools at a branch connection. (RP 6G)

DIVERTER – A device attached to the wellhead or marine riser to close the vertical access and direct any flow into a line away from the rig. Diverters differ from blowout preventers in that flow is not stopped but rather the flow path is redirected away from the rig. (RP 53)

DIVIDED DECK – A deck having a screening surface longitudinally divided by partition(s). (Bul 13C)

DnV – Det norske Veritas.

DOCUMENTATION – Recorded information. (Spec Q1)

DOG-LEG – The “elbow” caused by a sharp change of direction in the wellbore. (Bul D11)

DOGHOUSE – A small house used for keeping lease records, changing clothes, or any other use around a lese. (ITOGP)

DOGLEG- A term applied to a sharp change of direction in a wellbore or ditch. Applied also to the permanent bending of wire rope or pipe. (ITOGP)

DOGLEG ANGLE – Refer to “Dogleg Severity.” (Bul D20)

DOGLEG CONTROL PROGRAM – Program, designed specifically to decrease the severity of or eliminate doglegs in a drilled hole. (BulD20)

DOGLEG SEVERITY – A measure of the amount of change in the inclination and/or direction of a borehole, usually expressed in degrees per 100 feet of course length. (Bul D20)

DOGLEG TYPES - (QUALITATIVE) –
Abrupt Dogleg – A dogleg caused by a sudden change in inclination and/or direction over a short interval.
Deceasing Dogleg – A dogleg in the borehole with the change in inclination returning the borehole toward vertical.

Excessive Dogleg (Severe Dogleg) – Doglegs larger than Permissible Doglegs.

Increasing Dogleg – A dogleg with in the borehole with the change in inclination increasing the angle away from vertical.

Long Dogleg – A dogleg with a gradual change in inclination and/or direction over a long interval.

Permissible Dogleg – A dogleg through which equipment and/or tubulars can be operated without sticking tools or providing excessive stresses or wear. (Bul D20)

DOLOMITE – A type of sedimentary rock similar to limestone but rich in magnesium carbonate. Sometimes dolomite is found as the reservoir rock or petroleum. (ITOGP)

DOME – The volume chamber inside the bellows of a gas lift valve. (GL)

DOPE – A viscous material used on casing or tubing threads as a lubricant, and to prevent corrosion; a tar-base coating for pipelines to prevent corrosion. (ITOGP)

DOSE RATE – The amount of ionizing radiation energy absorbed per unit of mass and time of irradiated material. Measured in reps, rem and rad. (RP 5A5)

DOSIMETER – A device that measures radiation dose, such as film badge or ionization chamber. (RP 5A5)

DOT – Department of Transportation.

DOUBLE CRYSTAL METHOD – The method of ultrasonic testing, using two transducers with one acting as the transmitter and one as the receiver. (RP 2X)

DOUBLE DOGLEGGING – Refer to "S-type Well." (Bul D20)

DOUBLE FLUTE – Two flutes advancing simultaneously at the same angle and 108^{o} apart. (Bul 13C)

DOUBLE LEAD – See Preferred Term: Double Flute. (Bul 13C)

DOUBLE SEAM PIPE – Pipe having two longitudinal seams formed by the submerged-arc welding process or the gas metal-arc welding process or the combination welding process. (Spec 5L)

DOUBLE-WALL DRILL PIPE – A two-tube concentric drill pipe assembled with the inner pipe in compression and the outer pipe in tension. Used to replace drill collars in directional holes. (Bul D20)

DOUBLES – Drill pipe and tubing pulled from the well two joints at a time. The two joints make a stand pipe that is set back and racked in the derrick. Three-joint stands are called THRIBBLES, fours are FOURBLES. (ITOGP)

DOUGHNUT – A ring of wedges that supports a string of pipe or a threaded, tapered ring used for the same purpose. (ITOGP)

DOWNCOMER – A tube that conducts liquids downward in a vessel (as an absorber, a stripper, or heater-treater.) (ITOGP)

DOWNHOLE – A term to describe tools, equipment, and instruments used in the wellbore. For example, a downhole tool is used in the wellbore. Also, conditions or techniques applying to the wellbore. (ITOGP)

DOWNHOLE MOTOR – A power source located just above the bit to rotate the bit; usually refers to the turbodrill or the Dyna-Drill. (Bul D20)

DP – An acronym for drill pipe. (RP 5A5)

DRAG – The extra force needed to move the drill stem resulting from the drill stem being in contact with the wall of the wellbore. (Bul D20)

DRAIN DECK – See Preferred Term: Beach. (Bul 13C)

DRAIN HOLES – Several high-angle holes drilled laterally from a single wellbore into the producing zone. (Bul D20)

DRAWDOWN – The difference in pressure (psi) between the static (shut-in) bottomhole pressure and the flowing bottomhole pressure at a constant rate of fluid production. (GL)

DRAWDOWN – The difference between the static and the flowing bottom-hole pressures. The distance between the static level and the pumping level of the fluid in the annulus of a pumping well. (ITOGP)

DRAW-OFF – Draining one fluid from a measurement vessel to determine relative volumes of heavy vs. light fluid. (WT)

DRESS – To sharpen or repair items of equipment (as drilling bits, tools, or sucker rod pumps) in order to make them ready for reuse. (ITOGP)

DRIFT – A drift is a gage used to check minimum ID of loops, flowline, and nipples. (RP6G)

DRIFT – (1) Horizontal component of the distance from the surface to any certain point in the wellbore (usually the bottom of the wellbore). (2) Normally random precession in a displacement gyro caused by stray torques from bearings, pickoffs, imperfect balance, mass shift, etc. (Bul D20)

DRIFT ANGLE – (1) The angle between the axis of the wellbore and the gravity vertical (refer to "Inclination"). (2) More or less constant angle at which the wellbore is carried after sufficient angle has been obtained in the buildup (refer to "Maximum Angle"). (Bul D20)

DRIFT INDICATOR – Refer to "Inclinometer." (Bul D20)

DRIFT MANDREL – A precision dimensioned cylinder sized to pass through each diameter and weight of pipe. It is passed through the pipe ID to locate obstructions and/or to assure compliance with appropriate specifications. (RP 5A5)

DRIFT SURVEY – Refer to "Inclination Survey." (Bul D20)

DRILL COLLAR – Thick-walled pipe to provide stiffness and concentration of weight at the bit. (Bul D10)

DRILL COLLARS – Round, square, and triangular drill stem elements utilized to provide a load on the bit for the purpose of drilling. (Bul D20)

DRILL CORE OR SCHRADER CORE VALVE – Valve in the top of the gas lift valve used in charging the bellows with nitrogen. (GL)

DRILL PIPE – A portion of the drill string which transmits power to the bit. (Bul D10)

DRILL PIPE – The tubular member of the drill string to which tool joints are attached. (Bul D20)

DRILL PIPE – A length of tube, usually steel, to which special threaded connections called tool joints are attached. (RP 54)

DRILL PIPE SAFETY VALVE – An essentially full-opening valve located on the rig floor with threads to match the drill pipe in use. This valve is used to close off the drill pipe to prevent flow. (RP 53)

DRILL STEM – The entire drilling assembly from the swivel to the bit composed of the Kelly, drill string, subs, drill collars, and other downhole tools such as stabilizers and reamers. This assembly is used to rotate the bit and carry the drilling fluid to the bit. (Bul D20, RP 54)

DRILL STEM BUCKLING – To bend; to become distorted due to effects of forces on the drill stem in a wellbore. (Bul D20)

DRILL-STEM TEST (DST) – A test to determine whether oil and/or gas in commercial quantities has been encountered in the wellbore. (Bul D11)

DRILL STRING – A combination of drill pipe, drill collars, and accessory components. (Bul D10)

DRILL STRING – The drill pipe with tool joints attached. (Bul D20)

DRILL STRING – Several sections or joints of drill pipe joined together. May also refer to sections or joints of threaded tubing or casing joined together to be used for drilling. (RP 54)

DRILL STRING BEHAVIOR – A term describing the mechanics and action of the drill string/stem. (Bul D20)

DRILL STRING FATIGUE – The cumulative effect of the stresses imposed on the drill string due to cyclic stressing during drilling operations. (Bul D20)

DRILL STRING FLOAT – A check valve in the drill string that will allow fluid to be pumped into the well but will prevent flow from the well through the drill pipe. (RP 53)

DRILL STRING TEST – A test taken by means of special testing equipment run into the wellbore on the drill string to determine the producing characteristics of a formation. (RP 54)

DRILLED SOLIDS – (See Related Term: Low Specific Gravity Solids.) Formation particles. (Bul 13C)

DRILLER – Employee directly in charge of a drilling rig and crew. Operation of the drilling and hoisting equipment constitute his main duties. (RP 54)

DRILLER'S REPORT – A record kept on the rig for each tour to show the footage drilled, drilling-fluid tests, bit record, and all important occurrences during that tour. (WLOP)

DRILLING AREAS – Those areas in which wells are being drilled, recompleted, or reworked for the purpose of exploring for or producing oil or gas. Wells meeting any of the conditions of the above are referred to as "drilling wells." The term "drilling wells" does not include wells on which wireline work is being performed through a lubricator or wells into which or from which pumping equipment is being installed or removed. (RP 500B)

DRILLING COLLISIONS – Refer to "intersection." (Bul D20)

DRILLING FLUID – A fluid circulated through the bit; an integral part of rotary drilling. It serves to carry cuttings from the bit. Hole conditions may dictate other necessary functions for the fluid. The fluid phase may be air (or other gas), water, oil or any combination thereof. (Bul 10C)

DRILLING FLUID OR MUD – A circulating fluid used in rotary drilling to perform any or all of various functions required in the drilling operation. (Bul D11)

DRILLING FLUID WEIGHT RECORDER – An instrument in the drilling fluid system which continuously measures drilling fluid density. (RP 53)

DRILLING (HOISTING) LINE – The wireline used in the rig's main hoisting system. (RP 54)

DRILLING HYDRAULICS – The employment of the science of the effects of fluid velocities and pressures and forces involved. (Bul D10)

DRILLING IN – The operation during the drilling procedure at the point of drilling into the pay formation. (Bul D1)

DRILLING MUD – A drilling fluid where the fluid phase is oil, water or a combination thereof (synonym MUD). (Bul 10C)

DRILLING OUT – The operation during the drilling procedure when the cement is drilled out of the casing before further hole is made or completion attempted. (Bul D11)

DRILLING OUT – Refers to drilling and removal of material which normally remains in the casing or wellbore after cementing. (RP 54)

DRILLING RIG – Equipment and machinery assembled primarily for the purpose of drilling or boring a hole in the ground. (RP 54)

DRILLING SPOOL – A connection component with ends either flanged or hubbed. It must have an internal diameter at least equal to the bore of the blowout preventer and can have smaller side outlets for connecting auxiliary liens. (RP 53)

DRIP – The small quantities of liquid hydrocarbons which sometimes condense in a natural gas line. Also the equipment installed on a gas line to remove liquids. (ITOGP)

DRIVE – All the immediate elements used to provide motive power to the mud processing equipment, such as V-belts, sheaves, motor, and motor base. (Bul 13C)

DRIVE PIPE – A relatively short string of large diameter pipe driven or forced into the ground to function as "conductor pipe." (RP 53, RP 54)

DROOP ERROR – The error introduced by the hanging downward of the protruding instrument extending through and ahead of the rigger bit. (Bul D20)

DROP OFF – That portion of the wellbore in which the inclination is reduced (refer to "Angle Drop Off). (Bul D20)

DROP-OFF INTERVAL – The interval in the wellbore where the inclination angle is purposely deceased and returned toward the vertical. (Bul D20)

DROP-OFF RATE – The rate of change of the inclination in the part of the wellbore where the inclination angle is purposely returned toward the vertical, usually expressed in degrees per 100 feet of course length. (Bul D20)

DROP TIME – The amount of time needed for a "go-devil" type instrument to fall from the surface through the drilling fluid within the drill stem to the desired position. (Bul D20)

DROP-TYPE SURVEY – A directional or inclination survey taken with an instrument that is free released to fall within the drill stem to the desired position within the wellbore. (Bul D20)

DRUM-ROPE – A rotating cylinder with side flanges on which wire rope used in machine operation is wrapped. (Spec 2C)

DRUNKEN THREAD – Distortions in the spiral path of a thread around the pin. Sometimes applied to wavy threads or threads which crests that undulate around the periphery of the threads. (Bul 5T1, RP 5A5)

DRY BOTTOM – A dry condition at the underflow of a hydrocyclone. (Bul 13C)

DRY GAS – Natural gas that is produced without liquid hydrocarbons. Also gas that has been dehydrated o remove water (pipeline gas). (ITOGP)

DRY HOLE – Any exploratory or development well that does not produce oil or gas in commercial quantities. (ITOGP)

DRY METHOD – A magnetic particle inspection method in which the particles employed are in dry powder form. (RP 5A5)

DRY PLUG – The plugging of the underflow opening of a dry bottom hydrocyclone. (Bul 13C)

DUAL SEARCH UNIT (TWIN PROBE) – A probe or search unit containing two elements, one a transmitter, the other a receiver (T-R, S-E). (RP 2X)

DUAL TRANSDUCER – An ultrasonic probe containing two piezoelectric crystals, one for transmitting and one for receiving. (RP 5A5)

DUALLY COMPLETED WELLS – Wells producible from two separate and distinct zones having separate production strings. Zones are separated by packers and production may be through two strings of tubing, or through one string of tubing and casing tubing annulus. (WT)

DUMMY – A blank tool installed in a side pocket gas lift mandrel landing nipple and/or sliding sleeve. (WLOP)

DUMP VALVE – The discharge valve through which oil and water are discharged from separators, treaters, etc. (ITOGP)

DUMP VALVE – A valve on a production vessel which opens automatically at high liquid level and closes to stop flow at low liquid level. Usually actuated by float control but may be diaphragm, or electrically operated. (WT)

DYNAMIC – The state of being active or in motion; opposed to static. (Bul D11)

DYNAMIC-LOADING – Loads introduced into the machine or its components due to accelerating or decelerating forces. (Spec 2C)

DYNAMIC-LOADING – Loading imposed upon a structure as a result of motion as opposed to static loading. (Spec 4F)

DYNAMIC RANGE – The ratio of maximum to minimum reflective areas that can be distinguished on the cathode ray tube at a constant gain setting. (RP 2X)

DYNAMIC STRESS – Varying or fluctuating stress occurring in a structural member as a result of dynamic loading. (Spec 4F)

DYNAMOMETER – As applied to sucker-rod pumping, the dynamometer records the variation in load on the polished rod as the rod string reciprocates. (ITOGP)

-E-

EARTHFILL STRUCTURE – A gravity structure made from gravel or other earthfill material. (Bul 2N)

ECCENTRICITY – A condition of pipe in which the OD and ID axes are not coincident, resulting in wall thickness variation around the circumference at a given section plane. (Bul 5T1)

ECHO – Indication of reflected energy. (RP 2X)

ECOLOGY – The interrelationships of living things to one another and to their environment, or the study of such interrelationships. (Bul D11)

ECOLOGICAL IMPACT – The total effect of an environmental change, either natural or mad-made, on the ecology of the area. (Bul D11)

ECONOMICS – Analysis of capital, labor, wages, prices, tariffs, taxes, etc. (SSWID)

ECOSYSTEM – The interacting system of a biological community and its non-living environment. (Bul D11)

EDDY CURRENT – Circulating current caused to flow in the pipe by varying magnetic fields. (RP 5A5)

EFFECTIVE BEAM ANGLE – That beam angle which, when plotted for a flat workpiece of the same thickness, accounts for the lengthening of skip distance which occurs in a curved test piece. (RP 2X)

EFFECTIVE FLANGE BREADTH – The reduced breadth of a plate subjected to bending an/or tensile load, which, with an assumed uniform stress distribution, produces the same effect on the behavior of a structural member as the actual breadth of the plate with its nonuniform stress distribution. While the effective flange breadth applies to a member under bending and/or tensile loading, and is associated with shear lag effects. (Bul 2V)

EFFECTIVE FLANGE WIDTH – The reduced width of a plate subjected to compressive load, which, with an assumed uniform stress distribution produces the same effect on the behavior of a structural member as the actual width of the plate with its nonuniform stress distribution. (Bul 2V)

EFFECTIVE LENGTH (KL_t) – The equivalent length used in compression formulas and determined by a bifurcation analysis. (Bul 2U)

EFFECTIVE LENGTH FACTOR (K) – The ratio between the effective length and the unbraced length of the member. (Bul 2U)

EFFECTIVE PENETRATION – The maximum depth in a material at which the ultrasonic transmission is sufficient for proper detection of discontinuities. (RP 2X)

EFFECTIVE PERMEABILITY – The permeability of a rock to a fluid when the rock is not 100 percent saturated with the fluid. See Permeability. (ITOGP)

EFFECTIVE POROSITY – The percentage of the bulk volume of a rock sample that is composed of interconnected pore spaces, allowing the passage of fluids through the sample. See Porosity. (ITOGP)

EFFECTIVE SCREENING AREA – Portion of screen surface available for material separation. (Bul 13C)

EFFECTIVE SECTION – Stiffener together with the effective width of shell acting with the stiffener. (Bul 2U)

EFFECTIVE SIZE – A term used in specifying sand. It is the sieve size in millimeters that permits 10 percent of the filter sand by weight to pass. (SSWID)

EFFECTIVE THREAD LENGTH – Threads having fully formed roots, but not necessarily finished crests. (RP 5B1)

EFFECTIVE WIDTH – The reduced width of shell or plate which, with an assumed uniform stress distribution, produces the same effect on the behavior of a structural member as the actual width of shell or plate with its nonuniform stress distribution. (Bul 2U)

EFFICIENCY – The percentage relation of output to input. (Bul D10)

EFFLUENT – See Preferred Term: Overflow. (Bul 13C)

EFFLUENT – A discharge of liquids and/or solids into the environment, partially or completely treated or in their natural state. Generally used in regard to discharges into waters. (Bul D11)

EFFLUENT – A discharge of liquid – generally used to describe a stream of liquid after some attempt at separation or purification has been made. (SSWID)

EFFLUENT SEEPAGE – Diffuse discharge into the ground of liquids that have percolated through solid waste or another medium; they contain dissolved or suspended materials. (Bul D11)

ELASTIC BUCKLING STRESS – The buckling stress of a cylinder based upon elastic behavior. (Bul 2U)

ELASTOMER – Any of the class of materials, including natural and synthetic rubbers, which return to their original shape after being subjected to large deformations. (RP 2T)

ELBOW – A fitting that allows two pipes or nipples to be joined together at an angle of less than 180^{o}, usually 90^{o} or 45^{o}. (Slang term for elbow is "ell"). (WLOP)

ELECTRIC HORSEPOWER (EHP) – Kilowatts x 0.746. (Bul D10)

ELECTRIC LINE – Single or multiple electrical conductor housed within a braided wireline. (RP 57)

ELECTRIC LOGGING – See Well Log. (Bul 10C)

ELECTRIC LOGGING – Electric logs are run on a wireline to obtain information concerning the porosity, permeability, fluid content of the formations drilled, and other information. The drilling-fluid characteristics may need to be altered to obtain good logs. (Bul D11)

ELECTRIC-WELDED PIPE – Defined as pipe having one longitudinal seam formed by electric-flash welding or electric-resistance welding, without the addition of extraneous metal. The weld seam of electric-welded pipe shall be heat treated after welding to a minimum temperature of $1000\,^{o}F$ ($538\,^{o}C$), or processed in such a manner that no untempered martensite remains. (Spec 5A)

ELECTRIC-WELDED PIPE – Pipe having one longitudinal seam formed by electric-resistance welding, or electric-induction welding without the additional extraneous metal. The weld seam of electric-resistance welded pipe and induction welded pipe in grades higher thanX42 shall be heat treated after welding to a minimum temperature of 1000 ^{o}F (538 ^{o}C). For grades X42 and lower, the weld seam shall be similarly heat treated, or the pipe shall be processed in such a manner that no untempered martensite remains. (Spec 5L)

ELECTRICAL CLASSIFICATION OF AREAS – For purpose of this document, locations are classified according to APR RP 500B: Recommended Practice for Classification of Areas for Electrical Installations at Drilling Rigs and Production Facilities on Land and on Marine Fixed and Mobile Platforms. (RP 54)

ELECTRICAL ENCLOSURE – The case or housing of electrical apparatus provided to prevent personnel from accidentally contacting energized parts, and/or to protect the equipment from physical damage and the environment. Also certain enclosures serve to prevent electrical equipment from being a source of ignition of flammable mixtures outside the enclosure. (RP 14F)

ELECTRICAL NOISE – Extraneous signals caused by externally radiated electrical signals or form electrical interferences within the ultrasonic instrumentation. (RP 2X)

ELECTROSTATIC TREATER – An emulsion treating vessel that utilizes an electrical grid and usually a fire tube to coalesce the fluid. This type of treater usually operates at lower temperature than ones without grids. (Spec 12L)

ELECTROCHEMICAL – Chemical changes associated with flow of electric current. (COGWE, SSWID)

ELECTROLYTE – A substance which dissociates into charged positive and negative ions when in solution or a fused state and which will then conduct an electric current. Acids, bases, and salts are common electrolytes. (Bul 10C, Bul D11)

ELECTROLYTE – A liquid or soil capable of conducting electric current. (COGWE, SSWID)

ELECTROMAGNET (EM) – When ferromagnetic material is surrounded by a current carrying coil it becomes magnetized and is called an electromagnet. (RP 5A5)

ELECTRONIC PULSER – See Pulser. (RP 5A5)

ELECTRONIC YAW EQUIPMENT® (registered trademark of Scientific Drilling Controls) – Term used to describe the “EYE Tool” (refer to “EYE Tool”). (Bul D20)

ELEVATION – Height above sea level. (SSWID)

ELEVATION – Measurement of a well location or a plane on a drilling well above a specified datum, usually sea level. (WLOP)

ELEVATORS – Latches which secure the drill pipe; attached to the traveling block which raises and lowers the pipe from the hole. (Bul 10C)

ELEVATORS – Mechanical device attached to the traveling block which latches around and supports the pipe during hoisting or lowering operations. (RP 54)

EMERGENCY SHUTDOWN (ESD) SYSTEM – A system of manual stations which, when activated, initiate platform shutdown. (RP 14C)

EMI – Acronym for Electromagnetic Inspection including flux leakage and eddy current inspection. (RP 5A5)

EMI INSPECTION – A colloquial expression for new pipe inspection performed with an inspection unit having these four scanners:

a. Rotating scanner for detection of longitudinal defects.
b. Fixed scanner for detecting transverse defects.
c. Rotating scanner for wall thickness measurement.
d. Grade verifier or comparator (optional). (RP 5A5)

EMISSION FACTOR – The average amount of a pollutant emitted from each type of polluting source in relation to a specific amount of material processed. (Bul D11)

EMISSION STANDARD – The maximum amount of a pollutant legally permitted to be discharged from a signal source either mobile or stationary. (Bul D11)

EMULSIFIER OR EMULSIFYING AGENT – A substance used to produce an emulsion of two liquids which do not mix. Emulsifiers may be divided, according to their behavior, into ionic and non-ionic agents. The ionic types may be further divided into anionic, cationic, and amphoteric, depending upon the nature of the ion-active groups. (Bul 10C, Bul D11)

EMULSION – A substantially permanent heterogeneous liquid mixture of two or more liquids which do not dissolve in each other but which are held is suspension or dispersion, one in the other, by mechanical agitation or, more frequently, by adding small amounts of substances known as emulsifiers. Emulsions may be mechanical, chemical, or a combination of the two. They may be oil-in-water types or water-in-oil types. (Bul 10C, Bul D11)

EMULSION – A mixture of oil and water that requires treatment before the oil and water will separate. (GL)

EMULSION – A mixture of crude oil and formation water. Generally requires time and heat, chemicals (called DEMULSIFIERS or EMULSION BREAKERS) or electricity to separate the water form the oil. (ITOGP)

EMULSION – A relatively stable dispersion of water and oil which normally exists in the production stream from flowing or pumped oil wells. (Spec 12L)

EMULSION – A mixture of two or more liquids which do not mix together under normal conditions. One liquid is mixed throughout the other in small droplets. (WT)

EMULSOID – Colloidal particles which take up water. (Bul D11)

ENCIRCLING COIL – A coil surrounding the pipe under test. (RP 5A5)

ENCLOSED AND GASKETED BUSWAY – An enclosed and gasketed, grounded metal enclosure containing factory mounted, bare or insulated conductors which are usually copper or aluminum bars, rods, or tubes (see Article 364 of the NEC). (RP 14F)

ENCLOSED AND GASKETED LIGHTING FIXTURES – Lightning fixtures (formerly referred to as "vapor-tight") designed to prevent the entrance of gas and vapors. Such enclosures will not absolutely prevent the entrance of gases and vapors, as such tend to "breathe" as they are heated and cooled. (RP 14F)

ENCLOSED AREA (ROOM BUILDING, OR SPACE) – A three-dimensional space enclosed by more than two thirds (2/3) of the possible projected plane surface area and of sufficient size to allow the entry of personnel. For a typical building, this would require that more than two-thirds (2/3) of the walls, ceiling, and/or floor be present. (RP 500 B)

ENCLOSURE – A structure which may provide environmental protection for the machine. (Spec 2C)

ENCLOSURE, ELECTRICAL – The case or housing of electrical apparatus provided to prevent personnel from accidentally contacting energized parts and to protect the equipment from physical damage. Certain enclosures also serve to prevent electrical equipment from being a source of ignition of flammable mixtures outside the enclosure. (RP 500B)

ENCLOSURE, EXPLOSION-PROOF – An enclosure which is capable of withstanding an explosion of a gas or vapor within it and of preventing the subsequent ignition of a flammable gas or vapor which may surround it, and which operates at such an external temperature that a surrounding flammable gas or vapor will not be ignited. (RP 500B)

ENCLOSURE, PURGED – An enclosure supplied with clean air or an inert gas at sufficient flow and positive pressure to reduce the concentration of any flammable gases or vapors initially present to an acceptably safe level and to maintain this safe level by positive pressure with or without continuous flow. Reference NFPA No. 496. (RP 500B)

END AND OUTLET CONNECTIONS – Integral threads, male or female; and flanges, studded or through-bolted used to join together equipment that contains or controls pressure. (Spec 6A, Spec 16A)

END DAMAGE – Damage to the pipe, such as during loading, unloading or that resulting from longitudinal shifting of the load and striking a bulkhead or an adjacent pipe pile. (RP 5L5)

END EFFECT – The reduction in magnetization near the ends of a length of magnetized pipe due to the demagnetizing effect of the poles at the pipe ends. (RP 5A5)

END POINT – Indicates the end of some operation or when a definite change is observed. In titration, this change is frequently a change in color of an indicator which has been added to the solution or the disappearance of a colored reactant. (Bul D11)

ENGINE HORSEPOWER (ENGINE RATING) – Refer to API STD 7B-11C. This standard covers rating of internal combustion engines. The MAXIMUM rating is not usable. The INTERMITTENT rating is applicable to joisting. The CONTINUOUS rating is applicable to pumping. (Bul D10)

ENGINEER – The person who acts on behalf of the Owner during construction. (RP 2X)

ENGINEER, MUD OR DRILLING-FLUID – One versed in drilling fluids whose duties are to manage, carry through, and maintain the various types of oil-well drilling fluid programs. (Bul 10C, Bul D11)

ENTRAINED GAS – Gas suspended in bubbles in a stream of liquid such as water or oil. (ITOGP)

ENTRAINED LIQUIDS – Mist-size liquid droplets occurring gas stream. Special designed separators, with a MIST EXTRACTOR, are used to remove the liquid from the gas stream. (ITOGP)

ENTRANCE – See Preferred Term: Inlet. (Bul 13C)

ENTRANCE HOLE DIAMETER – Entrance hole diameter is the average diameter of the hole through the 3/8-in. thick steel faceplate on the core target. It shall be measured twice at right angles and the average of the two measurements reported. (RP 43)

ENVIRONMENT – The sum of all external conditions and influences affecting the life, development, and ultimately the survival of an organism. (Bul D11)

ENVIRONMENTAL IMPACT STATEMENT – A document prepared by a Federal agency on the environmental impact of its proposals for legislation and other major actions significantly affecting the quality of the human environment. Environmental impact statements are used as stools for decision-making and are required by the National Environmental Policy Act. (Bul D11)

ENVIRONMENTAL SEAL – A seal which uses O-rings, epoxy, molded elastomer, silicone compound, or potting compound to prevent corrosion due to moisture or vapors. (RP 14F)

EP – Explosion Proof

EPA – The Environmental Protection Agency, a Federal agency.

EP ADDITIVE – See Extreme-pressure Lubricant. (Bul D11)

EPM OR EQUIVALENTS PER MILLION – Unit chemical weight of solute per million unit weights of solution. The epm of a solute in solution is equal to the ppm (parts per million) divided by the equivalent weight. Refer also to PPM. (Bul 10C, Bul D11)

EQUALIZING FEATURE (EF) – An SSSV mechanism which permits the well pressure to bypass the SSSV closing element to aid in opening the valve. (RP 14B, Spec 14A)

EQUIPMENT – Any single completed unit that can be used for its intended purpose without further processing or assembly (e.g., a valve, choke, cross, tee, spool, etc.). (Spec 6A, Spec 16A)

EQUIPMENT OPERATOR – Employee who operates equipment or devices. (RP 54)

EQUIVALENT CIRCULATING DENSITY – For a circulating fluid, the equivalent circulating density in lb/gal equals the hydrostatic head (psi) plus the total annular pressure drop (psi) divided by the depth (ft) and by 0.052. (Bul 10C, Bul D11)

EQUIVALENT SPHERICAL DIAMETER OR ESD – (See Related Term: Particle Size.) The theoretical dimension usually referred to when the sixes of irregularly shaped small particles are discussed. These dimensions can be determined by several methods, such as: settling velocity, electrical resistance, and light reflection. (Bul 13C)

EQUIVALENT WIGHT OR COMBINING WEIGHT – The atomic or formula weight of an element, compound, or ion divided by its valence. Elements entering into combination always do so in quantities proportional to their equivalent weights. (Bul 10C, Bul D11)

ERDA – Energy Research and Development Administration, a Federal agency.

ERECTION LOAD – The load produced in the mast and its supporting structure during the raising and lowering operation. (Spec 4F)

ERODED ORIENTATION POCKETS – Enlargements made on one side of the wellbore by getting methods. (Bul D20)

ERW PIPE – Pipe having one longitudinal seam formed by electric-flash welding or electric-resistance welding, without the addition of extraneous metal. (RP 5A5)

ESD – Emergency Shut-Down. A system of stations which, when activated, initiate platform shut-down. (RP 14B)

ESTUARIES – Areas where the fresh water meets salt water. For example, bays, mouths of rivers, salt marshes, and lagoons. Estuaries are delicate ecosystems; they serve as nurseries or spawning and feeding grounds for a large group of marine life and provide shelter and food for birds and wildlife. (Bul D11)

EVALUATION – Process of determining the severity of the flaw which leads to determining whether the pipe is acceptable or rejectable under the appropriate specification. (RP 5A5)

EVAPORATION PONDS – Shallow, artificial ponds into which liquids or aqueous suspensions are pumped, permitted to dry, and either removed or buried by more added materials. (Bul D11)

EXCESS TEMPERATURE – Temperature in a process component in excess of the rated working temperature. (RP 14C)

EXCESSIVE REINFORCEMENT (EXCESSIVE OVER-FILL) – Outside weld beads which extend above the prolongation of the original surface of the pipe (more than 1/8 in. for pipe having a thickness of ½ in. and under, and more than 3/16 in. for a pipe having a thickness of over ½ in.). (Bul 5T1)

EXCESS TRIM – Ref. API Spec 5L. (Bul 5T1)

EXIT DUCT – See Preferred Term: Overflow Opening. (Bul 13C)

EXPANDED PERLITE – A siliceous volcanic rock that is ground to small size and subjected to extreme temperature in an oven, resulting in an expansion and release of combined water, leaving the rock particle considerable expanded and porous. (Bul 10C)

EXPANSION BELLOWS – A corrugated piping device designed for absorbing expansion and contraction. (RP 14E)

EXPANSION BEND – A piping configuration designed to absorb expansion and contraction. (RP 14E)

EXPANSION LOOP – A bend placed in a line to absorb line movement or "line crawl" due to expansion and contraction of the pipe. (ITOGP)

EXPERIMENTAL PERMEABILITY RATIO – The experimental permeability ratio (k_p/k_o) is the ratio of the perforated effective permeability to the original effective permeability. These permeabilities are determined from flow tests on the core target. (RP 43)

EXPLORATORY WELL – See Wildcat Well. (ITOGP)

EXPLOSION-PROOF ENCLOSURE – An enclosure which is capable of withstanding an explosion of a gas or vapor within it and of preventing the ignition of an explosive gas or vapor which may surround it, and which operates at such an external temperature that a surround explosive gas or vapor will not be ignited thereby. (See Section 2.3) (RP 14F)

EXPLOSIVE LIMITS – The explosive limits of a gas or vapor are the lower and upper percentages by volume of concentration of gas in a gas-air mixture that will form an ignitible mixture. (See U.S. Bureau of Mines Bulletin 627, Flammability Characteristics of Combustive Gases and Vapors.) (RP 14F)

EXTERNAL GUYLINES – Lines which provide stability and run from some point in the derrick, mast, or pole to ground anchors or to a special substructure or derrick base which provides a substitute for ground anchors. (RP 54)

EXTERNAL THREAD – A thread on the outside surface of a pipe. (RP5A5, RP 5B1)

EXTERNAL UPSET – An extra-thick wall at the threaded end of drill pipe or tubing. Externally upset pipe does not have a uniform outside diameter throughout its length but is enlarged at each end. (WLOP)

EXTRA-WEIGHT DRILL PIPE® (Registered trademark of Reed Drilling Tools, Inc.) – Commercial name for a particular manufacturer's heavy weight drill pipe. (Bul D20)

EXTRAPOLATED THICKENING TIME – The time required for a cement slurry to reach a consistency of 100 Bearden units of consistency (Bc) obtained by extending the curve recorded during a thickening-time test which may be stopped at 70 under given conditions. See API Spec 10. (Bul 10C)

EXTREME OFFSET – An estimated maximum offset of the platform corresponding to given environmental conditions. (RP 2T)

EXTREME-PRESSURE LUBRICANT – Additives which, when added to the drilling fluid, impart lubrication to the bearing surfaces when subjected to extreme pressure conditions. (Bul 10C, Bul D11)

-F-

^{o}F – Degrees Fahrenheit temperature measurement. (WT)

FABRICATOR – The person, firm, company, or corporation executing the contract or agreement with the purchaser to fabricate the structural steel pipe. (Spec 2B)

FACTORY SEAL – A factory seal is a seal provided in an explosion-proof device during manufacture for the purpose of eliminating external, field-installed "conduit seals" for that device. (RP 14F)

FAIL SAFE – Said of equipment or a system so constructed that, in the event of failure or malfunction of any part of the system, devices are automatically activated to stabilize or secure the safety of the operation. (ITOGP)

FAIL-SAFE DEVICE – A device, which upon loss of the control medium, automatically shifts to the safe position. (RP 14B, Spec 14A)

FAILURE – Any condition of the SSSV system that prevents it from performing the design function of preventing uncontrolled well flow; e.g., inability to close due to breakage, erosion, corrosion or fouling. (RP 14B, Spec 14A)

FAILURE – Improper performance of a device or equipment item that prevents completion of its design function. (RP 14C, RP 14H, Spec 14D)

FAIRLEAD – A device to guide wire rope for proper spooling. (Spec 2C)

FALSE INDICATION – An indication that may be interpreted erroneously as an imperfection or defect. An irrelevant indication. Sometimes called artifact. (RP 5A5)

FALSE SET – An abnormal early thickening of cement slurry wherein the slurry remains pumpable for the usual thickening time. The thickening may be reversible during the pumping history of the slurry. (Bul 10C)

FALSE STARTING THREAD – A circumferential tool mark on a round thread chamfer that precedes the actual starting thread. Sometimes referred to as a double starting thread. (Bul 5T1)

FAR FIELD – The region beyond the near field in which intervals of high and low acoustic transmission intensity cease to occur. (RT 2X)

FAST ICE – Any type of sea ice that remains attached to a shoreline, island, or grounded ice features. (Bul 2N)

FAST ICE ZONE – Any type of se ice that remains attached to a shoreline (sometimes called landfast) or grounded. (Bul 2N)

FAST LINE – The end of the hoisting (drilling) line which is affixed to the drum or reel. (RP 54)

FASTLINE – See Whip Line. (Spec 2C)

FATIGUE – Failure of a metal under repeated loading. (COGWE, ITOGP)

FATIGUE – Failure of a metal under repeated loading and stress. (SSWID)

FATIGUE FAILURE – Failure of equipment due to cumulative effect of repeated change of stress. (Bul D20)

FATIGUE LIFE – Number of cycles a metal can endure at a given stress level before failure will occur. (Bul D20)

FAULT – Geological term denoting a formation break, upward or downward, in the subsurface strata. Faults can significantly affect the area drilling fluid and casing programs. (Bul D11)

FEATHEREDGE – A thin sharp crested portion of a thread normally formed when the starting thread on round or buttress (pipe threads) runs out to the face of the pipe and not on the chamfer. (Bul 5R1)

FEED OR FEED SLURRY – A mixture of solids and liquid entering a liquid-solids separation machine, including dilution liquid if used. (Bul 13C)

FEED CAPACITY – (See Related Terms: Liquid Capacity, Solids Discharge Capacity.) The maximum feed rate that a solids separation device can effectively handle, dependent upon particle size, particle concentration, viscosity, and other variables. (Bul 13C)

FEED CHAMBER – That part of a device which receives the mixture of diluents, mud, and solids to be separated. (Bul 13C)

FEED HEADER – (See Related Term: Feed Manifold.) A pipe, tube, or conduit to which two or more hydrocyclones are connected and from which they receive their feed slurry. (Bul 13C)

FEED MANIFOLD – An arrangement by which liquids, solids, or slurries from one or more sources can be fed to one or more solids separation devices. (Bul 13C)

FEED OPENING – See Preferred Term: Inlet. (Bul 13C)

FEED PRESSURE – The actual gage pressure measured as near as possible to, and upstream of, the inlet of a device. (Bul 13C)

FEMALE CONNECTION – A pipe or rod coupling with the threads on the inside. (ITOGP)

FERMENTATION – Decomposition process of certain organic substance, e.g., starch in which a chemical change is brought about by enzymes, bacteria, or other micro-organisms. Often referred to as "souring." (Bul 10C, Bul D11)

FERROMAGNETIC – A term applied to magnetic materials that can be magnetized or strongly attracted by a magnetic field. (RP 5A5)

FIBER OR FIBROUS MATERIALS – Any tough stringy material used to prevent loss of circulation or to restore circulation. If field use, fiber generally refers to the larger fibers of plant origin. (Bul 10C, Bul D11)

FIELD – An area consisting of a single reservoir or multiple reservoirs all grouped on, or related to, the same individual geological structural feature and/or stratigraphic condition. The field name refers to the surface area, although at times it may refer to both the surface and the underground productive formation. (ITOGP)

FIELD – Any area other than the authorized facility of the original equipment manufacturer. (RP 14B, RP 14H)

FIELD END – The pipe end opposite the coupling or box. (RP 5A5)

FIELD FACILITY – An installation designed for one or more specific field processing units – scrubbers, absorbers, drip points, compressors, single or multiple stage separation units, low temperature separators, and other types of separation and recovery equipment. Also see Battery. (ITOGP)

FIELD REPAIR – An activity involving disassembly, reassembly and functional testing of SSSV equipment with or without the replacement of qualified parts. Field repair does not include machining, welding, heat treat or other manufacturing operations. Redress or adjustment does not constitute field repair. Field repair can also be accomplished at an Authorized Facility. (RP 14B, RP 14H, Spec 14D)

FILL-UP LINE – A lien usually connected into the bell nipple above the blowout preventers to allow adding drilling fluid to the hole while pulling out of the hole to compensate for the metal volume displacement of the drill string being pulled. (RP 53)

FILLER MATERIAL – A material added to a cement or cement slurry for the primary purpose of increasing the yield of the slurry. (Bul 10C)

FILLING THE HOLE – Pumping drilling fluid continuously or intermittently into the well bore to maintain the fluid level in the hole near the surface. The purpose is to avoid danger of blowout, water intrusion, and/or caving of the well bore, e.g., as the pipe is withdrawn. (Bul D11)

FILLUP LINE – The lien through which fluid is added to the hole. (Bul D11)

FILM BADGE – A package of photographic film worn like a badge by some workers in the inspection industry to measure exposure to ionizing radiation. The absorbed dose can be calculated by the degree of film darkening caused by the irradiation. (RP 5A5)

FILTER CAKE – The suspended solids that are deposited on a porous medium during the process of filtration. See also Cake Thickness. (Bul 10C, Bul D11)

FILTER-CAKE TEXTURE – The physical properties of a cake as measured by toughness, slickness, and brittleness. See also Cake Consistency. (Bul D11)

FILTER-CAKE THICKNESS – A measurement of the solids deposited on filter paper in 32nd of an inch during the standard 30-min API filter test. See Cake Thickness. In certain areas the filter-cake thickness is a measurement of the solids deposited on filter paper for a 7½ min duration. (Bul D11)

FILTER LOSS – A misnomer sometimes applied to fluid loss. (Bul 10C)

FILTER LOSS – See Filtrate Volume. (Bul D11)

FILTER PAPER – Porous unsized paper for refiltering liquids. API filtration test specifies one thickness of 9-cm filter paper Whatman No. 50, S&S No. 576, or equivalent. (Bul 10C, Bul D11)

FILTER PRESS – (1) Device for determining the fluid loss of a drilling fluid or cement system having specifications in accordance with API Spec 10 or RP 13B. (2) A porous medium through which fluid is forced under pressures described in API Spec 10 or RP 13B to separate the fluid from material held in suspension. (Bul 10C)

FILTER PRESS – A device for determining fluid loss of a drilling fluid having specifications in accordance with API RP 13B. (Bul D11)

FILTRATE – The liquid that is forced through a porous medium during the filtration process. See Filtrate Volume for recommended test procedure. (Bul 10C, Bul D11)

FILTRATE VOLUME – Measure of the volume of fluid lost through filter media (usually filter paper) when drilling fluid is subjected to a differential pressure in accordance with the filtration procedure contained in API RP 13B. (Bul D11)

FILTRATION – The process of separating suspended solids from their liquid by forcing the later through a porous medium. Two types of fluid filtration occur in a well: dynamic filtration while circulating and static filtration while at rest. (Bul 10C, Bul D11)

FILTRATION QUALITIES – The filtration characteristics of a drilling fluid. Generally these qualities are inverse to the thickness of the filter cake deposited on the face of a porous medium and the amount of filtrate allowed to escape from the drilling fluid into or through the medium. (Bul D11)

FILTRATION RATE – See Filtrate Volume. (Bul D11)

FIN – A thin, long ridge of metal protruding above a chamfer surface or thread profile. Bul 5T1)

FINAL SET – Cement shall be considered to have acquired its final set when it will bear, without appreciable identation, the final Gillmore needle. This is not an API test. See ASTM C 266; Time of Setting of Hydraulic Cement by Gillmore Needles. (Bul 10C)

FINAL STRENGTH – The strength of a cement at such a time when under the given conditions of temperature and pressure it ceases to change significantly (synonym Ultimate Strength). Bul 10C)

FINDING – Survey originated objective evidence that a control feature of the approved quality program was not implemented within an acceptable level of reliability. (Spec Q1)

FINENESS – The particle size to which a cement clinker is ground. This value is generally reported as surface area as determined with the Blaine air permeability apparatus or Wagner turbidimeter. See ASTM C 204 and C 115. (Bul 10C)

FINE SCREEN SHAKER – A vibrating screen designed for screening drilling fluids through screen cloth finer than 30 mesh. (Bul 13C)

FINGER RAFTING – Rafted ice in which two sheets alternately override each other along their common boundary. Predominant feature for thin ice sheets, but can be identified with most first-year compression ridges. (Bul 2N)

FIP – Federation Internationale de la Precontrainte

FIRE – The phenomenon of combustion manifested in light flame and heart. (RP 14G)

FIRE LOOP – A pneumatic control line containing temperature sensing elements (fusible plugs, synthetic tubing, etc.) which, when activated, will initiate platform shutdown. (RP 14C)

FIRE WALL – A dike built around oil tanks, oil pumps and other oil handling equipment to contain any oil which may be accidentally discharged from the equipment. It also serves to block

the spread of a fire or give protection for a period of time while emergency action is taken. (ITOGP)

FIRE WALL – A partition fabricated from non-combustible materials to prevent the spreading of flames and to provide a heat shield. (RP 2G)

FIRE WATCH – One or more trained persons with operable fire fighting equipment standing on alert during welding or burning operations. (RP 14E)

FIREBOX – The firebox is also called the firetube. It is the enclosure where the fuel is burned, and is submerged in the fluid to be heated. The most common configuration is one or more U-tubes. The fire is propagated in one end and exhausts into a stack on the other end. (RP 12N)

FIREBOX – A complete assembly consisting of the firetube, mounting flange, intake and stack adaptors. (Spec 12K, Spec 12L)

FIRED PROCESS AREA – That area is which a fired vessel is located. (RP 2G)

FIRETUBE – Natural gas is normally used to fire the heater through a submerged furnace chamber called the firetube. The firetube normally consists of one or more U-tubes fired at one end and exhausting through a vertical stack for each U-tube. In larger heaters the firetube may consist of a large diameter first pass firetube and multiple return tubes manifolded into a common stack The firetube is that portion of the firebox in contact with the heater bath. (Spec 12K)

FIRED VESSEL – A vessel in which the temperature of a fluid is increased by the addition of heat supplied by a flame within the vessel. (RP 14C)

FIRST-YEAR ICE – Sea ice that is less than one year old. Typically, first-year ice has a salinity of 4 to 6 ppt; however, fresh-water ice may be found near some river deltas. (Bul 2N)

FIRST-YEAR RIDGE – A linear ice feature created by motion interference between two ice sheets; usually, a result of higher ice movement rates than for the formation of rafted ice. (Bul 2N)

FIRST-YEAR RIDGE – A linear ice feature of broken ice blocks created by pressure. Can be further subdivided into a shear ridge or a compression ridge. (Bul 2N)

FISH – Any object left in the wellbore during drilling or workover operations that must be recovered before work can proceed. v: To recover an object (fish) left in a wellbore during drilling or workover. (WLOP)

FISHING – Operations on the rig for the purpose of retrieving from the wellbore sections of pipe, collars, junk, or other obstructive items which are in the hole. (Bul D11)

FISHING – The effort to recover tools, cable, pipe, or other objects from the wellbore which have become lost in the well accidentally. Many special and ingeniously designed FISHING

TOOLS are used to recover objects lost downhole. The object being sought downhole by the fishing tools is referred to as "the fish." (ITOGP)

FISHING NECK - A groove in the top of many wireline tools to allow other tools to clamp the tool and remove it from the well. (WLOP)

FISHING TOOL – A tool designed to recover equipment (lost or left) from the well. (WLOP)

FITNESS-FOR-PURPOSE – The manufacture or fabrication of as assembly or component to the quality level required (but not necessarily the highest level attainable) to assure material properties, environmental interactions, and any imperfections present in the assembly or connection are compatible with the intended purpose. Fitness-for-purpose connotes an assembly or component may contain material or fabrication imperfections of sizeable dimensions but their presence has an influence on its performance or reliability. (Spec 2C)

FITTINGS - The small pipes and valves that are used to make up a system of piping. (ITOGP)

FIVE-SPOT – Four input or injection wells located in a square pattern with the production well in the center. See Injection Pattern. (ITOGP)

FIXED OFFSHORE PLATFORM – A platform extending above and supported by the seal bed by means of piling spread footings or other means with the intended purpose of remaining stationary over an extended period. (RP 2L)

FIXED PLATFORM – A platform extending above and supported by the sea bed by means of piling, spread footings or other means with the intended purpose of remaining stationary over an extended period. (RP 2A)

FLAG – A piece of cloth, rope, or nylon strand used to mark a stranded wire line when swabbing, bailing, etc. (WLOP)

FLAME ARRESTOR – A device which prevents the propagation of flame from an enclosed area which contains the burner. If the area outside the enclosure were to contain an ignitable mixture, flashback would thus be prevented. The flame arrestor must be able to accomplish this without stopping the communication of air between the two areas. (RP 12N)

FLAME ARRESTOR ELEMENT (FLAME CELL) – A device which is mounted in a housing that serves as the combustion air intake. Its function is to prevent propagation of the flame from the firebox to the outside atmosphere. Sustained exposure to direct flame impingement may render the element inoperative. (RP 12N)

FLAME ARRESTOR HOUSING - An enclosure which contains the flame arrestor element and may contain mechanical devices such as mixer, air controller, etc. It bolts to the breeching. (RP 12N)

FLAME FAILURE – A flame which is inadequate to instantaneously ignite combustible vapors entering the firing chamber. (RP 14C)

FLAMMABLE – Capable of igniting easily, burning intensely or having a rapid rate of flame spread. (RP 14F, RP 14G, RP 500B)

FLAMMABLE (EXPLOSIVE) LIMITS – The lower and upper percentages by volume of concentration of gas in a gas-air mixture that will form an ignitable mixture. (See NFPA No. 325M.) (RP500B)

FLAMMABLE HIGHLY VOLATILE LIQUID – See Highly Volatile Liquid. (RP 500B)

FLAMMABLE LIQUID – A liquid having a flash point below 100°F (37.8°C) and having a vapor pressure not exceeding 40 lbs per square inch absolute (276 kilopascals) at 100°F (38.8°C). Flammable (Class I) liquids are subdivided into Classes IA, IB, and IC. Refer to NFPA No. 30 for further details. (RP 500B).

FLAMMABLE LIQUID – Any liquid having a flashpoint below 100°F (37.8°C). (RP 54)

FLAMMABLE LIQUID – Any liquid having a flash point of 100°F) (37.8°C) or less. These liquids are easily ignited. (RP 57)

FLANGE – A protruding rim with holes to accept bolts and having a sealing mechanism used to join pressure containing equipment. (Spec 6A, Spec 16A)

FLANGE, BLIND – A flange with no center bore, used to close off completely a flanged end or outlet connection. (Spec 6A, Spec 16A)

FLANGE, LOOSE – A flange, as manufactured, not intended to be made integral with another piece of API Spec 6A equipment. They are blind, threaded, spacer, welding neck, and studded adapter flanges. (Spec 6A)

FLANGE POINT – A point of contact between rope and drum flange where the rope changes layers. (Spec 2C)

FLANGE, THREADED – A flange having a sealing face on one side and a female thread on the other for the purpose of joining flanged connections to threaded connections. (Spec 6A)

FLANGE UP – To finish a job. (ITOGP)

FLANGE, WELDING NECK – A flange with a neck on the side opposite the sealing face prepared with a bevel to weld to corresponding pipe or transition pieces. (Spec 6A)

FLANK ANGLE – The angle of the individual flanks. (Spec 5B1)

FLANK OR SIDE – The surface of a thread that connects the crest with the root. (RP 5A5, RP B1)

FLASH – Excess metal squeezed out between forging die faces. (Spec 11B)

FLASH GAS LIBERATION – A process whereby gas is liberated from solution in the oil by increasing the space occupied by the gas and oil. The mass and composition of the system remain constant. (RP 44)

FLASH POINT – The lowest temperature at which the vapor pressure of the liquid is just sufficient to produce a flammable mixture at the lower limit of flammability. (RP 14G)

FLASH POINT – The minimum temperature at which a liquid gives off vapor in sufficient concentration to form an ignitible mixture with air near the surface of the liquid. Appropriate test procedure and apparatus are specified by NFPA No, 30. (RP 500B)

FLASH POINT – The minimum temperature at which a produce momentarily ignites, but doesn't burn continuously. (RP 57)

FLASH SET – Flash set is abnormal early thickening or setting of cement slurry wherein the cement slurry become unpumpable. (Bul 10C)

FLAT- Horizontal stiffened bulkhead. (RP 2T)

FLAT-BOTTOM BIT – A bit which produces a nearly plane surface when drilling, usually a four-cone bit. (Bul D20)

FLAT GEL – A condition wherein the 10-min gel strength is substantially equal to the initial get strength. (Bul 10C, Bul D11)

FLAW – A discontinuity which may be undesirable but does not necessarily call for rejection. (RP 2X)

FLAW - A discontinuity or irregularity in the product. (RP 5A5)

FLEX ELEMENT – Any of a variety of devices that permit relative angular movement of the riser or tendon in order to reduce bending stresses caused by vessel motions and environmental forces. (RP 2T)

FLIGHT – On a decanting centrifuge, one full turn of a spiral helix, such as a flute or blade of a screw-type conveyer. (Bul 13C)

FLIGHT DECK – Flight deck area is the portion of a heliport surface provided for helicopter takeoff and landing. (RP 2L)

FLIPPED – When the opposite occurs of what is intended in a drilling fluid. In an invert water-in-oil emulsion, the emulsion is said to be flipped when the continuous and dispersed phases reverse. (Bul D11)

FLOAT – A long flat-bed semi-trailer. (ITOGP)

FLOATING HARNESS (ALSO KNOWN AS BRIDLE) – A frame equipped with sheaves and connected to the boom by stationary ropes usually called pendants. (Spec 2C)

FLOATING ICE PLATFORM – A floating mass of either mad-made or natural ice that is used as a working surface. (Bul 2N)

FLOC – A flocculent mass formed by the aggregation of a number of fine suspended particles (Vi): to aggregate into flocculent. (Bul 10C)

FLOC – Aggregation produced by a gelatinous precipitation of suspended matter in a liquid. (SSWID)

FLOCCULANT – A material which promotes flocculation (synonym Flocculator, Flocculating Agent). (Bul 10C)

FLOCCULATES – Groups of aggregates or particles in suspension subject to being broken up by normal shaking and stirring and reforming on standing. (Bul D11)

FLOCCULATING AGENT – Substances, such as most electrolytes, some polysaccharides, certain natural or synthetic polymers, that bring about the thickening of the consistency of a drilling fluid. In Bingham plastic fluids, the yield point and gel strength increase. (Bul D11)

FLOCCULATION – The coagulation, coalescence or aggregation of finely-divided suspended particles (Bul 10C)

FLOCCULATION – Loose association of particles in lightly, bonded groups, non-parallel association of clay platelets. In concentrated suspensions, such as drilling fluids, flocculation results in gelation. In some drilling fluids, flocculation may be followed by irreversible precipitation of colloids and certain other substances from the fluid, e.g., red beds. (Bul D11)

FLOCCULENT – Resembling wool especially in loose, fluffy organization. (Bul 10C)

FLOCS – See Flocculates. (Bul D11)

FLOE – A relatively flat areal ice feature surrounded by distinguishable boundaries. (Bul 2N)

FLOES OR PANS – Sheet ice features separated by thermally-induced or other ice motion. Pans are small ice floes. (Bul 2N)

FLOODING – Feeding screens and centrifuges beyond their liquid capacity. (Bul 13C)

FLOOR BLOCKS AND PULLEYS – An arrangement of equipment for routing or directing the wireline into the well. (WLOP)

FLOORMAN – Member of the rig crew whose work station during hoisting is on the rig floor. Also performs numerous other operating and maintenance duties as directed b the supervisor. May also be referred to as rotary helper, roughneck, driller's helper, or well puller. (RP 54)

FLOW BY HEADS (HEADING) – Intermittent flow from a well. (ITOGP)

FLOW CHART – A record of the flow rate made by a recording meter. (ITOGP)

FLOW COUPLING – A heavy walled nipple, designed to resist erosion that can result from turbulence created by a restriction in the flow strong. (RP 14B RP 57, Spec 14)

FLOW LINE – The surface pipe through which oil travels from the well to storage. (GL)

FLOW LINE – The surface pipe through which oil travels from the well to the field processing facility. (ITOGP)

FLOW-LINE HEADER – Common line at production facility into which flow lines from several wells may be connected to provide commingling of production through separation or treating equipment. May be connected to a second common line through a system of valves to provide individual well testing without interrupting normal production. (WT)

FLOW REGIME – The flow condition of a multiphase process stream such as slug, mist, or stratified flow. (RP 14E)

FLOW-STREAM SAMPLES – Small quantity of fluid taken from well production at well head connections or from flow line for test of fluid composition. (WT)

FLOW STRING – The string of casing or tubing through which fluids from a well flow to the surface. (ITOGP)

FLOW TUBE – The inner movable sleeve or tube in a SSSV through which well fluids must flow. (Spec 14A)

FLOWING BOTTOMHOLE PRESSURE – The pressure existing at the depth of the producing formation in a well at a constant rate of fluid production. (GL)

FLOWING BOTTOMHOLE PRESSURE – Pressure taken at a specified depth near producing interval while well is being produced. (WT)

FLOWING PRESSURE – The pressure at the wellhead of a flowing well. (ITOGP)

FLOWING WELL – A well which produces without any means of artificial lift. (ITOGP, RP 54)

FLOWLINE – Piping which directs the well stream from the wellhead to the first downstream process component. (RP 14C)

FLOWLINE – Piping which carries well fluid from wellhead to manifold or first process vessel. (RP 14E)

FLOWLINE SEGMENT – Any portion of a flowline that has an operating pressure different form another portion of the same flowline. (RP 14C)

FLUID – A fluid is a substance readily assuming the shape of the container in which it is placed. The term includes both liquids and gases. It is a substance in which the application of every

system of stresses (other than hydrostatic pressure) will produce a continuously increasing deformation without any relation between time rate of deformation at any instant and the magnitude of stresses at that instant. Drilling fluids are usually Newtonian and plastic, seldom pseudoplastic, and rarely dilatant fluids. (Bul D11)

FLUID – A form of matter which cannot permanently resist a shearing force, which causes flow. Elastic – A gas, e.g., a condition of matter in which the molecules flow apparently without resistance.

Inelastic – A liquid, e.g., a condition of matter in which the molecules move freely but are restricted by gravitation.

Newtonian – An increase in pressure or rate of shear increases the velocity gradient in the same proportion, non-Newtonian Heterogeneous, e.g., sols or gels. (Bul 10C)

FLUID – a substance that flows. Both liquids and gases are fluids. In common oil field usage, however, the term fluid refers to liquids. (ITOGP)

FLUID – A generic term meaning a gas, vapor, liquid or combinations thereof. (RP 14E)

FLUID – A substance that slows. A fluid yields to any force tending to change its shape. Both liquids and gases are fluids. (WLOP)

FLUID – Any substance that can flow. In a well this would be gas, oil, or water. (WT)

FLUID OR PRODUCTION OPERATED VALVE – A gas lift valve that utilizes the pressure in the production conduit as its primary operating medium. (GL)

FLUID DRIVE – Special pump-and-turbine unit connecting engine to load, permitting some slip and flexibility. (Bul D10)

FLUID FLOW – The state of fluid dynamics of a fluid in motion is determined by the type of fluid (e.g., Newtonian, plastic, pseudoplastic, dilatant), the properties of the fluid such as viscosity and density, the geometry of the system, and the velocity. Thus, under a given set of conditions and fluid properties, the fluid flow can be described as plug flow, laminar (called also Newtonian, streamline, parallel, or viscous) flow, or turbulent flow. See above terms and Reynolds number. (Bul 10C,Bul D11)

FLUID INJECTION – Injection of gases or liquids into a reservoir to force oil toward and into producing wells. (ITOGP)

FLUID LOSS – See Filtrate Volume. (Bul D11)

FLUID LOSS – The volume of filtrate lost to the permeable material due to the process of filtration. The API water loss is the volume of filtrate determined according to the Fluid-Loss Test given in API Spec 10. (Bul 10C)

FLUID LOSS CONTROL – A means by which the volume of filtrate lost to a permeable material is reduced. (Bul 10C)

FLUID LEVEL – The distance from the surface to the top of the liquid in the tubing or casing in a well. The static fluid level is taken when the well is not producing and after it has STABILIZED. (ITOGP)

FLUID SATURATION – Fluid saturation is the percent of the total pore volume occupied by salt water or kerosene) distributed through a saturated Berea sandstone core. (RP 43)

FLUIDITY – The reciprocal of viscosity. The measure of rate with which a fluid is continuously deformed by a shearing stress. Ease of flowing. (Bul 10C, Bul D11)

FLUORESCENCE – Instantaneous re-emission of a photon (typically visual light) with a lower energy than that of the photon originally absorbed.

FLUORESCENCE – Instantaneous re-emission of light of a greater wave length than that light originally absorbed. (Bul D11)

FLUORESCENCE – The emission of visible radiation by a substance as the result of the absorption of ultraviolet light radiation (RP 5A5)

FLUORESCENT MAGNETIC PARTICLE INSPECTION – The magnetic particle inspection process employing a finely divided fluorescent ferromagnetic inspection medium that fluoresces when activated by ultralight violet (3200 to 4000 angstrum). (RP 5A5)

FLUSH PRODUCTION – The high initial rate of flow from a good well. (ITOGP)

FLUTE – The curved metal blade wrapped round a shaft as on a screw conveyer. (Bul 13C)

FLUTED DRILL COLLAR – Drill collar with external deep grooves. (Bul D20)

FLUX DENSITY – The strength of a magnetic field, expressed in flux lines per unit area, i.e., gauss, kilogauss. (RP 5A5)

FLUX LEAKAGE – This is the magnetic field forced out into the air by the distortion of the field within the pipe caused by the presence of a discontinuity. (RP 5A5)

FLUX LINES – Imaginary magnetic lines used as a means of explaining the behavior of magnetic fields. Their conception is based on the pattern of lines produced when iron filings are sprinkled on a piece of paper laid over a magnet. Synonymous with Magnetic Lines of Force. (RP 5A5)

FLY ASH – Fly ash is the finely-divided residue that results from the combustion of ground or powdered coal in thermal generating plants and is transported form the firebox through the boiler by flue gases. Fly ash is an artificial pozzolan. See Pozzolan. (Bul 10C)

FM – Factory Mutual Research Corporation.

FOAM – A foam is a two-phase system, similar to an emulsion, where the dispersed phase is a gas or air. (Bul D11)

FOAMING AGENT – A substance that produces fairly stable bubbles at the air-liquid interface due to agitation, aeration, or ebullition. In air or gas drilling, foaming agents are added to turn water influx into aerated foam. This is commonly called "mist drilling." (Bul D11)

FOCUSED BEAM – Converging energy of the sound beam at a specified distance. (RP 2X)

FOCUSED TRANSDUCER – A transducer with a concave face which converges the acoustic beam to a focal point or line at a definite distance from the face. (RP 2X)

FOLDS – (Also called cold shut). Circumferential discontinuity produced when two surfaces of metal fold against each other without metallurgical bonding. This can occur when flash produced by one forging operation is pressed into the metal surface during a subsequent operation. (Spec 11B)

FOLLOWING FLANK (BACK FLANK) – The opposite flank to the leading flank. (RP 5B1)

FOLLOW-UP – Change in inclination angle and/or direction in addition to that obtained from the original tool run. (Bul D20)

FORGING – (1) Plastically deforming metal, usually hot, into desired shapes with compressive force, with or without dies. (2) A shaped metal part formed by the forging method. (Spec 6A, Spec 16A)

FORMATION DAMAGE – A reduction of permeability in the immediate area surrounding the well bore. It is caused by the invasion of foreign fluids or solids into the exposed section adjacent to the well bore or by depositing of clays or wax already in the section. May also include permanent damage when water based drilling muds are used in areas of moisture sensitive shales or using excessive pump pressures on fragile formations. (Bul 10C)

FORMATION DAMAGE – Damage to the productivity of a well resulting from invasion into the formation by drilling fluid particles or drilling fluid filtrates. Asphalt from crude oil will also damage some formations. See Mudding Off. (Bul D11)

FORMATION DAMAGE – The reduction of permeability in a reservoir rock arising from the invasion of drilling fluid and treating fluids into the section adjacent to the wellbore. Often called "Skin Damage." (ITOGP)

FORMATION (F GAS) GAS – Gas which is produced from the oil reservoir with the produced liquids. (GL)

FORMATION PRESSURE – Pressure at the bottom of a well that is shut in. See Pressure Bottom-Hole Static. (Bul 10C)

FORMATION PRESSURE – The pressure exerted by formation fluids, recorded in the hole at the level of the formation, with the well shut in. (ITOGP)

FORMATION PRESSURE – The pressure exerted by fluids in a formation, recorded in the hole at the level of the formation with the well shut in. Formation pressure may also be termed "reservoir pressure," or "shut-in bottom-hole pressure." (WLOP)

FORMATION SENSITIVITY – The tendency of certain producing formations to adversely react with invading mud filtrates. (Bul D11)

FOSSIL FUELS – Coal, oil, and natural gas; so-called because they are derived from the remains of ancient plant and animal life. (Bul D11)

FOUNDATION BOLTS OR FASTENERS – The bolts used to connect a swing bearing to the upper structure and/or pedestal. (Spec 2C)

FOUR-CONE SYMMETRICAL BITS – A four-cone roller rock bit with nearly a flat face and no cone offset. Used in some areas to hold inclination and direction when three-cone rock bits have a tendency to walk or deviate. (Bul D20)

FRACTURE – Crack and crevice in the formation either inherent or induced. (Bul 10C)

FRACTURE CONTROL PLAN – An engineered plan by which design options material selections, fabrication control, and inspection procedure are integrated into a consistent strategy. (RP 2X)

FRACTURE CONTROL PLAN – The consideration of material properties environmental exposure conditions, potential material and fabrication imperfections, and methods of inspection for the purpose of eliminating conditions which could result in failure under the design requirements for the projected life of the crane. (Spec 2C)

FRACTURE MECHANICS – A discipline which deals with the local stress state near planar discontinuities, and the growth of cracks. (RP 2X)

FRACTURING – Application of hydraulic pressure to the reservoir formation to create fractures through which oil and gas may move to the well bore. (Bul 10C, (ITOGP)

FREE GAS – Gas produced from the gas cap of an oil reservoir. Different from solution gas in that free gas has not been dissolved in produced liquids but exists as a separate and distinct substance in the reservoir. (WT)

FREE LIQUID FILM – The layer of liquid that surrounds each separate particle in the underflow of a hydrocyclone and screens. The thickness of this film depends upon design of the device and viscosity of the liquid (Bul 13C)

FREE MACHINING – A characteristic of being machined easily. For example, this may be accomplished by adding sulfur to steel or lead to brass. (COGWE, SSWID)

FREE WATER KNOCKOUT (FWKO) – A vertical or horizontal vessel into which oil or emulsion is run in order to allow the water that is not emulsified with the oil (free water) to drop out. (SSWID)

FREEZING OPERATION – Creation of a plug by freezing a liquid in a pipe or fitting to confine the pressure while removing defective or inadequate equipment downstream of the plug. (RP 54)

FREQUENCY – (See Related Term: Speed.) The number of times an event (viz., complete cycle of motion) repeats itself per unit of time. (Bul 13C)

FREQUENCY (FUNDAMENTAL) – In resonance testing, the frequency at which the wave length is twice the thickness of the examined material. (RP 2X)

FREQUENCY (Hz) – Number of complete cycles of a wave motion per second of time. Unit of measure is called Hertz. (RP 5A5)

FREQUENCY (INSPECTION) – Effective ultrasonic wave frequency of the system used to inspect the material. (RP 2X)

FREQUENCY (PULSE REPETITION) – The number of pulses per second. (RP 2X)

FRICTION – The resistance to movement created when two surfaces are in contact. When friction is present, heat is produced. (Sometimes referred to as "drag" in wireline operations). (WLOP)

FROZEN UP – Said of equipment of which the components do not operate freely. (ITOGP)

FUEL – Any material which will burn. (RP 14G)

FULL CREST THREAD LENGTH – The length of machine threads, from the end of the machined threads, including the incomplete starting threads, where the crests have full form. (RP 5B1)

FULL-PACKED ASSEMBLY – Refer to "Full-packed, Bottom-hole Assembly." (Bul D20)

FULL-PACKED, BOTTOM-HOLE ASSEMBLY – Configuration of tools with a relatively high degree of rigidity and wall bearing surface. (Bul D20)

FUNCTIONS OF DRILLING FLUIDS – The most important function of drilling fluids in rotary drilling is to bring cuttings form the bottom of the hole to the surface. Some other important functions are: control subsurface pressures, cool and lubricate the bit and drill string, deposition of an impermeable wall cake, etc. (Bul D11)

FUNNEL VISCOSITY – See Marsh Funnel Viscosity. (Bul D11)

FURRING – Buildup or bristling of magnetic particles at the ends of a longitudinal magnetized pipe, i.e., at its poles. (RP 5A5)

FUSIBLE PLUG – A plug or portion of the SSSV surface control system which is designed to melt in case of a fire and actuate the fail safe features of the SSSV system. (RP 14B)

-G-

G – The acceleration of gravity (32.2 ft/sec^2 9.8 m/sec^2). Accelerations are usually expressed as multiples of one gravity (viz, 1G, 2G, 3.6G). (Bul 13C)

GAGE AND TEST PORT CONNECTIONS – Holes drilled and tapped into API Spec 6A equipment through which internal pressure may be measured or through which pressure may be applied to test the sealing mechanisms. (Spec 6A)

GAGE LINE PASTE – A material similar in character to toothpaste which is put on a gage line and changes color when contacted with water. Used to find water or BS&W level in tanks. Normally supplied in a tube. (WT)

GAGE POINT – A predetermined point on the thread flanks used as a reference for measuring thread element (RP 5B1)

GAGE (GAUGE) PRESSURE – The pressure exerted on the interior walls of a vessel by the fluid contained in the vessel as indicated by the device capable of measuring this pressure (a pressure gage). Absolute pressure being equal to gage pressure plus atmospheric pressure (psig – pounds per square inch gage). (WLOP)

GAGING – Act of using a measuring line or tape to determine liquid level in a tank or a storage vessel. (WT)

GAGING NIPPLE – A small section of pipe in the top of a tank through which a tank may be gaged. (ITOGP)

GAIN – The controlled increase in sensitivity within the instrument. (RP 2X)

GAIN CONTROL – A sensitivity adjustment of an amplifier or circuit. (RP 5A5)

GALENA – Lead sulfide (PbS). Technical grades (specific gravity about 7) are used for increasing the density of drilling fluids to points impractical or impossible with barite. (Bul D11)

GALLING – Surface damage on threads caused by localized friction welding of high spots. (Bul 5T1)

GALVANIZE – To coat a metal with zinc. (COGWE, SSWID)

GAMMA RAYS – High-energy, shortwave length electromagnetic radiation emitted by a nucleus. Energies of gamma rays are usually between 0.010 and 10 MeV. Gamma rays are penetrating and are best attenuated by dense materials like lead and tungsten. (RP 5A5)

GANTRY (ALSO KNOWN AS "A" FRAME) – A structural frame, extending above the upperstructure to which the boom support ropes are reeved. (Spec 2C)

GAP SCANNING – Short fluid column coupling technique. (RP 2X)

GAS – A fluid substance that completely fills any container in which it is confined and whose volume is dependent on the size of and pressure exerted upon the container. A gas is readily compressible. (WLOP)

GAS ANCHOR – A device for the bottom-hole separation of oil and gas in a pumping well. It serves to prevent GAS LOCK by minimizing gas entry into the pump. (ITOGP)

GAS BLANKET – A certain volume and pressure of gas contained just above the surface of a fluid in storage. (SSWID)

GAS BLOWBY – The discharge of gas from a process component through a liquid outlet. (RP 14C)

GAS BREAKOUT – Fluids containing gas in solution will release this gas when pressure is reduced or temperature increases. Shrinkage of oil in storage tanks may be due to gas breakout. (WT)

GAS CAP – The portion of an oil-producing reservoir occupied by free gas. (ITOGP)

GAS-CAP DRIVE – The drive energy supplied naturally by the expansion of gas in a cap overlying the oil in a reservoir. (ITOGP)

GAS CUT – Gas entrained by a drilling fluid. See Air Cutting. (Bul D11)

GAS DETECTION SYSTEM – A control system which monitors the concentration of combustible gases and initiates alarm and shutdown functions at predetermined concentrations. (RP 14C)

GAS HYDRATES – Gas hydrates are ice-like solids, formed by a combination of water and an encaged gas molecule, that can remain stable above the freezing point of water. (Bul 2N)

GAS INJECTION – Natural gas injected under high pressure into a producing reservoir through an INPUT or INJECTION WELL as part of an enhanced recovery operation. (ITOGP)

GAS-INPUT WELL – A well into which gas is injected for return to the reservoir in a pressure-maintenance or secondary-recovery program. (WLOP)

GAS LIFT – A method of artificial lift in which the energy of compressed gas is used directly to lift fluids to the surface. (GL)

GAS LIFT – The raising, or lifting, of liquid from a well by means of injecting gas into the liquid. (ITOGP)

GAS LIFT – The process of producing fluid from a well by means of gas injected down the well through tubing or through the tubing-casing annulus. Injected gas aerates the fluid to make it exert less pressure than the formation pressure. Consequently, the higher formation pressure forces the fluid out of the wellbore. (WLOP)

GAS LIFT VALVE – A pressure regular mounted on or in the tubing string so that by manipulation of the injection gas pressure and the producing pressures the valve will either be open or closed to provide a controllable communication between the tubing and casing for gas passage. (GL)

GAS-LIFT VALVE – A device installed on the tubing string of a gas-lift well that is sensitive to tubing and casing pressures, which cause the valve to open and close. The functioning of the vale is to allow gas to be injected into the fluid in the tubing in order to cause the fluid to rise to the surface. (WLOP)

GAS-LIQUID RATION (GLR) – The number of standard cubic feet of gas produced with a stock tank barrel of liquid (oil and water).
FGLR – Formation GLR
IGLR – Injection GLR
TGLR – Total GLR (GL)

GAS-LIFT MANDREL – A device run in the tubing string into which a gas-lift valve is installed. The two most common types of mandrels are the conventional mandrel and the sidepocket mandrel. The gas-lift valve is installed in the conventional gas-lift mandrel as the tubing is placed in the well. To replace or repair the valve the tubing string must be pulled. On the other hand, the gas-lift valve is installed and removed from the sidepocket mandrel by wireline while the mandrel is still in the well, eliminating the need to pull the tubing to repair or replace the gas-lift valves. (WLOP)

GAS METAL-ARC WELDED PIPE – Pipe having one longitudinal seam formed by continuous gas metal-arc welding. At least one pass shall be made on the inside and at least one pass from the outside of the pipe. Gas metal-arc welding is an arc welding process wherein coalescence is produced by heating with an arc between continuous filler metal (consumable) electrode and the work. Shielding is obtained entirely from an externally supplied gas or gas mixture. The shield gas protects the fluid weld metal from oxidation or contamination by the surrounding atmosphere. (Spec 5L)

GAS METER – A measurement device for determining volume of gas flowing past a given point in a line. (WT)

GAS-OIL RATIO – Cubic feet of gas at base conditions produced with each barrel of oil, and reported as cu ft/barrel. (WT)

GAS-OIL RATION (GOR) – The number of standard cubic feet of gas produced with a stock tank barrel of oil.

IGOR – Injection gas/produced oil ratio
FGOR – Formation gas/produced oil ratio. (GL)

GAS-OIL RATIO (GOR) – The number of cubic feet of gas produced with a barrel of oil. Gas-Liquid Ratio (GLR) – The number of cubic feet of gas produced with a barrel of liquid. (Usually water and oil.) (ITOGP)

GAS PLANT PRODUCTS – Liquids recovered from natural gas in a gas processing plant and, in some situations, from field facilities. See Natural Gas Liquids. (ITOGP)

GAS PROCESSING PLANT (GAS PLANT) – A facility designed (1) to achieve the recovery of natural gas liquids from the stream of natural gas which may or may not have been processed through lease separators and field facilities and (2) to control the quality of the natural gas to be marketed. (ITOGP)

GAS REGULATOR – A device for controlling the pressure of gas flowing in a pipeline. (ITOGP)

GAS SAND – A porous sandstone reservoir which contains natural gas. (ITOGP)

GAS SATURATION – The portion of the pore space in a reservoir rock which is occupied by the gaseous phase. (RP 44)

GAS WELL – A well capable of producing natural gas. (ITOGP, WLOP)

GATE – An electronic means to monitor associated segment of time, distance, or impulse. (RP 2X)

GATE VALVE – A valve which employs a sliding gate to open or close the flow passage. The valve may or may not be full-opening. (RP 53)

GATHERING LINES – The flow lines which run from several wells to a central lease or plant facility. (ITOGP)

GAUGE REAMERS – A sub with a set of cutting edges or rollers with an outer diameter equal to that of the bit (refer to “Reamer”). (Bul D20)

GAUSS (G) – This is the unit of flux density or induction. Numerically, one Gauss is one line of flux per square centimeter of area. (RP 5A5)

GAUSSMETER – See Magnetometer. (RP 5A5)

GEAR RATIO – On a decanting centrifuge, the ratio of the outer bowl speed to the difference in speed between the outer bowl and the conveyor, usually expressed as the number of revolutions of the outer bowl for a difference of one complete revolution between the outer bowl and the screw conveyor. (Bul 13C)

GEAR UNIT – On a centrifuge, a reduction device connected to the rotating bowl and driving the conveyor at a slightly different rate. (Bul 13C)

GEL – Oil field term for sodium bentonite clays belonging to the general class of montmorillonities. (Bul 10C)

GEL – A state of colloidal suspension in which shearing stresses below a certain finite value fail to produce permanent deformation. The minimum shearing stress that will produce permanent deformation is known as the gel strength. See Shear Strength. (Bul D11)

GEL – A term used to designate highly colloidal, high-yielding, viscosity-building commercial clays, such as bentonite and attapulgrite clays. (Bul D11)

GEL – A state of a colloidal suspension in which shearing stresses below a certain finite value fail to produce permanent deformation. The minimum shearing stress that will produce permanent deformation is known as the shear or gel strength of the gel. Gels commonly occur when the dispersed colloidal particles have a great affinity for the dispersing medium, i.e., are lyophilic. Thus gels commonly occur with bentonite in water. For their measurement, see Gel Strength, Initial and 10-min. (Bul D11)

GEL CEMENT – Blends or slurries containing both cement and bentonite. (Bul 10C)

GEL CEMENT – Cement having a small to moderate percentage of bentonite added as a filler an/or to reduce the slurry weight. See Gunk Plug. (Bul D11)

GEL STRENGTH – The ability or the measure of the ability of a colloid to form gels. Gel strength is a pressure unit usually reported in lbf/100 sq ft (.48 Pa). It is a measure of the same interparticle forces of a fluid as determined by the yield point except that gel strength is measured under static conditions, yield point under dynamic conditions. The common gel strength measurements are initial and the 10-min gels. (See Strength, Initial and 10-min. See also Shear and Thixotrophy.) Bul 10C, Bul D11)

GEL STRENGTH – The value of the shear stress required to cause permanent deformation of a colloidal suspension. (Bul 10C)

GEL STRENGTH, 10-MIN – The measured 10-min gel strength of a fluid is the maximum reading (deflection) taken from a direct-reading viscometer after the fluid has been quiescent for 10 min. The reading is reported in lbf/100 sq ft (.48 Pa). See API RP 13B for details of test procedure. (Bul 10C, Bul D11)

GEL STRENGTH – INITIAL – The measured initial gel strength of a fluid is the maximum reading (deflection) taken from a direct reading viscometer after the fluid has been quiescent for 10 sec. It is reported in lbf/100 sq ft (48 Pa). See API RP 13 B for details of test procedure. (Bul 10C, Bul D11)

GELATION – The formation of a gel. (Bul 10C)

GELATION – Association of particles to form a continuous structure. (Bul D11)

GELLED UP – Oil-field jargon usually referring to any fluid with high gel strength and/or highly viscous properties. Often a state of severe flocculation. (Bul D11)

GENERATOR, ELECTRIC – A rotating machine together with its driver and associated switch gear used to generate electrical energy. (RP 2G)

GEOLOGY – The scientific study of the origin, history and structure of the earth as recoded in rocks. A person trained in geology is a GEOLOGIST. A PETROLEUM GEOLOGIST is primarily concerned with sedimentary rocks where most of the world's oil has been found. (ITOGP)

GEOTHERMAL GRADIENT – The naturally occurring increase of temperature with depth in undisturbed ground. (GL)

GERMICIDE (BACTERICIDE) – A chemical or agent that kills microorganisms such as bacteria. Such compounds must be registered as pesticides with EPA. (Bul D11)

GFI – Ground Fault Interruptor.

GHOST – An indication which has no direction relation to reflected pulses from discontinuities in the materials besting test. (RP 2X)

GILSONITE - A naturally occurring solid hydrocarbon belonging to the asphalt group. A granular form of gilsonite is sometimes used as a cement additive. (Bul 10C)

GIMBLE CORRECTION – The difference in measurements obtained with the gimbel system of a gyroscope in a plane non-parallel to the horizontal plane of a borehole and those obtained if the gimble system were in the horizontal plane. (Bul D20)

GIN POLE – A pole used with hoisting equipment to lift heavy loads. (WLOP)

GIN-POLE TRUCK – A truck equipped with a pair of poles and hoisting equipment for use in lifting heavy machinery around a lease. (ITOGP)

GIRTH SEAM – A circumferential butt-welded seam lying in a plane normal to the longitudinal axis of the pipe, used to join sections into lengths of straight pipe. (Spec 2B)

GLR – Gas Liquid Ratio (cu. ft/BBL).

GLOBAL STRESSES – Stresses resulting from global frame action. (Bul 2V)

GO-DEVIL – A term used to describe a tool or instrument that is dropped and free falls from the surface through the drilling fluid within the drill stem. (Bul D20)

GO-DEVIL – A device dropped or pumped down the well, usually through drill pipe or tubing. (WLOP)

GO IN THE HOLE – To lower drill pipe, tubing, work-over tools, or other devices into the wellbore. (WLOP)

GOING-IN-HOLE – Running either tubular goods or wire line into the well bore (abbr. GIH). (Bul 10C)

GONE TO WATER – Describes a well in which oil production has decreased and water production has greatly increased. (ITOGP)

GONIOMETER – An instrument for measuring angles, as in surveying. (Bul D20)

GOODMAN DIAGRAM – A plot of reversed bending stress versus the average tensile stress in, for example, drill pipe. (Bul D20)

GOR – Gas-oil ration expressed in cubic feet of gas per barrel of oil (cu ft/bbl). (WT)

GOUGE – Elongated grooves or cavities caused by mechanical removal of metal. (Bul 5T1)

GOUGING – The scraping of the seabed by ice features. (Bul 2N)

GPA – Gas Processors Association

GPG OR GRAINS PER GALLON – PPM (see PPM) equals GPG x 17.1. (Bul D11)

GRADIENT – Change in pressure or temperature per unit change in depth. (GL)

GRADIENT – Pressure exerted by a fluid for each foot of fluid height. For example: Fresh water exerts a gradient pressure of .433 psi/ft calculated in this manner – 4330 psi gage @ 10,000' less surface pressure of 0 psi is

$$\frac{4330 - 0}{10{,}000'} = .433 \text{ psi/ft.}$$

(WT)

GRADIENT, PRESSURE – Pressure change with depth, expressed in psi/ft. (ITOGP)

GRADIENT, TEMPERATURE – Temperature change with depth expressed in ^{o}F/100 Ft. (ITOGP)

GRANULAR ICE – Ice consisting of granular ice crystals. (Bul 2N)

GRANULATED BLAST FURNACE SLAG – A non-metallic material consisting essentially of glassy, non-crystalline silicates of calcium and other bases. Slag, depending upon its form, may be pozzolanic and/or cementitious. (Bul 10C)

GRASSHOPPER – A piping device used to control the level of the interface between oil and water in a storage tank. (SSWID)

GRAVEL PACK – A mass of very fine gravel that is placed around a slotted liner. Gravel packing is a method of well completion in which a slotted or perforated liner is placed in the well and surrounded by a very fine-mesh gravel. (WLOP)

GRAVITY-API – See API Gravity. (ITOGP)

GRAVITY DRAINAGE – The movement of the oil in the reservoir toward the wellbore due to the force of gravity. (ITOGP)

GRAVITY GATHERING SYSTEM – A gathering system that depends up differences in elevation of ground level for the movement of fluid. (SSWID)

GRAVITY, SPECIFIC – The weight of a particular volume of any substance compared to the weight of an equal volume of water at a reference temperature. For gases, air is usually taken as the reference substance, although hydrogen is sometimes used. (Bul D11)

GRAVITY, SPECIFIC – Density expressed as the ratio of the weight of a volume of substance to the weight of an equal volume of another standard substance. In the case of liquids and solids, the standard is fresh water. In the case of natural gas or other gaseous material, the standard is air. (ITOGP)

GRAVITY, SPECIFIC – The weight of a particular volume of any substance compared to the weight of an equal volume of water at a reference temperature. (Bul 10C)

GRAVITY STRUCTURE – A structure deriving its support on the seabed from the forces of gravity imparted through one or more mat foundations. (Bul 2N)

GRAZING INCIDENCE – Immersion inspection with the beam directed at a glancing angle to the test surface. (RP 2X)

GREASING OUT – Certain organic substances, usually fatty-acid derivates, which are added to drilling fluids as emulsifiers, extreme pressure lubricants, etc., may react with such ions as calcium and magnesium that are in or will subsequently come into the system. An essentially water-insoluble greasy material separates out. (Bul D11)

GREAT CIRCLE METHOD – Refer to “Minimum Curvature Method.” (Bul D20)

GRID – In electrostatic treaters the electric field is distributed by a steel assembly of plates, rods, screens or combinations of thee, commonly referred to as the grid. The grid establishes the electric field which enhances coalescing of the water droplets. The grid does not provide heat. The projected grid area is significant to the performance and capacity of the treater. (Spec 12L)

GRID NORTH – The direction from any geographical location within a grid system paralleling the Universal True Meridian as determined by observation of Polaris. (Bul D20)

GRIND OUT – See Shake Out. (ITOGP)

GRIND, PROBE – An exploratory grind made to determine the depth of an imperfection. (RP 5A5)

GRIND, RADIUS – Grinding performed to remove sharp edges and/or abrupt changes in the well thickness around exploratory grinds or imperfections. (RP 5A5)

GRIND, REPAIR – A grind made to remove a questionable imperfection and make the product comply with the appropriate specification (refer to API 5AX, Par. 10.11: Dispositions). (RP 5A5)

GRINDING – Removing material from a pipe surface by abrading, e.g., grinding wheel or file. (RP 5A5)

GROSS WEIGHT – Gross weight is defined as the certified maximum takeoff weight of the helicopter for which the heliport is designed to accommodate. (RP 2L)

GROUND ANCHORS – Static holding devices installed in the ground separate from the rig structure and to which guylines may be attached. (RP 54)

GROUND CUSHION – An improvement in flight capability that develops whenever the helicopter flies or hovers near the heliport or other surface. It results from the cushion of denser air built up between the surface and helicopter by the air displaced downward by the rotor. (RP 2L)

GROUND CUSHION AREA – Ground cushion area is the solid portion of a heliport surface provided for proper ground cushion effect. This area may be only the flight deck or the flight deck plus its perimeter safety shelf. (RP 2L)

GROUNDWATER – Water present in the saturated zone of an aquifier. (Bul D11)

GROUTING – The filling of void space with a substance that hardens (grout). (Bul 10C)

GUAR GUM – A naturally occurring hydrophilic polysaccharide derived from the seed of the guar plant. The gum is chemically classified as a galactomannan. Guar gum slurries made up in clear fresh or brine water possess pseudoplastic flow properties. (Bul D11)

GUARDED – Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers or casings, barrier rails, or screens to eliminate the possibility of accidental contact with or dangerous approach by persons, animals, or object. (RP 54)

GUIDANCE EQUIPMENT – Guidance equipment is used to direct and orient risers or tools to the seafloor template. Guidelines, tendons, submersibles, etc., can be used for this purpose. (RP 2T)

GUM – Any hydrophilic plant, polysaccharides or their derivatives which when dispersed in water, swell to produce a viscous dispersion or solution. Unlike resins, hey are soluble in water and insoluble in alcohol. (Bul 10C, Bul D11)

GUMBO – Any relatively sticky formation, such as clay, encountered in drilling. (Bul 10C, Bul D11)

GUNBARREL – Basically a vertical separator, usually a tall, large diameter vessel permitting extended settling times for oil and water separation due to difference in specific gravity. (WT)

GUNK – The collection of dirt, paraffin, oil, mill scale, rust, and other debris that is cleaned out of a pipeline when a scraper or a pig is put through the line. (ITOGP)

GUNK PLUG – A slurry in crude or diesel oil containing any of the following materials or combinations: bentonite, cement, attapulgite, and guar gum (never with cement). Used primarily in combating lost circulation. The plug may or may not be squeezed. (Bul 10C, Bul D11)

GUNK SQUEEZE – A bentonite, diesel-oil mixture that is pumped down the drill pipe to mix with drilling mud being pumped down the annulus. These two mix to form a stiff, putty-like material that can be squeezed into lost circulation zones. (Bul 10C)

GUNNING THE PITS – Mechanical agitation of the drilling fluid in a pit by means of a mud gun, electric mixer, or agitator. (Bul D11)

GUY LINE – A wire rope with one end attached to the derrick or mast assembly and the other end attached to a suitable anchor. (Spec 4F)

GUY LINE – A cable attached to a workover rig, lubricator, etc., and anchored in the ground to provide stability. (WLOP)

GUY-LINE ANCHOR – A buried weight or anchor to which a guy line is tied to provide stability. (WLOP)

GUY ROPE – A non-operating standing wire rope which maintains a constant distance between the points of attachment to the components connected by the wire rope. (Spec 2C)

GUY WIRE – A rope or cable used to steady a mast or pole. (ITOGP)

GUYING PATTERN – A plan view showing the manufacturer's recommended locations and distance out to the anchors with respect to the wellhead. (Spec 4F)

GYP OR GYPSUM – (See Calcium Sulfate.) Gypsum is often encountered while drilling. It may occur as thin stringers or massive formations. (Bul D11)

GYPSUM – See Calcium Sulfate. (Bul 10C)

GYRO PRECESSION – Refer to "Precession" and "Drift." (Bul D20)

GYRO RIGIDITY – First property of a gyroscope, tendency of a spinning gyroscope to maintain the original axis of rotation. (Bul D20)

GYROSCOPE SURVEY – A directional survey conducted using a gyroscope for directional control, usually used where magnetic directional control cannot be obtained. (Bul D20)

-H-

HABITAT – The sum total of environmental conditions of a specific place that is occupied by an organism, a population, or a community. (Bul D11)

HALF-LIFE – The period of time required for a radioactive substance to lose half of its active characteristics; used especially in radiological work. (Bul D11)

HAND – Practically anyone who works in the oil industry, but especially applied to those who work in the field. (ITOGP)

HAND-TIGHT – Threaded joint that has been madeup by hand without the aid of tongs. (RP 5A5, RP 5B1)

HAND-TIGHT STANDOFF – The length, at hand-tight engagement, from the face of the coupling to the vanish point of the pipe. (RP 5A5)

HAND-TIGHT STANDOFF – The length, at hand-tight engagement from the face of the coupling to vanish point of the pipe. Positive values indicate vanish point is exposed. Negative values indicate vanish point is buried. (RP 5B1)

HANDLING DAMAGE – Cuts, gouges, dents, or flattened crests (mashes) that occurred during handling (loading, unloading, shifts in transit, etc.). (Bul 5T1, RP 5A5)

HANDLING TIGHT – Sufficiently tight so that the coupling cannot be removed except by use of a wrench. (RP 5A5, RP 5B1, Spec 5AC)

HANDY – A connection that can be unscrewed by hand. (ITOGP)

HANG THE RODS – To pull the rods out of the well and hang them in the derrick. (ITOGP)

HANGDOWN – The weight of drill stem suspended below a dogleg. (Bul D20)

HANGER MANDREL – That portion of a casing or tubing hanger which is attached by a threaded connection to the tubular string and forms the upper end of that tubular string. (Spec 6A)

HARD BANDING – A hard metal deposited on tool joints to resist abrasion from the contact of the tool joint to the wall of the borehole. (Bul D20)

HARD HAT – Molded plastic hat worn in the field for protection. (ITOGP)

HARD SPOT – An area in the pipe with a hardness level considerably higher than that of the surrounding metal, usually due to localized quenching. (Bul 5T1)

HARDNESS – A measure of the hardness of a metal, as determined by pressing a hard steel ball or diamond penetrator into a smooth surface under standard conditions. Results are often expressed in terms of Rockwell hardness number (HRB or HRC) or Brinell Hardness Number (BHN). Refer to ASTM E-10 and ASTM E-18 for added information. (RP 5A5)

HARDNESS (OF WATER) – The hardness of water is due principally to the calcium and magnesium ions present in the water and is independent of the accompanying acid ions. The total hardness is measured in terms of parts per million of calcium carbonate or calcium and sometimes equivalents per million of calcium. For hardness tests, see API RP 13B. (Bul 10C, Bul D11)

HARMONICS – Those vibrations which are integral multiples of the fundamental frequency. (RP 2X)

HASH – Numerous, small indications appearing on the oscilloscope of the ultrasonic instrument indicative of many small inhomogeneities in the material or background noise; also referred to as "grass." (RP 2X)

HAZARDOUS AIR POLLUTANT – According to law, a pollutant to which no ambient air quality standard is applicable and that may cause or contribute to an increase in mortality or in serious illness. For example, asbestos, beryllium, and mercury have been declared hazardous air pollutants. (Bul D11)

HAZARDOUS SUBSTANCE – Any substance which by reason of being explosive, flammable, toxic, corrosive, oxidizing, irritating, or otherwise harmful, has the potential to cause injury, illness, or death. (RP 54, RP 57)

HEAD – The volume of reservoir fluids produced at the surface following a short period of gas injection, as in intermittent operation. (GL)

HEAD WELL PULLER – Employee directly in charge of a well servicing rig and crew. May also be referred to as crew chief or pulling unit operator. (RP 54)

HEADACHE! – A warning cry given by a fellow worker when anything is accidentally dropped or falls from overhead toward another worker. (ITOGP)

HEADER – A pipe or chamber which receives the flow from two or more lateral lines. (RP 2G)

HEADER – That part of a manifold which directs fluid to a specific process system. (RP 14E)

HEADING – Alternating fluid lugs separated by gas which causes pressure variation at wellhead. (WT)

HEAT (A CONNECTION) – To loosen a collar or other threaded connection by striking it with a hammer. Also, WARM (a connection) or WHIP (a connection). (ITOGP)

HEAT AFFECTED ZONE (HAZ) – That portion of the base metal which has not been melted, but whose mechanical properties microstructure has been altered by the heat of welding or cutting. (Spec 6A, Spec 16)

HEAT (CAST LOT) – Material originating from a final melt. For remelted alloys, a heat shall be defined as the raw material originating from a single remelted ingot. (Spec 6A, Spec 16A)

HEAT CHECKING OF TOOL JOINTS – A condition that exists when a tool joint is excessively heated by the friction caused by rotation against the wall in the borehole. (Bul D20)

HEAT DENSITY – This term is commonly applied to the heat release through the cross section of the firetube, expressed as BTU/hour/square inch of cross sectional area. (Spec 12K)

HEAT DUTY – Heat absorbed by the process, expressed as btu/hr. (Spec 12L)

HEAT EXCHANGER – A shell-and-tube, plate type or other heat exchanger optionally employed to recover heat from the heated crude oil by preheating the incoming emulsion. (Spec 12L)

HEAT FLUX – This term is commonly applied to the average transfer rate through the firetube, expressed as BTU/hour/square foot of exposed area. (Spec 12K)

HEAT SENSITIVE LOCKOPEN DEVICE – A device installed on an SSV actuator to maintain the SSV valve in a full open position, until exposed to sufficient heat to cause the device to release and allow the SSV valve to close. (RP 14H, Spec 14D)

HEAT TREATMENT (HEAT TREATING) – Alternate steps of controlled heating and cooling of materials for the purpose of changing physical or mechanical properties. (Spec 6A, Spec 16A)

HEAT TREATMENT LOAD – That material placed on loading or carrying devices moved as a batch through one heat treatment cycle. (Spec 16A)

HEATER – A vessel in which heat is applied to a series of internal coils or tubes to increase temperature of fluid flowing through coils or tubes. (WT)

HEATER BATH – The indirect heating medium is referred to as the heater bath and within the scope of this specification the heater bath is limited to water or water solutions. When freezing is possible, ethylene glycol may be added for anti-freeze protection. Other additives to the water bath may include corrosion inhibitors. (Spec 12K)

HEATING SHROUD OR HOOD – Baffle surrounding firetubes in treaters designed to increase emulsion heating efficiency by minimizing the heating of free water which separates from the emulsion before heating. (Spec 12L)

HEAVE – Platform motion in the vertical direction. (RP 2T)

HEAVIES – See Preferred Term: High Specific Gravity Solids. (Bul 13C)

HEAVING – The partial or complete collapse of the walls of a hole resulting from internal pressures due primarily to swelling from water absorption or formation of gas pressures. See Sloughing. (Bul 10C, Bul D11)

HEAVY METALS – Metallic elements with high atomic weights, which may be toxic to plant and animal life depending on their oxidation and chemical state. Such metals may be residual in

the environment and exhibit biological accumulation. Examples include arsenic cadmium, chromium, mercury, and lead. (Bul D11)

HEAVY WEIGHT DRILL PIPE – Drill pipe fabricated with thick wall tube. Frequently used in place of drill collars to apply weight on the drill bit. Handles like normal drill stem in drilling operations. (Bul D20)

HEIGHT OF DERRICK AND MAST WITHOUT GUY LINES – The minimum clear vertical distance from the top of the working floor to the bottom of the corner block support beams. (Spec 4F)

HEIGHT OF MAST WITH GUY LINES – The minimum vertical distance form the ground to the bottom of the crown support beams. (Spec 4F)

HEIGHT OF THREAD – The distance between the root and crest of the thread measured normal to the thread axis. (RP 5B1)

HELICAL BUCKLING – Buckling in which the pipe forms a helix or spiral shape. (Bul D20)

HELICOPTER – A rotary wing aircraft which depends principally for its support and motion in the air upon the lift generated by one or more power-driven rotors, rotating on substantially vertical axes. (RP 2L)

HELIPORT – An area on a structure used for the landing and takeoff of helicopters and which includes some or all of the various facilities useful to helicopter operation such as parking, tiedown, fueling, maintenance, etc. (RP 2L)

HELIX – See Preferred Term: Flute. (Bul 13C)

HELIX ANGLE – The angle made by the conical spiral of the thread at the pitch diameter with a plane perpendicular to the axis. (RP 5B1)

HERMETIC SEAL – See Hermetically Sealed Device. (RP 14F)

HERMETICALLY SEALED DEVICE – A device which prevents a hazardous or corrosive gas or vapor from coming in physical contact with an arcing or high temperature component. (RP 14F)

HERTZ (Hz) – One cycle per second. (RP 2X)

HETEROGENEOUS – A substance that consists of more than one phase and is not uniform, such as colloids, emulsions, etc. It has different properties in different parts. (Bul D11)

HEVIWATE DRILL PIPE® - (Registered trademark of SII Drilco.) Commercial name for a particular manufacturer’s heavy weight drill string made with extra length tool joints. The pipe has a wear pad at the middle of the joint. (Bul D20)

HIGH-ANGLE HOLES – Generally conceded to be holes for which the inclination angle from vertical exceeds 50 degrees. (Bul D20)

HIGH LIQUID LEVEL – Liquid level in a process component above the highest operating level. (RP 14C)

HIGH PRESSURE – Pressure in a process component in excess of the maximum operating pressure but less than the maximum allowable working pressure (for pipelines, maximum allowable operating pressure). (RP 14C)

HIGH-pH DRILLING FLUID – A drilling fluid with a pH range above 10.5. A high-alkalinity drilling fluid. (Bul D11)

HIGH SIDE OF HOLE – Opposite side of the hole from the low side, the low side being determined by the force of gravity, and on which side a free length of pipe would rest. (Bul D20)

HIGH SPECIFIC GRAVITY SOLIDS – In the petroleum industry, this usually refers to the barite solids (could be Galena or other solids more than 4.2 specific gravity). (Bul 13C)

HIGH SPEED – Term used to indicate screen speed generally in excess of 3,000 RPM or CPM. (Bul 13C)

HIGH TEMPERATURE – Temperature in a process component in excess of the design operating temperature. (RP 14C)

HIGH TEMPERATURE DEVICE – A device whose maximum operating temperature exceeds 80 percent of the ignition temperature in degrees Celsius (C) of the gas or vapor involved. (RP 14F, RP 550B)

HIGH-YIELD DRILLING CLAY – A classification given to a group of commercial drilling-clay preparations having a yield of 30 to 50 bbl/ton and intermediate between bentonite and low-yield clays. High-yield drilling clays are usually prepared by peptizing low-yield calcium montmorillonite clays or, in a few cases, by blending some bentonite with the peptized low-yield clay. (Bul D11)

HIGHLY VOLATILE LIQUIDS (HVL'S) – Liquids whose vapor pressure exceeds 40 pounds per square inch absolute (276 kilopascals) at 100^{o}F (37.8^{o}C). See Section 3.3. (RP 500B)

H-MEMBER – The term "H-member" refers to a nipple assembly that provides hydraulic communication between strings of tubing in the wellbore. (RP 6G)

HOIST MECHANISM – A hoist drum and rope reeving system used for lifting and lowering loads. (Spec 2C)

HOIST ROPE – Wire rope involved in the process of lifting. (Spec 2C)

HOISTING – The process of lifting. (Spec 2C)

HOISTING EQUIPMENT - A piece of equipment used to vertically lift materials, supplies, etc., from boats or barges to one of the structure decks. This is usually a crane or stiffleg derrick located on the main deck and may be driven by internal combustion engine or an electric, pneumatic or hydraulic motor. (RP 2G)

HOLD ANGLE – The borehole inclination and direction are maintained constant. (Bul D20)

HOLD-DOWN – A mechanical arrangement to prevent the upward movement of certain pieces of equipment installed in a well. (ITOGP)

HOLE – The wellbore. (ITOGP)

HOLE – Common term which usually refers to the wellbore. (RP 54)

HOLE AXIS – A line through the center of the hold, generally considered to be the centralized position that would be taken by a stiff tubular member inserted through that section of the hole. (Bul D20)

HOLE AZIMUTH ANGLE – The angle between north and the projection of the hole axis onto a horizontal plane. Angle is referred to either true north, magnetic north, or grid north. (Bul D20)

HOLE CAVING – Refer to "Caving." (Bul D20)

HOLE CLEARANCE – Refer to "Clearance." (Bul D20)

HOLE CURVATURE – Refers to the changes in inclination and direction of the borehole. (Bul D20)

HOLIDAY – A gap or void in the coating of a pipe or in paint on a metal surface. (ITOGP)

HOLIDAY – A discontinuity in a protective coating which exhibits electrical conductivity when exposed to a specific voltage. (RP 5L7)

HOLIDAYS – Areas of metal that have been missed by one or more applications of a coating material, resulting in pinholes or reduced film thickness. (COGWE, SSWID)

HOMOGENEOUS – Of uniform or similar nature throughout; or a substance or fluid that has at all points the same property or composition. (Bul D11)

HOOK BLOCK – Block with hook attached used in lifting service. It may have a single sheave for double or triple line or multiple sheaves for four or more parts of line. (Spec 2C)

HOOK CRACKS OR UPTURNED FIBER IMPERFECTIONS – Metal separations, resulting from imperfections at the edge of the plate or skelp, parallel to the surface, which turn toward the ID or OD pipe surface when the edges are upset during welding. (Bul 5T1)

HOOK HORSEPOWER (HOISTING HORSEPOWER) –

$$\frac{\text{Weight-indicator Reading (lb)} \times \text{length of middle joint (ft)}}{\text{Time to hoist middle joint (sec)} \times 550}$$

(Bull D10)

HOOK ROLLERS – Rollers which prevent the lifting of the resolving upperstructure from the roller path. Hook rollers are the means to connect the upperstructure to the foundation or pedestal. (Spec 2C)

HOOK STRIPS – The hooks on the edges of a screen section which accept the tension member. (Bul 13C)

HOPPER, JET – See Mud-mixing Devices. A device to hold or feed drilling fluid additives. (Bul D11)

HORIZONTAL DISPLACEMENT – The distance between two points that are projected onto a horizontal plane. (Bul D20)

HORSEPOWER (HP) – $\frac{\text{Force (lb)} \times \text{speed (ft/min)}}{33{,}000}$

The rate of doing work (transferring energy) equivalent to lifting 33,000 lb 1 ft/min (33,000 ft-lb/min). This is also 550 ft-lb/sec.

Lifting a weight is a simple example of a force in motion. The same combination of force-times-speed in any direction –along the flat, on a slant, around a curve, or any combination – is the same horsepower. (Also, other transfers of energy may be stated as horsepower.) (Bul D10)

HOT OIL – Oil production in violation of state regulations or transported interstate in violation of federal regulations. (ITOGP)

HOT OIL TREATMENT – The act of heating oil and pumping it into the tubing, casing, or formations to remove paraffin and asphaltines. (RP 54)

HOT-OIL TREATMENT (TO HOT OIL) – A treatment using heated oil to melt and remove accumulated paraffin from the tubing, annulus, flow lines or production equipment. (ITOGP)

HOT TAPPING – Making repairs or modifications on a tank, pipeline, or other installation without shutting down operations. (ITOGP)

HOT WORKING – Deforming metal plastically at a temperature above the recrystallization temperature. (Spec 6A)

HOT WORKING – Deforming metal plastically at such a temperature and rate that hardness and strength do not increase. (Spec 16A)

HOVER – A flight characteristic peculiar to helicopters which enables them to remain stationary above a fixed point. (RP 2L)

HP – Horsepower

HUMIC ACID – Organic acids of indefinite composition in naturally occurring leonarite lignite. The humic acids are the most valuable constituent. See Lignite. (Bu D11)

HVL – Highly Volatile Liquid

HYBRID STRUCTURE – A structure consisting of several different construction materials. (Bul 2N)

HYDRATE – A substance containing water combined in the molecular form (such as $CaSO^4$ $2H_20$). A crystalline substance containing water of crystallization. (Bul 10C, Bul D11)

HYDRATE – A hydrocarbon and water compound which forms in gas gathering, compression, and transmission facilities or well bores under reduced temperature and pressure. In appearance, hydrates resemble snow or ice, and can plug equipment. (WLOP)

HYDRATES – Crystalline substance (ice crystals) formed in gas stream due to temperature reduction as a result of gas expansion when pressure is reduced. (WT)

HYDRATION – The chemical reaction between hydraulic cement and water forming new compounds most of which have strength-producing properties. (Bul 10C)

HYDRATION – The act of a substance to take up water by means of absorption and/or adsorption. (Bul D11)

HYDRAULIC – Operated, moved, or effected by liquid (usually water). (WLOP)

HYDRAULIC DRIVE – A motor driven hydraulically by a pump. (Bul D10)

HYDRAULIC EFFICIENCY – The percentage relation of hydraulic horsepower output to mechanical horsepower input. In some cases this may include mechanical efficiency. (Bul D10)

HYDRAULIC FRACTURING – The act of pumping fluid(s) into a wellbore and into a specific formation to induce fractures. (RP 54)

HYDRAULIC GRADIENT – The quotient obtained by dividing the difference in pressure between any two points along a line of flow by the distance between the points of measured pressure. (Bul 10C)

HYDRAULIC GRADIENT – The change in pressure head between any two points along a line of flow divided by the length between the pints. (SSWID)

HYDRAULIC HORSEPOWER (HHP) –

Circulation Differential

$$\frac{\text{Rate (gpm)} \times \text{pressure (psi)}}{1{,}714}$$

(Bul D10)

HYDRAULIC ORIENTATING SUB – Used in directional holes, with inclination greater than six degrees, to find the low side of the hole. A ball falls to the low side of the sub and restricts an orifice causing an increase in the circulating pressure. The position of the tool is then known with relation to the low side of the hole. (Bul D20)

HYDRAULIC WHIPSTOCK – Refer to "Circulating Whipstock." (Bul D20)

HYDRAULICALLY-OPERATED BENT SUB – A deflection sub which is activated by hydraulic pressure of the drilling fluid. (Bul D20)

HYDROCARBON – A compound consisting only of molecules of hydrogen and carbon. (Bul 10C)

HYDROCARBON – A compound consisting only of molecules of hydrogen and carbon. Petroleum is a mixture of many hydrocarbons. (ITOGP)

HYDROCARBONS – A vast family of compounds containing carbon and hydrogen in various combinations, found especially in fossil fuels. Some hydrocarbons are major air pollutants, some may be carcinogenic, and others may contribute to photochemical smog. (Bul D11)

HYDROCARBONS – Hydrogenated carbon molecules, of which oil and natural gas are familiar examples. Integral components are methane, ethane, propane, butane, pentane, hexane, heptane, and octane, to name a few. Hexane is a major component of gasoline. (WT)

HYDROCARBON WETABILITY – The ability of the process stream to form a protective hydrocarbon film on metal surface. (RP 14E)

HYDROCYCLONE – A liquid-solids separation device utilizing centrifugal force for settling; obtaining the rotation of slurry and resulting centrifugal acceleration from high-velocity tangential entry of the feed into the major circular cross-section of the stationary restraining walls. (Bul 13C)

HYDROCYCLONE SIZE – The maximum diameter of a hydrocyclone. (Bul 12C)

HYDRODYNAMIC DAMPING – Component of hydrodynamic force proportional to the velocity of the body and 180^{o} out of phase with the velocity. (RP 2T)

HYDROGEN SULFIDE (H_2S) – A malodorous gas made up of hydrogen and sulfur with the characteristic odor of rotten eggs. Hydrogen sulfide may be present in some produced crude oils and formation waters. The gas, in the presence of an aqueous phase, is corrosive to tubular and wellhead goods. The gas is toxic and, in very low concentration, can cause death. (Bul D11)

HYDROGEN SULFIDE – A flammable, toxic gas which is slightly heavier than air and sometimes found in fluids encountered in oil, gas, and service well drilling operations. Inhalation at certain concentrations can lead to injury or death. (RP 49)

HYDROGEN SULFIDE – a gaseous compound, commonly known by its chemical formula, H_2S, frequently found in oil and gas reservoirs. It has a distinctive "rotten-egg" odor. It is extremely poisonous and corrosive and quickly deadens the olfactory nerve so that its odor is no longer a warning signal. (WLOP)

HYDROGEN ION CONCENTRATION - A measure of the acidity or alkalinity of a solution, normally expressed as pH. See pH. (Bul D11)

HYDROLOGY – The science dealing with the properties, distribution, and circulation of water and snow. (Bul D11)

HYDROLYSIS – Hydrolysis is the reaction of a salt with water to form an acid and base. For example, soda as (Na_2CO_3) hydrolyzes basically, and hydrolysis is responsible for the increase in the pH of water when soda ash is added. (Bul D11)

HYDROMETER – A floating instrument for determining the specific gravity or density of liquids, solutions, and slurries. A common example is the Mudwate hydrometer used to determine the density of drilling fluid. (Bul D11)

HYDROPHILE – A substance usually in the colloidal state or an emulsion, which is wetted by water, i.e., it attracts water or water adheres to it. (Bul D11)

HYDROPHILIC – A property of a substance having an affinity for water or one that is wetted by water. (Bul D11)

HYDROPHILIC-LIPOPHILIC BALANCE (HLB) – The huydrophilic-lipophilic balance (HLB) is one of the most important properties of emulsifiers. It is an expression of the relative attraction of an emulsifier for water and oil, determined largely by the chemical composition and ionization characteristics of a given emulsifier. The HLB of an emulsifier is not directly related to solubility, but it determines the type of an emulsion that tends to be formed. It is an indication of the behavior characteristics and not an indication of emulsifier efficiency. (Bul D11)

HYDROPHOBE – A substance, usually in the colloidal state, not wetted by water. (Bul D11)

HYDROPHOBIC – Descriptive of a substance which repels water. (Bul D11)

HYDROSTATIC HEAD – The pressure exerted by a column of fluid, usually expressed in pounds per square inch (6.9 kPa). To determine the hydrostatic head at a given depth in psi, multiply the depth in feet by the density in pounds per gallon by 0.052. (Bul 10C, Bul D11)

HYDROSTATIC HEAD – The pressure which exists at any point in the wellbore due to the weight of the column of fluid above that point. (RP 53)

HYDROSTATIC PRESSURE – Uniform external pressure on the sides and ends of a member. (Bul 2U)

HYDROSTATIC TEST (HYDROTEST) – Filling a pipe with water, under pressure, and its ability to hold a certain pressure without leaking or rupturing. (RP 5A5)

HYDRO-TEST (HYDROSTATIC TESTING) – To apply hydraulic pressure (usually with water) in order to find leaks in tubing, lines, piping, vessels and equipment. (ITOGP)

HYDROXIDE – See Base. (Bul 10C)

HYDROXIDE – A designation that is given for basic compounds containing the OH- radical. When these substances are dissolved in water, they increase the pH of the solution. See Base. (Bul D11)

HYGROSCOPIC – The property of a substance enabling it to absorb water from the air. (Bul 10C, Bul D11)

Hz – Hertz (cycles per second)

-I-

IADC – International Association of Drilling Contractors

ICE ISLAND – Large ice pieces of glacial or shelf ice origin. (Bul 2N)

ICE STRUCTURE – A gravity structure largely composed of natural and/or mad-made ice. (Bul 2N)

ID (id) – Literally, inside diameter. (RP 5A5)

IDEAL PERFORATED PERMEABILITY, k_i – The ideal perforated permeability of a Berea sandstone core target is the calculated permeability to kerosine of the core target containing an ideal perforation at the outflow end based on the core section and length of the Berea sandstone core used in determining the perforated effective permeability. (RP 43)

IEEE – Institute of Electrical and Electronics Engineers

IES – Illuminating Engineering Society

IGNITE – To cause to burn. (RP 14G)

IGNITIBLE MIXTURE – A gas-air mixture that is capable of being ignited by an open flame, electric arc or spark or high temperature. See Explosive Limits. (RP 14F)

IGNITIBLE (FLAMMABLE) MIXTURE – A gas-air mixture that is capable of being ignited by an open flame, electric arc or spark or device operating at or above the ignition temperature of the gas-air mixture. See Flammable (Explosive) Limits. (RP 500B)

IGNITION SOURCE – A source of temperature and energy sufficient to initiate combustion. (RP 14G)

IGNITION TEMPERATURE – The ignition temperature is the minimum temperature required to ignite an ignitable mixture. (RP 14F)

IGNITION (AUTOIGNITION) TEMPERATURE – The minimum temperature required, at normal atmospheric pressure, to initiate or cause self-sustained combustion (independent of any externally heated element). (RP 500B)

ILMENITE – An iron-black mineral of composition Fe0 $Ti0_2$ having a specific gravity of 4.67. It is used for increasing the density of well cement slurries and drilling fluids. (Bul 10C)

IMPACT LOADING – This loading results from sudden changes in the state of motion of components of the rig. (Spec 4F)

IMPEDANCE (ACOUSTIC) – Resistance to flow of ultrasonic energy in a medium. Impedance is a product of particle velocity and material density. (RP 2X)

IMPERFECT THREAD LENGTH – Threads having imperfect thread forms. (RP 5B1)

IMPERFECTION – An imperfection is a discontinuity or irregularity in the produce. For exact definitions and illustrations of specific imperfections see API Bulletin 5T1. Sometimes called a flaw. (RP 5A5)

IMPLEMENTATION PLAN – A document of the steps to be taken to ensure attainment of environmental quality standards within a specific time period. Implementation plans are required by various laws. (Bul D11)

IMPOUNDMENT - A body of water such as a pond, confined by a dam, dike, floodgate, or barrier. (Bul D11)

IMPRESSION BLOCK – A block with lead or another relatively soft material on the bottom. The block may be made up on drill pipe, tubing, or wireline at the surface, run into a well, and allowed to rest on a tool or other object that has been lost in the well. On retrieval to the surface, an idea of the size, shape and position of the "fish" is obtained from an examination of the impression left in the lead. This helps in selecting the appropriate fishing tools. (WLOP)

IMPROPER THREAD FORM – A general term describing an excessive deviation from a normal thread profile (in an axial plane) over a length of one pitch or over multiple pitch lengths. (Bul 5T1)

IMPROPER THREAD HEIGHT – Lack of sufficient thread height (depth). This may be because of a "shaved" condition where an excess of metal has been removed form the root or crest, distorting the contour of the thread. (Bul 5T1, RP 5A5)

INADEQUATE FLASH TRIM – A condition in which height of weld flash after trimming exceeds the limits set in the API specification to which the pipe was manufactured. (Bul 5T1)

INADEQUATELY VENTILATED AREA – See Adequately Ventilated Area. (RP 14F)

INCENDIARY ENERGY – Hot particle energy sufficient to ignite a specific ignitable mixture. (RP 500B)

INCIDENCE RATE – Four separate incidence rates are used for purposes of this award plan. Each incidence rate represents the number of one of the four categories below per 100 full-time workers per year (200,000 hours = bases for 100 full-time equivalent workers working 40 hours per week. 50 weeks per year.)

1. Number of cases involving days away from work or death.
2. Number of days away from work.
3. Number of deaths.
4. Number of total recordable cases

(Bul 5)

INCINERATION – The controlled process by which solid, liquid, or gaseous combustible wastes are burned and changed into gases; the residue produced contains little or no combustible material. (Bul D11)

INCINERATOR – An engineered apparatus used to burn waste substances and in which all the combustion factors, temperature, retention time, turbulence, and combustion air can be controlled. (Bul D11)

INCLINATION (INCLINATION ANGLE) – The angle of the wellbore from the vertical. (Bul D20)

INCLINATION SURVEY – A survey to obtain the angle through which the bit was deflected form the vertical during drilling operations. Usually implies a survey where n azimuth readings are taken. (Bul D20)

INCLINOMETER – An instrument that measures a position angle of deviation from the vertical. (Bul D20)

INCLUDED ANGLE – The angle between the flanks of the threads. (RP 5B1)

INCLUSION – Foreign material or non-metallic particles entrapped within the metal during solidification. (Bul 5T1)

INCOMPLETE FUSION – Lack of complete coalescence of some portion of the metal in a weld joint. (Bul 5T1)

INCOMPLETE PENETRATION (LACK OF PENETRATION) – A condition where the weld metal does not continue through the full thickness of the joint. (Bul 5T1)

INCRUSTATIONS – Undesirable material which collects on interior walls of production vessels such as separators, meters, tanks, etc., reducing internal dimensions or capacity. Paraffin, gyp, etc., are examples. (WT)

INDENTED DRILL COLLAR – Round drill collar with a series of indentations on one side to form an eccentrically weighted collar. (Bul D20)

INDICATION – A response from nondestructive inspection that requires interpretation in order to determine its significance, i.e., blip on the log or a powder build on the pipe. (RP 5A5)

INDICATION (ULTRASONICS) – The signal displayed on the ultrasonic oscilloscope. (RP 2X)

INDICATOR – Substances in acid-base titrations which, in solution, change color or become colorless as the hydrogen ion concentration reaches a definite value, these values varying with the indicator. In other titrations such as chloride, hardness, and other determinations, these substances change color at the end of the reaction. Common indicators are phenolphthalein, potassium chromate, etc. (Bul D11)

INDICATOR (OR READOUT) – A device for indicating a condition, a current or potential. Typical ones used on inspection instruments are galvanometers, meters both De Arsenval or digital, CRT or a warning light. (RP 5A5)

INDIRECT FIRED VESSEL – A vessel used to increase the temperature of a fluid by the transfer of heat from another fluid which is heated by a flame in the same vessel. The flame is contained within a fire tube or tubes. (RP 2G)

INDIRECT HEATED COMPONENT – A vessel or heat exchanger used to increase the temperature of a fluid by the transfer of heat form another fluid, such as steam, hot water, hot oil or other heated medium. (RP 14C)

INDIRECT HEATED VESSEL – A vessel or heat exchanger used to increase the temperature of a fluid by the transfer of heat from another fluid such as steam, hot water, hot oil or other heated media. (RP 2G)

INDUCED PERMAFROST – Permafrost caused by thermal disturbance from construction or operation at the planned installation site. (Bul 2N)

INDUCTION – The magnetism induced in a ferromagnetic body by an outside magnetizing force. (RP 5A5)

INDUSTRIAL CLASSIFICATION – Segment of all industry identified by work process and end-product according to the Standard Industrial Classification Manual, 1972 edition. (Bul T5)

INDUSTRY RATE - An incidence rate calculated for the industrial classification. (Bul T5)

INELASTIC BUCKLING STRESS – The buckling stress of a cylinder which exceeds the elastic stress limit of the member material. The inelastic material properties are accounted for, including effects of residual stresses due to forming and welding. (Bul 2U)

INERT GAS – A gas that does not react with other substances under ordinary conditions. (Bul D11)

INFILTRATION –The flow of a fluid into a substance through pores or small openings. Commonly used in hydrology to denote the flow of water into soil material. (Bul D11)

INHIBIT – Prevent, stop, restrain or arrest an undesirable action, i.e., prevent corrosion. (WT)

INHIBITED DRILLING FLUID – A drilling fluid having an aqueous phase with a chemical composition that tends to retard and even prevent (inhibit) appreciable hydration (swelling) or dispersion of formation clays and shales through chemical and/or physical means. See Inhibitor Drilling Fluid. (Bul 10C)

INHIBITED DRILLING FLUID – A drilling fluid having an aqueous phase with a chemical composition that tends to retard and even prevent (inhibit) appreciable hydration (swelling) or dispersion of formation clays and shales through chemical and/or physical means. See Inhibitor Drilling Fluid. (Bul 10C)

INHIBITION – The diminishing of the rate of a chemical reaction to retard corrosion. (COGWE)

INHIBITION – Diminishing the rate of corrosion. (SSWID)

INHIBITOR (CORROSION) – Any agent which when added to a system, slows down or prevents a chemical reaction or corrosion. Corrosion inhibitors are used widely in drilling and producing operations to prevent corrosion of metal equipment exposed to hydrogen sulfide, carbon dioxide, oxygen, salt water, etc. Common inhibitors added to drilling fluids are filming amines, chromates, and lime. (Bul D11)

INHIBITOR DRILLING FLUID – Substances generally regarded as drilling fluid contaminants, such as salt and calcium sulfate, are called inhibitors when purposely added to drilling fluid so that the filtrate from the drilling fluid will prevent or retard the hydration of formation clays and shales. (Bul 10C)

INHIBITOR (DRILLING FLUID) – Substances generally regarded as drilling fluid contaminants, such as salt and calcium sulfate are called inhibitors when purposely added to drilling fluid so that the filtrate from the drilling fluid will prevent or retard the hydration of formation clays and shales. (Bul D11)

INITIAL GEL – See gel Strength, Initial. (Bul 10C, Bul D11)

INITIAL POTENTIAL (IP) – The initial capacity of a well to produce. (ITOGP)

INITIAL PULSE – The first indication which may appear on the screen. This indication represents the emission of ultrasonic energy from the crystal face (main bang). (RP 2X)

INITIAL SET – Cement shall be considered to have acquired its initial set when it will bear, without appreciable indentation, the initial Gillmore needle. This is not an API test. See ASTM C 266: Time of Setting of Hydraulic Cement by Gillmore Needles. (Bul 10C)

INJECTED GAS – High pressure gas injected into a formation to maintain or restore reservoir pressure or otherwise enhance recovery. Also, has injected for gas-lift. (ITOGP)

INJECTION PATTERN – The spacing and pattern of wells in an enhanced recovery project. The more common injection patterns include line drive, five spot, seven spot, nine spot, and peripheral. (ITOGP)

INJECTION PUMP – A pump that (1) injects chemicals into a flow-line system for the purpose of treating emulsions or corrosion and (2) injects liquids underground for disposal or to enhance recovery. (ITGOP)

INJECTION WELL – Well in which fluid is pumped to push reservoir fluids to a producing well. (SSWID)

INJECTION WELL – A well into which fluid is pumped to increase reservoir pressure or to push reservoir fluids toward a producing well. (WLOP)

INJECTION WELLS – Wells in which fluid is pumped down the hole to push reservoir fluids to a producing well. (WT)

INK BLOB – An early method of measuring inclination (refer to "Acid Bottle"). (Bul D20)

INLET – The actual opening through which the feed enters the device. (Bul 13C)

INLET GAS – That gas which is compressed and returned to a wellbore to be used for gas lift or as injection gas for pressure maintenance. (WT)

INPUT HORSEPOWER – The horsepower that is put into an operating system. (Bul D10)

INPUT WELL – A well which is used for injecting fluids into an underground stratum. (ITOGP)

IN SITU COMBUSTION – The setting afire of some portion of the reservoir in order that the gases produced by combustion will drive oil ahead of it to the producing wells. (Bul 10C)

IN SITU COMBUSTION – The setting afire of some portion of the oil in a reservoir in order (1) that the gases produced by combustion will drive oil ahead of them to the producing wells and (2) to heat the oil so it will flow more readily. (ITOGP)

INSIDE BLOWOUT PREVENTER – A device that can be installed in the drill string that acts as a check valve allowing drilling fluid to be circulated down the string but prevents back flow. (RP 53)

INSPECTOR – The authorized agent of the purchaser. (RP 5L2)

INSPECTOR – The duly authorized representative of the purchaser, qualified to act as such by training and experience in the fabrication of structural steel pipe covered by this specification. (Spec 2B)

INSPECTOR – The individual representing the operator during fabrication and installation with responsibility for examining all details of fabrication to ensure compliance with construction specifications. (RP 2X)

INSPECTION – The process of examining materials and pipes for possible defects or for deviation from established standards. (RP 5A5)

INSPECTION SPOOL – A short length of pipe inserted in a pipeline in such a manner that it is easily removed for inspection. It should be of the same material as the remainder of the pipeline. (SSWID)

INSULATED FLANGE – A flange which contains insulating material to separate the metal parts. (ITOGP)

INTAKE FLAME ARRESTOR – A device placed on the air intake of the firetube to prevent propagation of flame from inside the firetube to the outside atmosphere. It normally consists of a corrugated aluminum cell mounted in a metal housing which attaches to the firebox. (Spec 12K)

INTEGRAL – A part of the whole. For example: A meter is an integral part of an ACT unit. (WT)

INTEGRATING METER – A meter that calculates, records and gives instantaneous readout of throughput volumes or rates, and in many cases the integrating (calculating) portion will eliminate need for hand calculation or correction. (WT)

INTERCHANGEABLE – Conforms in every detail, within specified tolerances to both fit and function of a safe design but not necessarily the form. (Bul S1)

INTERFACE – The physical boundary between two adjacent surfaces. (RP 2X)

INTERFACE DRAIN – A pipe connection extending to the normal interface level with a vortex breaker which is used periodically to drain off any accumulated sludge. (Spec 12L)

INTERFACIAL TENSION – The force required to break the surface between two immiscible liquids. The lower the interfacial tension between the two phases of an emulsion, the greater the ease of emulsification. When the values approach zero, emulsion formation is spontaneous. See Surface tension. (Bul D11)

INTERFERENCE – (1) Occurs when drilling boreholes that are deemed too close to the borehole of another well (refer to “Intersection”). (2) Refer to “Magnetic Interference.” (Bul D20)

INTERIM AWARD – An Award of Merit or Award of Honor given within a calendar year for a perfect record (that is, a record without an occupational injury or illness involving death or days away from work). (Bul T5)

INTERIM AWARD APPLICATION – A special report form used as application for National Safety Council interim awards. (Bul T5)

INTERMEDIATE CASING STRING – The casing set in a well after the surface casing. Also called PROTECTION CASING. (ITOGP)

INTERMEDIATE COLUMNS – Vertical, cylindrical or multifaceted buoyancy members of the hull structure, which primarily assist in deck and/or pontoon support. (RP 2T)

INTERMEDIATE DECKS – Deck levels between lower deck and upper deck consisting of girder, beam and plate elements. (RP 2T)

INTERMEDIATE GIRDERS - Primary deck elements spanning between main girders. (RP 2T)

INTERMITTENT FLOW – Gas lift operation in which gas is injected periodically into the liquid column, with reservoir fluids and injected gas being produced from the wellhead at the surface for an interval following each injection period. (GL)

INTERMITTENT GAS-LIFT – Pressurized gas injected at intervals into tubing down hole at a depth below top of fluid in tubing to lift slugs of fluid to surface. (WT)

INTERMITTER – A device for regulating the production of a gas lift well whereby the well produces for short periods of time and is then closed in. This action is repeated several times a day. (ITOGP)

INTERMITTER (TIME CYCLE CONTROLLER) – A surface control which may be adjusted and set to operate a motor valve at predetermined intervals of time and also control the duration of the operating or injection period. (GL)

INTERNAL THREAD – A thread on the inside surface of a coupling or pipe. (RP 5A5, RP 5B1)

INTERPRETATION – The process of determining the nature of an indication. (RP 5A5)

INTERRUPTED STARTING THREAD – The absence of a portion of the true starting thread groove on the chamfer of a round or buttress (pipe thread) caused by thread axis misalignment with the chamfer axis or out-of-round chamfer diameter. (Bul 5T1)

INTERSECTION – Occurs when two wellbores meet at a common point, usually happens when a drilling bit or drill stem contacts the casing of a previously drilled well. (Bul D20)

INTERSTATE WATERS – According to law, waters defined as: (1) rivers, lakes, and other waters that flow across or form a part of state or international boundaries; (2) waters of the Great Lakes; (3) coastal waters whose scope has been defined to include ocean waters seaward to the

territorial limits and waters along the coastline (including inland streams) influenced by the tide. (Bul D11)

INTERSTITIAL WATER – Water contained in the interstices or voids of formations. (Bul D11)

INTERVAL – A designated portion of a zone. (RP 57)

INTRINSICALLY SAFE SYSTEM – An electrical system which is incapable of releasing sufficient electrical or thermal energy under normal or abnormal conditions to cause ignition of a specific hazardous atmospheric mixture in its most easily ignitable concentration. (RP 14F)

INTRINSICALLY SAFE SYSTEM – An electrical system which is not capable of releasing sufficient electrical or thermal energy under normal or abnormal conditions to cause ignition of a specific flammable or combustible mixture in its most easily ignitible concentration. (RP 500B)

INVERT EMULSION – A water-in-oil emulsion where fresh or salt water is the dispersed phase and diesel, crude, or some other oil is the continuous phase. Water increases the viscosity and oil reduces the viscosity. (Bul 10C)

INVERT OIL-EMULSION DRILLING FLUID – An invert emulsion is a water-in-oil emulsion where fresh or salt water is the dispersed phase and diesel, crude, or some other oil is the continuous phase. Water increases the viscosity and oil reduces the viscosity. (Bul D11)

IODINE NUMBER – The number indicating the amount of iodine absorbed by oils, fats, and waxes, giving a measure of the unsaturated linkages present. Generally, the higher the iodine number, the more severe the action of the oil on rubber. (Bul D11)

ION – Electrically charged particle, atom, or radical. (COGWE, SSWID)

ION – Acids, bases, and salts (electrolytes) when dissolved in certain solvents, especially water, are more or less dissociated into electrically charged ions or parts of the molecules, due to loss or gain of one or more electrons. Loss of electrons results in positive charges producing a cation. A gain of electrons results in the formation of an anion with negative charges. The valence of an ion is equal to the number of charges borne by it. (Bul D11)

ION EXCHANGE – A reversible exchange of ions (electrically charged atoms or groups of atoms) between a solid and a liquid. In water and waste-water treatment, the solids (ion-exchange resins) exchange the polluting ions in the water for ions originally on the resin. (Bul D11)

IONIZATION CHAMBER – An instrument that detects and measures ionizing radiation by observing the electrical current created when radiation ionizes gas in the chamber, making it a conductor of electricity. (RP 5A5)

IPR (INFLOW PERFORMANCE RELATIONSHIP) – The relationship of flowing bottom hole pressure to gross liquid producing rate for a particular well. (GL)

IR – Letter symbols of current (1) and resistance (R) as used in Ohm's Law (E= IR). (COGWE, SSWID)

ISA – Instrument Society of America

ISOGONIC CHART – A chart showing lines of equal magnetic declination. (Bul D20)

ISOTOPE – Atoms with the same atomic number (same chemical element) but different atomic weights. (RP 5A5)

-J-

JACK BOARD – A device used to support the end of a length of pipe while another length is being screwed on. (ITOGP)

JACK SHAFT – Term applied to an intermediate shaft. (Spec 2C)

JACKUP VESSEL – An offshore drilling or well servicing structure with tubular or derrick legs that can be moved vertically to support the deck and hull. (WLOP)

JAR – n. A percussion tool that operates on a mechanical or hydraulic principle and is designed to deliver a heavy hammer blow to objects in the borehole to which it is attached. Jars are used for such purposes as freeing stuck objects in the hole in fishing operations or imparting a jarring motion to stuck tools for the purpose of freeing them. The design of the jar often permits blow to be delivered in either a downward or upward direction, with control being effected at the surface. v. To apply a heavy upward or downward blow to the drill stem, or a heavy upward or downward blow to wireline tools, by use of a jar. (WLOP)

JAR ACCELERATOR – A hydraulic tool used in conjunction with a jar. The accelerator is made up in the fishing string above the jar and serves to increase the magnitude of the jarring blow delivered to the fish. (WLOP)

JAR TEST – Pretesting in small containers to see what the reaction will be before large volumes are utilized. Generally used to show the effects of adding chemicals to fluids to produce a change (if the chemical will break an emulsion, for example). (SSWID)

JET BIT – A drilling bit having nozzles through which the drilling fluid is directed in a high velocity stream. (Bul D20)

JET BIT DEFLECTION – A method of changing the inclination angle and direction of the wellbore by using the washing action of a jet nozzle at one side of the bit. (Bul D20)

JET NOZZLE – A fluid-flow port in a jet bit. (Bul D10)

JET-PERFORATING – An operation similar to gun-perforating except that a shaped charge of high explosives is used to burn a hole through the casing instead of the gun which fires a projectile. (Bul 10C)

JET SPUD BIT – A special bit used to cause deflection of the wellbore by a combination of jetting and spudding action. (Bul D20)

JET-TYPE BIT – A bit employing directed, rapid flow of fluid from a nozzle or nozzles. (Bul D10)

JETTING – The action of causing erosion by fluid impingement on the formation. (Bul D20)

JETTING – The process of periodically removing a portion of, or all of, the water, drilling fluid, and/or solids from the pits, usually by means of pumping through a jet nozzle arrangement. (Bul D11)

JETTING RUNS (CORRECTIVE JETTING RUNS) – Trips, jetting and drilling made to change the inclination and direction of the wellbore. (Bul D20)

JIB (Also known as TIP EXTENSION) – An extension attached to the boom point to provide added boom length for lifting specified loads. (Spec 2C)

JOINT – A length of pipe, casing or tubing, usually from 20 to 30 feet long. (ITOGP)

JOINTER – A length of pipe made up of two shorter pieces of pipe. (RP 5A5)

JONES EFFECT – The net surface tension of salt solutions first decreases with an increase of concentration, passes through a minimum, and then increases as the concentration is raised. (Bul D11)

JTU (JACKSON TURBIDITY UNITS) – A measure of the turbidity of water, proportional to the ppm silica, where 100 ppm silica equals 21.5 JTU. (Bul D11)

JUMPER HOSES/FLUID TRANSFER SYSTEM – System for transmitting fluid flow between the top of the risers to the platform mounted manifold. Jumper hoses or an articulated system of hard piping may be used to accommodate the relative motion between these points. (RP 2T)

JUNK – n. The metal debris lost in a hole. Junk may be lost tools, pieces of wire, or any relatively small object that impedes activity to the extent that it must be fished out of the hole. v. To abandon a project (as a well with mechanical problems that cannot be corrected). (WLOP)

JUNK – Metal debris lost in a hole. Junk may be a lost bit, milled pieces of pipe, wrenches, or any relatively small object that must be fished out of the hole. (ITOGP)

JUNK BASKET – A fishing tool run in the well when it is necessary to retrieve small parts or lost tools. (ITOGP)

-K-

KELLY – The square or hexagonal shaped steel pipe connecting the swivel to the drill pipe. The kelly moves through the rotary table and transmits torque to the drill strong. (RP 54)

KELLY COCK – A valve immediately above the kelly that can be closed to confine pressures inside the drill string. (RP 53)

KELLY OR KELLY JOINT – A heavy square pipe or other configuration that works through a like hole in the rotary table and rotates the drill stem. (Bul 10C, Bul D11)

KELLY VALVE, LOWER – An essentially full-opening valve installed immediately below the kelly, with outside diameter equal to the tool joint outside diameter. Valve can be closed to remove the kelly under pressure and can be stripped in the hole for snubbing operations. (RP 53)

KEY SEAT – That section of a hole, usually of abnormal deviation and relatively soft formation, which has been eroded or worn by drill pipe to a size smaller than the tool joints or collars. This keyhole type configuration will not allow these members to pass when pulling out of the hole. (Bul 10C, Bul D11)

KEYSEAT – A condition wherein the borehole is abraded and extended sideways and with a diameter smaller than the drill collars and the bit; usually caused by the tool joints on the drill pipe. (Bul D20)

KEYSEAT WIPER – A special reamer device designed to run in the drill stem assembly to enlarge the diameters of keyseats to the size of the drill collars. (Bul D20)

KICK – An unintended entry of water, gas, oil, or other formation fluid into the wellbore. A kick occurs because the pressure exerted by the column of fluid is not great enough to overcome the pressure exerted by the fluids in the formation drilled. If prompt and proper action is not taken, a blowout may occur. (WLOP)

KICK – Intrusion of formation liquids or gas that results in an increase in pit volume. Without corrective measures, this condition can result in a blowout. (RP 53)

KICK A WELL OFF – Unload and place a well on gas lift. (GL)

KICK-OFF – To bring a well into production. (ITOGP)

KICK-OFF PRESSURE – The gas injection pressure available for unloading fluids from a gas lift well down to the operating valve depth. (GL)

KICK-OVER TOOL – The wireline tool which guides the wireline gas lift valve into the mandrel pocket when installing the valve or guides the pulling tools onto the valve when recovering the valve. (GL)

KICKOFF POINT (KICKOFF DEPTH) – The position in the wellbore where the inclination of the hole is first purposely increased. (Bul D20)

KILL A WELL – To stop a well from producing so that surface connections may be removed for well servicing or workover. It is usually accomplished by circulating water or mud to load the hole and render it incapable of flowing. (ITOGP)

KILL LINE – A line connected to the annulus below the blowout preventers for the purpose of pumping into the annulus while the preventers are closed. (Bul D11)

KILL LINE – A high pressure line between the pumps and some point below a blowout preventer. This line allows fluid to be pumped into the well or annulus with the blowout preventer closed. (RP 53)

KILL WEIGHT FLUID – A fluid whose density creates a hydrostatic pressure equal or greater than the pressure of the formation exposed to the wellbore. (RP 57)

KILLING A WELL – Bringing a well under control that is blowing out. Also, the procedure of circulating water and drilling fluids into a completed well before starting well servicing operations. (Bul D11)

KILLING A WELL – The act of removing shut-in surface pressure from a well by creating hydrostatic pressure equal to or greater than formation pressure. (RP 54)

KINEMATIC VISCOSITY – The kinematic viscosity of a fluid is the ratio of the viscosity (e.g., cp in g/cm-sec) to the density (e.g., g/cc) using consistent units. In several common commercial viscometers the kinematic viscosity is measured in terms of the time of efflux (in seconds) of a fixed volume of liquid through a standard capillary tube or orifice. See Marsh Funnel Viscosity. (Bul D11)

KING PIN – See Center Pin. (Spec 2C)

KINKED DOUBLE – A bent double of drill string, forerunner to the fabricated bent sub. (Bul D20)

KNIFE (OR RAZOR) EDGE – A sharp edge at the end of the pipe producing no face; caused buy an excessively small chamfer diameter and/or excessive ID bevel. (Bul 5T1)

KNOCKOUT – A kind of tank or vessel used to separate water from oil. A FREE WATER KNOCKOUT (FWKO). (ITOGP)

KNOCKOUT – A knockout is a type of separator which falls into one of two categories: free water and total liquid knockouts.
a – The free water knockout is a vessel used to separate free water from a flow stream of gas, oil, and water. The gas and oil usually leave the vessel through the same outlet to be processed by other equipment. The water is removed for disposal.
b – The total liquid knockout is normally used to remove the combined liquids from a gas stream. (Spec 12J)

KNUCKLE JOINT – A deflection tool employing a ball-type universal joint permitting 360 degree flexure of the lower part of the tool. (Bul D20)

KNUCKLE JOINT – A deflection tool, placed above the tools in the work string, that has a ball and socket arrangement which allows the tool to be deflected at an angle. A knuckle joint is

sometimes useful in fishing operations because it allows the fishing tool to be deflected to the side of the hole where a fish may have come to rest. (WLOP)

KOP – Refer to "Kickoff Point." (Bul D20)

KVA – Kilowatt-ampere.

KVA – Transformer Power Rating

KW – Kilowatt

-L-

LACING – See Boom Lacing. (Spec 2C)

LACT – Lease Automatic Custody Transfer.

LAGGINGS – Removable and interchangeable drum spool shells for changing hoist drum diameter to provide variation in rope speeds and line pulls. This construction is optional with manufacturer. (Spec 2C)

LAMBERT COORDINATE SYSTEM – A system of coordinates on a conical projection based on two standard parallels. (Bul D20)

LAMELLAR TEARING – A cracking phenomenon resulting from non-metallic inclusions which occurs beneath welding principally in rolled steel plate fabrication. (RP 2X)

LAMINAR FLOW – Fluid elements flowing along fixed streamlines which are parallel to the walls of the channel of flow. In laminar flow, the fluid moves in plates or sections with a differential velocity across the front which carries from zero at the wall to a maximum toward the center of flow. (Bul 10C)

LAMINAR FLOW – Fluid elements flowing along fixed streamlines which are parallel to the walls of the channel of flow. In laminar flow, the fluid moves in plate or sections with a differential velocity across the front which varies from zero at the wall to a maximum toward the center of flow. Laminar flow is the first stage of flow in a Newtonian fluid; it is the second stage in a Bingham plastic fluid. This type of motion is also called parallel, streamline, or viscous flow. See Plug and Turbulent Flow. (Bul D11)

LAMINATION – An internal metal separation creating layers generally parallel to the surface. (Bul 5T1)

LAMINATION – A metal defect with separation or weakness generally aligned parallel to the worked surface of the metal. (RP 2X)

LANDING NIPPLE – A receptacle in a production string with an internal profile to provide for latching and sealing of various types of plugs or valves. (RP 57)

LAP – Fold of metal which has been rolled or otherwise worked against the surface of rolled metal, but has not fused into sound metal. (Bul 5T1)

LAP – A longitudinal overfill rolled into the surface of the bar. Typically formed at the bar during a rolling pass. (Spec 11B)

LAST ENGAGED THREAD – The last thread on a pin engaged with the coupling. (RP 5B1)

LAST SCRATCH – Last visible evidence of the machined thread tool mark on the pipe surface. (RP 5B1)

LATCH – The locking device for a wireline gas lift valve to lock the valve in the mandrel. (GL)

LATITUDE – The horizontal displacement of one station from another in a north or south direction. (Bul D20)

LATTICE BOOM – Boom of open construction with angular or tubular lacing between main corner members (chords) in form of truss. (Spec 2C)

LAY BARGE – A shallow-draft, barge-like vessel used in the construction and laying of under-water pipelines in swampy areas and to offshore platforms. (ITOGP)

LAYING DOWN TUBING – Pulling tubing from the well and laying it on a pipe rack. Similar terms apply to drill pipe and rods. (ITOGP)

LC_{50} – See Medial Lethal Concentration in Section 2. (Bul D11)

LD_{50} – See Median Lethal Dose in /Section 2. (Bul D11)

LEACHATE – Liquid that has percolated through solid waste or other medium and has extracted dissolved or suspended materials from the medium. (Bul D11)

LEACHING – The process by which soluble materials in the soil, such as nutrients, pesticide chemicals, or contaminants are washed into a lower layer of soil or are dissolved and carried away by water. (Bul D11)

LEAD – On a decanting centrifuge, the slurry-conducting channel formed by the adjacent walls of the flutes or blades of the screw conveyor. (Bul 13C)

LEAD – The distance a thread moves axially. The distance from a point on a thread measured parallel to the axis of the thread section. (RP 5B1)

LEAD – The distance that a thread moves along its longitudinal axis. The distance from a point on a thread to a corresponding point on the next thread, measured parallel to the axis of the thread section. (RP 5A5)

LEAD – The distance from a point on a thread turn to a corresponding point on the next thread turn, measured parallel to the thread axis. Lead tolerances are expressed in terms of “per inch” of

threads and "cumulative," and lead errors must be determined accordingly. For interval measurements over lengths other than 1 in. (25,40 mm) the observed errors should be calculated to the per-inch basis. For cumulative measurements, observed errors represent the cumulative errors. (Spec 5B)

LEAD ANGLE – A method of setting the direction of the wellbore in anticipation of the bit walking. (Bul D20)

LEADING OR FRONT FLANK (STAB FLANK) – The flank of the pipe thread facing the near end of pipe. The flank of the coupling thread forcing the open end of the coupling. (RP 5B1)

LEAK – The accidental escape from a process component of liquid and/or gaseous hydrocarbons to atmosphere. (RP 14C)

LEAKAGE FIELD – This is the magnetic field forced out of the material into the air by the distortion of the field within the material caused by the presence of a discontinuity. (RP 5A5)

LEAKER – A length of pipe that will not hold hydrostatic pressure. (RP 5A5)

LEAN GAS – Natural gas containing little or no liquefiable hydrocarbons. (ITOGP)

LEASE – (1) A legal document that conveys to an operator the right to drill for oil and gas. (2) The tract of land, on which a lease has been obtained, where the producing wells and production equipment are located. (ITOGP)

LEASE AUTOMATIC CUSTODY TRANSFER (LACT OR ACT) – The measurement and transfer of oil from the producer's tanks to the oil purchaser's pipeline on an automatic basis without a representative of either having to be present. (ITOGP)

LEASE OPERATOR – One charged with the responsibility of operating all wells and equipment on a lease. Sometimes called pumper. May be required to test wells, gage tanks, make minor repairs to maintain well production, make reports of production and sales etc. (WT)

LEDGE – A projecting ridge or edge in the side of the wellbore. A ledge may be created with the bit by rotating off bottom. Other ledges occur when consolidated formations are exposed by wall cavings in the softer unconsolidated formations. (Bul D20)

LEL – Lower Explosive Limit.

LENGTH – A complete section of casing, tubing, or drill pipe. (Colloquial term is "joint.") (RP 5A5)

LENGTH OF THREAD ENGAGEMENT – The length of contact between two mated parts measured axially. (RP 5B1)

LEONARDITE – A naturally occurring oxidized lignite. See Lignite. (Bul 10C, Bul D11)

LFL – Lower Flammable Limit.

LICENSED MATERIAL – Radiation source material possessed, used or transferred under license issued by the appropriate government agency. (RP 5A5)

LICENSEE – Holder of a license to use the API Monogram. (Spec Q1)

LIFE CYCLE – The phases, changes, or stages an organism passes through during its lifetime. (Bul D11)

LIFT-OFF – The perpendicular distance between detector shoe and pipe surface sometimes called "stand-off." (RP 5A5)

LIFTING COSTS – The costs of producing oil from a well or a lease. (ITOGP)

LIGHT DISCHARGE - See Preferred Term: Overflow. (Bul 13C)

LIGHT SOLIDS – See Related Term: Low Specific Gravity Solids. (Bul 13C)

LIGNITE – Brownish-black coal, intermediate between peat and bituminous coal; especially one in which the texture of the original wood is distinct (synonym Brown Coal). (Bul 10C)

LIGNITE – A collective term designating a broad group of naturally occurring amorphous, acidic materials derived form decayed vegetation, e.g., leonardite. These materials are obtained by strip mining from selected lignite deposits. The active compound is humic acid. Lignites, which may or may not be combined with chemical compounds such as sodium or potassium hydroxide and/or chromates, are used as thinners, emulsifiers, and for fluid loss control. (Bul D11)

LIGNOSULFONATE – Anionic portion of a by-product of sulfite paper manufacturing process. The heavy metal salt is used primarily in drilling fluids. The alkaline and alkaline earth salts may be used in the manufacture of certain API Class well cements and in well cementing. (Bul 10C)

LIGNOSULFONATES – Organic drilling fluid additives derived from by-products of sulfite paper manufacturing process from coniferous woods. Some of the common salts, such as the ferrochrome, chrome, calcium, and sodium, are used as universal deflocculants while others are used selectively for calcium-treated systems. In large quantities, the ferro-chrome and chrome salts are sometimes used for fluid-loss control and shale inhibition. (Bul D11)

LIMBER HOOKUP – A bottom-hole assembly that is relatively free to buckle. (Bul D20)

LIME – Calcium Hydroxide. (Bul 10C)

LIME – Commercial form of calcium hydroxide. (Bul D11)

LIME-TREATED DRILLING FLUIDS – Commonly referred to as "lime-base"muds. These high-pH systems contain most of the conventional fresh-water additives to which slaked

hydrated lime has been added to impart special properties. The alkalinites (pH0) and lime contents vary from low to high. (Bul 10C, Bul D11)

LIMESTONE – See Calcium Carbonate. (Bul 10C)

LIMESTONE – A type of sedimentary rock rich in calcium carbonate. Limestone sometimes serves as a reservoir rock for petroleum. (ITOGP)

LIMITED VENTILATION – Although ventilated at a rate of less than six (6) air changes per hour, certain rooms, buildings, and spaces may have a natural or a mechanical ventilation system which is sufficient to reasonably assure that significant quantities of vapor-air mixtures in concentration above 25% of the lower flammable (explosive) limit (LEL) will not accumulate for significant periods of time due to hydrocarbon emissions which are relatively small in size or short in duration. These areas are considered to have "limited ventilation." While such areas may justify a classification reduction from Division 1 to Division 2, they never should be considered as unclassified based on ventilation rates along. (RP 500B)

LINE OF CLOSURE – A straight line, in a horizontal plane containing the last station of the survey, drawn from the projected surface location to the last station of the survey. (Bul D20)

LINEAR IMPERFECTIONS – Linear imperfections include, but are not limited to, seams, laps, cracks, plug scores, cuts and gouges. (Spec 5A)

LINEARITY – Amplitude: The characteristic of an ultrasonic testing system indicating its ability to respond in a proportional manner to a range of echo amplitudes produced by specified reflectors. Distance: The characteristic of an ultrasonic testing system indicting its ability to respond in a proportional manner to a range of echo signals, produced by specified reflectors, variable in time, usually a series of multiple back reflections. (RP 2X)

LINED OUT – Refers to being on a satisfactory trajectory with the proper angle of inclination and direction. (Bul D20)

LINER – Any string of casing whose top is situated at any point below the surface. (Bul 10C)

LINER – Refer to Casing. (RP 54)

LINER – Partial length pipe string extending between bottom of borehole to an elevation above bottom of the previous casing string. Liner performs same function as productive casing in sealing off productive zones and water bearing formations. Liner may or may not be cemented in place. (RP 54)

LIPOPHILE – A substance usually colloidal and easily wetted by oil. (Bul D11)

LIPOPHILIC – Having an affinity for oil. (Bul D11)

LIQUID – A substance which flows readily, does not tend to expand indefinitely like a gas, assumes the form of its container while retaining its independent volume, and has form which can be seen and felt. (WT)

LIQUID CAPACITY – The maximum volume rate at which a decanting centrifuge or screen can handle liquid without detriment to separation. (Bul 13C)

LIQUID DISCHARGE – That stream from a liquid-solids separation device which contains a higher percentage of liquid fraction than does the feed. (Bul 13C)

LIQUID (FLUID) PACKED – In horizontal treaters the coalescing section or entire treater may operate completely full if liquid. This condition is referred to as liquid (fluid) packed. (Spec 12L)

LIQUID METER – A measurement device to determine volume of liquid passing a given point in line. Usually calibrated in barrels or gallons. (WT)

LIQUID OVERFLOW- The discharge of liquids from a process component through a gas (vapor) outlet. (RP 14C)

LIQUID SATURATION – The portion of the pore space in a reservoir rock which is occupied by a liquid phase. (RP 44)

LIVE OIL – Crude oil that contains gas and has not been stabilized or weathered. This oil can cause gas cutting when added to drilling fluid and is a potential fire hazard. (Bul D11)

LIVE ROLLER CIRCLE - An assembly of multiple swing rollers free to roll between revolving upperstructure and mounting. (Spec 2C)

LOAD – Any action causing stress or strain in the structure. (RP 2T)

LOAD BLOCK, LOWER – The assembly of hook or shackle, swivel, sheaves, pins, and frame suspended by the hoisting ropes. (Spec 2C)

LOAD BLOCK, UPPER – The assembly of shackle, swivel, pins, and frame suspended from the boom point. (Spec 2C)

LOAD FLUID (KILL FLUID) – Liquid used to fill the well before pulling the tubing. (GL)

LOAD GUYLINES – Stabilizing guylines which run from a point on the mast, derrick, or pole to a point at or near the base supporting the mast or pole or to ground anchors. (Sometimes referred to as internal guylines when attached to the base.) (RP 54)

LOAD LINE (ALSO KNOWN AS HOIST LINE) – In lifting crane service it refers to the main hoist. The secondary hoist is referred to as a "Whip Line or Auxiliary Line." (Spec 2C)

LOAD OR PRESSURE FLANK – The flank which takes the load. The back 3^{o} flank of buttress casing. (RP 5B1)

LOAD RATINGS – Crane ratings in pounds (kilograms, decanewtons) established by the manufacturer. (Spec 2C)

LOAD-WORKING – The external load in pounds (kilograms, decanewtons), applied to the crane including the weight of load-attaching equipment such as load block, shackles, and slings. (Spec 2C)

LOCAL DIHEDRAL ANGLE – The dihedral angle between tangent surfaces at a given point along a weld joining two curved surfaces. (RP 2X)

LOCATION – The place at which a well is to be or has been drilled. (ITOGP)

LOCATION – The point at which a well is to be drilled. Also referred to as "wellsite." (RP 54)

LOCATION – Throughout this recommended practice, reference is made to areas, spaces, and locations. These terms should be considered interchangeable terms designating a three-dimensional space. (RP 500B)

LOCK-IN – Synchronization of vortex-shedding frequency and structural vibration frequency producing resonant flow induced vibration. (RP 2T)

LOCKED-IN – Refers to the condition where the bottom-hole assembly is held relatively fixed within the borehole by the outer diameter of the assembly being nearly the same diameter as the drill bit, the inclination and direction of the borehole are maintained. (Bul D20)

LOCK-OUT OR TAG-OUT – A system to specify that equipment is out of service until locks or tags are removed by the authorized person. (RP 54)

LOCK SCREWS (TIE-DOWN SCREWS) – A series of threaded pins extending through the wall of a casing head or tubing head flange used to lock down hangers or energize seals. (Spec 6A)

LOCOMOTIVE (PISTON) – A locomotive (piston) is a swabcup unit used to transport and manipulate TFL tools. (RP 6G)

LOG – The strip chart record or readout of the detected imperfections in the pie being inspected by EMI or other electronic inspection equipment. (RP 5A5)

LOGGING – See Well Log. (Bul 10C)

LOGGING – See Mud Logging and Electric Logging. (Bul D1)

LONG STRING (CASING) – See Production Casing. (ITOGP)

LONG STRING (TUBING) – In a dual completed well, the tubing string to the deepest one. (ITOGP)

LONGITUDINAL FATIGUE CRACKS – Damage initiated in the pipe by vertical cyclical forces with no apparent local abrasion or denting. Fatigue cracks are the result of a combination of static and cyclic stresses produced by the weight of upper layers of pipe and/or other cargo giving a static load, and a cyclic load due to the vertical movement. (RP 5L5)

LONGITUDINAL IMPERFECTION – An imperfection which has its principle direction or dimension in the approximately longitudinal direction. (RP 5A5)

LONGITUDINAL MAGNETIC FIELD – Magnetization of a material in such a way that the magnetic flux runs substantially parallel to the axis of the pipe. (RP 5A5)

LONGITUDINAL SEAM – A butt-welded seam which parallels the axis of the pipe. (Spec 2B)

LONGITUDINAL WAVE – Those waves in which the particle motion of the material is essentially in the same direction as the wave propagation. (RP 2X)

LOOP – A loop is a curved section of tube vent to a minimum 5 foot (1,524 m) radius allowing change in direction TFL lines. (RP 6G)

LOOSE GEAR – Loose gear includes all slings, nets, hooks, baskets, shackles, chains, ropes, cables, life vests, etc., necessary in crane operations to attach the load to the crane hook or block and to move the load. (Life jackets and life vests are terms for a Coast Guard approved life saving device able to support an unconscious man in the face-up position. Work vests are buoyant flotation devices usually made of a plastic foam and work vests are not approved for work over water or for personnel transfer.) (Spec 2C)

LOSS OF BACK REFLECTION (ULTRASONIC) – Absence of or a significant reduction of an indication from the back surface of the article being inspected. (RP 2X, RP 5A5)

LOSS CIRCULATION – See Circulation, Loss of. (Bul 10C, Bul D11)

LOSS OF HEAD OR FRICTION LOSS – See Pressure-Drop Loss. (Bul 10C, Bul D11)

LOST-CIRCULATION ADDITIVES – Materials added to drilling fluid to control or prevent lost circulation. These materials are added in varying amounts and are classified as fiber, flake, or granular. (Bul D11)

LOST CIRCULATION MATERIAL – A material added to cement slurries or drilling fluids which is designed to prevent the loss of cement or mud to the formation. See Bridging Material. (Bul 10C)

LOST RETURNS – Loss of drilling fluids into the formation resulting in a decrease in pit volume. (RP 53)

LOST RETURNS – See Circulation, Loss of. (Bul D11)

LOST WORKDAYS – There are two separate classifications.
Days away from work – (These days are evaluated under this Award Plan.) The number of workdays (consecutive or not) on which an employee would have worked but could not because of occupational injury or illness. The number of lost workdays should not include the day of injury or onset of illness or any days on which the employee would not have worked even though able to.

Days of restricted activity – (These days are not evaluated under this Award Plan.) The number of workdays (consecutive or not) on which, because of injury or illness
1. The employee was assigned to another job on a temporary basis, or
2. The employer worked at a permanent job less than full time, or
3. The employee worked at a permanently assigned job but could not perform all duties normally connected with it. (Bul T5)

LOW-ANGLE HOLES – Generally conceded to be holes for which the inclination from vertical is less than 20 degrees. (Bul D20)

LOW FLOW – Flow in a process component less than the minimum operating flow rate. (RP 14C)

LOW FREQUENCY MOTION – Motion response at frequencies below wave frequencies typically with periods ranging from 30 to 300 seconds. (RP 2T)

LOW LIQUID LEVEL – Liquid level in a process component below the lowest operating level. (RP 14C)

LOW PRESSURE – Pressure in a process component less than the minimum operating pressure. (RP 14C)

LOW-SOLIDS DRILLING FLUIDS – A designation given to any type of drilling fluid where high performing additives, e.g., CMC, have been partially or wholly substituted for commercial or natural clays. For comparable viscosity and densities (weighted with barite), a low-solids drilling fluid will have a lower volume-percent solids content. (Bul 10C, Bul D11)

LOW SPECIFIC GRAVITY SOLIDS – Salts, drilled solids of every size, commercial colloids, lost circulation materials; i.e., all solids in drilling fluid, except barite or other commercial weighting materials. (Bul 13C)

LOW TEMPERATURE – Temperature in a process component less than the minimum operating temperature. (RP 14C)

LOW-YIELD CLAYS – Commercial clays chiefly of the calcium montmorillonite type having a yield in the range of 15 to 30 bbl/ton (2.63 to 5.25 m^3/t) usually refers to per cent by weight. If per cent by volume is means, it should be so stated. (Bul 10C)

LOW-YIELD CLAYS – Commercial clays chiefly of the calcium montmorillonite type having a yield of approximately 15 to 30 bbl/ton. (Bul D11)

LOWER DECK – Lowest primary deck level consisting of girders, beams and plate elements. (RP 2T)

LOWER EXPLOSIVE LIMIT (LEL) – The lowest concentration by volume of combustible gases in mixture with air that can be ignited at ambient conditions. (RP 14C)

LUBRICATOR – A specially fabricated length of pipe that is usually temporarily placed above a valve on top of the Christmas tree. Lubricators are used to run special tools, usually on a wireline, into a producing well without having to kill the well. (ITOGP)

LUBRICATOR – A lubricator is a tube and valve assembly that permits tool strings to be inserted into and removed from a pressurized system. (RP 6G)

LUBRICATOR – A specially fabricated length of pipe with union connectors and bleed-off valves that is temporarily placed above a valve on top of the casing or tubing head. Lubricators afford a method of sealing off pressure yet still allow the passage of a device, usually on a wireline, or substance into the well without having to kill the well. (WLOP)

LUBRICATOR ASSEMBLY – Fabricated length(s) of casing or tubing equipped with a packoff and a wireline blowout preventer which is temporarily installed to provide surface pressure control while running or pulling wireline tools. (RP 57)

LUFFING – See Derricking. (Spec 2C)

LYOPHILIC – Having an affinity for the suspending medium, such as bentonite in water. (Bul D11)

LYOPHILLIC COLLOID – A colloid that is not easily precipitated from a solution and is readily dispersible after precipitation by an addition of the solvent. (Bul D11)

LYOPHOBIC COLLOID – A colloid that is readily precipitated from a solution and cannot be redispersed by an addition of the solution. (Bul D11)

-M-

M_f – The methyl orange alkalinity of the filtrate, reported as the number of milliliters of 0.02 Normal (N/50) acid required per milliliter of filtrate to reach the methyl orange end point. (pH 4.3). (Bul D11)

MACARONI STRING – Tubing inside tubing. (GL)

MACARONI STRING – A strong of tubing of very small diameter. (ITGOP)

MACHINERY AREA – An area where equipment incorporating rotating or reciprocating mechanical equipment in the form of internal combustion engines, gas turbines, electric motors, generators, pumps and compressor is located. (RP 2G)

MAGNETIC DECLINATION – Angular difference, east or west at any geographical location between true north or grid north and magnetic north. (Bul D20)

MAGNETIC FIELD – Region around a magnet experiencing lines of force from that magnet. (Bul D20)

MAGNETIC FIELD – The space around a magnet within which ferromagnetic materials are attracted is called a magnetic field. (RP 5A5)

MAGNETIC FIELD INDICATOR – A device which indicates the direction and strength of a magnetic field. (RP 5A5)

MAGNETIC INTERFERENCE – That condition which occurs when extraneous magnetic forces cause a magnetic compass to read incorrectly. (Bul D20)

MAGNETIC MOMENT – The product of the strength of one of the poles of a magnet by the distance between the ples. (D20)

MAGNETIC NORTH – The direction from any geographical location on the earth's surface to the north magnetic pole. (Bul D20)

MAGNETIC PARTICLES – Finely divided ferromagnetic particles selected and prepared for magnetic particle inspection by the dry method. (RP 5A5)

MAGNETIC POLE – The area on a magnet at which the magnetic field enters and leaves the magnet. Magnets have two poles, the north pole and the south pole. (Bu D20)

MAGNETIC POLES – The area on a magnetized pipe from which the magnetic field is "leaving or returning," usually at its end when longitudinally magnetized. (RP 5A5)

MAGNETIC SURVEY – A directional survey in which the direction is determined by a magnetic compass detecting the earth's magnetic field. (Bul D20)

MAGNETISM – The ability of a magnet to attract or repel another magnet is called magnetism. Also recognized as a force-field surrounding conductors carrying electric current. (RP 5A5)

MAGNETIZED DRILLING ASSEMBLIES – A drilling assembly may retain residual magnetism, this magnetism affects the magnetic compass. (Bul D20)

MAGNETIZING FORCE – Magnetizing force is considered to be the total force tending to set up a magnetic field in a magnetic circuit divided by its length. It is usually designated by the letter "H" and the unit is the "oerstedd." (RP 5A5)

MAGNETOMETER – A device for measuring the strength of magnets or magnetic fields. Also know as a Gaussmeter. (RP 5A5)

MAGNETOMOTIVE FORCE (mmf)- The produce of the current and the number of turns in a current carrying coil. (RP 5A5)

MAIN COLUMNS – Vertical, Cylindrical or multifaceted buoyancy members of the hull structure which provide platform stability and deck support. Tendons are supported by thee columns. (RP 2T)

MAIN GIRDERS – Deck elements spanning between the primary load carrying subsystem. (RP 2T)

MAIN HOIST LINE – See Load Line. (Spec 2C)

MAJOR CONE – An imaginary cone that passes over the crest of the external thread and the root of internal thread. (RP 5A5, RP 5B1)

MAJOR DIAMETER – The crest diameter of the external thread and the root diameter of the internal thread. The largest diameter of the thread. (RP 5B1)

MAJOR STRUCTURAL REVISION – A change to the structure which reduces the load-carrying capability of any structural component or for which a revised load chart has been established. (Spec 2C)

MAKE A HAND – To become a good worker. (ITOGP)

MAKE-AND-BREAK – To connect and disconnect a connection. (Spec 6A, Spec 16A)

MAKE IT UP – To screw a pipe or threaded connection tight by the use of a wrench. (ITOGP)

MAKE UP – To assemble and join parts to form a complete unit, as to make up a string of tubing. To screw together two threaded pieces. (ITOGP)

MAKING A CONNECTION – Act of screwing a joint of pipe or rods onto the string suspended in the wellbore. (RP 54)

MAKING A TRIP – Consists of hoisting (pulling) the pipe or rods to the surface and returning same to the wellbore. (RP 54)

MAKING UP A JOINT – Act of screwing a joint of pipe into another joint. (RP 54)

MALE CONNECTION – A connection with the threads on the outside. (ITOGP)

MALFUNCTION – Any condition of the SSSV system that causes it to operate improperly, but odes not prevent the performance of its design function of preventing uncontrolled well flow; e.g., premature closure or inability to reopen after closure. (RP 14B, RP14H)

MALFUNCTION – Any condition of a device or an equipment item that causes it to operate improperly, but does not prevent the performance of its design function. (RP 14C)

MALFUNCTION – Any condition of SSSV equipment that causes it to operate improperly, but does not prevent the performance of its design function of preventing uncontrolled well flow; e.g., premature closure or inability to reopen after closure. (Spec 14a)

MALFUNCTION – Any condition of SSV/USV equipment that causes it to operate improperly, but does not prevent the performance of its design function of preventing uncontrolled well flow; e.g., premature closure or inability to reopen after closure. (Spec 14D)

MANDREL – See Wireline or Tubing Retrievable. (GL)

MANIFOLD – An accessory system of valves and piping to a main piping system (or other conductors) that serves to divide a flow into several parts, to combine several flows into one, or to reroute a flow to any one of several possible destinations. (ITOGP)

MANIFOLD & HEADER SYSTEM – An assembly of pipe, valves and fittings by which fluid flow from one or more sources is selectively directed to one or more outlets. Commonly, the flow line from the wellhead is connected to a manifold and each manifold outlet is connected to a header which directs the flow to one of the production systems. An injection manifold divides a common source of gas, water, or other fluid among several injection wells. (RP 2G)

MANIFOLD – An assembly of pipe, valves, and fittings by which fluid from one or more sources is selectively directed to various process systems. (RP 14E)

MANNED PLATFORM – A platform which is actually and continuously occupied by persons accommodated and living thereon. (RP 2A)

MANNED PLATFORM – A platform on which people are routinely accommodated for more than 12 hours per day. (RP 14F, RP 14G)

MANUFACTURER – The firm, company, or corporation furnishing the plate steel used in the fabrication of the structural steel pipe. (Spec 2B)

MANUFACTURER – Includes pipe mills, processors, threaders, and manufacturers of couplings, pup joints and connectors, as applicable. (Spec 5AC)

MANUFACTURER – An API Licensee/Applicant who makes or processes products and/or materials. (Spec Q1)

MANUFACTURER – The principal agent in the design, fabrication and furnishing of SSSV equipment who chooses to comply with API Specification 14A. (RP 14B, Spec 14A)

MANUFACTURER – The principal agent in the design, fabrication and furnishing of an SSV/USV actuator and/or SSV/USV valve who chooses to comply with API Spec 14D. The SSV/USV valve and SSV/USV actuator define functional entities and do not necessarily represent the units as supplied. (RP 14H, Spec 14D)

MANUFACTURERS – A term denoting individuals or companies who make or process equipment and/or material for which AP Standards have been or are being formulated. (Bul S1)

MARGINAL WELL – A low producing rate well that is approaching depletion to the extent that any profit from its continued production is doubtful. (ITOGP)

MARINE DRILLING RISER – A tubular conduit serving as an extension of the well bore from the equipment on the wellhead at the seafloor to a floating drilling rig. (RP 2R)

MARKERS – A series of indications on the horizontal trace of the cathode ray tube which calibrates the trace in increments of time or distance. (RP 2X)

MARKING – The term "marking" is used to refer to the assorted marks on tubular products, and includes inspection markings made with paint sticks and stencils, and ball-point paint tubes. (RP 5A5)

MARSH BUGGY – A tractor-like vehicle whose wheels are fitted with extra large rubber tires for use in swamps. (ITOGP)

MARSH FUNNEL – An instrument used in determining the Marsh funnel viscosity. The marsh funnel is a container with a fixed orifice at the bottom so that, when filled with 1,500 mL fresh water, 1 qt (946 mL) will flow out in 26 ± 0.5 sec. For 1,000 mL fresh water outflow, the efflux time is 27.5 ± 0.5 sec. See API RP 13B for specifications. (Bul 10C, Bul D11)

MARSH FUNNEL VISCOSITY – Commonly called the funnel viscosity. The Marsh funnel viscosity is reported as the number of seconds required for a given fluid to flow 1 qt through the Marsh funnel. In some areas the efflux quantity is 1,000 cc. See API RP 13B for instructions. See also Kinematic Viscosity. (Bul D11)

MASS – The effective weight of a particle considering its specific gravity and particle size. (Bul 13C)

MASS FLOW METERS – Provide measurement of fluid volume and fluid density through same meter. (T)

MAST- Refer to "Derrick (Mast)." (RP 54)

MAST (Also known as GANTRY) – A frame hinged at or near the boom hinge for use in connection with supporting a boom. Head of mast is usually supported and raised or lowered by the boom hoist ropes. (Spec 2C)

MAST – A structural tower comprised of one or more sections assembled in a horizontal position near the ground and then raised to the operating position. If the unit contains two or more sections, it may be telescoped or unfolded during the erection procedure. (Spec 4F)

MAST – A portable derrick capable of being erected as a unit, as distinguished from a standard derrick which cannot be raised to a working position as a unit. Used for well drilling or well work-over. (WLOP)

MAST SET-UP DISTANCE – The distance from the center line of the well to a designated point on the mast structure defined by a manufacturer to assist in the setup of the rig. (Spec 4F)

MASTER CLUTCH – Disengages prime mover from all motions of the crane. (Spec 2C)

MASTER COUPLING LINK – Is an alloy steel welded coupling link used as an intermediate link to join alloy steel chain to master links. (Spec 2C)

MASTER LINK OR GATHERING RING – Is a forged or welded steel link used to support all members (legs) of an alloy steel chain sling or wire rope sling. (Spec 2C)

MASTER VALVE – A large valve located on the Christmas tree used to shut in a well. (ITOGP)

MASTER VALVE – A large valve used to shut in a well. (GL)

MASTER VALVE – A large valve located on the Christmas tree. It is used to open or close the well. (WLOP)

MASTER VALVE – Normally the lowermost valve(s) in the vertical run of the Christmas tree. (RP 57)

MASTER WELL COURSE MAPS – Plots showing the locations of the wellbores of several wells in an area. (Bul D20)

MATERIAL BALANCE – In reservoir engineering, a volumetric balance which states that since the volume of a reservoir is constant, the algebraic sum of the volume changes of the oil, free gas, and water volumes must be zero. (SSWID)

MATERIAL NOISE – Extraneous signals caused by the structure of the material being tested. (RP 2X)

MATERIAL PERFORMANCE BASES – Capabilities which must be demonstrated, as a minimum, for material to satisfy the criteria of this standard. (Spec 6A Spec 16A)

MATING JOINTS – Intersection of deck and hull structures on a non-integrally constructed platform. (RP 2T)

MAWP – Maximum Allowable Working Pressure

MAXIMUM ALLOWABLE OPERATING PRESSURE – The highest operating pressure allowable at any point in a pipeline system during normal flow or static conditions. (RP 14C)

MAXIMUM ALLOWABLE WORKING PRESSURE – The maximum allowable working pressure (MAWP) is the maximum pressure, permissible by the ASME Code, at the top of the separator in its normal operating position for a designated temperature. (Spec 12J)

MAXIMUM ALLOWABLE WORKING PRESSURE – The highest operating pressure allowable at any point in any component other than a pipeline during normal operation or static conditions. (RP 14C)

MAXIMUM ALLOWABLE WORKING PRESSURE – The maximum gage pressure permissible at the top of a completed vessel in its operating position for a designated temperature. This pressure is based on calculations for every element of the vessel using nominal thicknesses exclusive of allowances for corrosion and thickness required for loadings other than

pressure. It is the basis for the pressure setting of the pressure relieving devices protecting the vessel. (Spec 12L)

MAXIMUM ANGLE (MAXIMUM AVERAGE ANGLE) – Refers to the angle of inclination to which the wellbore is held in the "locked-in" straight section. (Bul D20)

MAXIMUM ANTICIPATED SURFACE PRESSURE – The highest pressure predicted to be encountered at the surface of a well. (RP 57)

MAXIMUM CONNECTED CONDITION – The maximum connected condition is defined as that combination of wind velocity, wave heights and period, water depth, current and offset up to which the drilling unit can be expected to hold location with the riser connected to the BOP stack. (RP 2P)

MAXIMUM DESIGN CONDITION – The maximum design condition is defined as that combination of wind velocity, wave height and period, current velocity, water depth and vessel offset for which the mooring system is designed. Generally the drilling unit will likely be disconnected from seafloor drilling equipment as required so that large values of offset can be tolerated. The magnitude of thee values should be known to those people responsible for the drilling unit's operation in order that abandonment of location can be achieved in a timely fashion. The maximum design condition is the concurrent collinear combination of the design wind, design wave and design current. (RP 2P)

MAXIMUM ENVIRONMENTAL CONDITION – The maximum environmental condition for a given location and time period is defined as that combination of wind velocity, wave height and period, water depth and current velocity that will create the largest force on a fixed permanent structure. These values are generally the criteria used for designing fixed, permanent structures. They may not be the same values used for a floating drilling unit since it retains the option to leave location before these conditions develop. (RP 2P)

MAXIMUM OPERATING CONDITION – The maximum operating condition is defined as that combination of wind velocity, wave height and period, water depth, current and offset up to which the drilling unit can be expected to sustain drilling operations. These values should be known to the people responsible for the drilling unit's operations in order that timely plans to suspend operations can be performed. (RP 2P)

MAXIMUM OPERATING TEMPERATURE – The temperature at which a gun can be held for a specified period of item and function normally. (RP 43)

MAXIMUM PERMISSIBLE DOGLEG – Refer to "Dogleg Types, Permissible." (Bul D20)

MAXIMUM RATED STATIC HOOK LOAD –The Maximum Rated Static Hook Load, for the specified number of lines strung to the traveling block, is the sum of the weight that is applied at the hook and the traveling equipment for the designated location of the dead line anchor and in the absence of any pipe setback, sucker road or wind loadings. (Spec 4F)

MAXIMUM SHEAR STRESS THEORY – Failure theory defined by the following equation: $O_1 - O_2 = F_y$ where O_1 is the maximum principal stress and O_2 is the minimum principal stress, with tension positive and compression negative. (Bul U)

MCF – The abbreviation for 1,000 cubic feet (usually applied to natural gas). (ITOGP)

MCF – 1000 cubic feet of gas (WT)

MCFD – 1000 cubic feet of gas per day. (WT)

MD – MEASURED PUMP INTAKE SETTING DEPTH (FT.) – Actual pump setting depth measured along the well bore. Theoretically, in non-deviated wells, MD =VD.

MEAN OFFSET – The average offset, corresponding tothe average horizontal forces on the RLP in the given environmental conditions. (RP 2T)

MEASURED DEPTH – Actual length of the well bore from its surface location to any specified station (refer to "Well Depth"). (Bul D20)

MEASUREMENTS – Measurements are to be made with appropriate instruments and are to be reported in inches and in decimal fractions thereof to the nearest 0.01 in., e.g; entrance hole diameter – 0.37 in., total target penetration – 6.78 in. (RP 43)

MEASURING DEVICE - A special reel for solid wireline used to take depth measurements in a well. A calibrated wheel, roller assembly, and counter measures the footage of wire line as it is lowered into the well. It is also used to measure the footage of wire line as it is pulled form the well. (WLOP)

MEASURING TANK – A calibrated tank that automatically measures the volume of liquid run in and then released. Measuring tanks are used in LACT systems and may also be referred to as METERING TANKS or DUMP TANKS. (ITOGP)

MECHANICAL – The distribution of power by mechanical devices (chains, sprockets, clutches, and shafts). (WLOP)

MECHANICAL COUPLING LINK – A non-welded, mechanically closed steel link used to attach master links, hooks, etc., to alloy steel chain. (Spec 2C)

MECHANICAL DAMAGE: See Handling Damage and Galling. (Bul 5T1)

MECHANICAL EFFICIENCY – The percentage relation of mechanical power output to mechanical power input. (Bul D10)

MECHANICAL-ELECTRIC RIG – A rotary drilling rig using diesel or gas engines to drive pumps and generator. (Bul D10)

MECHANICAL ORIENTING TOOL – A device to orient deflecting tools without the use of subsurface surveying instruments. (Bul D20)

MECHANICAL RIG – A rotary drilling rig driven by diesel or gas engines. (Bul D10)

MECHANISM –The working parts of a machine; or a system whose parts work together like those of a machine. (WT)

MEDIAN CUT – The effectiveness of a device in separating solids particles from a specific liquid-solids slurry under specified condition expressed in the particle size that reports 50% to the overflow. (Bul 13C)

MEDIAN LETHAL CONCENTRATION (LC_{50}) – A standard measure of toxicity. LC_{50} indicates the concentration of a substance or test material that cause death to fifty percent (50%) of a population within a given time period. (Bul D11)

MEDIAN LETHAL DOSE (LD_{50}) – The dose of a test material ingested or injected that kills fifty percent (50%) of a group of test organisms. (Bul D11)

MEGGER INSTRUMENT – A device for measuring resistances. Used for determining coating insulation or electrolyte resistance. (COGWE, SSWID)

MELT – To convert a solid substance into the liquid state through a process of heating, or a quantity of metal melted at a single operation. (COGWE, SSDWID)

MEMBRANE STRESSES – The in-plane stresses in the shell; longitudinal, circumferential or shear. (Bul 2U)

MENISCUS – The curved upper surface of a liquid column, concave when the containing walls are wetted by the liquid and convex when not. (Bul 10C, Bul D11)

MERCURY METHOD – A combination of the “Tangential” and the “Balanced Tangential” Methods, so as to treat that portion of the measured course defined by the length of the measuring tool as a straight line (tangentially) and the remainder of the measured course trapezoidially. Also, refer to “Compensated Acceleration Method” and “Combined Method.” (Bul D20)

MERIDIAN-SEEKING COMPASS – A gyroscope compass that has the capability to return itself to the meridian if moved away by some disturbing force. (Bul D20)

MESH – The average openings (distance between parallel wires) both in the warp and shoot directions of a woven wire screen expressed as the number of openings per linear inch. (Bul 10C)

MESH – The number of openings (and fraction thereof) per linear inch in a screen, counting from the center of a wire. (Bul 13C)

MESH – A meaure of fineness of a woven material, screen, or sieve; e.g., a 200-mesh sieve has 200 openings per linear inch. A 200-mesh screen with a wire diameter of 0.002 in. (0.0533 mm) has an opening of 0.074 mm, or will pass a particle of 74 microns. See Micron. (Bul D11)

MESH EQUIVALENT – As used in oilfield drilling applications; the U.S. Sieve number which has the same opening as the minimum opening of the screen in question. (Bul 13C)

METAL LOSS CORROSION – Loss of metal in areas exposed to wellstreams which contain water or brine and carbon dioxide (CO_2), hydrogen sulfide (H_2S), oxygen (O_2) or other corrosive agents. (RP 14H, Spec 14D)

METAL PATH DISTANCE – One-way travel distance between transducer exit point and reflector, along the actual travel path. (RP 2X)

METALLURGY – The art and science of extracting metals form their ores, refining them, and preparing them for use. Can also be the technical details of a metal. (COGWE, SSWID)

METER CHART – A circular chart which records the differential and static pressure. See Orifice Meter. (ITOGP)

METERING SEPARATOR - A vessel which measures liquid after separating of gas, usually by means of a positive volume chamber which dumps a measured volume of liquid each time chamber is filled. (WT)

METHANE – A colorless, nonpoisonous, and flammable gaseous hydrocarbon. Methane (CH_4) is emitted by marshes and by dumps undergoing anaerobic decomposition. (Bul D11)

METHODS OF ORIENTATION
Direct Method – Magnets embedded in the non-magnetic drill collar are used to indicate the position of the tool face with respect to magnetic north. A picture of a needle compass pointing to the magnets is superimposed on the picture of a compass pointing to magnetic north. By knowing the position of the magnets in the tool, the tool can be positioned with respect to north.

Indirect Method – A method of orienting deflecting tools in which two survey runs are needed, one showing the direction of the hole and the other showing the position of the tool.

MMO® - Magnetic Method of Orientation (Registered trademark of Sperry Sun Well Surveying Co.). Refer to “Methods of Orientation, Direct Method.”

R-1® - (Registered trademark of Eastman Whipstock.) A method of orienting a deflection tool using the “R-1 instrument.” Magnets in the non-magnetic collar and the magnetic north and a superimposed picture of two compasses indicate the position of the tool with respect to north. Refer to “Methods of Orientation, Direct Method.”

Stoking – method to orient a tool using two pipe clamps, a telescope with a hair line, and an aligning bar to determine the orientation at each section of pipe run in the hole.

Surface Readout – A device on the rig floor to indicate the subsurface position of the toll. (Bul D20)

MICA – Any of a group of mineral silicates crystallizing naturally into a very thin, laminar sheets. When pulverized and sized, it is useful in combating lost circulation. (Bul 10C)

MICA – A naturally occurring flake material of varying size used in combating lost circulation. Chemically, an alkali aluminum silicate. (Bul D11)

MICELLES – Organic and inorganic molecular aggregates occurring in colloidal solutions. Long chains of individual structural units chemically joined to one another and laid side by side to form bundles. When bentonite hydrates, certain sodium or other metallic ions go into solution, the clay particle plus its atmosphere of ions is technically known as a micelle. (Bul D11)

MICRON – a metric unit of linear measure. 1,000 microns = 1 millimeter; 25,400 microns = 1 inch. (Bul 13C)

MICRON u Mu – A unit of length equal to one-millionth part of a meter, or one-thousandth part of a millimeter. (Bul D11)

MICRON – A unit of length equal to one-millionth part of a meter, or one-thousandth part of a millimeter. (SSWID)

MID-BAFFLE – In horizontal emulsion treaters a baffle or bulkhead may be located between the heating section and the coalescing section. This member is commonly referred to as a mid-baffle or bulkhead. (Spec 12L)

MIGRATION – The movement of oil from the area is which it has formed to a reservoir rock where it can accumulate. (ITOGP)

MIL – One-thousandth of an inch (0.001 in). (COGWE, SSWID)

MILK EMULSION – See Oil-emulsion Water. (Bul D11)

MILL END – The pipe end having the coupling or box. (RP 5A5)

MILL GRIND – An area of the pipe surface removed by grinding during the manufacturing process. (RP 5A5)

MILL SCALE – An oxide of iron which forms on the surface of hot steel. (RP 5A5)

MILLIDARCY – 1/1000 Darcy. See Darcy. (Bul D11)

MINIMUM ANGLE – The lowest angle for easy control of azimuth in a directional well, almost universally agreed to be about 18^{o}, not less than 14^{o}, and preferably 20^{o}. (Bul D20)

MINIMUM CURVATURE METHOD – Uses the sets of angles measured at the top and bottom of the course length to establish coordinate velocities through which a space curve (which represents the calculated path of the wellbore) passes in a manner that minimizes its total curvature. (Bul D20)

MINIMUM INTERNAL YIELD PRESSURE – The lowest pressure at which permanent deformation will occur. (RP 53)

MINIMUM WATER – The minimum water content of cement slurry determined by the procedure given in API Spec 10. (Bul 10C)

MINOR CONE – An imaginary cone that passes over the root of the external threads and the crest of internal threads. (RP 5A5, RP 5B1)

MINOR DIAMETER – The root diameter of the external thread and the crest diameter of the internal thread. The smallest diameter of the thread. (RP 5B1)

MISCIBLE FLOOD – An oil-recovery process which involves the injection of a fluid which mixes readily with the oil, followed by a displacing fluid. (ITOGP)

MIST DRILLING – A method of rotary drilling whereby water and/or oil is dispersed in air and/or gas as the drilling fluid. (Bul D11)

MIST EXTRACTOR – A metallic element used to remove moisture of condensable hydrocarbons from a gas stream in an oil and gas separator or scrubber. (ITOGP)

MIXER, PILOT, BURNER – Mechanical devices located in the arrestor housing and breeching which mix the fuel and air and control burning and flame position. (RP 12N)

ML OR MILLILITER – A metric system unit for the measure of volume. Literally $1/1000^{th}$ of a liter. In drilling fluid analysis work, this term is used interchangeably with cubic centimeter (cc). One quart is about equal to 946 ml. (Bul D11)

MMCF – The abbreviation of 1,000,000 cubic feet; a common unit of measurement of large quantities of gas. (ITOGP)

MMCF – 1,000,000 cubic feet of gas. (WT)

MMCFD – 1,000,000 cubic feet of gas per day. (WT)

MMS – Abbreviation for Minerals Management Service, the Federal Government agency responsible for enforcement of rules pertaining to the drilling, completion and operation of oil and gas wells on the Outer Continental Shelf (offshore) and federal lands onshore. (Formerly United States Geological Survey – USGS).

MMSCF – 1,000,000 cubic feet of gas at standard or base conditions of temperature and pressure according to established base condition in area of measurement. (WT)

MMSCFD – 1,000,000 standard cubic feet of gas per day. (WT)

MODE – The manner in which acoustic energy is propagated through a material as characterized by the particle motion of the wave. (RP 2X)

MODE-CONVERSION – The characteristics of surfaces to change the mode of propagation of acoustic energy from one mode to another. (RP 2X)

MODE OF VIBRATION – Type of wave motion, for example, longitudinal, transverse, etc. (RP 2X)

MODEL – A make of SSSV with unique internal operating parts and operating characteristics which differentiate it from other SSSVs of the same type. It may have any of a variety of end thread connections. (Spec 14)

MODEL ERROR – That portion of the error that is due to the difference between the position of the real well and the position derived from the model calculation under the assumption that the survey data contain no errors. (Bul D20)

MODERATE ANGLE WELLBORES – Generally conceded to be wellbores which have an inclination from vertical between 20 and 50 degrees. (Bul D20)

MODU – Mobile Offshore Drilling Unit

MOGA – Mid-Continent Oil and Gas Association

MOLECULE – When atoms combine they form a molecule. In the case of an element or a compound, a molecule is the smallest unit which chemically still retains the properties of the substance in mass. (Bul D11)

MOLECULE – The smallest particle of any substance that can exist free and still exhibit all the properties of the original substance. (COGWE, SSWID)

MOLECULAR WEIGHT – The sum of the atomic weights of all the constituent atoms in the molecule of an element or compound. (Bul D11)

MOMENT – Tendency, or measure of tendency, to produce motion about a reference point or axis. (Bul D20)

MOMENT – Tendency, or measure of tendency, to produce motion about a reference point or axis. (Bul D20)

MOMENT CONTROLLING DEVICE – Devices such as ball joints or elastomeric joints used to reduce bending stresses induced by relative angular movements at the ends of the riser. When curvature control is necessary, tapered joints may also be used. (RP 2T)

MONEL – A trademark name of an alloy of about 70 percent nickel, 30percent copper. (COGWE, SSWID)

MONEL (K MONEL) – A permanently non-magnetic alloy used in making downhole tools. (Bul 20)

MONITORING – Periodic or continuous determination of the amount of pollutants or contamination present in the environment or in drilling fluids. (Bul D11)

MONITORING, RADIATION – Periodic or continuous determination of the amount of ionizing radiation present in a region. (RP 5A5)

MONKEY BOARD – Platform on which the derrickman works during the time a trip is being made. (RP 54)

MONTMORILLONITE – A clay mineral commonly used as an additive to drilling fluids. Sodium montmorillonite is the main constituent in bentonite. (Bul 10C)

MONTMORILLONITE - A clay mineral commonly used as an additive to drilling fluids. Sodium montmorillonite is the main constituent in bentonite. The structure of montmorillonite is characterized by a form which consists of a thin-platy-type sheet with the width and breadth indefinite, and thickness that of the molecule. The unit thickness of the molecule consists of three layers. Attached to the surface are ions that are replaceable. Calcium montmorillonite is the main constituent in low-yield clays. (Bul D11)

MOSQUITO BILL - A tube mounted at the bottom of a sucker-rod pump and inside a gas anchor to provide a conduit for well fluids into the pump. See Gas Anchor. (ITOGP)

MOTION SENSOR – A device used in directional surveys that senses motion and will not permit the measurements of the survey until after motion ceases. (Bul D20)

MPI – Acronym for Magnetic Particle Inspection. (RP 5A5)

MPY – Measure of corrosion penetration rate in mils per year. (COGWE, SSWID)

MSCF – 1,000 standard cubic feet of gas. (WT)

MSCF (MCF) – One thousand standard cubic feet of gas. This term is commonly used to express the volume of gas produced, transmitted, or consumed in a given period of time (scf – standard cubic foot of gas). (GL)

MSCF/B (MCF/B) – Thousands of cubic feet per barrel. (GL)

MSCFD – 1,000 standard cubic feet of gas per day. (WT)

MSS – Manufacturers Standardization Society of The Valve and Fittings Industry.

MUD – See Drilling Mud. (Bul 10C)

MUD – A water- or oil-base drilling fluid whose properties have been altered by solids, commercial and/or native, dissolved and/or suspended. Used for circulating out cuttings and many other functions while drilling a well. Mud is the term most commonly given to drilling fluids. See Drilling Fluid. (Bul D11)

MUD – The liquid that is circulated through the well-bore during rotary drilling and workover operations. (ITOGP)

MUD ADDITIVE – Any material added to a drilling fluid to achieve a particular purpose. (Bul 10C, Bul D11)

MUD BOX – A compartment which receives the mud for distribution to the screening surface. (Bul 13C)

MUD BOX – Device used to wrap around pipe connections to deflect fluid released when a joint or stand of pipe containing liquid is unscrewed. (RP 54)

MUD CONE – See Preferred Term: Hydrocyclone. (Bul 13C)

MUD FEED – Drilling fluid, with or without dilution, for introduction into a liquid-solids separator. (Bul 13C)

MUD HOUSE – A structure at the rig to store and shelter sacked materials used in drilling fluids. (Bul D11)

MUD LOGGING – A method of determining the presence or absence of oil or gas in the various formations penetrated by the drill bit. The drilling fluid and the cuttings are continuously tested on their return to the surface, and the results of these tests are correlated with the depth or origin. (Bul 10C, Bul D11)

MUD-MIXING DEVICES – The most common device for adding solids to the drilling fluid is by means of the jet hopper. Some other devices for mixing are: eductors, paddle mixers, electric stirrers, must guns, chemical barrels, etc. (Bul D11)

MUD MOTOR – Usually a "Dyna-Drill" or a turbo-drill. (Bul D20)

MUD PIT – Earthen or steel storage facilities for the surface drilling fluid system. Mud pits which vary in volume and number are of two types: circulating and reserve. Drilling fluid testing and conditioning is normally done in the circulating pit system. (Bul 10C, Bul D11)

MUD PROGRAM – A proposed or followed plan or procedure for the type(s) and properties of drilling fluid(s) used in drilling a well with respect to depth. Some factors that influence the mud program are the casing program and such formation characteristics as type, competence, solubility, temperature, pressure, etc. (Bul 10C, Bul D11)

MUD PUMPS – Pumps at the rig used to circulate drilling fluids. (Bul 10C, Bul D11)

MUD SCALES – See Balance, Mud. (Bul 10C, Bul D11)

MUD STILL – An instrument used to distill oil, water, and other volatile material in a drilling fluid to determine oil, water, and total solids contents in volume-percent. (Bul D11)

MUDDING OFF – Commonly thought of as reduced productivity caused by the penetrating, sealing, or plastering effect of a drilling fluid. (Bul D11)

MUDDING UP – Process of mixing drilling fluid additives to achieve some desired purpose not possible with the former fluid which usually has been water, air, or gas. (Bul D11)

MULE SHOE – A shaped form used on the bottom of orienting tools to position the tool. The shape resembles a mule shoe or that of the end of a pipe cut both diagonally and concave. The shaped end forms a wedge to rotate the tool when lowered into a mating seat for the mule shoe. (Bul D22)

MULTI-HELICOPTER HELIPORT – A heliport designed for use by more than one helicopter at any one time. (RP 2L)

MULTI-SHOT SURVEY – A directional survey in which multiple data points are recorded with one trip into the wellbore. Data are usually recorded on rolls of film. (Bul D20)

MULTIPLE BACK REFLECTIONS – Repetitive echoes from the far boundary of the material being examined. (RP 2X)

MULTIPLE COMPLETION – A well equipped to produce oil and/or gas separately from more than one reservoir. (ITOGP)

MULTIPLE COMPLETION – An equipment arrangement for producing two or more oil or gas formations from one wellbore. Multiple completions may use parallel tubing strings, each packed off from the other to prevent commingling of the production from different formations, or concentric strings, each packed off from the other, for the same purpose. (WLOP)

MULTIPLE REFLECTIONS – Successive echoes of ultrasonic energy between two surfaces. (RP 2X)

MULTIYEAR FLOE – An ice floe that has survived one or more melt seasons. The floe may contain an embedded ridge having a weathered, rounded, consolidated sail and a relatively solid keel, approximately 3 to 4 times the sail height. (Bul 2N)

MULTIYEAR ICE – Sea ice that has survived one or more melt seasons. (Bul 2N)

MULTIYEAR RIDGE – A ridge that has survived one or more summer melt seasons. (Bul 2N)

-N-

NACE – National Association of Corrosion Engineers

NATURAL CLAYS – Natural clays, as opposed to commercial clays, are clays that are encountered when drilling various formations. The yield of these clays varies greatly, and they may or may not be purposely incorporated into the drilling fluid system. (Bul D11, Bul 10C)

NATURAL GAS – A mixture of hydrocarbons and varying quantities of nonhydrocarbons that exists either in the gaseous phase or in solution with crude oil in natural underground reservoirs. (ITOGP)

NATURAL GAS – A fuel gas occurring naturally in certain geologic formations. Natural gas is usually a combustible mixture of methane and other hydrocarbons. (Bul D11)

NATURAL GAS LIQUIDS – Those portions of reservoir gas which are liquefied at the surface in separators, field facilities or gas processing plants. Plant products are also known as LIQUEFIED PETROLEUM GAS (LPG). (ITOGP)

NATURAL GAS PLANT – See Gas Processing Plant. (ITOGP)

NATURAL GAS STRIPPING – The countercurrent bubbling of a gas through a fluid to remove certain components or impurities in the fluid. (SSWID)

NATURAL ICE ISLAND – Tabular, fresh-water fragments of glacial or shelf ice origin. (Bul 2N)

NATURALLY DEVIATED HOLE – A hole which has deviated from vertical without use of deflection tools, for example, many holes will drill updip. (Bul D20)

NDT – Non-destructive testing

NEAR-BIT STABILIZER – A stabilizer placed in the bottom-hole assembly just above the bit. (Bul D20)

NEAR FIELD – The region of the ultrasonic beam adjacent to the transducer and having complex beam profiles. Also known as the Fresnel one. (RP 2X)

NEAR-SIZE – That material very nearly the size of the screen aperture, generally considered as plus or minus 25% of the aperture. (Bul 13C)

NEAT CEMENT – A slurry composed of portland cement and water. (Bul D11, Bul 10C)

NEC – National Electrical Code

NEEDLE VALVE – A valve having a tapered gate that rests in a tapered orifice for extremely fine regulation of flow. (WLOP)

NEEDLE VALVE – A valve used on small, high-pressure piping where accurate control of small amounts of liquid or gas is desired. Also used with pressure gages. (ITOGP)

NEGATIVE BUOYANCY – If a body weights more than the weight of sea water that it displaces, then it is considered to be negatively buoyant. (RP 2T)

NEGATIVELY SKEWED BIT – A bit with offset built into the cones in an opposite direction to that normally used. Some effort has gone into determining if negative offset will reverse the bit walk of the normally-offset, soft-formation bits. (Bul D20)

NEMA – National Electrical Manufacturers Association

NEMA ENCLOSURE – An electrical enclosure manufactured to NEMA standards. (RP 14F)

NET-OIL COMPUTER – A combination of electronic and mechanical devices that automatically determines the amount of oil in a water and oil emulsion. (ITOGP)

NEUTRAL POINT – This term has been defined variously as (1) the point where tension is zero; or (2) where stresses are zero. (Bul D20)

NEUTRALIZATION – A reaction in which the hydrogen ion of an acid and the hydroxyl ion of a base unite to form water, the other ionic product being a salt. (Bul 10C, Bul D11)

NEWTONIAN FLOW – See Newtonian Fluid. (Bul D11)

NEWTONIAN FLUID – The basic and simplest fluids from the standpoint of viscosity consideration in which the shear force is directly proportional to the shear rate. These fluids will immediately begin to move when a pressure or force is applied. Examples of Newtonian fluids are water, diesel oil, and glycerine. The yield point as determined by direct-indicating viscometer is zero. (Bul 10C, Bul D11)

NFPA – National Fire Protection Association

NIOSH – The National Institute of Occupational Safety and Health. (Bul D11)

NIPPLE – A section of threaded or socket welded pipe used as an appurtenance that is less than 12 inches in length. (RP 14E)

NIPPLE – A pipe fitting that is usually threaded on both ends and is less than 12 inches in length. (ITOGP)

NIPPLE – A tubular pipe fitting threaded on both ends, usually less than 12 inches long. (WLOP)

NIPPLE UP – To assemble a system of pipe, valves, and nipples as in a Christmas tree. (ITOGP)

NO-DRIFT – A length of pipe which will not pass an API drift with reasonable pressure. (RP 5A5)

NODE – A point in a standing wave where a given characteristic of the wave field has zero amplitude. (RP 2X)

NOISE – Any undesired signal that tends to interfere with the normal reception or processing of the desired signal. Origin may be electrical, or from small material reflectors. (RP 2X)

NOMINATIONS – The amount of oil or gas a purchaser expects to take from a field as reported to a state regulatory agency (ITOGP)

NON-ASSOCIATED GAS – Natural gas which is in reservoirs that do not contain significant quantities of crude oil. (ITOGP)

NON-CONDUCTIVE DRILLING FLUID – Any drilling fluid, usually oil-base or invest-emulsion types, whose continuous phase does not conduct electricity, e.g., oil. The spontaneous potential (SP) and normal resistivity cannot be logged, although such other logs as the induction, acoustic velocity, etc., can be run. (Bul D11)

NON-CONFORMANCE – Any deviation from specified requirements. (Spec Q1)

NON-CORROSIVE HYDROCARBON SERVICE – Process streams under conditions which do not cause significant metal weight loss, selective attack or stress corrosion cracking. (RP 14E)

NONDESTRUCTIVE EVALUATION (NDE) – Same as nondestructive testing. (RP 5A5)

NONDESTRUCTIVE TESTING (NDT) – Inspection to detect internal, surface and concealed defects or flaws in materials using techniques that do not damage or destroy the items being tested. (RP 5A5)

NON FULL-CRESTED THREADS – Those threads on which the profiled or machined pipe surface still appears on the threads crests. (RP 5A5)

NONINCENDIVE CIRCUITS – Circuits that under normal conditions do not release sufficient energy to ignite a specific ignitable mixture. (RP 500B)

NON-INCENDIVE EQUIPMENT – Electrical equipment which in its normal operating condition would not ignite a specific hazardous atmosphere in its most easily ignitable concentration. (RP 14F)

NON-INCENDIVE EQUIPMENT – Equipment which is incapable of causing ignition of a flammable gas or vapor in air mixture due to arcing or surface temperature in normal use. Note: Normal use is considered to be when such equipment is operated at rated voltage, current and frequency, and under specified environmental conditions; with all adjustments at most unfavorable settings and with all tool removal parts in place; and is not subject to overloading in normal use. (RP 500B)

NON-MAGNETIC DRILL COLLAR – A drill collar fabricated with non-magnetic material. (Bul D20)

NON-OPERATOR – A working-interest owner other than the one designated as operator of the property. (ITOGP)

NONPERFECT RECORD – An occupational injury and illness record with cases involving death or days away from work. (Bul T-5)

NORMAL SOLUTION – A solution of such a concentration that it contains 1 gram-equivalent of a substance per liter of solution. (Bul D11)

NORMALLY CLOSED VALVE – A valve which will shift to the closed position upon loss of the power medium. (RP 14C, RP 14H, Spec 14D)

NORMALLY OPEN VALVE – A valve which will shift to the open position upon loss of the power medium. (RP 14C)

NPL – Neutral Pressure Level

NPRA – National Petroleum Refiners Association

NPSH – Net Positive Suction Head

NSC – National Safety Council

NUDGE – Refers to the practice where very small deflection angles are induced to displace conductor or shallow surface pipe a short distance away from an area of well congestion. (Bul D20)

NUTRIENTS – Mineral elements including nitrogen, phosphorous, potassium, calcium, sulfur, magnesium, and iron which encourage plant and animal growth in soil or natural bodies of water. (Bul D11)

-O-

OBJECTIVE EVIDENCE – Facts which are observed and documented. (Spec Q1)

OBSERVATION – Survey originated objective evidence that a control feature of the approved quality programs is not being implemented with complete reliability but which does not constitute a finding. An observation may also include a surveyable/auditable element which is not contrary to documented requirements, but warrants further qualification or improvement. (Spec Q1)

OCEAN DISPOSAL – The deposition of waste into an ocean or estuarine body of water. (Bul D11)

OCS STAMP – Symbol applied to SPPE equipment which signifies compliance with all requirements of the SPPE Standard (API 14A) and ANSI/ASME SPPE-1 (formerly OCS-1). (RP 14B, Spec 14A)

OCS ORDERS – Rules and regulations promulgated by the Minerals Management Service that govern oil and gas operations in waters under Federal control. OCS is an abbreviation for Outer Continental Shelf. (WLOP)

OD (od) – Literally, outside diameter. Often used as an acronym for outside surface. (RP 5A5)

OFF PRODUCTION – Said of a well when it is shut in or temporarily not able to produce (ITOGP)

OFFSET – Horizontal distance of the platform at any instant from its static, stillwater, still air equilibrium position. (RP 2T)

OFFSET OF PLATE EDGES – The radial offset of plate edges in the weld seams. (Bul 5T1)

OFFSET WELL – Well drilled near another one. (ITOGP)

OFFSHORE – That geographic area which lies seaward of the coastline. (ITOGP)

OFFSHORE WELL – An offshore well is one which is bottomed at, or produces from, a point which lies seaward of the coastline. (Bul 12A)

OIL-BASE DRILLING FLUID – A special type drilling fluid where oil is the continuous phase. (Bul 10C)

OIL-BASE DRILLING FLUID – The term "oil-base drilling fluid" is applied to a special type drilling fluid where oil is the continues phase and water the dispersed phase. Such fluids contain blown asphalt and usually 1 to 5 percent water emulsified into the system with caustic soda or quick lime and an organic acid. Silicate, salt, and phosphate may also be present. Oil-base drilling fluids are differentiated from invert-emulsion drilling fluids (both water-in-oil emulsions) by the amounts of water used, method of controlling viscosity and thixotropic properties, wall-building materials, and fluid loss. (Bul D11)

OIL-BASE MUD – Synonym for oil-base drilling fluid. (Bul 10C)

OIL CONTENT – The amount of oil in any drilling fluid expressed as volume-per cent. (Bul 10C)

OIL CONTENT – The oil content of any drilling fluid is the amount of oil in volume-percent. (Bul D11)

OIL COUNTRY TUBULAR GOODS – Oil-well casing, tubing and drill pipe. (ITOGP)

OIL-EMULSION WATER (MILK EMULSION) – A drilling fluid in which the oil content is usually kept between 3 to 7 percent and seldom over 10 percent (it can be considerably higher). The oil is emulsified into fresh or salt water with a chemical emulsifier. Sometimes CMC, starch, or gum may be added to the fresh-and-salt-water systems. (Bul D11)

OIL FIELD – See Field. (ITOGP)

OIL AND GAS SEPARATOR – An item of production equipment used to separate the liquid components of the well stream from the gaseous components. (ITOGP)

OIL IMMERSED EQUIPMENT – Equipment immersed in electrical insulating oil for the purpose of preventing an ignitable or corrosive gas or vapor from coming in physical contact with the equipment or for the purpose of reducing arcing of circuit breaking devices. (RP 14F)

OIL OPERATOR (OPERATOR) –An individual or company engaged in the business of finding and producing oil and gas. (ITOGP)

OIL PATCH – A colloquial expression for an oil field. If one goes to an oil field, then one goes to the oil patch. (ITOGP)

OIL – PETROLEUM – GAS – A fluid or gas composed of hydrocarbons. (ITOGP)

OIL-RESISTANT – Ability to withstand exposure to oil as defined by ANSI C-33.80 (UL Std. 83), Safety Standard for Thermoplastic Insulated Wires. (RP 14F)

OIL SAND – A sandstone reservoir that yields oil. (ITOGP)

OIL SAVER – A packing arrangement that seals around a wire line to prevent leakage and waste of gas, oil, or water (as when swabbing or reworking a well). It may be operated mechanically or hydraulically. (WLOP)

OIL SEALED – See Oil Immersed Equipment. (RP 14F)

OIL SPILL – The accidental discharge of oil into oceans, bays, or inland waterways. Methods of oil-spill control include chemical dispersion, combustion, mechanical containment, and absorption. (Bul D11)

OIL STRING – See Production Casing. (ITOGP)

OIL AND WATER SEPARATION FACILITY – A gun barrel, settling tank, water knockout, or emulsion treater, installed by the lease owner to separate produced oil and water. (SSWID)

OIL-IN-WATER EMULSION DRILLING FLUID – Commonly called “emulsion mud.” Any conventional or special water-base drilling fluid to which oil has been added. The oil becomes the dispersed phase and may be emulsified into the drilling fluid either mechanically or chemically. (Bul D11)

OIL-WATER INTERFACE – Oil will lie on top of water due to difference in specific gravity. The bottom level of oil column and top level of water column are at a common level called the interface. (WT)

OIL WELL – A well completed for the production of crude oil from at least one oil zone or reservoir. (ITOGP)

ON THE BEAM – A well being pumped by a beam pumping unit. (ITOGP)

ON THE LINE – Said of a tank when it is being emptied into a pipeline. (ITOGP)

ON THE PUMP – A well that is not capable of flowing and is produced by means of a pump. (ITOGP)

ONE-EYED BIT – Bit with only one jet nozzle open and used in jet deflection. (Bul D20)

ONE-PIECE SUCKER ROD – A rod whose body and pin or box ends are an integral unit. The ends may be formed by forging the ends of a one-piece body stock or by welding or fusing end pieces on the body. (Spec 11B)

OOC – Offshore Operators Committee

OPEN AREA, OR PERCENT OPEN AREA – Ratio of the area of the apertures to the total area of the screening surface. (Bul 13C)

OPEN FLOW – Maximum delivery rate at the surface for a gas well with a back pressure at the sand face of 1 atmosphere plus tubing friction plus weight of a column of gas from surface to formation. This differs from Absolute Open Flow, with the latter being a calculated value which assumes the back pressure at the sand face is equal to 0 psia and neglects friction and weight of gas column. (WT)

OPEN HOLE – Wellbore in which casing has not been set. (Bul D20)

OPEN HOLE – Uncased portion of a well. (ITOGP)

OPEN HOLE – Uncased part of the wellbore. (RP 54)

OPEN-HOLE SURVEY – A survey made in the uncased section of the borehole and not within the drill string. (Bul D20)

OPEN LEAD – An essentially linear, wet opening in the sea ice of navigable width, not thermally induced. A small, wet opening will be considered a crack. (Bul 2N)

OPEN-TYPE PLATFORM – A platform that has sufficient natural ventilation to minimize the accumulation of vapors. (RP 14G)

OPEN WATER-TREATING SYSTEM – A system of treating water in which the water comes in contact with air. (SSWID)

OPENING RATIO – The ratio of well pressure to the pressure required to open the blowout preventer. (RP 53)

OPERATING MANUAL – The publication issued by the manufacturer which contains detailed data and instructions related to the design, installation, operation, and maintenance of SSV/USV equipment. (RP 14H, Spec 14D)

OPERATING MANUAL – The publication issued by the manufacturer which contains detailed data and instructions related to the design, installation, operation and maintenance of SSSV equipment. (RP 14B, Spec 14A)

OPERATING PRESSURE – The gas injection pressure available to maintain the desired rate of fluid production in a gas lift well under settled continuous or intermittent operation. (GL)

OPERATING PRESSURE – The operating pressure is the pressure in the vessel during normal operation. The operating pressure shall not exceed the MAWP, and is usually kept at a suitable level below the setting of the pressure relieving devices to prevent their frequent opening. (Spec 12J)

OPERATING PRESSURE – The pressure at which a line or system is operated at any given time. (SSWID)

OPERATING PRESSURE – The pressure at which a flow line or system is operated at any given time. May also be used as wellhead flowing pressure. (WLOP)

OPERATOR – The person, firm, corporation or other organization employed by the owners to conduct operations. (RP 2A)

OPERATOR – The person, firm, corporation, or other organization employed by the owner to oversee the construction and/or operation of the facility. (RP 2X)

OPERATOR – The person present throughout the inspection or testing process who is responsible for the unit, operates the controls, observes the readout to detect imperfections, and classifies the pipe. (RP 5A5)

OPERATOR – Lease owner or his designated agent who is responsible for the overall operation of the lease. (RP 54)

OPERATOR – The user of an SSV/USV who chooses to comply with this standard. (RP 14H, Spec 14D)

OPERATOR – The user of SSSV equipment who chooses to comply with this API Recommended Practice. (RP 14B, Spec 14A)

OPERATORS STATION – The designated location for the operator for operating the machine. (Spec 2C)

OPTIMUM WATER – The amount of water used in a cement slurry which gives the slurry the best properties for its particular application. (Bul 10C)

ORGANIC AMINE INHIBITOR – A chemical consisting of carbon, hydrogen, and nitrogen which reduces corrosion rates. (COGWE, SSWID)

ORIENTING TECHNIQUES – Techniques used in positioning the tools that change the inclination and the direction of the wellbore. See Methods of Orientation. (Bul D20)

ORIENTATION – The angular relationship of a surface, plane, defect axis, etc., to a reference plane or surface. (RP 2X)

ORIFICE METER – An instrument commonly used to measure the flow of fluid (usually gas) in a pipe. (ITOGP)

ORIFICE METER – Instrument used to measure fluid flow by recording differential pressure across a restriction placed in the flow stream and the static or actual pressure on the system. (WT)

ORIFICE PLATE – A plate with centered hole of precise diameter placed as a restriction in a pipe to determine flow rate by measuring pressure drop across plate. (WT)

ORIFICE WELL TESTER – Device for measuring gas. A precision drilled nipple attached to the open end of a line with a plate, having a small opening, attached to the end of the nipple, and a connection to measure gage pressure. Differs form critical flow prover in that orifice well tester is designed for low pressure and low volume testing. (WT)

ORIGINAL EFFECTIVE PERMEABILITY (k_0) – The original effective permeability of a Berea sandstone core target is the effective permeability to kerosine of a 3-9/16 inc. diameter by 12-, 15-, 18-, 21-, 24-, or 27 in. length core cut in such a way that the bedding planes are parallel to the axis of the core target and to the direction of fluid flow. (RP 43)

OSAPTM – Offshore Safety and Anti-Pollution Training and Motivation Committee

OSCILLOGRAM – Common term for photograph data displayed on CRT. (RP 2X)

OSHA – Occupational Safety and Health Administration, a regulatory agency under the U.S. Labor Department.

OTC – Offshore Technology Conference

OUT-OF-LINE WELD BEADS OR OFF SEAM – A condition in which the inner and/or outer weld beads are sufficiently out of radial alignment with the abutting edges of the joint to cause incomplete penetration. (Bul 5T1)

OUTPUT HORSEPOWER – The horsepower that is put out by an operating system. (Bul D10)

OUTRIGGERS – Structural extensions of the mast or pole base protruding at approximately 90 degrees from the longitudinal axis of the rig to provide overturn stability. (RP 54)

OVERALL HELICOPTER LENGTH – The overall length of a helicopter is the distance from the tip of the main rotor blade to the tip of the tail rotor when the rotor blades are aligned along the longitudinal axis of the helicopter. Similarly, for a tandem rotor helicopter, the overall length is from the tip of the front main rotor to the tip of the rear main rotor. Herein the overall length is referred to as “OL”. (RP 2L)

OVERBURDEN – The pressure on a formation due to the weight of the earth material above the formation. For practical purposes this pressure can be estimated at 1 psi/ft of depth. (RP 53)

OVERFILLS – Longitudinal ridges formed during bar rolling when the bar is too large for the rolling pass it is entering. (Spec 11B)

OVERFLOW – The discharge stream from a centrifugal separation that contains a higher percentage of liquids than does the feed. (Bul 13C)

OVERFLOW HEADER (See Related Term: Overflow Manifold) – A pipe, tube, or conduit into which two or more devices discharge their overflow. (Bul 13C)

OVERFLOW MANIFOLD – An arrangement by which the overflow from one or more solids separation devices, or from one or more overflow headers can be diverted to various directions. (Bul 13C)

OVERFLOW OPENING – The actual opening through which the overflow leaves the centrifugal separation. (Bul 13C)

OVERHAUL – Ability of a weight on end of hoist line to unwind rope from drum when brake is released. (Spec 2C)

OVERHAUL BALL – The weight on a single part line used to pull the wire rope off the drum line with gravitational assistance. (Spec 2C)

OVERLOAD – To feed separable solids to a separating device at a rate greater than its solids discharge capacity. (Bul 13C)

OVERPRESSURE – Pressure in a process component in excess of the maximum allowable working pressure (for pipelines, maximum allowable operating pressure). (RP 14C)

OVERPRODUCED – Said of a well that has produced more than its allowable. (ITOGP)

OVERSHOT – A fishing tool attached to a wireline tool string, tubing, rods, or drill pipe that is lowered over the outside of a "fish" lost or stuck in the wellbore. A friction device in the overshot, usually a basket or a spiral grapple, firmly grips the fish allowing it to be pulled from the hole. (WLOP)

OVERSIZE – Material having particle size larger, at least in one dimension, than a specified aperture. (Bul 13C)

OVERSWING – Term denoted to excessive walk of the bit; walk of the bit greater than expected. (Bul D20)

OWNER – A word used throughout this Recommended Practice used to designate the company or person who specifies the type of inspection or testing to be conducted, and has the authority to order it performed. (RP 5A5)

OXIDATION – A chemical change or reaction in which oxygen unites or combines with other elements or substances. Organic matter may be oxidized or broken down by the action of aerobic bacteria as in certain waste-water treatment procedures. (Bul D11)

OXIDATION – (1) Chemical combining with oxygen to form an oxide. (2) Electro-chemically, as the loss of electrons at the anode of a corrosion cell. (COGWE, SSWID)

-P-

P - The phenolphthalein alkalinity of the filtrate, reported as the number of milliliters of 0.02 Normal (N/50) acid required per milliliter of filtrate to reach the phenolphthalein end point. (Bul D11)

P – The phenolphthalein alkalinity of the drilling fluid reported as the number of milliliters of 0.02 Normal (N/50) acid required per milliliter of drilling fluid. (Bul D11)

P&A – The abbreviation for plugged and abandoned. See Plug and Abandon. (ITOGP)

PACK ICE – Any sea ice other than fast ice. (Bul 2N)

PACK OFF – To place a packer in the wellbore and activate it such that it forms a seal between the tubing and casing. (WLOP)

PACKED ASSEMBLY – Refer to "Packed Bottom-hole Assembly." (Bul D20)

PACKED BOTTOM-HOLE ASSEMBLY – A configuration of tools with a certain degree of rigidity and wallbearing surfaces. (Bul D20)

PACKED HOLE – A wellbore with a packed bottom-hole assembly. (Bul D20)

PACKER – An expandable plug-like device for sealing off the annular space between the well's tubing and the casing. (ITOGP)

PACKER – Downhole equipment consisting essentially of a sealing device, a holding or setting device, and an inside passage for fluids. It is used to block the flow of fluids through the annular space between the tubing and the wall of the wellbore (or between tubing and casing) by sealing off the space between them. (WLOP)

PACKER FLUID – Any fluid placed in the annulus between the tubing and casing above a packer. Along with other functions, the hydrostatic pressure of the packer fluid is utilized to reduce the pressure differentials between the formation and the inside of the casing and across the packer itself. (Bul 10C, Bul D11)

PACKER TEST – Application of hydraulic pressure either through the tubing or annulus to assure that the packer is properly set and sealed. (RP 57)

PACKING – A material used in the stuffing box of a valve or between flange joints to maintain a leakproof seal. (WLOP)

PACKING GLAND – The metal part that compresses and holds the packing in place in a stuffing box. (WLOP)

PACKOFF OR STRIPPER – A device with an elastomer packing element that depends on pressure below the packing to effect a seal in the annulus. Used primarily to run or pull pipe under low or moderate pressures. This device is not dependable for service under high differential pressures. (RP 53)

PANEL – See Stiffened Panel. (Bul 2V)

PANEL STRESSES – Stresses on stiffened panels resulting from local applied pressures or transverse loads. (Bul 2V)

PAR RATE – A rate developed solely for the evaluation of incidence rates determined by taking the sum of a reporter's prior rates and the industry prior rates, and dividing by two. (Bul T5)

PARAFFIN – Heavier paraffin-base hydrocarbons often form a waxlike substance called paraffin. Paraffin may accumulate on the walls of tubing, flow lines and other production equipment, thus restricting the flow of well fluids to the extent that it must be removed. See Hot-Oil Treatment. (ITOGP)

PARAFFIN – A hydrocarbon having the formula $C_n H_{38} + 2$ (e.g., methane, CH_4; etc.). Heavier paraffin hydrocarbons (i.e. those of $C_{13} H_{38}$ and heavier) form a waxlike substance that is called paraffin. These heavier paraffins often accumulate on the walls of tubing and other production equipment, restricting or stopping the flow of oil. (WLOP)

PARAFFIN INHIBITOR – A chemical that, when injected into the production string prevents or minimizes paraffin deposition. (WLOP)

PARAFFIN SCRAPER – Any tool used t remove paraffin from inside tubular goods. (WLOP)

PARALLEL FLOW – See Laminar Flow. (Bul D11)

PART – Individual pieces used in the assembly of single equipment units (e.g., body, bonnet, gate, stud, handwheel, etc., are parts of a valve). Also may be a piece in raw material form. (Spec 6A)

PART – An individual piece used in the assembly of a single equipment unit. (Spec 16A)

PARTS PER MILLION – See PPM. (Bul D11)

PARTICLE – A minute unit of matter, usually a single crystal, or of regular shape with a specific gravity approximating that of a single crystal. (Bul D11)

PARTICLE CUT – See Preferred Term: Cut. (Bul 12C)

PARTICLE SIZE – (See Related Term: Equivalent Spherical Diameter). Particle diameter expressed in microns. (Bul 12C)

PARTICLE SIZE DISTRIBUTION – The fraction or percentage of particles of various sizes, or size ranges. (Bul 13C)

PARTICLE SURFACE AREA – (See Related Terms: Free Liquid Film and Adsorbed Liquid). Referring to the combined area of the surfaces of solids particles in some particular grouping. (Bul 13C)

PARTICULATES – Finely divided solid or liquid particles in the air or in an emission. Particulates include dust, smoke, fumes, mist, spray, and fog. (Bul D11)

PAWL (DOG) – A device for positively holding a member against motion in one or more directions. (Spec 2C)

PAY OUT – The recovery from production of the costs of drilling, completing, and equipping a well. (ITOGP)

PAY SAND – The producing formation, or that formation which represents the objective drilling. Also referred to as PAY. (ITOGP)

PAY ZONE OR PAY FORMATION – The formation drilled into that contains oil and/or gas in commercial quantities. (Bul D11)

PAYLOAD – See Load-Working. (Spec 2C)

PE – Polyethylene.

PEARLITIC – Alternate parallel platelets of iron and a microstructural arrangement having iron carbide in one grain. May also refer to a steel with a preponderance of such carbine arrangements. (COGWE, SSWID)

PEDESTAL (ALSO KNOWN AS BASE) – The supporting substructure upon which the revolving upperstructure is mounted. (Spec 2C)

PENDANT – (ALSO KNOWN AS GUY ROPE) – A non-operating standing rope of specified length with fixed end connections. (Spec 2C)

PENDULUM EFFECT – Refers to the pull of gravity on a body; tendency as a pendulum to return to a vertical position. (Bul D20)

PENDULUM FORCE – The force of gravity on a body as on a pendulum. (Bul D20)

PENDULUM HOOKUP – A bit and drill collars with a stabilizer placed to attain the maximum pendulum effect. (Bul D20)

PENETRAMETER – See Magnetic Field Indicator. (RP 5A5)

PENETRATION – The maximum depth in a material from which indications can be measured. (RP 2X)

PENETRATION, RATE OF – The rate in feet per hour at which the drill proceeds to deepen the well bore. (Bul D11)

PENETRATION (ULTRASONICS) – Propagation of ultrasonic energy through an article. See Effective Penetration. (RP 2X)

PENETRATOR – A localized spot of incomplete fusion. (Bul 5T1)

PEPTIZATION – An increased dispersion due to the addition of electrolytes or other chemical substances. See Deflocculation and Dispersion. (Bul D11)

PEPTIZED CLAY – A clay to which an agent has been added to increase its initial yield. For example, soda ash is frequently added to calcium montmorillonite clay. (Bul D11)

PER CENT ADDITIVE – The parts of additive per 100 parts of cement either by volume or by weight. Per cent usually refers to per cent by weight. If per cent by volume is meant, it should be so stated. (Bul 10C)

PER CENT WATER – The water content of a cement slurry expressed as parts of water per 100 parts of dry cement by weight. Per cent usually refers to per cent by weight. If per cent by volume is meant, it should be so stated. (Bul 10C)

PERCENT – For weight-percent, see PPM. Volume-percent is the number of volumetric parts of any liquid or solid constituent per 100 like volumetric parts of the whole. Volume-percent is the most common method of reporting solids, oil, and water contents of drilling fluids. (Bul D11)

PERCOLATION – Downward flow of infiltration of water through the pores or spaces of a rock or soil. (Bul D11)

PERFECT RECORD – An occupational injury and illness record which has continued without the occurrence of a case involving days away from work or death. (Bul T5)

PERFECT THREAD LENGTH – A design length from the end of pipe or coupling to a specified location. For buttress thread this is an L_7 . Some threads may have unfinished crests. (RP 5B1)

PERFORATED CYLINDER CENTRIFUGE – A mechanical centrifugal separator in which the rotating element is a perforated cylinder (the rotor) inside of and concentric with an outer stationary cylindrical case. (Bul 13C)

PERFORATED EFFECTIVE PERMEABILITY, k_p- The perforated effective permeability of a Berea sandstone core target is the effective permeability to kerosine of the core target after it has been perforated at the outflow end by a bullet or shaped charge, based on the original cross section and length of the core target. (RP 43)

PERFORATED-PAID STABILIZER (Perforated-sleeve Stabilizer) – Stabilizer with a built-on perforated pad to extend the outer diameter. (Bul D20)

PERFORATED ROTOR – The rotating inner cylinder of the perforated cylinder centrifuge. (Bul 13C)

PERFORATING – The act of making holes in pipe, cement, or formulation at desired depths (usually formed with an explosive device utilizing bullets or shaped charges). (RP 54)

PERMAFROST – Soil with partially or completely frozen pore water. (Permafrost is sometimes defined as soil at a temperature below 0^{o}C. Permafrost will be used only to indicate ice bonded soil. (Bul 2N)

PERMANENT MAGNET – A magnet or body which retains a strong residual magnetic field. (RP 5A5

PERMEABILITY – A measure of the capacity of a porous medium to transmit fluids or gases. The unit of measure is normally millidarcy, mD (um^2). (Bul 10C)

PERMEABILITY – Normal permeability is a measure of ability of a rock to transmit a one-phase fluid under conditions of laminar flow. Unit of permeability is the Darcy. (Bul D11)

PERMEABILITY – The capacity of a porous medium to conduct or transmit fluids. Normal permeability is a measure of ability of a rock to transmit a one-phase fluid under conditions of laminar flow. Unit of permeability is the Darcy. (Bul D11)

PERMEABILITY – 1. The ease with which a material can become magnetized. 2. The ratio of flux density produced to magnetizing force, i.e., B/H. (RP 5A5)

PERMEABILITY – The property of a porous medium which is a measure of the capacity of the medium to transmit fluids within its interconnected pore network. Usual unit of measurement is the darcy or millidarcy (0.001 darcy). (SSWID)

PERMEABILITY – A measure of ability of a rock to transmit fluids. By definition, a rock has permeability of 1 darcy if it permits flow of 1 cubic centimeter per second of single phase fluid having viscosity of 1 centipoise under pressure gradient of 1 atmosphere per centimeter. Practical unit of measure is millidarcy, or .001 darcy. (WT)

PERMEABILITY (OF A RESERVOIR ROCK) – The ability of a rock to transmit fluid through the pore spaces – A key influence in the rate of flow, movement and drainage of the fluid. There is no necessary relation between porosity and permeability. A rock may be highly porous and yet impermeable if there is no communication between pores. A highly porous sand is usually highly permeable. See Effective Permeability. (ITOGP)

PERSONNEL LANDING – A landing near the water level used primarily for transfer of personnel to and from boats and barges. (RP 2G)

PERSONNEL MONITORING EQUIPMENT – Devices designed to be worn or carried by an individual for the purpose of measuring the radiation dose received (e.g., film badges, pocket dosimeters, film rings, etc.) (RP 5A5)

PERSONNEL & UTILITY AREA – That area which contains living quarters and other personnel service equipment. (RP 2G)

PETROLEUM – Oil or gas obtained from the rocks of the earth by drilling down into a reservoir rock and piping them to the surface. See Hydrocarbon. (ITOGP)

PETROLEUM ROCK – Sandstone, limestone, dolomite, fractured shale, and other porous rock formations where accumulations of oil and gas may be found. (ITOGP)

P_f – The phenolphthalein alkalinity of the filtrate, reported as the number of milliliters of 0.02 Normal (N/50) acid required per milliliter of filtrate to reach the phenolphthalein end point. (Bul 10C)

pH – The negative logarithm of the hydrogen ion concentration. (Bul 10C)

pH – An abbreviation for potential hydrogen ion. The pH numbers range form 0 to 14, 7 being neutral, and are indices of the acidity (below 7) or alkalinity (above 7) of the fluid. The numbers are a function of the hydrogen ion concentration in gram ionic weights per liter which, in turn, is a function of the dissociation of water as given by the following expression:
$\frac{(H)\ (OH)}{(H_2O)} = K\ H_2O) = 1 \times 10^{-14}$
The pH may be expressed as the logarithm (base 10 of the reciprocal (or the negative logarithm) of the hydrogen ion concentration. The pH of a solution offers valuable information as to the immediate acidity or alkalinity, as contrasted to the total acidity or alkalinity (which may be titrated.) (Bul D11)

pH – A symbol which signifies the concentration of hydrogen ion. The lower the pH (more acidic), the higher the concentration of hydrogen ions. The higher the pH (more basic), the lower the concentration of hydrogen ion. (COGWE)

pH – A symbol which signifies the concentration of hydrogen ion. The lower the pH (more acidic), the higher the concentration of hydrogen ions. The higher the pH (more basic), the lower the concentration of hydrogen ions. Dimensionally, the logarithm of the reciprocal of the hydrogen ion concentration. (SSWID)

pH (pH VALUE) – A unit to measure the degree of acidity or alkalinity of a substance. A neutral solution (as pure water has a pH of 7; acid solutions are less than 7; basic, or alkaline, solutions are above 7. (WLOP)

PHANTOM THREAD – A circumferential tool mark on a round thread chamfer that precedes the actual starting thread. Usually referred to as a false starting thread. (RP 5A5)

PHENOLS - A group of aromatic organic compounds containing one or more hydroxyl functions similar in structure to phenol (C_6H_5OH). Such compounds may produce a taste and odor problem in water at very low concentrations. In higher concentrations, they are toxic to aquatic life. (Bul D11)

PHOSPHATE – Certain complex phosphates, usually sodium tetraphosphate ($Na_6P_4O_{13}$) and sodium acid pyrophosphate (SAPP, $Na_2H_2P_2O_7$), are used either as drilling fluid thinners or for treatment of various forms of calcium and magnesium contamination. (Bul D11)

PI (PRODUCTIVITY INDEX) – The ration of fluid production rate, in barrels per day, to the difference between static and flowing bottom hole pressure in pounds per square inch. (GL)

PICTURE – A survey chart or film in which a survey recording has been made. (Bul D20)

PIEZOELECTRIC EFFECT – The characteristic of certain materials to generate electrical charges when subjected to mechanical vibrations and conversely to generate mechanical vibrations when subjected to electrical pulses. (RP 2X)

PIG- A device inserted in a pipeline for the purpose of sweeping the line clean of water rust, or other foreign matter. Also known as GO-DEVIL. (ITOGP)

PIG A LINE – T run or put a PIG or SCRAPER through a pipeline (ITOGP)

PIG IRON – Any piece of oilfield equipment made of iron or steel. (ITOGP)

PILE- A long cylindrical tubular member, usually driven through the leg of an offshore platform, that carries vertical loads and resists lateral forces. (Spec 2B)

PILE-SUPPORTED STRUCTURE – A structure deriving its support from the piles inserted into the seabed. (Bul 2N)

PILOT BIT – Bit with a smaller diameter than the hole finally to be drilled. Used on deflecting tools, such as the whipstock and knuckle joint. Also used with hole openers which follow and enlarge the original hole. (Bul D20)

PILOT TESTING – A method of predicting behavior of drilling fluid systems by mixing small quantities of drilling fluid and additives, then testing the results. (Bul D11)

PINCH A VALVE – Closing a valve part way to reduce the flow of liquid or gas through a line. (ITOGP)

PIN END – The threaded end of a pipe without a coupling applied. (RP 5A5, RP 5B1)

PINHOLE – A short unwelded area in the weld line extending through the entire pipe thickness so that fluid will leak out through the area very slowly. (Bul 5T1)

PIPE – A long tube or hollow body of wood, metal, earthenware, or the like, as to conduct water, oil, steam, etc.

(A) Conductor Pipe – A short sting of casing of large diameter. Its function is to keep the top of the wellbore open and to provide a means of conveying the upflowing drilling fluid from the wellbore to the slush pit.

(B) Surface Pipe – The second string of casing run in the well which may be set from a few hundred feet to a depth of a few thousand feet. Its primary purpose is to seal off fresh

water aquifers and to help support subsequent casing strings and wellhead equipment. (Bul 10C)

PIPE – In this document, includes oil field casing, tubing and plain-end drill pipe. (RP 5A5)

PIPE – Refers to casing, liners, pup joints, connectors, work tubing, and drill pipe, either individually or collectively, as applicable. (Spec 5A)

PIPE COEFFICIENT – A factor used in the Hazen-Williams flow formula to correct for roughness of the inside surface of the pipe. (SSWID)

PIPE LEAN – The angle between the vertical and a typical stand of pipe with the setback. (Spec 4F)

PIPE RACKING BOARD GUYLINES (TUBING BOARD GUYLINES) – Lines which run from racking board to ground anchors or special substructure or base which provide a substitute for ground anchors. (RP 54)

PIPE RAMS – Rams whose ends are contoured to seal around pipe to close the annular space. Unless special rams accommodating various pipe sizes are used, separate rams are necessary for each size (outside diameter) pipe in use. (RP 53)

PIPE TAPPING (HOT TAPPING) – The act of drilling a hole through the wall of pipe which is under pressure. A special saddle is used to attach a valve and lubricator to the pipe. The saddle and valve remain on the pipe after the tapping operation is completed. (RP 54)

PIPE WIND-UP ANGLE – The twist in the drill stem due to reactive torque (refer to "Angle of Twist"). (Bul D20)

PIPELINE – Piping which directs fluids between platforms or between a platform and a shore facility. (RP 14C)

PIPELINE GAS – Gas which meets gas pipeline purchaser specification. (ITOGP)

PIPELINE OIL – Clean oil. Crude oil whose BS&W content is low enough to make the oil acceptable for transport or pipeline shipment. (ITOGP)

PIPELINE PIG – A scraping tool forced through a flow line or pipeline to clean the line or test for obstruction. (SSWID)

PIT – A depression resulting from the removal of foreign material rolled into the surface during manufacture. (Bul 5T1)

PIT – An emergency tank or shallow pond to hold salt water, etc., prior to disposal. (GL)

PIT – A depression or cavity that may be caused by corrosion or removal of roll-in or extraneous material. (RP 5A5)

PIT VOLUME INDICATOR – A device installed in the drilling fluid tank to register the fluid level in the tank. (RP 53)

PIT VOLUME TOTALIZER – A device that combines all of the individual pit volume indicators (refer to Par. 12.42) and registers the total drilling fluid volume in the various tanks. (RP 53)

PITCH – Platform rotation about the plant east-west horizontal axis. (RP 2T)

PITCH – A distance from a point on a thread to a corresponding point on the next thread, measured parallel to the axis. (RP 5A5, RP 5B1)

PITCH-CATCH – (See Two Crystal.) One transmits; the other receives. (RP 2X)

PITCH CONE – An imaginary cone which passes through the thread profile at approximately the thread center. (RP 5B1)

PITCH DIAMETER – The diameter of the pitch cone or the distance between the pitch line of the thread. (RP 5A5, RP 5B1)

PITCH DIAMETER – Root diameter of drum, lagging or sheave, plus the diameter of the rope. (Spec 2C)

PITCH LINE – An imaginary line drawn approximately through the center of the thread making the widths of the thread tooth and gap equal at the pitch line. (RP 5B1)

PILOT TUBE – An impact tube, usually a piece of tubing bent 90 degrees and inserted in line with open end facing into flow stream. A flow measurement device. (WT)

PITTED THREADS – A depression or cavity on a chamfer or thread surface caused by inclusions or porosity exposed after machining or by corrosive attack during storage of the pipe. (Bul 5T1)

PLAIN END – Pipe end without threads or tool joint. (RP 5A5)

PLANE OF CLOSURE – Vertical plane that contains both the surface location of the wellbore and the last station of the survey. (Bul D20)

PLASTIC FLOW – See Plastic Fluid. (Bul D11)

PLASTIC FLUID – A complex, non-Newtonian fluid in which the shear force is not proportional to the shear rate. A definite pressure is required to start and maintain movement of the fluid. Plug flow is the initial type of flow and only occurs in plastic fluids. Most drilling fluids are plastic fluids. The yield point as determined by direct-indicating viscometer is in excess of zero. (Bul 10C, Bul D11)

PLASTIC VISCOSITY – A measure of the internal resistance to fluid flow attributable to the amount, type, and size of solids present in a given fluid. It is expressed as the number of

dynes per sq cm of tangential shearing force in excess of the Bingham yield value that will induce a unit rate of shear. This value, expressed in centipoises, is proportional to the slope of the consistency curve determined in the region of laminar flow for materials obeying Bingham's Law of Plastic Flow. When using the direct-indicating viscometer, the plastic viscosity is found by subtracting the 300 rpm reading from the 6000 rpm reading. (Bul 10C, Bul D11)

PLASTICITY – The property of a substance to be deformed by pressure without being ruptured. (Bul 10C)

PLASTICITY – The property possessed by some solids, particularly clays and clay slurries, of changing shape or flowing under applied stress without developing shear planes or fractures. Such bodies have yield points, and stress must be applied before movement begins. Beyond the yield point, the rate of movement is proportional to the stress applied, but ceases when the stress is removed. See Fluid. (Bull D11)

PLASTICS – Large group of organic, synthetic or processed materials used for coating; or that are molded, cast, or extruded and used for making structural items.
Acetate Butyrate – Produced by reacting cellulose with acetic and butyric anhydride.
Epoxy – Produced by reaction between epichlorohydrin and biphenol H to A.
Phenolic – Produced by reacting formaldehyde and phenol.
Polyester – Produced from polybasic alcohols and polybasic acids.
Polyethylene – Composed of polymers of ethylene.
Polyurethane – Produced from propionadlehyde, trimethylolpropane, propionic acid, and ammonia.
Syrenes – Polystyrene is produced by polymerizing styrene. A butadiene-styrene copolymer is formed by reacting butadiene and styrene.
Vinyl – Polyvinyl chloride (PVC) is produced by the addition-type polymerization of vinyl chloride. (COGWE, SSWID)

PLATE – This term refers to a flat thin rectangular plate. (Bul 2V)

PLATE STRESSES – Stresses on a thin rectangular plate. (Bul 2V)

PLATFORM PIPING – A general term referring to any piping, on a platform, intended to contain or transport fluid. (RP 14E)

PLATFORM SAFETY SYSTEM – An arrangement of safety devices and Emergency Support Systems to effect platform shutdown. The system may consist of a number of individual process shutdowns and may be actuated by either manual controls or automatic devices sensing detectable abnormal conditions. (RP 14C)

PLATFORM SHUTDOWN – The shutting in of all process stations of a platform production process and all support equipment for the process. (RP 14C)

PLUG AND ABANDON (PLUGGED AND ABANDONED) – Expressions, often abbreviated "P&A," referring to the act of placing plugs in a depleted well or DRY HOLE, then abandoning it. See Abandon. (ITOGP)

PLUG AND ABANDON (P & A) – To place a cement plug or plugs in a dry hole or uneconomic producing well to abandon it. (WLOP)

PLUG BACK – To shut off a lower formation in a well bore. (Bul 10C, ITOGP)

PLUG BACK – To fill part of the wellbore with cement, sometimes used for side-tracking. (Bul D20)

PLUG BACK – To place cement or other material at or near the bottom of a well to exclude bottom water or to perform another operation such as side tracking or producing form another depth. It may also be used to denote the setting of a mechanical plug by wire line, tubing, or drill pipe. (WLOP)

PLUG FLOW – The movement of a material as a unit without shearing within the mass. Plug flow is the first type of flow exhibited by a plastic fluid after overcoming the initial force required to produce flow. (Bul 10C, Bul D11)

PLUG VALVE – A valve whose mechanism consists of a plug with a hole through it on the same axis as the direction of fluid flow. Turning the plug 90^{o} opens or closes the valve. The valve may or may not be full-opening. (RP 53)

PLUG SCORES – Internal longitudinal grooves occurring in seamless pipe, usually caused by hard pieces of metal adhering to the high-mill plug. (Bul 5T1)

PLUGGING (SCREEN SURFACE) - (See Related Term: Blinding) The wedging or jamming of openings in a screening surface by particles, preventing passage of undersize material. (Bul 13C)

PLUGGING MATERIAL – A material used to block off zones while treating or working on other portions of wells. Blocking may be temporary or permanent. (Bul 10C)

PLUMB-BOB EFFECT – The pendulum action, due to the force of gravity, pulling the drill stem to a vertical position. (Bul D20)

PLUNGER LIFT – A method of lifting oil using a swab or free piston propelled by compressed gas from the lower end of the tubing string to the surface. (ITOGP)

PNEUMATIC POWER SYSTEM – A system which supplies pressure to operate pneumatic actuators. (RP 14C)

POCKET – The gas lift valve receiver inside a wireline (retrievable) mandrel. (GL)

POISE – The metric unit for measurement of viscosity. (Bul 10C)

POLAR ORGANIC – A compound of carbon which will adsorb on a solid surface. (COGWE, SSWID)

POLARIZE – Retard an electrochemical corrosion reaction by deposition of a corrosion product. (COGWE, SSWID)

POLE – The area on a magnetized part from which the magnetic field is leaving or returning into the pipe, i.e., substantially perpendicular to the pipe surface. (RP 5A5)

POLE MAST – Structure consisting of one or more tubular sections, telescoping or not telescoping, which are the load-bearing members. The structure, when erected to working position, usually requires guylines. It may be attached to a carrier, skid base, or substructure. It is used in place of a derrick. (RP 54)

POLE PIECE – The ferromagnetic portion of a magnetic circuit attached to the core used to shape and direct the magnetic field through the air gaps into the wall of the pipe being inspected. (RP 5A5)

POLLUTANT – Any introduced gas, liquid, or solid that makes a resource unfit for a specific purpose. (Bul D11)

POLLUTION – The prescnce of matter or energy whose nature, location, or quantity produces undesired environmental effects. (Bul D11)

POLY – Having several atoms, groups or molecules; prefix signifying many. (SSWID)

POLY ELECTROLYSIS – Passage of electric currents through a solution with resultant migration of ions to positive and negative electrodes, or the decomposition of a chemical compound brought about by the passage of electrical currents through the compound. (SSWID)

POLYMER – A substance formed by the union of two or more molecules linked end to end into another compound having the same elements in the same proportion but a higher molecular weight and different physical properties. (Bul 10C)

POLYMER – A substance formed by the union of two or more molecules linked end to end into another compound having the same elements in the same proportion but a higher molecular weight and different physical properties, e.g., paraformaldehyde. See Copolymer. (Bul D11)

POLYMER – A compound formed by linking of a molecule with itself to form a very long molecule. (COGWE)

POLYMER – Thickening agent used to increase viscosity of water. A substance formed by the union of two or more molecules of the same kind linked end to end into another compound having the same elements in the same proportion but a higher molecular weight and different physical properties. (SSWID)

POLYNYA – An areal opening in sea ice, ultimately refreezing to a thickness less than the normal ice sheet growth. (Bul 2N)

POLYPHOSPHATE – A phosphate compound used for water stabilization and corrosion inhibition. (COGWE, SSWID)

POND – See Preferred Terms: Pool. (Bul 13C)

PONTOONS – Horizontal, cylindrical or rectangular buoyancy members of the hull structure which interconnect with columns to form a frame below the waterline. (RP 2T)

PONY ROD – A sucker rod made in short lengths of 2 ft to 8 ft. (ITOGP)

POOL – The reservoir of fluid formed in a decanting centrifuge in which classification or separation occurs due to application of centrifugal force to accelerate solids settling rates. (Bul 13C)

POP-OFF VALVE (POP VALVE) – See Pressure-Relief Valve. (ITOGP)

POROSITY – Property that indicates the ratio of the volume of voids to the total volume of an ice feature. Voids can consist of air, snow, or water. (Bul 2N)

POROSITY – Voids in a metal, usually resulting from shrinkage or gas entrapment occurring during solidification of a casting or weldment. (Bul 5T1)

POROSITY – The amount of void space in a formation rock, usually expressed as percent voids per bulk volume. Absolute porosity refers to the total amount of pore space in a rock, regardless of whether or not that space is accessible to fluid penetration. Effective porosity refers to the amount of connected pore spaces, i.e., the space available to fluid penetration. See Permeability. (Bul 10C, Bul D11)

POROSITY (OF A RESERVOIR ROCK) – The percentage that the volume of the pore space bears to the total bulk volume. The pore space determines the amount of space available for storage of fluids. See Effective Porosity. (ITOGP)

POROSITY – (0) Porosity, (0), is the percentage by volume of pore space within a sample. It is defined as the ratio of pore volume to bulk volume multiplied by 100. The Berea sandstone core, after oven drying, is evacuated and saturated fully with salt water. It is weighted both in the dry state and in the saturated state. The difference in weight divided by the density of the salt water gives pore volume directly. The bulk volume is calculated using the physical dimensions of the core. (RP 43)

POROSITY – The percentage by volume of porous space within a formation. Porosity combined with permeability to permit fluid flow is termed “effective porosity.” (SSWID)

POTABLE MAST – Refer to “Derrick (Mast).” (RP 54)

PORTABLE WELL TESTER – Specialized unit, usually trailer mounted, complete with all necessary separation equipment and measuring instruments to obtain fluid production measurement on a well. Unit is connected to a well or battery on a temporary basis, and can be disconnected for moving to other locations as needed. (WT)

PORTLAND CEMENT CLINKER – Hard granular nodules composed essentially of hydraulic calcium silicates, with smaller quantities of calcium aluminates and ferrites, produced by the heat treatment of cement raw materials in a kiln. Clinker is pulverized with the proper quantity of calcium sulfate in the manufacture of portland cements. (Bul 10C)

PORTS – The openings in a centrifuge for entry or exit of materials. Usually applied in connection with a descriptive term, i.e., feed ports, overflow ports, etc. (Bul 13C)

POSITIVE CHOKE - Choke with a fixed orifice size. To change the size of the orifice the choke beam or choke nipple is changed. (WLOP)

POSITIVE-DISPLACEMENT METER (PD METER) – A mechanical, fluid-measuring device that measures by filling and emptying chambers of a specific volume. (ITOGP)

POSITIVE DISPLACEMENT METERS – Meters in which rotation causes a positive displacement of an exact measured volume of fluid with each revolution. (WT)

POST WELD HEAT TREATMENT – Any heat treatment subsequent to welding, including stress relief. (Spec 6A, Spec 16A)

POTABLE WATER – Water suitable for drinking or cooking purposes from both health and aesthetic considerations. (Bul D11)

POTASSIUM – One of the alkali metal elements with a valence of 1 and anatomic weight of about 39. Potassium compounds, most commonly potassium hydroxide (KOH), are sometimes added to drilling fluids to import special properties, usually inhibition. (Bul D11)

POTENTIAL – Voltage under standardized conditions. (COGWE, SSWID)

POTENTIAL TEST – A test which indicates the maximum rate at which a well can produce. (ITOGP)

POTENTIOMETER – Instrument used to measure electrical potentials. (COGWE, SSWID)

POTTING – The encapsulation of electrical components with epoxy, elastomeric, silicone or asphaltic or similar compounds for the purpose of excluding moisture of vapors. Potted components are not necessarily hermetically sealed. (RP 14F)

POUND EQUIVALENT – A laboratory unit used in pilot testing. One gram or pound equivalent to 1 lb/bbl (=2.85 kg/m^3). (Bul 10C, Bul D11)

POUR POINT – Temperature above which a liquid will flow freely. (WT)

POWDER DRY – A pipe surface that is sufficiently dry so as to allow any type of powder, applied to the surface, to be blown from the surface without a remaining residue. (RP 5A5)

POWER CONTROLLED LOWERING – A system or device in the power train, other than the load hoist brake, which can control the lowering rate of speed of the load hoist mechanism. (Spec 2C)

POWER OIL – Oil pumped down a tubing string to operate a free pump or jet pump down hole. (WT)

POWER RATING – Rating given by a manufacturer of an engine operating at its most efficient output. (ITOGP)

POWER TIGHT – A threaded connection that has been fully made up by mechanical means using power tongs or a screw-on machine. (RP 5A5, RP 5B1)

POWER TOOLS – Equipment operated hydraulically or by compressed air for making up and breaking out drill pipe, casing, tubing, rods, nuts, etc. (ITOGP)

POZZOLAN – A siliceous or siliceous and aluminous material, which in itself possesses little or no cementitious value, but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cemetitous properties. See ASTM C618: Fly Ash and Raw or Calcined Natural Pozzolans for Use in Portland Cement Concrete. (Bul 10C)

POZZOLANIC REACTION – The chemical combination of certain finely divided siliceous or siliceous and aluminous materials with calcium hydroxide to form compounds which have cementitious properties. (Bul 10C)

PPM OR PARTS PER MILLION – Units of weight of solute per million unit weights of solution (solute plus solvent), corresponding to weight-per cent except that the basis is a million instead of a hundred. (Bul 10C)

PPM OR PARTS PER MILLION – Unit weight of solute per million unit weights of solution (solute plus solvent), corresponding to weight-percent except that the basis is a million instead of a hundred. The results of standard API titrations of chloride, hardness, etc., are correctly expressed in milligrams (mg) of unknown per liter but not in ppm. At low concentrations, mg/l is about numerically equal to ppm. A correction for the solution specific gravity or density in g/ml must be made as follows:

$$\text{ppm} = \frac{\text{mg/l}}{\text{soln den, g/ml}}$$

$$\%\text{ by wt} = \frac{\text{mg/l}}{(10{,}000)\,(\text{soln den, g/ml})}$$

$$= \frac{\text{ppm}}{10{,}000}$$

Thus 316,000 mg/l salt is commonly called 316,000 ppm or 31.6 percent, which correctly should be 264,000 ppm and 26.4 percent, respectively. (Bul D11)

PRECESSION – Motion about the vertical and/or horizontal axis of a gyro due to imbalance friction, earth's rotation, or externally applied forces. (Bul D20)

PRECIPITATE – Material that separates out of solution or slurry as a solid. Precipitation of solids in a drilling fluid may follow flocculation or coagulation, such as the dispersed red-bed clays upon addition of a flocculation agent to the fluid. (Bul D11)

PRECIPITATE – An insoluble solid substance produced as a result of a chemical reaction. (SSWID)

PRELOAD – Load purposely induced in a component to improve its in-service strength, fatigue life, or sealing capabilities. (RP 2T)

PRESENTATION – The method used to show ultrasonic wave information. This may include A, B, or C scans displayed on various types of recorders or cathode ray tube instruments. (RP 2X)

PRESERVATIVE – Usually paraformaldehyde. Any material used top prevent starch or any other substance from fermenting through bacterial action (Bul D11)

PRESSURE – A force of thrust distributed over a surface divided by the area of the surface Normally indicated by a gage in pounds per square inch. (WT)

PRESSURE – Force per unit area.
Bottom Hole Circulating Pressure – The pressure at the bottom of a well during circulation of any fluid. It is equal to the hydrostatic head plus the annular friction loss required to move the fluid to the surface plus any back pressure held at the surface.

Bottom Hole Static Pressure – The pressure at the bottom of a well after the well is shut-in long enough to reflect ambient formation pressure.

Circulating Pressure – The pressure at a specified depth required to circulate a fluid in a well at a given rate.

Final Squeeze Pressure – The pressure at the completion of a squeeze cementing operation. Final squeeze pressure usually refers to the surface pressure. (Bul 10C)

PRESSURE BASE – The pressure of a gas-phase or liquid-phase system associated with its stated volume. (RP 44)

PRESSURE CHARGED VALVE – (a gas lift valve which uses a gas charge inside the responsive element to provide the closing force for the valve.) The gas is usually Nitrogen. The responsive element is usually a bellows. (GL)

PRESSURE-CONTAINING PARTS – Those parts whose failure to function as intended would result in a release of retained fluid to the atmosphere, such as bodies, bonnets, and stems. (Spec 6A)

PRESSURE CONTAINING PART(S) OR MEMBER(S) – Those parts exposed to well bore fluids whose failure to function as intended would result in a release of wellbore fluid to the environment, such as bodies, bonnets and stems. (Spec 16A)

PRESSURE CONTAINING PARTS (SSV/USV ACTUATORS) – The piston, cylinder and stem (shaft) comprise the SSV/ISV actuator pressure containing parts as used in Spec 14D. (RP 14H, Spec 14D)

PRESSURE CONTAINING PARTS (SSV/USV VALVE) – Body, bonnet, cover, gate (plug), seats, stem: Bonnet connections and end and outlet connections comprise the SSV/USV valve pressure containing parts as used in API Spec 14D. (RP 14H, Spec 14D)

PRESSURE-CONTROLLING PARTS – Those parts intended to control or regulate the movement of pressurized fluids, such as valve bore sealing mechanisms and hangers. (Spec 6A)

PRESSURE CONTROLLING PART(S) OR MEMBER (S) – Those parts intended to control or regulate the movement of wellbore fluids, e.g., packing elements, rams, replaceable seats within a pressure containing member or part (s). (Spec 16A)

PRESSURE-DROP LOSS – The pressure lost in a pipeline or annulus due to the velocity of the liquid in the pipeline, the properties of the fluid, the condition of the pipe wall and the alignment of the pipe. (Bul 10C)

PRESSURE-DROP LOSS – The pressure lost in a pipeline or annulus due to the velocity of the liquid in the pipeline, the properties of the fluid, the condition of the pipe wall, and the alignment of the pipe. In certain drilling fluid mixing systems, the loss of head can be substantial. (Bul D11)

PRESSURE DRAWDOWN – The reduction in a well's bottom-hole pressure. See Drawdown. (ITOGP)

PRESSURE GAGE – An instrument for measuring fluid pressure. (ITOGP)

PRESSURE GAGE – An instrument for measuring fluid pressure. A pressure gage usually registers the difference between atmospheric pressure and the pressure of the fluid being measured by indicating effect of such pressure on a measuring element (as a column of liquid, a bourdon tube, a weighted piston, a diaphragm, or other pressure-sensitive device. (WLOP)

PRESSURE GRADIENT - See Gradient, Pressure. (ITOGP)

PRESSURE GRADIENT – Uniform change in pressure from one point to another. For example, the pressure gradient of a column of pure water is about 0.433 psi/ft of vertical elevation. (WLOP)

PRESSURE GRADIENT, NORMAL – The subsurface pressure proportional to depth, which is roughly equal to the hydrostatic pressure of a column of salt water (0.465 psi/ft). (RP 53)

PRESSURE MAINTENANCE – Maintaining reservoir pressure by injecting fluid, normally water or gas, or both. (ITOGP)

PRESSURE MAINTENANCE – The repressuring of oil fields from the beginning of operation in order to maintain the original pressure. Also, a method for increasing ultimate oil recovery by injecting gas, water, or other fluids into the reservoir before reservoir pressure has dropped appreciably, usually early in the life of the field, to reduce or eliminate a decline in pressure. (SSWID)

PRESSURE OPERATED VALVE – A gas lift valve that utilizes injection gas pressure as its primary operating medium. (GL)

PRESSURE REGULATOR – A device for maintaining pressure in a line, downstream from the device. (ITOGP)

PRESSURE-RELIEF VALVE – A valve that opens at a preset pressure to relieve excessive pressure within a vessel or line; also called a RELIEF VALVE, SAFETY VALVE, OR POP VALVE (ITOGP)

PRESSURE RETAINING PARTS (S) OR MEMBERS(S) – Those parts not exposed to wellbore fluids whose failure to function as intended would result in a release of wellbore fluid to the environment such as closure bolts, claims. (Spec 16A)

PRESSURE SENSOR – A device designed to detect a predetermined pressure. (RP 14E)

PRESSURE SURGE – A sudden, usually short-duration increase in pressure. When pipe or casing is run into a hole too rapidly, an increase in the hydrostatic pressure results, which may be great enough to create lost circulation. (Bul D11)

PRESSURE SURVEY – An operation to measure and record the pressures at various depths in the well bore with the well either producing or shut-in. The pressures may be measured and recorded by either a self-contained unit run on a solid wireline or a unit run on an electric wireline with an instantaneous recording at the surface. (GL)

PRESSURE TEST, BLOWOUT PREVENTER – The process of pressure testing internally, a blowout preventer or blowout preventer assembly. (RP 57)

PRESSURE VESSEL QUALITY – Metallic material whose integrity is such that it can be used to safely contain pressure without risk of leakage or rupture. (Spec 6A, Spec 16A)

PRESSURIZED SURGE VESSEL – An unfired pressure vessel used to provide for fluctuations in liquid flow to pumps. (RP 2G)

PRETENSION – Tension applied to a tendon in its static, zero offset equilibrium position. (RP 2T)

PREVENTATIVE MAINTENANCE – Service operations performed on sub-surface safety valve equipment not initiated as a result of SSSV equipment malfunction or failure. (RP 14B)

PRIMARY CEMENTING – The original cementing operation performed immediately after casing has been run into the hole. See Casing Cementing. (Bul 10C)

PRIMARY DEFLECTING TOOLS – Historically, the whipstock, knuckle joint, and spudding bit, and more recently, the jet bit and downhole motor. (Bul D20)

PRIMARY LOAD CARRYING SUBSYSTEM – Structure tying column tops together and supporting deck levels. This structure may consist of either trusses, box girders, plate girders or a combination thereof. (RP 2T)

PRIMARY MEANS OF ESCAPE – Fixed stairways or fixed ladders of metal construction. (RP 14G)

PRIMARY RECOVERY – The amount of oil and/or gas produced from a reservoir by the reservoir's natural sources of energy. This includes gas-cap drive, dissolved-gas drive, water drive, or any combination of these. (ITOGP)

PRIMARY TREATMENT – The first stage in waste-water treatment in which substantially all floating or settleable solids are mechanically removed by screening and sedimentation. (Bul D11)

PRIME MOVER – The source of power for a pump or other device, usually gas engines or electric motors. (SSWID, WLOP)

PRIME MOVER – The electric motor, internal combustion engine or other source of power for the machinery being operated. (ITOGP)

PRIME PIPE – Pipe meeting all of the specificed inspection and testing requirements (RP 5A5)

PRIOR RATES – Incidence rates for those years preceding current experience. (Bul T5)

PROBE – Transducer or search unit. (RP 2X, RP 5A5)

PROCESS CAPABILITY – The ability of a process or method of NDT to repeatedly detect a defect under normal conditions of variability. Sometimes related to confidence level. (RP 5A5)

PROCESS COMPONENT – A single functional piece of production equipment and associated piping, used in a process station such as a separator, heater, pump or tank. (RP 14C, RP 14E)

PROCESS STATION – One or more process components performing a specific process function, such as separating, heating, pumping, etc. (RP 14C)

PROCESS SHUTDOWN – The isolation of a given process station from the process by closing appropriate SDVs to shut-in flow to the process station or divert flow to another process station. (RP 14C)

PROD MAGNETIZATION – Magnetization of the pipe by direct contact, i.e., passing current through the pipe wall with prods. (RP 5A5)

PRODS – Hand-held electrodes attached to cables to transmit the magnetizing current from the source to the pipe under inspection. (RP 5A5)

PRODUCED GAS – That portion of reservoir gas recovered with fluid production from a well. (WT)

PRODUCING PLATFORM – An offshore structure accommodating a number of producing wells. Also see Well Platform. (ITOGP)

PRODUCTION – The yield of an oil or gas well. Also that branch of the petroleum industry that has to do with bringing the well fluids to the surface and separating them, and with storing, gaging, and otherwise preparing the product for the pipeline. (ITOGP)

PRODUCTION AREAS – Those areas where flammable petroleum gas and volatile liquids are produced, processed, store3ed, transferred, or otherwise handled prior to entering the transportation facilities. (RP 500B)

PRODUCTION CASING (PRODUCTION STRING) – The last string of casing set in a well; the casing string set to the top or through the producing formation and inside of which is usually suspended the tubing string. Also called the OIL STRING or LONG STRING. (ITOGP)

PRODUCTION CASING – Full length pipe string extending between the wellhead and elevation at or below pay formation inside of protective or surface casing and cemented in place to seal off productive zones and water-bearing formations. (RP 54)

PRODUCTION PACKER – A device installed in wells to effect a seal between the tubing string(s) and casing. (RP 57)

PRODUCTION PLATFORM (PROCESSING PLATFORM) – An offshore structure providing a central processing and disposition point for fluids produced from wells on adjacent PRODUCING and WELL PLATFORMS. The treated oil and gas is moved to shore through submarine pipelines. Produced water is generally disposed of within the field. (ITOGP)

PRODUCTIVITY INDEX – The rate of liquid production (oil plus water) divided by the difference between the prevailing reservoir pressure and the flowing pressure at the formation face, expressed in barrels per day per pound per square inch. (RP 44)

PRODUCTIVITY TEST – A test of a well’s ability to produce under specified conditions. (ITOGP)

PROFILE – A profile is an internal conduit configuration used to engage tools. (RP 6G)

PROPAGATION – Advancement of a wave through a medium. (RP 2X)

PROPORTIONAL LIMIT STRESS (F_p) – Stress above which the stress-strain curve is no longer linear and which represents the onset of plastic behavior. If no specific value for the steel being used is available F_p can be taken as 0.60 F_y, where F_y is the yield stress. (Bul 2V)

PROPPANT MATERIAL – A granular substance (as sand grains, walnut shells, or other material carried in suspension by the fracturing fluid) that serves to keep the fracture open when the fracturing fluid is flowed back after a fracture treatment – propping agent. (SSWID)

PRORATION – A system of allocating the amount of oil or gas a well or field is allowed to produce within a given period by a regulatory agency. (ITOGP)

PRORATION LAWS – State regulations defining the allowed volumes of oil or gas or both that may be produced in a given unit of time for a particular well, unit or lease. (WT)

PROTECTED FIRED VESSEL – Any fired vessel that is provided with equipment (such as flame arresters, stack temperature shutdowns, forced draft burners with safety controls, and spark arrestors) designed to eliminate the air intake and exhaust as sources of ignition. (RP 500B)

PROTECTION CASING – A string of casing set to protect a section of the hole and to permit drilling to continue to a greater depth. Sometimes called “protection string” and “intermediate string.” (Bul 10C)

PROTECTION CASING – A string of casing set to protect a section of the hole and to permit drilling to continue to a greater depth. Sometimes called INTERMEDIATE CASING. (ITOGP)

PROTECTIVE (INTERMEDIATE) CASING – Pipe string installed inside of surface casing in wells of such depth where drilling fluid cannot be balanced because of simultaneous lost circulation and high pressure entry of another zone or in regions where abnormal pressure gradients are encountered. (RP 54)

PROTECTIVE WALL – A barrier designed to withstand or deflect falling or flying objects, prevent flow of liquids from one area to another or restrain minor explosions. (RP 2G)

PROTOTYPE – An initial manufactured component or unit of a specific design. (Spec 2C)

PROVER – A device used to calibrate meters used in measuring oil. (ITOGP)

PSEUDOPLASTIC FLUID – A complex non-Newtonian fluid that does not possess thixotropy. A pressure or force in excess of zero will start fluid flow. The apparent viscosity or consistency decreases instantaneously with increasing rate of shear until at a given point

the viscosity becomes constant. The yield point as determined by direct-indicating viscometer is positive, the same as in Bingham plastic fluids; however, the true yield point is zero. (Bul 10C)

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PSI – Pounds per square inch. (ITOGP)

PSI – Pounds per square inch pressure. (WT)

PSIA – Points per square inch absolute; pressure measurement which takes atmospheric pressure into consideration. (ITOGP)

PSIA – Pounds per square inch absolute. (See absolute pressure.) (WLOP)

PSIA – Points per square inch absolute is gage pressure plus the base standard atmospheric pressure at a particular location. (Example: 300 pig + 14.65 psia base = 314.65 psia). (WT)

PSIG – Pounds per square inch gage (as observed on a gage). (ITOGP)

PSIG – Pounds per square inch gage. (See gage pressure). (WLOP)

PSIG – Pounds per square inch pressure obtained from a pressure gage. (WT)

PTB – This term refers to pounds of salt per thousand barrels of crude oil. It is used in conjunction with BS&W to express the quality of untreated and treated crude oils in relation to desalting applications of emulsion treaters. (Spec 12L)

PUDDLING – (A) In cement evaluation work, the agitation of cement slurry in molds with a rod to remove trapped air bubbles. (B) In field practice, the movement by reciprocation or rotation of the casing during or after the cementing operation. (C) A type of cementing operation wherein the cement slurry is spotted in open hole through drill pipe or tubing, the casing is then run in the well and puddle into cement. Sometimes called a puddle job. (Bul 10C)

PULL A WELL – To remove rods or tubing from a well. (ITOGP)

PULLING FLANGE – The flange, or neck, on a pulling tool. (See fishing neck.) (WLOP)

PULLING UNIT (PULLING MACHINE) – A portable, truck-mounted mast equipped with winch, wirelines, and sheaves, used for pulling rods or well workover. (ITOGP)

PULSE – A short-wave train of mechanical vibrations. (RP 2X)

PULSE – A wave of short duration. (RP 5A5)

PULSE-ECHO METHOD – A single crystal ultrasonic test method that both generates ultrasonic pulses and receives the return echo. (RP 2X)

PULSE-ECHO METHOD – An ultrasonic test method that both generates ultrasonic pulses and receives the return echo. (RP 5A5)

PULSE LENGTH – Time duration of the pulse from the search unit. (RP 2X)

PULSE LENGTH (OR PULSE DURATION) – The time between the points at which the instantaneous value of current exceeds 10% of the maximum pulse current. Measured in milliseconds. (RP 5A5)

PULSE RATE – For the pulse method number of pulses transmitted in a unit time. (Also called pulse repetition rate.) (RP 2X)

PULSE TUNING – Control on some instruments used to optimize the response of the search unit and cable to the transmitter by varying the frequency. (RP 2X)

PULSER – Electronic device and probe for generating a controlled magnitude magnetic pulse for standardizing transducers. (RP 5A5)

PUMP – A device used to increase the pressure of or move liquids. Types of pumps include: SUCKER ROD, RECIPROCATING, CENTRIFUGAL, ROTARY, GEAR and JET. (ITOGP)

PUMP – A rotating or reciprocating machine together with its driver and associated pipe, valves, pulsation dampners, etc., used to transfer fluids. (RP 2G)

PUMP – A rotating or reciprocating machine together with its driver and associated pipe, valves, pulsation dampners, etc., used to transfer fluids. (RP 2G)

PUMP INPUT HORSEPOWER – Mechanical horsepower put into the pump. (Bul D10)

PUMP OUTPUT HORSEPOWER – Hydraulic horsepower put out by pump. (Bul D10)

PUMP-THROUGH TUBING PLUG – A plug set inside the tubing string which will not permit back flow, but will permit pumping through from the top side. (RP 57)

PUMPDOWN – Pumpdown is a term applied to the hydraulic transport and manipulation of tools. (RP 6G)

PUMPED OFF – Said of a pump when fluid is not entering the pump intake. (ITOGP)

PUMPING – Act of moving fluids by mechanical means, plunger pump, jet pump. In a well, the act of lifting fluid to surface by mechanical means, i.e., rod pump, hydraulic pump, etc. (WT)

PUMPING UNIT – Surface equipment assembled for the purpose of mechanically lifting fluids from a well. (RP 54)

PUP JOINT – A joint of pipe or tubing shorter than standard length. (ITOGP)

PURCHASER – The owner company or the authorized agency that buys the coated pipe. (RP 5L2)

PURCHASER – The person, firm, company, or corporation entering into a contract or agreement for the purchase of structural steel pipe fabricated under this specification. (Spec 2B)

PURGED ENCLOSURE – An enclosure supplied with clean air or an inert gas at sufficient flow and positive pressure to reduce to an acceptably safe level the concentration of any flammable gases or vapors initially present, and to maintain this safe level by positive pressure with or without continuous flow. (RP 14F)

PUT A WELL ON – To start a well flowing or pumping. (ITOGP)

PUT ON PUMP – To install an artificial lift pumping system to produce a well. (ITOGP)

PVC – Polyvinylchloride.

PVF – Pump Volume Factor.

-O-

QUADRANT BEARING – An azimuth angle measured from north or south in the direction of east or west. (Bul D20)

QUADRATIC METHOD – A method in math modeling considering the wellbore as a curve; the projections into three vertical plans are quadratic functions. (Bul D20)

QUALIFIED – A person who, by possession of a recognized degree, certificate or professional standing or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work. (Spec 2C)

QUALIFIED PART – A part manufactured under an authorized quality assurance program and, in the case of replacement, produced to meet or exceed the performance of the original part. (RP 14B, RP 14H, Spec 14A, Spec 14D)

QUALIFIED PERSON – An individual with characteristics or abilities gained through training or experience or both as measured against established requirements, such as standards or tests that enable the individual to perform a required function. (Instructions should be provided that include as a minimum this Standard and the Manufacturer's Operating Manual. (RP 14B, RP 14C, RP 14H, Spec 14A, Spec 14D)

QUALIFIED PERSON – A person who, by possession of a recognized degree, certificate, or professional standing, or who by knowledge, training, or experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the subject. (RP 54)

QUALIFIED PERSONNEL – Individuals with characteristics or abilities gained through training experience, or both, as measured against the manufacturer/user/API established requirements. (Spec 6A, Spec 16A)

QUALIFIED TECHNICIAN – An individual or agency employee whose performance has been examined and found adequate to perform the designated inspections. (RP 2X)

QUALITY – Conformance to specified requirements. (Spec Q1)

QUALITY ASSURANCE – Those planned, systematic, and preventive actions which are required to ensure that materials, products, or services will meet specified requirements. (Spec Q1)

QUALITY CONTROL – Inspection, test, or examination to ensure that materials, products, or services conform to specified requirements. (Spec Q1)

QUALITY PROGRAM – An established documented system to ensure quality. (Spec Q1)

QUEBRACHO – A drilling fluid additive used for thinking or dispersing to control viscosity and thixotropy. It is a crystalline extract of the quebracho tree consisting essentially of tannic acid. (Bul D11)

QUICK UNION – A union with coarse threads that employs an O-Ring seal for a quick lock. (WLOP)

QUICKLIME – Calcium oxide, Ca0. (Bul 10C)

QUICKLIME – Calcium oxide, Ca0. Used in certain oilbase drilling fluids to neutralize the organic acid. (Bul D11)

QUIESCENCE – The state of being quiet or at rest. Static. (Bul 10C, Bul D11)

-R-

RABBIT – A device that is put through casing or tubing before it is run to make certain it is the proper size inside and outside. A drift mandrel. (ITOGP)

RACK PIPE – To stand pipe in the derrick when coming out of the hole or to stack pipe on a pipe rack. (ITOGP)

RACKING PIPE OR RODS – Act of placing stands of pipe or rods in orderly arrangement in the derrick. (RP 54)

RACKING PLATFORM – A platform located at a distance above the working floor for laterally supporting the upper end of racked pipe. (Spec 4F)

RADIAL PRESSURE – Uniform external pressure acting only on the sides of a member. (Spec 2U)

RADIATION SAFETY OFFICER – An individual engaged in the practice of providing radiation protection. He is the representative appointed by the licensee for liaison with the Nuclear Regulatory Commission and with "agreement states" radiation control branches. (RP 5A5)

RADICAL – Two or more atoms behaving as a single chemical unit, i.e., as an atom; e.g., sulfate, phosphate, nitrate. (Bul D11)

RADIOISOTOPE – An unstable isotope of an element that disintegrates spontaneously, emitting radiation. (RP 5A5)

RADIUS OF CURVATURE METHOD – Uses the sets of angles measured at the top and bottom of the course length to generate a space curve (representing the wellbore path) that has the shape of a spherical arc passing through the measured angles at both the upper and lower ends of the measured course. (Bul D20)

RAFTED ICE – An ice sheet consisting of two or more layered ice sheets as a result of overriding. (Bul 2N)

RAM – The closing and sealing component on a blowout preventer. Rams are of three types: blind, pipe, and shear. Pipe rams, when closed, have a configuration such that they seal around the pipe; shear rams cut through drill pipe and then form a seal. Blind rams seal on each other with no pipe in the hole. (WLOP)

RAM BLOWOUT PREVENTER – A blowout preventer that uses rams to seal off pressure in the well bore; also called a ram preventer. (WLOP)

RANDOM SAMPLING – A prescribed number of units selected by the inspector from a lot for inspection such as one-in-ten, 10%, 20%, etc. (RP 2X)

RANGE (SEE SWEEP) – The maximum ultrasonic path length that can be displayed. (RP 2X)

RAPID SAND FILTER – A relatively small filtering unit containing sand. The liquid movement through the sand bed is fairly rapid. The filter bed usually has to be cleaned often, by backwashing. (SSWID)

RATE OF SHEAR – The rate at which an action, resulting from applied forces, causes or tends to cause two adjacent parts of a body to slide relatively to each other in a direction parallel to their plane of contact measured in reciprocal seconds. (Bul 10C)

RATE OF SHEAR – The rate at which an action, resulting from applied forces, causes or tends to cause two adjacent parts of a body to slide relatively to each other in a direction parallel to their plane of contact. Commonly given in rpm. (Bul D11)

RATE OF TRAVEL – The speed of material over the screening surface, usually expressed in feet per minute. (Bul 13C)

RATED CAPACITY – The rated load at specified radii as established by the manufacturer and are the maximum loads at those radii covered by the manufacturer's warranty. (Spec 2C)

RATED SETBACK LOAD – The maximum weight of tubular goods which can be supported by the substructure in the setback area. (Spec 4F)

RATED STATIC ROTARY LOAD – The maximum weight being supported by the rotary table support beams. (Spec 4F)

RATED WORKING PRESSURE – The maximum internal pressure equipment is designed to contain and/or control. Working pressure is not to be confused with test pressure. (Spec 6A)

RATED WORKING PRESSURE – The maximum internal pressure equipment is designed to contain and/or control. Rated working pressure is not to be confused with test pressure. (Spec 16A)

RAT HOLE (1) – Hole that is drilled ahead of the main wellbore and which is of a smaller diameter than the bit used in the main borehole (refer to "Pilot Bit"). (Bul D20)

RAT HOLE (2) – Surface facilities used to store the during tripping operations. (Bul D20)

RAW MUD – Mud to be processed by solids removal equipment, before dilution. (Bul 13C)

REACTIVE TORQUE – Based on the physical property that action equals reaction, the torque reacting on the drill stem is that torque being generated at the point in question, such as at the bit. (Bul D20)

READOUT – A device that visually indicates a condition or voltage or current. Typical devices used in inspection requirements are galvanometers and CRT. (RP 5A5)

REAM – Enlargement of the wellbore to straighten the hole. (Bul D20)

REAMER – Tool employed to smooth the wall of a wellbore, enlarge the hole, stabilize the bit, and straighten the wellbore where kinks or doglegs are encountered. (Bul D20)

REAMING – The operation employed to enlarge the hole to the size originally planned. (Bul 10C)

REAR END RADIUS – See Tail Swing. (Spec 2C)

RECEIVING WATERS – Rivers, lakes, oceans, or other bodies that receive treated or untreated waste waters. (Bul D11)

RECESS – The counter-bored section at the end of line pipe and oil country tubular goods couplings to facilitate stabbing the thread. (RP 5B1)

RECESS – A recess is an enlargement in conduit bore, generally concentric with the bore. (RP 6G)

RECLAIMED – Processed for reuse. (Bul 13C)

RECOMMENDED PRACTICE (RP) – A document which describes the approved recommended inspection or test procedure for a product. (RP 5A5)

RECOMPLETION OPERATIONS – To perform operations to change producing formations in an existing well. (ITOGP)

RECORDABLE CASE – All work-related cases that involve any of the following:
Deaths recordable regardless of the time between injury and death of length of illness and death.

Injuries: All occupational injuries resulting in any of the following:

1. Lost workdays. (Either days away from work or days of restricted activity)
2. Medical treatment other than first aid
3. Lost of consciousness
4. Restriction of work or motion
5. Transfer. (Temporary or permanent transfer to another job)
6. Termination of the injured or ill employee

Illnesses: All occupational illness. (Bul T5)

RECORDS – Retrievable information. (Spec 6A, Spec 16A)

RECTANGULAR OPENING (SCREEN CLOTH) – When referring to wire cloth, having elongated openings defined by single or multiple cross wires. The mesh count in one direction is different from that at right angles to that direction. (Bul 13C)

RECYCLING – The process by which materials pass through a cycle and undergo change or treatment, thus permitting their reclamation in some form to further use. (Bul D11)

RED-LIME MUD – A red mud which has been converted to a lime-treated drilling fluid. The pH is usually 12.0 to 13.0. (Bul D11)

RED MUD – A clay, water-base drilling fluid containing sufficient amounts of caustic sode and tannates to give a pronounced red appearance. Normally a high-pH drilling fluid. (Bul 10C, Bul D11)

REDRESS – Replacement of items as defined in the Manufacturer's Operating Manual. Redress may be performed on or away from well site. Each replacement item should be a qualified part. (RP 14B)

REEL SYSTEM – A circular drum and assorted mechanical equipment used to spool wireline. (WLOP)

REEVING – A rope system where the rope travels around drums and sheaves. (Spec 2C)

REFERENCE BLOCKS – A block or series of blocks of material containing artificial or actual discontinuities of one or more reflecting areas at one or more distances from the test surface, which are used for reference in calibrating instruments and in defining the size and distance of defective areas in materials. (RP 2X)

REFERENCE ELECTRODE – A standard cell of known voltage used for making voltage measurements of a corrosion cell. Calomel and copper sulfate are common reference electrodes. (COGWE, SSWID)

REFERENCE MAGNETS – Magnets inset in the wall of the non-magnetic drill collar. Used to indicate a position of the deflecting tool with respect to magnetic north. A picture of a magnetic needle compass at the magnets is imposed on the picture of the magnetic north compass. (Bul D20)

REFERENCE STANDARD – A pipe containing machined notches or natural defects used as a base for comparison or for inspection equipment standardization. (RP 5A5)

REFLECTION – The characteristic of a surface to change the direction of propagating acoustic energy; the return of sound waves from surface. (RP 2X, RP 5A5)

REFLECTOR – Any condition (not necessarily a discontinuity) capable of returning ultra sound energy to the transducer. (RP 2X)

REFRACTION – The characteristic of a material to change the direction of acoustic energy as it passes through an interface into the refracting material. A change in the direction and velocity of acoustic energy after it has passed at an acute angle through an interface into the refracting material. (RP 2X)

REFRACTIVE INDEX – The ratio of the velocity of a wave in one medium to the velocity of the wave in a second medium is the refractive index of the second medium with respect to the first. It is a measure of the amount a wave will be refracted when it enters the second medium after leaving the first. (RP 2X)

REFRACTORY – Resisting ordinary treatment and difficult to degrade. (Bul D11)

REFROZEN LEAD – Lead in which ice has grown, but remains relatively smooth. Thickness can vary from a few inches to several feet. (Bul 2N)

REJECT (SUPPRESSION) – A control for minimizing or eliminating low amplitude signals (electrical or material "noise") so that larger signals are emphasized. (RP 2X)

REJECT LEVEL (TO BE EVALUATED) – The value that is established as a baseline test signal, and is used to determine whether specimens that are above or below the baseline may be rejectable, or otherwise distinguished from the remaining specimens. (RP 5A5)

REJECT OPENING – See Preferred Term: Underflow Opening. (Bul 13C)

RELEVANT INDICATION - An indication resulting from a discontinuity in the pipe. (RP 5A5)

RELIEF VALVE – See Pressure-Relief Valve. (ITOGP)

RELIEF WELL – A well drilled with the specific purpose to provide communication at a below-ground position to another well which is out of control. (Bul D20)

RELIEF WELL – An offset well drilled to intersect the subsurface formation to combat a blowout. (RP 53)

REMANUFACTURE – Any activity involving disassembly, reassembly and testing of SSV/USV equipment or any item thereof, with or without the replacement of qualified parts where machining welding, heat treating or other manufacturing operation is employed. (RP 14B, RP 14H)

REMANUFACTURER – A person or company who performs remanufacture in an authorized facility. (RP 14B, RP 14H)

REMNANT PERMAFROST – Permafrost existing in a soil prior to construction and installation activities. (Bul 2N)

REMOTE CONTROL STATION – A centrally located station containing equipment to control and regulate operations in one or more fields. (ITOGP)

REMOTE READING GAGE – An instrument capable of providing indications of pressure, vacuum, voltage, etc., at a point remote from the place that such indications are actually taken. (WLOP)

REMOVABLE – Total component is field replaceable without welder assistance. (Spec 12K)

REPETITION RATE – The rate at which the individual pulses of acoustic energy are generated; also Pulse Rate. (RP 2X)

RESERVOIR – A pond, lake, tank, or basin, natural or man-made, used for the storage, regulation, and control of water or other fluids. (Bul D11)

RESERVOIR – A subsurface porous and permeable rock body that contains oil and/or gas. (ITOGP)

RESERVOIR FLUID – A natural underground accumulation consisting primarily of hydrocarbon compounds. The reservoir fluid may be either a liquid or a gas and may contain certain non-hydrocarbon compounds. The non-hydrocompounds which are of greatest importance in sampling are nitrogen, carbon dioxide, hydrogen sulfide, helium, and water. Free water (brine) which flows into the well with the reservoir fluid is not considered here to be a part of the reservoir fluid. (RP 44)

RESERVOIR PRESSURE – The pressure at the face of the producing formation when the well is shut in. (ITOGP)

RESERVOIR PRESSURE – The pressure that exists in an oil, gas, or water bearing formation or reservoir. (WLOP)

RESIDUAL FIELD – The remaining magnetic field retained by ferromagnetic materials after they have been exposed to a magnetic force. (RP 5A5)

RESIDUAL METHOD – Inspection utilizing the residual magnetic field remaining in the pipe after magnetization for obtain indications. (RP 5A5)

RESIDUAL OIL – In laboratory reservoir-fluid analysis, the liquid remaining at atmospheric pressure following the differential liberation of gas at reservoir temperature. (RP 44)

RESIDUAL STRESSES – The stresses that remain in an unloaded member after it has been formed and installed in a structure. Some typical causes are forming, welding and corrections for misalignment during installation in the structure. The misalignment stresses are not accounted for by the plasticity reduction factor.[ll] (Bul 2U)

RESIDUAL STRESSES – The stresses that remain in an unloaded member after it has been formed and installed in a structure. Some typical causes are forming, welding and corrections for misalignment during installing in the structure. (Bul 2V)

RESIN – Semisolid or solid complex, amorphous mixture of organic compounds having no definite melting point nor tendency to crystallize. Resins may be a component of compounded materials that can be added to drilling fluids to impart special properties to the system, wall cake, etc. (Bul 10C)

RESISTIVITY – The electrical resistance offered to the passage of a current expressed in ohm-meters; the reciprocal of conductivity. (Bul 10C)

RESISTIVITY – The electrical resistance offered o the passes of a current, expressed in ohm-meters; the reciprocal of conductivity. Fresh-water drilling fluids are usually characterized by high resistivity; salt-water drilling fluids by a low resistivity. (Bul D11)

RESISTIVITY METER – An instrument for measuring the resistivity of drilling fluids and its cakes. (Bul 10C, Bul D11)

RESOLUTION – The ability of ultrasonic equipment to give simultaneous, separate indications from discontinuities having nearly the same range and lateral position with respect to the beam axis. (RP 2X)

RESOLVING POWER (ULTRASONICS) – The measure of the capability of an ultrasonic system to separate in time two discontinuities at slightly different distances. (RP 5A5)

RESTRICTED AREA SEALING MEANS – A seal which encloses a pressure containment area smaller than the adjacent API ring gasket. (Spec 6A)

RETARDER – A chemical which is added to cements or slurries to lengthen thickening time. (Bul 10C)

RETENTION TIME (CENTRIFUGAL SEPARATORS) – The time the liquid phase is actually in the separating device. (Bul 13C)

RETENTION TIME (SCREEN) – The time any given particle of material is actually on the screening surface. (Bul 13C)

REVERSE CIRCULATE – The method by which the normal flow of a drilling fluid is reversed by circulating down from the annulus and up and out the drill string. (Bul 10C, Bul D11)

REVERSE CIRCULATION – Normal course of fluid circulation is downward inside the pipe and upward in the wellbore annular space surrounding the pipe. This normal circulation is sometimes reversed and the fluid returns to the surface through the pipe after being pumped down the annular space. (RP 54)

REVERSED CONE OFFSET – Refer to "Negatively Skewed Bit." (Bul D20)

REVOLVING UPPERSTRUCTURE – The rotating upper frame structure and the operating machinery mounted thereon. (Spec 2C)

REWORKING A WELL (REMEDIAL OPERATIONS) – To restore production from an existing formation when it has fallen off substantially or ceased altogether. See Workover. (ITOGP)

REYNOLDS NUMBER – A dimensionless number, Re, that occurs in the theory of fluid dynamics. (Bul 10C)

REYNOLDS NUMBER – A dimensionless number, Re, that occurs in the theory of fluid dynamics. The diameter, velocity, density, and viscosity (consistent units) for a fluid flowing through a cylindrical conductor are related as follows:
Re = (diameter) (velocity) (density) (viscosity)
Or
$= DV_{p/u+}$

The number is important in fluid hydraulics calculations for determining the type of fluid flow, i.e., whether laminar or turbulent. The transitional range occurs approximately from 2,000 to 3,000; below 2,000 the flow is laminar, above 3,000 the flow is turbulent. (Bul D11)

REYNOLDS NUMBER (R_e) – A dimensionless function that characterizes friction of fluid flow in pipes and is defined by the following: (Bul D10)

$$R_e = \frac{vd_p}{N}$$

Wherein:
v = mean velocity, ft/sec
d = diameter of pipe, ft
$_p$ = density, lb/cu ft
N = absolute viscosity, lb/ft-sec
= 0.000672 x viscosity in centipoise
or, in oil-field engineering units:

$$R_e = 928\ \frac{vd_1p_1}{N_1}$$

Wherein:
v = mean velocity, ft/sec
d_1 = diameter of pipe, in.
$_{p1}$ = density, lb/gal
N_1 = plastic viscosity, cp

or:

$$R_e = 379\ \frac{G_{p1}}{N_1d_1}$$

Wherein:
G = flow rate, gal/min
d_1 = diameter of pipe, in.
$_{p1}$ = density, lb/gal
N_1 = plastic viscosity, cp

rf (RADIO FREQUENCY PRESENTATION) – A signal display that is not rectified. (RP 2X)

RHEOLOGY – The study of the deformation and flow of matter. (Bul 13D)

RHEOLOGY – The science that deals with deformation and flow of matter. (Bul 10C, Bul D11)

RIDGE KEEL – The portion of an ice ridge that extends below the water line. Can be partially consolidated in first-year ridges but the depth of consolidation is variable. (Bul 2N)

RIDGE SAIL – The portion of a ridge that extends above sea level. In early season the sail of a first-year ridge is generally composed of loosely stacked blocks. In multiyear ridges, the sail

becomes eroded or worn smooth due to summer melting and ultimate refreezing, and is generally composed of almost solid, freshwater ice (with numerous air pockets). (Bul 2N)

RIG – The derrick, drawworks and attendant surface equipment of a drilling or workover unit. (ITOGP)

RIGGING UP – The on-site erection and connection of the right components in preparation for drilling or well servicing operations. (RP 54)

RIGHT-HAND THREAD – A thread that winds in a clockwise receding direction when viewed axially. (RP 5B1)

RIGIDITY – Usually refers to the stiffness or flexibility characteristics of a bottom-hole assembly or an element thereof. (Bul D20)

RING GEAR – See Swing Gear. (Also called Bull Gear). (Spec 2C)

RING STIFFENED – A member with circumferential stiffeners. (Bul 2U)

RINGING – High frequency vertical vibration of the TLP spring-mass system excited by impulsive loading. (RP 2T)

RINGING TIME – The time that the mechanical vibrations of a crystal continue after the electrical pulse has stopped. (RP 2X)

RIPARIAN RIGHTS – Rights of a land owner to the water on or bordering his property, including the right to prevent diversion or misuse of upstream water. (Bul D11)

RISER – A pipe through which liquid travels upward. (ITGOP)

RISER – The vertical portion of a pipeline (including the bottom bend) arriving on or departing from a platform. (RP 14E)

RISER BOX – The female coupling member. (RP 2R)

RISER JOINT – A section of riser pipe having ends fitted with a box and a pin. (RP 2R)

RISER JOINT – A riser joint consists of a section of pipe, with couplings on each end. It may have provision for supporting integral and non-integral auxiliary lines (flowlines, choke and kill lines, control bundles, etc.) and buoyancy devices. (RP 2T)

RISER PIN – The male coupling member. (RP 2R)

RISER PIPE – The basic pipe from which riser joints are fabricated. (RP 2R)

RISER RUNNING/HANDLING EQUIPMENT – Usually consists of a riser handling sub and a riser spider. The riser bus latches on to the end of the riser joint permitting it to be connected to

the surface lifting device. The riser spider is used to support the riser string, during deployment/retrieval, as a joint is being made or broken. (RP 2T)

RISER SPACER FRAME – A purpose designed frame to maintain lateral separation among risers. (RP 2T)

RISER SPIDER – A device used to support the riser string as a joint is being made or broken during riser deployment/retrieval operations. (RP 2T)

RISER SPOILERS – Used in areas where high velocity currents are encountered to preclude vortex-induced riser vibration. Various types of spoilers have been effective in reducing these vibrations; however, they frequently result in an increase in drag forces. (RP 2T)

RISER SUB – A device which latches on to the end of the riser joint permitting it to be connected t the surface lifting device. (RP 2T)

ROCK A WELL – To alternately bleed pressure from the casing and then from, the tubing of a dead well until the well will flow on its own. (ITOGP)

ROCK ANISOTROPY – Refers to the differences in physical properties of rocks as related to the directional characteristic; for example, ‘strength” or drillability” may be different when measured in different directions through the rock. (Bul D20)

ROCKWELL HARDNESS – A numerical value which expresses the resistance of a material to indentation with a small diamond point or a 1/16 in. diameter ball. This correlates directly with strength. (COGWE, SSWID, WLOP)

ROD BOARD – A platform located at a distance above the working floor for supporting rods. (Spec 4F)

RODS (SUCKER RODS) – A special steel rod, a number of which are screed together to make up the mechanical link from the surface pumping unit to the pump in the well. (RP 54)

ROLL – Platform rotation about the plant north-south axis. (RP 2T)

ROLL OFF – Correction in the facing of the deflection tool, usually determined by experience, and which must be taken into consideration in order to give the proper facing to the roll. (Bul D20)

ROLL MARK – A term applied to surface imperfections caused by improper roll alignment or roll surface damage. Such imperfections may be periodic or continuous. (Bul 5T1)

ROLLED-IN-SCALE (ALSO CALLED A SCAB) – A surface imperfection caused by scale, formed during a previous heating, which has not been eliminated prior to surface drilling. (Spec 11B)

ROLLED-IN SLUGS – A foreign metallic body rolled into the metal surface, usually not fused. (Bul 5T1)

ROLLER PATH – The surface upon which the rollers that support the revolving upperstructure bear. It may accommodate either cone rollers or live rollers. (Spec 2C)

ROLLING CUTTER REAMER – A reamer with the outermost radius provided by cutting roller members. (Bul D20)

ROLLING ELEMENT – The balls or rollers contained between the rings of the swing circle bearing. (Spec 2C)

ROOT – The bottom of a thread. (RP 5A5, RP 5B1)

ROOT TRUNCATION – The distance between the sharp root (root apex) and the finished root. (RP 5B1)

ROPE – Refers to wire rope unless otherwise specified. (Spec 2C)

ROPE DISCHARGE (OR ROPE) – The characteristic underflow of a hydrocyclone so viscous and overloaded with separable solids that not all the solids reporting to the underflow can crowd through the underflow opening. (Bul 13C)

ROPE FALLS – Block and tackle arrangements to assist in wireline operation equipment placements. (WLOP)

ROTARY DRILLING – The method of drilling wells that depends on the rotation of a column of drill pipe to the bottom of which is attached a bit. A fluid is circulated to remove the cuttings. (Bul 10C, Bul D11)

ROTARY DRILLING RIG – Includes prime movers, hoisting, rotating, circulating, and auxiliary equipment necessary for well drilling. (Bul D10)

ROTARY HORSEPOWER (RHP) – The horsepower required to rotate the drill string and the bit. (Bul D10)

$$\frac{\text{Torque (ft-lb)} \times \text{rpm}}{5{,}250} = \text{RHP}$$

ROTATING BASE – See Revolving Upperstructure. (Spec 2C)

ROTATING HEAD – A rotating pressure-sealing device used in drilling operations utilizing air, gas, foam, or any other drilling fluid whose hydrostatic pressure is less than the formation pressure. (RP 53)

ROTATION RESISTANT ROPE – A wire rope consisting of an inner layer of strand laid in one direction covered by a layer of strand laid in the opposite direction. This has the effect of counteracting torque by reducing the tendency of the finished rope to rotate. (Spec 2C)

ROTOR DIAMETER – Rotor diameter is the diameter of a circle by the rotor blades while rotating. Herein the main rotor diameter is referred to as “RD.” (RP 2L)

ROUNDNESS – Grain roundness is a measure of the relative sharpness of grain corners, or of grain curvature. (RP 56)

ROUND-TRIP – To pull out and subsequently run back into the hole a string of drill pipe, tubing or sucker rods. Also terms TRIP. (ITOGP)

ROYALTY INTEREST – The fraction of the oil and gas retained by the mineral rights owner under the lease agreement. (ITOGP)

RP – Recommended Practice

RUBBLE FIELD – A region of deformed ice, usually composed of upturned blocks refrozen into an ice sheet. A rubble field may contain a series of closely-spaced ridges unseparated by sheet ice and has larger areal extent than a rubble pile. (Bul 2N)

RUBBLE FIELD – Floating or grounded first-year ice composed of broken ice blocks refrozen into a contiguous feature. (Bul 2N)

RUBBLE PILE – An ice feature of areal, rather than linear, extent, created by ice falling against a structure of a grounded feature. (Bul 2N)

RUBBLE PILE – A grounded first-year ice feature of areal, rather than linear extent, created by pressure and composed of broken ice blocks. (Bul 2N)

RUN – The amount of crude oil sold and transferred to the pipeline by the producer. (ITOGP)

RUN A TANK – To transfer oil from a stock tank into a pipeline. (ITOGP)

RUN IN – To go into the hole with tubing, drill pipe, etc. (ITOGP)

RUN TICKET – A record of oil transferred from the producer's storage tank to the pipeline. This is the basic legal instrument by which the lease operator is paid for oil produced and sold. (ITOGP)

RUNNING ROPE – A rope which travels around sheaves or drums. (Spec 2C)

RUNNING TOOL – Specialized tools used to run equipment in a well, such as a wireline running tool for installing retrievable gas lift valves. Various tubing-type running tools are also used. (ITOGP)

RUNOFF – The portion of rainfall, melted snow, or irrigation water that flows across ground surface and eventually is returned to streams. Runoff can pick up pollutants from the air or the land and carry them to the receiving waters. (Bul D11)

RUNOUT – Intersection of the thread cone and the pipe outside surface. Location on the outer surface where the thread groove vanished. (RP 5B1)

-S-

S&W – Sediment and Water.

SACK – A weight measure. (Bul 10C)

SAE - Society of Automotive Engineers.

SAFE – Conforms in every detail to a design which has been demonstrated to perform satisfactorily in the service intended. (Bul S1)

SAFETY DEVICE – An instrument or control used within the safety system. (RP 14C)

SAFETY FACTOR – The ratio of the maximum permissible working load to the load causing failure. (RP 5B1)

SAFETY HAT – See Hard Hat. (ITOGP)

SAFETY NET – Safety net is a netting section around the perimeter of the flight deck used for personnel safety, and is normally provided in lieu of a safety shelf where the flight deck along provides ground cushion effect. (RP 2L)

SAFETY SHELF – Safety shelf is a section of solid construction around the perimeter of the flight deck used for safety of personnel, and may be included in the ground cushion area. (RP 2L)

SAFETY VALVE – See Pressure-Relief Valve. (ITOGP)

SAFETY VALVE – A valve available for quick installation in the pipe string to prevent flow. (RP 54)

SAFETY VALVE – An automatic valve designed to close or open when an abnormal condition exists. (WLOP)

SAFETY VALVE LANDING NIPPLE – A receptacle in the production string with internal sealing surfaces in which the SSSV can be installed. It can include recesses for locking devices to hold the valve in place and can be ported for communication to an outside source for valve operation. (RP 14B, Spec 14A)

SAFETY VALVE LOCK – A device attached to or a part of the SSV that holds the SSSV in place. (RP 14B, Spec 14A)

SAFETY VALVE, TUBING/DRILL PIPE – A full-opening valve with connections to match the tubing or drill pipe in use and which is maintained in a readily accessible location on the working level of the rig for use in controlling undesirable backflow and/or prevention of blowouts. (RP 57)

SALINITY – The degree of salt in water, expressed as ppm or as mg/l. (Bul D11)

SALT – Normally sodium chloride, NaCl. Chemically, the term salt is also applied to any one of a class of similar compounds formed when the hydrogen of an acid is partly or wholly replaced by a metal or a metallic radical. (Bul 10C)

SALT – In drilling fluid terminology, the term salt is applied to sodium chloride, NaCl. Chemically, the term salt is also applied to any one of a class of similar compounds formed when the acid hydrogen of an acid is party or wholly replaced by a metal or a metallic radical. Salts are formed by the action of acids on metals, or oxides and hydroxides, directly with ammonia, and in other ways. (Bul D11)

SALT-WATER CLAY – See Attapulgie Clay. (Bul 10C, Bul D11)

SALT-WATER DRILLING FLUIDS – A water-base drilling fluid comprising dissolved salt (brackish to saturated). Bul 10C)

SALT-WATER DRILLING FLUIDS – A drilling fluid containing dissolved salt (brackish to saturated). These fluids may also include native solids, oil, and/or such commercial additives as clays, starch, etc. (Bul D11)

SALT WATER FLOW – An influx of formation salt water into the wellbore. (RP 53)

SALT-WATER INTRUSION – The invasion of salt water into a body of fresh water, occurring in either surface or ground-water bodies. When this invasion is caused by oceanic waters, it is called sea-water intrusion. (Bul D11)

SALTWATER DISPOSAL – The method and system for the disposal of salt water produced with crude oil. A typical system is composed of collection centers and disposal wells in which treated salt water is injected into a suitable formation. (ITOGP)

SAMPLE MUD – A drilling fluid possessing properties to bring up suitable samples. (Bul 10C, Bul D11)

SAMPLES – Cuttings obtained for geological information from the drilling fluid as it emerges from the hole. (Bul 10C)

SAMPLES – Cuttings obtained for geological information from the drilling fluid as it emerges from the hole. They are washed, dried, and labeled as to the depth. (Bul D11)

SAND – Granular, hard, siliceous material. The produce of disintegration rock whose major constituent is silicon dioxide. (SiO_2). (Bul 10C)

SAND – A loose granular material resulting form the disintegration of rocks, most often silica. (Bul D11)

SAND – A loose material must commonly composed of small quartz grains formed from the disintegration of preexisting rocks. Also see Sandstone. (ITOGP)

SAND CONSOLIDATION – Any one of several methods by which loose, unconsolidated grains of a producing formation are caused to adhere together in order to prevent a well from producing sand yet still allow oil or gas to be produced. (ITOGP)

SAND CONTENT – In cementing work, the term refers to the weight of sand blended with dry cement powder. The sand content is expressed as percent by weight of cement or as pounds of sand per sack of cement. (Bul 10C)

SAND CONTENT – The sand content of a drilling fluid is the insoluble abrasive solids content rejected by a 200-mesh screen. It is usually expressed as the percentage bulk volume of sand in a drilling fluid. This test is an elementary type in that the retained solids are not necessarily silica nor may not be altogether abrasive. For additional information concerning the kinds of solids retained on the 200-mesh screen, more specific tests would be required. See Mesh. (Bul D11)

SAND CONTROL – Any method by which large amounts of sand are prevented from entering the wellbore. Methods include: Gravel Pack, Screen Liner, and Sand Consolidation. (ITOGP)

SAND DISCHARGE GATE – See Preferred Term: Underflow Opening. (Bul 13C)

SAND JETS – A system of one or more perforated pipes, or nozzles, located near the bottom of emulsion treaters which is used periodically to clean out sediments by flushing with water. (Spec 12L)

SAND PANS – Inverted angle baffles or troughs located above the sand (sediment) outlet connections to facilitate uniform sand or sediment removal. Notches in the troughs or pans increase the velocity of the water leaving the vessel to prevent bridging. (Spec 12L)

SANDED UP – Clogged by sand entering the wellbore. (ITOGP)

SANDSTONE – A compacted sedimentary rock composed of the minerals quartz or feldspar. Sandstone is a common rock in which petroleum and water accumulate. (ITOGP)

SATURATED LIQUID – A liquid which is in equilibrium with a vapor at the prevailing pressure and temperature. (RP 44)

SATURATED SOLUTION – A solution is saturated if it contains at a given temperature as much of a solute as it can retain. (Bul 10C)

SATURATED SOLUTION – A solution is saturated if it contains at a given temperature as much of a solute as it can retain. At 68^{o}F I takes 126.5 lb/bbl salt to saturate 1 bbl of fresh water. See Supersaturated. (Bul D11)

SATURATED VAPOR – A vapor which is in equilibrium with a liquid at the prevailing pressure and temperature. (RP 44)

SATURATION PRESSURE – The pressure at which a vapor and a liquid are in equilibrium. “Saturation pressure” is often used interchangeably with “bubble-point pressure” and “dew-point pressure.” (RP 44)

SATURATION (SCOPE) – A term used to describe an indication of such a size as to reach full scope amplitude (100%). Beyond this point there is no visual display to estimate the actual real height of the response signal unless the equipment is provided with db readout. (RP 2X)

SCAB – An imperfection in the form of a shell or veneer, generally attached to the surface by sound metal. It usually has its origin in an ingot defect. (Bul 5T1)

SCALE – A deposit formed in place by chemical action, or temperature and pressure changes on surfaces in contact with water – i.e., calcium carbonate, magnesium carbonate, calcium sulfate. (SSWID, WLOP)

SCANNER – A detector assembly carrying one or more transducers for detecting flaws in pipe. (See detector unit.) Often the scanner is quipped with a magnetizer and is a part of it. (RP 5A5)

SCANNING – Relative movement of the search unit over a test piece. (RP 2X)

SCATTER – Secondary radiation which is emitted in all directions. (RP 5A5)

SCATTERED ENERGY – Energy that is reflected in a random fashion by small reflectors in the path of a beam of ultrasonic waves. (RP 2X)

SCATTERING – Dispersion of ultrasonic waves in a medium due to cause other than absorption. See Diffuse and Dispersion. (RP 2X)

SCF – Standard cubic foot measured at a set of standard conditions (for example: 14.65 psia and 60^{o}F). (WT)

SCF/STB – Standard cubic feet per stock tank barrel. (GL)

SCOUR – Soil erosion from waves and current action. (Bul 2N)

SCRAPER – A device used to clean deposits of paraffin from tubing or flow lines. See Pig. (ITOGP)

SCRAPER – Any device (as a lien scraper, paraffin scraper, etc.) that is used to remove deposits (as scale or paraffin) from tubing, casing, rods, or flow lines. (WLOP)

SCRAPER TRAP – A pipeline quick connection for inserting or removing a scraper, or "pipeline pig." The pig is forced through the line for cleaning or testing for obstructions. (SSWID)

SCRATCHER – A device fastened to casing which aids in removal of mud cake from the annulus while the pipe is being moved during the cementing operation. (Bul 10C)

SCREEN – A machine with screening surface(s) used to classify materials by size. (Bul 13C)

SCREEN ANALYSIS – Determination of the relative percentages of substances, passing through or retained on a sequence of screens of decreasing mesh size. Analysis may be by wet or dry methods (synonym SIEVE ANALYSIS). See Mesh. (Bul 10C, Bul D11)

SCREEN CLOTH – (See Related Term: Wire Cloth.) – A type of screening surface, woven in square, rectangular, or slotted openings. (Bul 13C)

SCREEN CLOTH PROTECTOR – See Preferred Term: Support Rubber. (Bul 13C)

SCREEN SECTION – A finished piece of screening surface complete with edge or other preparation. (Bul 13C)

SCREENING – A mechanical process which accomplishes a division of particles on the basis of size by their acceptance or rejection by a screening surface. (Bul 13C)

SCREENING – The removal of relatively coarse floating and suspended solids by straining through rocks or screens. (Bul D11)

SCREENING SURFACE – The medium containing the apertures for passage of the undersize material. (Bul 13C)

SCSSV – Surface controlled subsurface safety valve – an SSSV controlled from the surface by hydraulic, electrical, mechanical or other means. (RP 14B, Spec 14A)

SCREW CONVEYOR – See Preferred Term: Conveyor. (Bul 13C)

SCROLL – See Preferred Term: Flute. (Bul 13C)

SCRUBBER – A vessel through which gas is passed to remove liquid and foreign matter. (ITOGP)

SCRUBBER – A scrubber is a type of separator which has been designed to handle flow streams with unusually high gas-to-liquid ratios. These are commonly used in conjunction with dehydrators, extraction plants, instruments, or compressors for protection from entrained liquids. (Spec 12J)

SEA-WATER DRILLING FLUIDS – A special class of salt-water drilling fluids where sea water is used as the fluid phase. (Bul 10C, Bul D11)

SEALING AGENTS – Any of many materials added to drilling fluid or cements to restore circulation. (Bul 10C, Bul D11)

SEALING BORE – The sealing bore is the polished section of conduit that receives a packing element. (RP 6G)

SEAM – Crevice in rolled metal which has been more or less closed by rolling or other work but has not been fused into sound meal. (Bul 5T1)

SEAM – A straightline longitudinal crack or opening extending radially inward from the original outside surface. The seamless tube-making process generally imparts a spiral path to the seam, but this is not usually noticeable in the threaded area. Seams may be caused by ingot cracks, surface pits on ingots, subsurface blowholes, or poor heating practices. (RP 5A5)

SEAM – A longitudinal crevice in the rod which has been closed but without metallurgical bonding and has the appearance of a scratch or small longitudinal separation of the bar. (Spec 11B)

SEAMLESS PIPE – A wrought steel tubular product made without a welded seam. It is manufactured by hot working steel, or if necessary, by subsequently cold finishing the hot-worked tubular product to produce the desired shape, dimensions, and properties. (RP 5A5, Spec 5A, Spec 5L)

SEAMLESS PIPE – Wrought steel tubular product made without a welded seam. It is manufactured by hot working steel, or if necessary, by subsequently cold finishing the hot-worked tubular product to produce the desired shape, dimensions, and properties. Cold drawn tubular products, without appropriate heat treatment, are not acceptable. (Spec 5AX)

SEARCH COIL – Small coil or coils mounted in a transducer shoe. (RP 5A5)

SEARCH PROBE – A small coil or coil assembly that is placed on or near the pipe surface for detecting flaws and defects. (RP 5A5)

SEARCH UNIT – A device incorporating one or more transducers. (RP 2X)

SECANT METHOD – Has been used with two different meanings: (1) meaning the "Trapezoidal Method," and (2) meaning the "Average Angle Method." (Bul D20)

SECONDARY MEANS OF ESCAPE – Fixed stairways or fixed ladders of metal construction or portable flexible ladders, knotted man ropes, and other satisfactory devices. (RP 14G)

SECONDARY RECOVERY – Any method by which an essentially depleted reservoir is restored to a producing status by the injection of liquids or gases into the reservoir from extraneous sources. This effects a restoration of reservoir energy, which moves the formerly unrecoverable secondary reserves through the reservoir to the wellbore. May also be referred to as "enhanced recovery." (SSWID)

SECONDARY TREATMENT – Waste-water treatment, beyond the primary state, in which bacteria consume the organic parts of the wastes. This biochemical action is accomplished by use of trickling filters or the activated-sludge process. Effective secondary treatment removes virtually all floating and settable solids and approximately 90% of both BOD_5 and suspended solids. Customarily, disinfection by chlorination is the final stage of the secondary-treatment process. (Bul D11)

SECONDS API – A unit viscosity as measured with a Marsh funnel according to API procedure. See API RP 13B and Marsh Funnel. (Bul 10C, Bul D11)

SEDIMENTARY ROCK – A rock composed of materials that were transported to their present position by wind or water. Sandstone, shale, and limestone are sedimentary rocks. (ITOGP)

SEDIMENTATION – In waste-water treatment, the settling out of solids by gravity. (Bul D11)

SEEPAGE – Water that flows through the soil. (Bul D11)

SELECTROGRAPH – Chart used to select the minimum required length of non-magnetic drill collars. (Bul D20)

SEND/RECEIVE TRANSDUCER – A transducer containing two crystals mounted side by side separated by an acoustic barrier; one generates the acoustic energy and the other receives it. (RP 2X)

SENSING PROBE – Wireline instrument used in connection with "Electronic Yaw Equipment." (Bul D20)

SENSITIVITY – The ability to detect small discontinuities. The level of amplification at which the receiving circuit in an ultrasonic equipment is set. (RP 2X)

SENSITIVITY – The size of the smallest discontinuity detectable by a nondestructive test method with a reasonable signal-to-noise level. (RP 5A5)

SENSITIVITY, PERCENTAGE – A ratio of the smallest flaw detectable divided by the wall thickness of the pipe being examined. (RP 5A5)

SENSOR – A device which detects an abnormal operating condition and transmits a signal to perform a specific shutdown function. (RP 14C)

SEPARATOR – A pressure vessel used for the purpose of separating gas from crude oil and water. (ITOGP)

SEPARATOR – An unfired pressure vessel used to separate gas and liquids by differential gravity settling and/or centrifugal action. Separators are commonly cylindrical, either vertical, horizontal or spherical in shape. (RP 2G)

SEPARATOR – A separator is a vessel used in the field to remove wellstream liquid(s) from gas components. The separator may be either two-phase or three-phase. Two-phase separators remove the total liquid from the gas, while three-phase separators also remove free water from the hydrocarbon liquid. (Spec 12J)

SEPARATOR – Vessel used to separate gas from liquid produced, with gas discharged at top for use as fuel or for sale and liquid discharged at bottom for additional treating and/or sale. (WT)

SEPARATOR CONE – See Preferred Term: Hydrocyclone. (Bul 13C)

SEPARATOR GAS-OIL RATIO – The ratio of separator gas rate to separator oil (or condensate) rate, expressed as cubic feet of separator gas per barrel of separator oil (or condensate). (RP 44)

SEPARATOR OIL RELATIVE-VOLUME FACTOR – The volume of separator oil at separator conditions of pressure and temperature divided by the volume of stock-tank oil at stock-tank conditions. (RP 44)

SEQUESTRATION – The formation of a stable, soluble complex by combing a metallic ion, such as calcium, magnesium, or iron, with a suitable agent thereby modifying the action of the ion. Representative sequestering agents are ethelenediamine tetraacetic acid (EDTA) or its sodium salts, pyrophosphates, tri-polyphosphates and citrates. (Bul D11)

SERIALIZATION – Assignment of a unique code to individual parts and/or pieces of equipment to maintain records. (Spec 6A, Spec 16A)

SERVICE WELL – A non-producing well used for injecting liquid or gas into the reservoir for enhanced recovery. Also a salt-water disposal well or a water supply well. (ITOGP)

SERVICE WELLS – A service well is one drilled or completed for the purpose of supporting production in an existing field. Wells of this class are drilled for the following purposes: gas injection (natural gas, flare gas, inert gas, propane, or butane), water injection, steam injection, air injection, salt water disposal, water supply for injection, and observation. In certain states, these service wells require API Well Number assignments. (Bul D12A)

SERVICEABILITY LIMIT STATE – Function of design variables which defines a condition at which a member no longer satisfies functional requirements, although it is still capable of carrying additional loads before reaching an ultimate limit state. (Bul 2V)

SET CASING – The installation of pipe or casing in a well bore. (Bul 10C)

SET CASING – The installation of pipe or casing in a well bore. Usually requires mudding up, reconditioning, or at least checking the drilling fluid properties. (Bul D11)

SETDOWN – The increase in TLP platform draft with offset due to tendon system restraint. (RP 2T)

SETTING OFF COURSE – A method of setting the direction of the wellbore in anticipation of the bit walking (refer to “Lead Angle”). (Bul D20)

SETTING TIME – A term defining the hardening time of construction cement. This term is not normally used with reference to well cement. (Bul 10C)

SETTLE – (a) To sink gradually to the bottom. (b) To become clear by a deposit of sediment or scum. (c) To become compact by sinking. (Bul 10C)

SETTLEABLE SOLIDS – Bits of debris and fine matter heavy enough to settle out of waste water. (Bul D11)

SETTLING VELOCITY – The velocity at which a particle of particular size, type, specific gravity, and concentration will settle in a fluid of a particular specific gravity and viscosity. It is usually measured in millimeters per second. (SSWID)

SG – Specific Gravity.

SHADOW – A region in a body that cannot be reached by ultrasonic energy traveling in a given direction because of the geometry of the body or a discontinuity in it. (RP 2X)

SHAKE OUT – To spin a sample of oil at high speed to determine its BS&W content. Also called Grind Out. (ITOGP)

SHAKE-OUT – Small sample of a liquid is placed in graduated clear tube and spun in a centrifuge to force liquid separation according to density. Method used to determine BS&W content of produced or sale liquid. (WT)

SHALE – Fine-grained clay rock with slate-like cleavage. (Bul 10C)

SHALE – Fine-grained clay rock with slate-like cleavage, sometimes containing an organic oil-yielding substance. (Bul D11)

SHALE – A fine-grained sedimentary rock composed of silt and clay sized particles. The most frequently occurring sedimentary rock. (ITOGP)

SHALE SHAKER – Any of several mechanical devices utilizing screens which remove cuttings and other large solids from the drilling fluid. (Bul 10C)

SHALE SHAKER – A general term for devices used to screen drilling fluids. (Bul 13C)

SHALE SHAKER – Any of several mechanical devices for removing cuttings and other large solids from the drilling fluid. Common examples are vibrating screen rotating cylindrical screen, etc. (Bul D11)

SHALL – Indicates that the “recommended practice(s)” has universal applicability to that specific activity. (RP 49)

SHALL – For the purpose of this document, indicates that the recommended practice is a minimum requirement that has universal applicability to that specific activity. (RP 54)

SHALL – Indicates that the function has universal applicability to the specific activity. (RP T1, RP T4)

SHALL – This word indicates that the rule is mandatory and must be followed. (Spec 2C)

SHALL – In this document the word “shall” is used to indicate requirements which must be satisfied or performed in order to comply with this specification. (Spec 6A, Spec 16A)

SHALLOW FLAW OR DISCONTINUITY – A discontinuity which as little depth in proportion to wall thickness and does not exceed critical flaw size of the appropriate specifications. (RP 5A5)

SHARP CREST – The top intersection of the sides when the thread flanks are extended. (RP 5B1)

SHAVED (OR THIN) THREAD – A specific condition of improper thread form exhibiting an excessive narrowness of thread width. (Bul 5T1)

SHEAR (SHEARING STRESS) – An action, resulting from applied forces, which causes or tends to cause two contiguous parts of a body to slide relative to each other in a direction parallel to their plane of contact. (Bul 10C, Bul D11)

SHEAR LAG – Shear effects on beams which cause a non-uniform distribution of longitudinal bending stresses across the flange. (Bul 2V)

SHEAR RIDGE – First-year ridge formed primarily by relative motion of two ice sheets in the direction parallel to their common boundary, called a slip-page line. Composed of groundup ice chips, water-soaked and refrozen. (Bul 2N)

SHEAR STRENGTH – See Gel, Gel Strength. (Bul 10C)

SHEAR STRENGTH – A measure of the shear value of the fluid. The minimum shearing stress that will produce permanent deformation. See Gel Strength. (Bul D11)

SHEAR WAVE – The wave in which the particles of the medium vibrate in a direction perpendicular to the direction of propagation. (RP 2X)

SHEAROMETER – A device used as an alternative method for measuring gel strengths. See API RP 13B. (Bul 10C)

SHEAROMETER – A device used as an alternative method for measuring gel strengths. See API RP 13 B for specifications and procedure. (Bul D11)

SHEATH – Protective casing or covering. Cement sheath is the protective covering around the oil well casing. (SSWID)

SHEET ICE – A region of relatively undisturbed, smooth-first year ice that grows continuously throughout the winter season. (Bul 2N)

SHELL –The shell is normally a horizontal vessel which contains the coil, firetube and heater bath. (Spec 12K)

SHELL PANEL – That portion of a shell which is bounded by two adjacent rings in the longitudinal direction and two adjacent stringers in the circumferential direction. (Bul 2U)

SHIELD – A layer or mass of material used to reduce the passage of ionizing radiation. (RP 5A5)

SHOE – See Detector Shoe. (RP 5A5)

SHORT HOOK UP – Assembly composed of gauge bit, a near-bit gauge stabilizer, and one or more drill collars. Used to build angle after an initial kick off. (Bul D20)

SHORT STRING – In a dual well, the tubing string for the shallower zone. (ITOGP)

SHOOT – Pass a short-time pulse of high current through a conductor. (RP 5A5)

SHOOTING NIPPLE ASSEMBLY – A fabricated length of pipe equipped with a wireline blowout preventer and packoff installed above the blowout preventer stack to accommodate removal of logging or perforating tools and for protection against unexpected pressure while performing through-casing wireline operations. (RP 57)

SHOT – The measurement taken or the survey reading taken as a picture or as a punched hole on a chart (refer to "Picture"). (Bul D20)

SHOT – Short-time pulse of current. (RP 5A5)

SHOT FIELD – Residual magnetic field induced by a short impulse of magnetizing current. Often it is generated using a battery or capacitor discharge magnetizer. (RP 5A5)

SHOULD – Denotes a "recommended practice(s)" (1) where a safe comparable alternative practice(s) is available; (2) that may be impractical under certain circumstances; or (3) that may be unnecessary under certain circumstances. (RP 49)

SHOULD – For the purpose of this document, indicates a recommended practice (1) where an alternative practice(s) that is equally safe is available, or (2) that may be impractical under certain circumstances, or (3) that may be unnecessary for personnel safety and health under certain circumstances. (RP 54)

SHOULD – Indicates that: (1) the function may have an alternate practice that is equivalent and should be applied; or (2) the practice may not be practical or necessary under certain conditions; or (3) the practice may not be applicable to the specific facility or configuration. (RP T1, RP T4)

SHOULD – This word indicates that the rule is a recommendation, the advisability of which depends on the facts in each situation. (Spec 2C)

SHOULDER – A condition where an excess of metal appears adjacent to the last thread in one or more places around the circumference. Usually an excessive amount of black threads appear opposite the shouldered area. This condition may also be known as "hooked threads." (Bul 5T1, RP 5A5)

SHOULDER (THREAD PROFILE) – See Step. (Bul 5T1)

SHRINKAGE – A decrease in oil volume caused by the vaporization of solution gas from the oil as pressure is reduced. (ITOGP)

SHUT IN – To close valves on a well so that it stops producing; said of a well on which the valves are closed. (ITOGP)

SHUT-IN BOTTOM-HOLE PRESSURE – The pressure existing at the bottom of a well when the well is completely closed. (See Formation Pressure.) (WLOP)

SHUT-IN PRESSURE – Pressure as recorded at the wellhead when the valves are closed and the well is shut in. (ITOGP)

SHUTDOWN VALVE (SDV) – An automatically operated normally closed valve used for isolating a process station. (RP 14C)

SHUTDOWN VALVE – An automatically operated valve used for isolating a process component or process system. (RP 14E)

SIDE-DOOR MANDREL – See Gas-lift Mandrel. (WLOP)

SIDE LOADING – A load applied at an angle to the vertical plane of the boom. (Spec 2C)

SIDE-POCKET MANDREL – See Gas-lift Mandrel. (WLOP)

SIDE TENSION – Tensioning of a screening surface across the direction of material flow. (Bul 13C)

SIDE TRACK – An operation performed to redirect the wellbore by starting a new hole at a position above the bottom of the original hole. (Bul D20)

SIDE TRACKING – Usually drilling past an obstacle which has become permanently lodged in the hole. (Bul 10C)

SIDE-RACKING POCKET – An enlargement of one side of the wellbore made to facilitate changing the direction of the wellbore. The wellbore enlargement is usually accomplished by use of jetting action. (Bul D20)

SIDETRACKING – See Whipstock. (Bul D11)

SIEVE – See Preferred Term: Testing Sieve. (Bul 13C)

SIEVE ANALYSIS – See Screen Analysis. (Bul 10C, Bul D11)

SIEVE ANALYSIS – See related Term: Particle Size Distribution. A statement by particle size and percentages of the amount of material in various particle size groupings. (Bul 13C)

SIGNAL – A response of electronic NDT equipment to a pipe imperfection or defect. (RP 5A5)

SIGNAL-TO-NOISE RATIO – The ratio of amplitudes of indications from the smallest defect considered significant and those caused by random factors, such as heterogeneity in grain size, etc. (RP 2X)

SIGNAL-TO-NOISE RATIO – The ratio of signals generated from surface noise to the signal from a significant flaw or defect. (RP 5A5)

SILICA FLOUR – A fine powder manufactured by grinding sand to a particle size in the range of about 0.074 mm to 0.044 mm. It is added to cementing formulations to prevent cement strength deterioration in high temperature well applications. (Bul 10C)

SILICA GEL – A porous substance consisting of SiO_3. Used on occasion as a dehydrating agent in air or gas drilling where small amount of water is encountered. (Bul D11)

SILICA SAND – A high purity graded sand of a particle size in the range of about 0.210 mm to 0.088 mm. It is used in cementing formulations where a high density slurry with strength deterioration protection from high temperatures is required. (Bul 10C)

SILICATE – A compound containing Si) = which may be used for the prevention of metal corrosion caused by oxygen. (COGWE, SSWID)

SILT – Materials that exhibit little or no swelling whose particle size generally falls between 2 microns and 74 microns (200-mesh). A certain portion of dispersed clays and barite for the most part also fall into this same particle-size range. (Bul D11)

SIMPSON'S RULE METHOD – Uses as many measured angle values as are available (a minimum of three sets) to recreate the wellbore path through Simpson's rule for numeric integration, which approximates by passing a parabola through three points. (Bul D20)

SINGLE – One joint of drill pipe, tubing, or rods. (RP 54)

SINGLE-SHOT SURVEY – A measurement of the inclination and direction of a wellbore at one position with one recording. (Bul D20)

SINGLE THREAD – A thread having lead equal to the pitch. (RP 5B1)

SINKER BAR – A heavy weight or bar run with a wireline tool to add weight so that the tool will lower properly into the well. (ITOGP)

SINKER BAR – A heavy weight or bar placed in the wireline tool string. The bar adds weight so that the tool will lower properly through the well fluids. (WLOP)

SINKING – A method of controlling oil spills that employs an agent to entrap oil droplets and sink them to the bottom of the body of water. The oil and sinking agent are eventually biologically degraded. (Bul D11)

SINTERED CARBIDES – Most commonly, iron, chromium, or tungsten carbides bonded together with nickel or cobalt. (COGWE, SSWID)

SINTERING – Property that indicates the degree of boding of ice blocks as a function of contact pressure, temperature and time where the voids are either air or snow. (Bul 2N)

SKELP – The rolled steel sheet used in the making of ERW pipe. (RP 5A5)

SKEW ANGLE – The angle by which the beam deviates right or left relative to its normal path in front of the transducer, due to curvature effects. (RP 2X)

SKEW (DIRECTIONAL DRILLING) – The angular difference between the wellbore direction and the formation dip direction. (Bul D20)

SKID – Moving a rig from one location to another, usually on tracks where little dismantling is required. (Bul D11)

SKIMMER TANK – A produced water processing tank designed to skim oil from the surface of the water. (ITOGP)

SKIMMING – The mechanical removal of oil or scum from the surface of water. (Bul D11)

SKIP DISTANCE – The surface distance required for an angle beam to traverse the metal thickness, be reflected form the far side, and return to the original surface. (RP 2X)

SLAG INCLUSIONS – Non-metallic solid material entrapped in the weld deposit or between weld metal and base metal. (Bul 5T1)

SLANT HOLE – A non-vertical hole; usually refers to a wellbore purposely inclined in a specific direction; also used to define a wellbore which is non-vertical at the surface. (Bul D20)

SLANT PORTION OF A WELL – The straight portion of the wellbore that is not vertical; the "locked-in" angled portion of the wellbore. (Bul D20)

SLANT RIG (SLANT-HOLE RIG) – Drilling rig specifically designed to a drill a wellbore which is non-vertical at the surface; the mast is slanted and special pipe handling equipment is needed. (Bul D20)

SLANT-TYPE DIRECTIONAL HOLE – Usually refers to a wellbore which has a vertical section, an angle-build section, and an angled-but-straight section to total depth (refer to "Straight-in Directional Hole"). Also used to define a wellbore which is non-vertical at the surface (refer to "Slant Hole"). (Bul D20)

SLENDERNESS RATIO (KL_t/r) –The ratio of the effective length of a member to the radius of gyration of the member. (Bul 2N)

SLEWING – See Swing. (Spec 2C)

SLICK LINE – A smooth, single-strand, high-strength, steel wire used in wireline operations. (RP 57)

SLICK LINE – See Solid Wire Line. (WLOP)

SLIDING-SLEEVE NIPPLE – A special device placed in a string of tubing which can be operated by a wireline tool to open or close orifices (openings) to permit circulation between the tubing and annulus. It may also be used to open or shut off production from various intervals in a well. (WLOP)

SLING – An assembly which connects the load to the material handling equipment. (Spec 2C)

SLIP RAM PREVENTER – A ram blowout preventer with pipe slips that, when engaged, prevent movement of the pipe but does not control flow. (RP 57)

SLIP VELOCITY – The difference between the annular velocity of the fluid and the rate at which a cutting is removed from the hole. (Bul 10C, Bul D11)

SLIPS - Wedge-shaped pieces of metal with teeth or other gripping elements, used to prevent pipe from slipping down into the hole or for otherwise holding pipe in place. Packers and other downhole equipment are secured in position by means of slip that engage the pipe as a result of action performed at the surface. (ITOGP)

SLIVER – An extremely thin elongated piece of metal that has been rolled into the surface of the parent metal to which it is attached usually by only one end. (Bul 5T1)

SLIVERS – Loose or torn segments of steel rolled into the bar surface at the mill or formed during forging. (Spec 11B)

SLOPE – The angle with the horizontal made by the first or top deck screen section(s). Must be specified as uphill or downhill. (Bul 13C)

SLOT – A manmade cut in an ice sheet. May be wet (completely through the ice), partially refrozen, or dry (partially through the ice). (Bul 2N)

SLOUGHING – The partial or complete collapse of the walls of a hole resulting from incompetent, unconsolidated formations, high angle of repose, and wetting along internal bedding planes. See Heaving. (Bul 10C, Bul D11)

SLOW SAND FILTER – A very large filtering unit containing said. The fluid flows through the sand bed very slowly because of the large bed size. Generally, these filters are too large to be economically practical. (SSWID)

SLUDGE – See Preferred Term: Underflow. (Bul 13C)

SLUDGE – A deposit formed in one place which may be deposited in another place (low flow rate areas – tanks or vessels or bends in lines). (SSWID)

SLUG-FLOW – See Heading. (WT)

SLUG THE PIPE – A procedure before pulling the drill pipe whereby a small quantity of heaving drilling fluid is pumped into the top section to cause an unbalanced column. As the pipe is pulled, the heavier column in the drill pipe will fall, thus keeping the inside of the drill pipe dry at the surface when the connection is unscrewed. (Bul D11)

SLURRY – Suspension of solids in water, oil or mixture of both. (Bul 10C)

SLURRY – A mixture and/or suspension of solid particles in one or more liquids. (Bul 13C)

SLURRY DENSITY – The density of a cement slurry expressed in either pounds per gallon (kg/L) or pounds per cubic foot (g/cm). Bul 10C)

SLURRY VOLUME – The sum of the absolute volumes of solids and liquids that constitute a slurry. (Bul 10C)

SLURRY WEIGHT – See Slurry Density. (Bul 10C)

SLURRY YIELD – The volume of cement slurry in cubic feet that is obtained from a sack of cement. (Bul 10C)

SMOOTH ICE – Any area of sea ice that has not been noticeably affected by ice deformation mechanism. (Also referred to as sheet ice.) (Bul 2N)

SNT – Society for Non-Destructive Testing.

SNUBBING – Pulling or running pipe under pressure through a resilient sealing element where special equipment is used to apply external force to push the pipe into the well or to control the pipe movement out of the well. (RP 54, RP 57)

SOAP – The sodium or potassium salt of a high-molecular-weight fatty acid. When containing some metal other than sodium or potassium, they are called “metallic” soaps. Soaps are commonly used in drilling fluids to improve lubrication, emulsification, sample size, defoaming, etc. (Bul D11)

SODA ASH – See Sodium Carbonate. (Bul 10C, Bul D11)

SODIUM – One of the alkali metal elements with a valence of 1 and an atomic weight of about 23. Numerous sodium compounds (all of which see) are used as additives to drilling fluids. (Bul D11)

SODIUM BICARBONATE ($NaHCO_3$) – A material used extensively for treating cement contamination and occasionally other calcium contamination in drilling fluids. (Bul 10C)

SODIUM BICARBONATE ($NaHCO_3$) – A material used extensively for treating cement contamination and occasionally other calcium contamination in drilling fluids. It is the half-neutralized sodium salt of carbonic acid. (Bul D11)

SODIUM BICHROMATE ($Na_2Cr_2O_7$) – Also correctly called "sodium dichromate." (Bul 10C, Bul D11)

SODIUM CARBONATE (Na_2CO_3) – A material used extensively for treating-out various types of calcium contamination. It is commonly called "soda ash." (Bul 10C)

SODIUM CARBONATE (Na_2CO_3) – A material used extensively for treating out various types of calcium contamination. It is commonly called "soda ash." When sodium carbonate is added to a fluid, it increases the pH of the fluid by hydrolysis. Sodium carbonate can be added to salt (NaCl) water to increase the density of the fluid phase. (Bul D11)

SODIUM CARBOXYMETHYLCELLULOSE – Commonly called CMC. Available in various viscosity grades and purity. An organic material used to control filtration, suspend weighting material, and build viscosity in drilling fluids (abbr. CMC). Bul 10C)

SODIUM CARBOXYMETHYLCELLULOSE – Commonly called CMC. Available in various viscosity grades and purity. An organic material used to control filtration, suspend weighting material, and build viscosity in drilling fluids. Used in conjunction with bentonite where low-solids drilling fluids are desired. (Bul D11)

SODIUM CHLORIDE – NaCl. (Bul 10C)

SODIUM CHLORIDE (NaCl) – Commonly known as salt. Salt may be present in the drilling fluid as a contaminant or may be added for any of several reasons. See Salt. (Bul D11)

SODIUM CHROMATE (Na_2CrO_4) – See Chromate. (Bul 10C, Bul D11)

SODIUM CHROMATE (Na_2CrO_4) – An inorganic water-soluble chromium compound useful as an inhibitor of iron corrosion caused by oxygen. (COGWE, SSWID)

SODIUM DICHROMATE ($Na_2Cr_2O_7$) – Sodium chromate in acid systems. (COGWE)

SODIUM DICHROMATE ($Na_2Cr_2O_7$) – Sodium chromate in acid systems. Also a corrosion inhibitor. (SSWID)

SODIUM HYDROXIDE (NaOH) – Commonly referred to as "caustic" or "caustic soda." A chemical used primarily to impart a higher pH. Bul D11)

SODIUM HYDROXIDE (NaOH) – Commonly referred to as "caustic" or "caustic soda."

SODIUM NITRITE ($NaNO_2$) – An inorganic water-soluble chemical useful as an inhibitor of iron corrosion caused by oxygen. (COGWE, SSWID)

SODIUM POLYACRYLATE – A synthetic, high molecular weight, hydrolyzed polymer of acrylonitrile. (Bul 10C)

SODIUM POLYACRYLATE – A synthetic high-molecular-weight polymer of acrylonitrile used primarily as a fluid-loss-control agent. (Bul D11)

SODIUM SILICATE MUDS – Special class of inhibited chemical drilling fluids using as their bases sodium silicate, salt, water, and clay. (Bul 10C, Bul D11)

SOFT LINE – A fiber rope. (ITOGP)

SOL – A general term for colloidal dispersions, as distinguished from true solutions. (Bul D11)

SOLID WIRE LINE – A special wire line of very strong steel, usually 0.066 to 0.092 inch in diameter. (Sometimes referred to as "slick line.") (WLOP)

SOLIDS – All particles of matter in the drilling fluid, i.e., drilled formation cuttings, barite, etc. (Bul 13C)

SOLIDS CONCENTRATION OR CONTENT – The total amount of solids in a drilling fluid as determined by distillation includes both the dissolved and the suspended or undissolved solids. The suspended-solids content may be a combination of high and low specific gravity solids and native or commercial solids. Examples of dissolved solids are the soluble salts of sodium, calcium, and magnesium. Suspended solids make up the wall cake; dissolved solids remain in the filtrate. The total suspended and dissolved solids contents are commonly expressed as percent by the volume, and less commonly as percent by weight. (Bul D11)

SOLIDS DISCHARGE – That stream from a liquid solids separator containing a higher percentage of solids than does the feed. (Bul 13C)

SOLIDS DISCHARGE CAPACITY – The maximum rate at which a liquid-solids separator can discharge solids without overloading. (Bul 13C)

SOLUBILITY – The degree to which a substance will dissolve in a particular solvent. (Bul 10E, Bul D11)

SOLUBILITY – The quality of being soluble; capability of being dissolved in a fluid. (SSWID)

SOLUBLE OILS – Compounds which may possess corrosion-inhibition properties, are dispersible in water, and are soluble in oil. (COGWE, SSWID)

SOLUTE – A substance which is dissolved in another (the solvent). (Bul 10C, Bul D11)

SOLUTION – A mixture of two or more components that form a homogenous single phase. (Bul 10C)

SOLUTION – A mixture of two or more components that form a homogeneous single phase. Example solutions are solids dissolved in liquid, liquid in liquid, gas in liquid. (Bul D11)

SOLUTION GAS – Natural gas dissolved in crude oil and held under pressure in the oil in a reservoir. See Solution-Gas Drive. (ITOGP)

SOLUTION GAS – Gas produced with liquid which was in solution in liquid in the formation. Reduction in pressure permits gas to separate (break out). See Gas Breakout. (WT)

SOLUTION-GAS DRIVE – A natural drive mechanism where an oil reservoir derives its energy for production from the expansion of the natural gas in solution in the oil. Also called Dissolved-Gas Drive and Depletion Drive. (ITOGP)

SOLVENT – Liquid used to dissolve a substance (the solute). Bul 10C, Bul D11)

SONIC – Sound pulses used in various instruments to determine sound travel times from which densities may be calculated, fluid levels in wells determined, and many other applications. (WT)

SOP – An acronym for Standard Operating Procedures. (RP 5A5)

SORPTION – A term including both adsorption and absorption. Sorption is basic to many processes used to remove gaseous and particulate pollutants from an emission and to clean up oil spills. (Bul D11)

SOUNDNESS – A measure of the expansive properties of a cement as determined by the autoclave expansion test given in ASTM C 151: Test for autoclave expansion of Portland Cement. (Bul 10C)

SOUR CRUDE OIL (SOUR CRUDE) – An oil containing free sulphur or other sulphur compounds whose total sulphur content is in excess of one percent. (ITOGP)

SOUR ENVIRONMENTS – Fluids containing water as a liquid and hydrogen sulfide are considered sour environments and may cause sulfide stress cracking of susceptible materials. This phenomenon is affected by complex interactions of parameters including: (1) metal chemical composition, strength, heat treatment, and microstructure; (2) pH; (3) hydrogen sulfide concentration and total pressure;) 4) total tensile stress; (5) temperature; (6) time. The user shall determine the environment conditions in which the metallic materials are to meet the requirements of this Standard. The following guidelines are offered to assist the user in making this judgment.

Sour Gas – Materials shall be selected to be resistant to sulfide stress cracking or the environment should be controlled if the gas being handled is at a total pressure of 65 psia (448 Mpa) or greater and if the partial pressure of hydrogen sulfide in the gas is greater than 0.05 psi (0.34 Kpa). Systems operating below 65 psia total pressure or below 0.05 psia hydrogen sulfide partial pressure are outside the scope of this Standard. Partial pressure is determined by multiplying the mol fraction (mol percent divided by 100) of hydrogen sulfide in the gas by the total system pressure. Figure C.1 provides a convenient means of determining whether the partial pressure of hydrogen sulfide in a sour environment exceeds 0.05 psia. Examples: (1) partial pressure of hydrogen sulfide in a system containing 0.01 mol percent hydrogen sulfide (100 ppm or 6.7 grains per 100 SCF) at a total pressure of 1000 psia exceeds 0.05 psia (Point A on Figure C.1), and (2) partial pressure of hydrogen sulfide in a system containing 0.005 mol percent hydrogen sulfide (50 ppm or 3.3 grains per SCF) at a total pressure of 200 psia does not exceed 0.05 psia (Point B on Figure C.1).

Sour Oil and Multiphases – Sour crude oil systems which have operated satisfactorily using off-the-shelf equipment are outside the scope of this Standard when the fluids being handled are either crude oil or two- or three-phase crude, water, and gas when: (1) the maximum gas/liquid ratio is 500 SF/bbl; (2) the gas phase contains a maximum of 15% hydrogen sulfide; (3) the partial pressure of hydrogen sulfide in the gas phase is a maximum of 10 psia (69 kPa); and (4) the surface operating pressure is a maximum of 265 psia (1.8 Mpa) (see Figure C.2). The satisfactory service of off-the-shelf equipment in these low pressure systems is believe to be a result of the inhibitive defect of the oil and the low stresses encountered under the low pressure conditions. (RP 49)

SOUR GAS – Natural gas containing hydrogen sulfide. (ITOGP)

SOURCE – The origin of radiation; an X-ray tube or a radioisotope. (RP 5A)

SOURING – A term commonly used to mean fermentation. See Fermentation. (Bul D11)

SPACE – See Location. (RP 500B)

SPACING – Distance between wells producing from the same reservoir (usually expressed in terms of acres, e.g., 10-acre spacing). (ITOGP)

SPALLING - Flaking off in small chips. (COGWE, SSWID)

SPARK ARRESTOR – A device placed on the exhaust of the stack to prevent sparks from being emitted to the outside atmosphere. It normally consists of a metallic wire screen attached across the top diameter of the stack. (Spec 12K)

SPEAR – A fishing tool designed to go inside pipe that is lost in a well to obtain a friction grip and permit recovery of the pipe. (ITOGP)

SPECIAL PROCESSES – Operations which convert or affect material properties. (Spec 16A, Spec Q1)

SPECIAL SERVICES – Those operations utilizing specialized equipment and personnel to perform work processes to support well drilling and servicing operations. (RP 54)

SPECIALIST – Person capable of formulating a UT Procedure (e.g., ASNT Level III). (RP 2X)

SPEED – The frequency at which a vibrating screen operates, usually expressed in RPM or CPM; the bowl rpm of a decanting centrifuge; the rotor rpm of a perforated cylinder centrifuge. (Bul 13C)

SPECIFIC ACOUSTIC IMPEDANCE – A characteristic which acts to determine the amount of reflection which occurs at an interface and represents the product of the density of the medium in which the wave is propagating and the wave velocity. (RP 2X)

SPECIFIC GRAVITY – See Gravity, Specific. (Bul D11. Bul 10C)

SPECIFIC GRAVITY – The ratio of the weight of a substance to the weight of an equal volume of a standard substance. Water is the standard for liquids and air is the stand for gases. (GL)

SPECIFIC HEAT – The number of calories required to raise 1 gram of a substance 1 degree Celsius at a specified temperature. (Bul 10C)

SPECIFIC HEAT – The number of calories required to raise 1 g of a substance 1 deg Centigrade. The specific heat of a drilling fluid gives an indication of the fluid's ability to keep the bit cool for a given circulation rate. (Bul D11)

SPHERICITY – Particles sphericity is a measure of how close a sand particle or grain approaches the shape of a sphere. (RP 56)

SPHEROIDIZED CARBIDES – Iron carbides in steel present as tiny round spheres. (COGWE, SSWID)

SPIRAL DRILL COLLAR – Drill collar on which large grooves have been machined on the outer diameter in a helical or spiral configuration. (Bul D20)

SPIRAL WELD PIPE – Pipe having a helical seam produced by automatic submerged-arc welding. At least one pass shall be made on the inside and at least one pass on the outside. (Spec 5L)

SPIRALED WELLBORE – A wellbore which has attained a changing configuration as of a spiral or helical form. (Bul D20)

SPLASH ZONE – The part of the structure subjected to periodic wetting and drying due to rides, waves, and spray. (Bul 2N)

SPLIT DECK – See Preferred Term: Divided Deck. (Bul 13C)

SPOIL – Dirt or rock that has been removed from its original location (Bul D11)

SPOOL – A pressure containing piece of equipment having API end connections, used below or between equipment functioning to space apart, adapt, or provide outlets in an equipment assembly. When outlet connections are provided, they shall be API connections. (Spec 16A)

SPPE – The process or control equipment whose primary function is safety or the prevention of pollution in offshore oil and gas operations. (RP 14B, Spec 14A)

SPRAY DISCHARGE – The characteristic underflow of certain hydrocyclones discharging t the atmosphere and not overloaded with separate solids. (Bul 13C)

SPREADER(S) – A device or system designed to distribute the incoming emulsion as uniformly as practical through the cross section of the vertical or horizontal shell. (Spec 12L)

SPRING LOADED VALVE – A gas lift valve which uses a spring to provide the closing force for the valve (GL)

SPRINGING – The high frequency vertical vibration of the TLP spring-mass system excited by cyclic loading at or near the TLP pitch or heave resonant periods. (RP 2T)

SPUD BIT – In directional drilling, a special bit used to change the direction and inclination of the wellbore. (Bul D20)

SPUD MUD – The fluid used when drilling starts at the surface, often a thick bentonite-lime slurry. (Bul D11)

SPUDDING IN – The starting of the drilling operations of a new hole. (Bul D11)

SPURT LOSS – See Surge Loss. (Bul D11)

SQUARE DRILL COLLAR – A drill collar fabricated with the outer cross section in the form of a square; the corners are normally rounded off. (Bul D20)

SQUARE MESH – Wire cloth with mesh count the same in both directions. (Bul 13C)

SQUEEZE – A procedure whereby slurries of cement, drilling fluid, gunk plug, etc., are forced into the formation by pumping into the hole while maintaining a back pressure, usually by closing the rams. (Bul 10C, Bul D11)

SQUEEZE CEMENTING – The process of forcing cementing material under pressure into a specific portion of a well, such as fractures, openings, or permeable zones.

Hesitation-Squeeze Cementing – The process of forcing cementing material under pressure into the points to be squeezed with a final pressure equal to or greater than the formation breakdown pressure and with a final temperature equal to the bottom hole static temperature.

High Pressure Squeeze Cementing – The forcing of cement slurry into the desired position with a final pressure equal to or greater than the formation fracture pressure.

Low Pressure Squeeze Cementing – The forcing of cement slurry into the desired position with a pressure less than the formation fracture pressure. (Bul 10C)

SSCSV – Subsurface controlled subsurface safety valve – an SSSV actuated by the pressure characteristics of the well. These devices are usually actuated by differential pressure through the SSCSV (Velocity Type) or by tubing pressure at the SSCSV (High or Low Tubing Pressure Types). (RP 14B, Spec 14A)

SSSV – Subsurface safety valve – A device installed in a well below the wellhead with the design function to prevent uncontrolled well flow when actuated. These devices can be installed and retired by wireline (Wireline Retrievable) and/or pump down methods (TFL-Thru Flow Line) or be an integral part of the tubing string (Tubing Retrievable). (RP 14B, Spec 14A)

SSSV ASSEMBLY – A SSSV and safety valve lock. This term shall include only the SSSV when referring to tubing retrievable type SSSVs. (RP 14B, Spec 14A)

SSSV EQUIPMENT – The SSSV, safety valve lock and safety valve landing nipple and related downhole accessories. (RP 14B, Spec 14A)

SSSV System – The down-hole components, including the SSSV, safety valve lock, landing nipple, flow couplings and any required control components. (RP 14B)

SSU – Saybolt Seconds Universal.

SSV/USV ACTUATOR – The device which causes the SSV/USV valve to open when power is supplied and to automatically close when power is lost or released. (RP 14H, Spec 14D)

SSV/USV VALVE – The portion of the SSV/USV which contains the wellstream and shuts off flow when closed. (RP 14H, Spec 14D)

STAB – To guide the end of a pipe into a coupling when making up a connection. (ITOGP)

STABILIZER – A tool placed in the drilling assembly to: (1) change or maintain the inclination angle in a wellbore by controlling the location of the contact point between the hole and drill collars, (2) center the drill collars near the bit to improve drilling performance, and/or (3) prevent wear and differential sticking of the drill collars. (Bul D20)

STABBING A VALVE – Aligning and screwing a valve onto the end of a pipe. (RP 54)

STABBING BOARD – Temporary platform in the derrick on which employee works while casing is being run to aid in guiding a tubular joint into another joint for makeup. (RP 54)

STABILITY METER – An instrument to measure the breakdown voltage of invest emulsions. (Bul D11)

STABILIZATION – Continuous operation to a time when conditions remain at a constant or unfluctuating level, or t a time when fluctuating conditions follow a definite repetitive sequence. (WT)

STABILIZED – A well is considered “stabilized” when, in the case of a flowing well, the rate of production through a given size of choke remains constant, or, in the case of a pumping well, when the fluid column within the well remains constant in height. (ITOGP)

STABILIZER TYPES
Rotating Blade – Stabilizer with the largest outside diameter sections composed of narrow blades extending from the stabilizer body, (i.e., welded blade, replaceable blade, integral blade, etc).

Non-rotating Blade – Stabilizer used to center drill stem in the wellbore without reaming the hole. Stabilizer ribs, usually of rubber, will not wear out rapidly since rotation occurs between the sleeve and a mandrel.

Full-body, Spiral-grooved – Full-gauge long stbailizer with sets of spiral grooves cut along the full body length.

Round-fluted – Round integral blade stabilizer milled and machined from a solid forging to produce flutes and grooves on the outer diameter. (Bul D20)

STACK – A vertical pipe on the exhausted end of the firetube which exhausts the products of combustion and creates draft through the firetube. (RP 12N)

STACK DOWNDRAFT DIVERTER – A device attached to the top of the stack designed to reduce the effects of wind currents on the burner system. (Spec 12K)

STACK FLAME ARRESTOR – A device placed on the exhaust of the stack to prevent propagation of flame from inside the firetube to the outside atmosphere. It normally consists of a corrugated aluminum or stainless steel cell mounted in a metal housing which attaches to the top of the stack. (Spec 12K)

STACK RAIN SHIELD – A device attached to the top of the stack to prevent rain from falling directly into the stack. It may also serve as a stack downdraft diverter. (Spec 12K)

STACKING A RIG – Storing a drilling upon completion of a job when the rig is to be withdrawn from operation for a period of time. (Bul D11)

STAGE SEPARATION – An operation hereby well fluids are separated into component liquids and gases by passing consecutively through two o more separators. The operating pressure of each succeeding separator is lower than the one preceding it. (ITOGP)

STAINLESS STEEL – (1) Non-magnetic (austenitic): An alloy of over 16 percent chromium, over 7 percent nickel, and iron. Manganese can be used to partially replace nickel. (2) Magnetic (ferritic): an alloy of over 11 percent chromium and iron. (COGWE, SSWID)

STAND OF PIPE – One, two, three, or sometimes four joints of pipe screwed together and sometimes referred to as a single, double, thribble, or fourble, respectively. (RP 54)

STANDARD – A prescribed set of voluntary rules, conditions, or requirements concerned with the definition of terms; classification of components; delineation of procedures; specification of dimensions; construction criteria, materials, performance, design, or operations; measurement of quality and quantity in describing materials, products, systems, services, or practices; or descriptions of fit and measurement of size. Standards is an all-inclusive term denoting Specifications, Recommended Practices and Bulletins. (Bul S1)

STANDARD – An all inclusive term covering Specifications, Recommended Practices and Bulletins. (RP 14B, Spec 14A)

STANDARDIZATION – The adjustment of instruments, prior to use, to an arbitrary reference value. (RP 5A5)

STANDARDIZATION CHECK – A check of the standardization adjustments to ensure that they remain correct. (RP 5A5)

STANDING FLUID LEVEL – Static or unchanging level of fluid in a wellbore. (WT)

STANDING (GUY) WIRE ROPE – A supporting non-operating wire rope which maintains a constant distance between the points of attachment to the two components connected by the wire rope. (Spec 2C)

STANDING VALVE – A fixed ball and seat valve situated at the lower end of the barrel of a sucker-rod pump. The standing valve and its cage do not move as does the traveling valve. (ITOGP)

STANDING WAVE – A wave in which the energy flux is zero at all points. Such waves in elastic bodies result from the interaction of similar trains of waves running in the opposite direction and are usually due to reflected waves meeting those which are advancing. (RP 2X)

STANDOFF –The longitudinal axial distance between specified reference points. A distance from the coupling face to the vanish point on the pipe. (RP 5A5)

STANDOFF – The axial distance between specified reference points. A distance from coupling face to vanish point to the pipe. (RP 5B1)

STANDS – Connected joints of pipe racked in the derrick when making a trip. (ITOGP)

STARCH – A group of carbohydrates occurring in many plant cells. Starch is specially processed (pregelatinized) or use in drilling fluids to reduce filtration rate and occasionally to increase the viscosity. Without proper protection, starch can ferment. (Bul D11)

STATIC – Opposite of dynamic. See Quiescence. (Bul 10C, Bul D11)

STATIC BOTTOMHOLE PRESSURE – The pressure at formation depth in a well after the well is shut-in and the pressures have been stabilized. (GL)

STATIC FLUID LEVEL – The level to which fluid rises in a well when the well is shut in. (ITOGP)

STATIC FLUID LEVEL –The depth below the surface to which reservoir fluids will rise when the producing conduit is open to atmospheric pressure. (GL)

STATIC HOOK LOAD – See Maximum Rated Static Hook Load. (Spec 4F)

STATIC PRESSURE – The force exerted by a fluid at rest and confined within a tank, line or well as measured by a gage. (ITOGP)

STATION BILL – A posted list which sets forth the special duties and duty stations of each member of the personnel of a manned platform for emergencies, including a fire. (PR 14G)

STATION INTERVAL – The length of the course with one end at the depth described as the station course length. (Bul D20)

STB – Stock tank barrel. The volume of oil, water or total liquid as measured in the stock tank. (GL)

STB – Stock tank barrels. (WT)

STB/D – Stock tank barrels per day. (WT)

STBO – Stock Tank Barrels Oil (BBL)

STEADY-STATE PHASE FLOW – An equation of flow in which time is assumed to have no significance. (SSWID)

STEAM RIG – A rotary drilling rig with steam boilers and stream-driven equipment. (Bul D10)

STEARATE – Salt of stearic acid, which is a saturated, 18-carbon fatty acid. Certain compounds, such as aluminum stearate, calcium stearate, zinc stearate, have been used in drilling fluids for one or more of the following purposes: defoamer, lubrication, air drilling in which a small amount of water is encountered, etc. (Bul D11)

STEEL – An alloy of iron and carbon having two main constituents – iron and iron carbide. (COGWE, SSWID)

STEERING READOUT – Directional instrument indication of the drilling tool alignment taken while drilling (refer to "MST Tool" and "EYE Tool"). (Bul D20)

STEP – A specific condition of improper thread form that exhibits an abrupt machining deviation above or below the normal thread profile. (Bul 5T1)

STEP DECK – A series of screening surfaces, each located in progressively lower parallel planes along the vibrating screen. (Bul 13C)

STIFF HOOKUP – A well-stabilized, rigid bottomhole assembly to maintain inclination and direction of the hole; opposite to limber hookup. (Bul D20)

STIFFENED PANEL – Structural component comprising one or two sets of equally spaced uniform stiffeners of equal cross section supporting a thin plate. If there is only one set of stiffeners the panel is uniaxially stiffened, and if there are two the panel is orthogonally stiffened. (Bul 2V)

STIFFENER – Straight and slender thin walled member of uniform cross section containing at lest one plane of symmetry, which serves as a stiffening element for a flat plate structure. (Bul 2V)

STIFFNESS – Quality or state of being rigid, resistance to bending under stresses within the elastic limit. (Bul D20)

STIMULATION – The descriptive term used for several processes to enlarge old channels, or create new ones, in the producing formation of a well, i.e., ACIDIZING or FRACTURING. (ITGOP)

STITCHING – Variation in the properties of the weld occurring at short regular intervals along the weld line due to repetitive variation in welding heat. The variation in properties gives rise to a regular pattern of light and dark areas visible only when the weld is broken in the weld line. (Bul 5T1)

STOCK TANK – A tank for holding the produced liquids at atmospheric pressure prior to pumping them elsewhere. (GL)

STOCK TANK – A lease tank into which a well's production is run. (ITOGP)

STOCK TANK – Storage vessel to receive saleable oil production from a well or lease and store until sold to purchaser. (WT)

STOCK-TANK GAS-OIL RATIO – The ratio of separator gas rate to stock-tank oil rate, expressed as cubic feet of separator gas per barrel of stock-tank oil. (RP 44)

STOCK-TANK OIL – The hydrocarbon liquid (oil or condensate) which is collected in a surface storage tank at atmospheric pressure after the produced well fluid has been processed through a gas-oil separation system. (RP 44)

STOKING – Refer to "Methods of Orientation." (Bul D20)

STRAIGHT BEAM – A vibrating pulse wave train traveling normal to the test surface. (RP 2X)

STRAIGHT-HOLE DOWNHOLE MOTOR – A downhole motor designed to drill straight ahead; usually a straight-hole ahead; usually a straight-hole motor that is longer, larger and provides more torque than does a "directional" downhole motor. (Bul D20)

STRAIGHT-HOLE TURBODRILL – Refer to "Straighthole Downhole Motor." (Bul D20)

STRAIGHT-IN DIRECTIONAL HOLE – Wellbore with a build and a straight locked-in section. There is no drop-off section. (Bul D20)

STRAIGHT MECHANICAL DRIVE – Internal-combustion engines connected to leads by clutches which can be slipped a moderate amount. (Bul D10)

STRAIGHT WELLBORE – Wellbore drilled with the intention to proceed in a non-changing direction. (Bul D20)

STRAP – To measure and record the dimensions of oil tanks for the purpose of preparing a tank table to accurately determine the volume of oil in a tank at any measured depth. (ITOGP)

STRATIFICATION – The phenomenon occurring when a body of water becomes divided into distinguishable layers. (Bul D11)

STRATIFICATION – The natural layering or lamination usually characteristic of sediments and sedimentary rocks. (Bul D20)

STRATIGRAPHIC (CORE) TEST – A stratigraphic test in a drilling effort, geologically directed, to obtain information pertaining to specific geological conditions that might lead to the discovery of an accumulation of hydrocarbons. Such wells are drilled without the expectation of being completed for hydrocarbon production. This classification also includes tests identified as core tests by some operators. (Bul 12A)

STREAMING POTENTIAL – The electrokinetic portion of the SP (spontaneous potential) electric-log curve which can be significantly influenced by the characteristics of the filtrate and mud cake of the drilling fluid that was used to drill the well. (Bul D11)

STREAMLINE FLOW – See Laminar Flow. (Bul D11)

STRENGTH RETROGRESSION – The decline with age of strength of the hardened cement slurry. This may occur at temperatures above a critical temperature. (Bul 10C)

STRESS – The load per unit area. (RP 5A5)

STRESS CORROSION CRACKING – The cracking which results from a combination or corrosion and stress when certain susceptible materials are exposed to specific corrosive media. (RP 14H, Spec 14A, Spec 14D)

STRESS RELIEF – Controlled heating of material to a predetermined temperature for the purpose of reducing any residual stresses after welding. (Spec 6A, Spec 16A)

STRESS RELIEVED – The residual stresses are significantly reduced by post weld heat treatment. (Bul 2U)

STRESS REVERSAL – Change in stress from tension to compression, or vice versa. (Bul D20)

STRETCH MILL INDENTATION – Localized thinning of the pipe body wall – usually located on the inside surface. (Bul 5T1)

STRIKE PLATE – Extra piece of metal to protect the bottom of a tank from plumb-bob at end of gager's tape. (COGWE, SSWID)

STRING – Refers to the casing, tubing, or drill pipe in its entirety, i.e., the casing string, etc. (ITOGP)

STRING REAMER – Reamer placed within the drill stem assembly that will increase the diameter of any keyseat through which it passes; used to remove doglegs and keyseats and to straighten the wellbore. (Bul D20)

STRING STABILIZER – Stabilizer placed anywhere in the drill stem assembly above the near-bit stabilizer. (Bul D20)

STRINGER STIFFENED – A member with longitudinal stiffeners. (Bul 2U)

STRIP A WELL – To pull rods and tubing from a well at the same time. Tubing must be "stripped" over the rods a joint at a time. (ITOGP)

STRIP CHART – In lieu of the circular chart for recording gas flow through an office meter, strip charts are sometimes used. (ITOGP)

STRIPPER – A well nearing depletion that produces a very small amount of oil or gas. (ITOGP)

STRIPPER – A device with an elastomer packing element that is used to effect a seal in the annulus. This device is used primarily to run or pull tubulars under low or moderate well pressure. (RP 57)

STRIPPING – Pulling or running pipe under pressure through a resilient sealing element. (RP 54, RP 57)

STROKE – (See Related Term: Amplitude.) The distance between the extremities of motion; viz., the diameter of a circular motion. (Bul 13C)

STRUCTURAL COMPETENCE – The ability of the machine and its components to withstand the stress imposed by applied loads. (Spec 2C)

STRUCTURAL STEEL PIPE – A cylindrical tubular member formed from plate steel with longitudinal and circumferential butt-welded seams and having a uniform wall thickness. (Spec 2B)

STRUCTURE – An underground geological feature capable of forming a reservoir for oil and gas. (ITOGP)

STUCK – A condition whereby the drill pipe, casing, or other devices inadvertently become lodged in the hole. May occur while drilling is in progress, while casing is being run in the hole, or while the drill pipe is being hoisted. Frequently a fishing job results. (Bul D11)

STUCK PIPE – Refers to pipe or tubing inadvertently stuck in the hole. (ITOGP)

STUCK PIPE – A condition in which the pipe sticks or hangs and cannot be moved. (RP 54)

STUDDED CONNECTIONS – Connections in which thread-anchored studs are screwed into tapped holes. (Spec 16A)

STUDDED-FLANGE CONNECTIONS – Flanged end and outlet connections in which thread anchored studs screwed into tapped holes replace the holes for bolt studs. (Spec 6A)

STUFFING BOX – A packing gland; a chamber or "box" to hold packing material around a moving pump rod, valve stem or wireline to prevent the escape of gas or liquid. (ITOGP)

STUFFING BOX – A packing gland that may be adjusted to allow a wireline or polished rod to operate through it while containing well pressure and well fluids. (WLOP)

S-TYPE WELL (S-SHAPED WELL) – Well drilled with a vertical portion, a deviated portion, and a return toward the vertical. (Bul D20)

SUB – A short length of tubing containing a special tool to be used downhole; a short pipe adaptor. (ITOGP)

SUBMERGED-ARC WELDED PIPE – Pipe having one longitudinal seam formed by automatic submerged-arc welding. At least one pass shall be made on the inside and at least one pass on the outside. (Spec 5L)

SUBMERGED ZONE – The part of the structure below the splash zone. (Bul 2N)

SUBSEA DIVERTER - A piping manifold positioned at the top of the drilling riser to divert formation gas and liquid to an acceptable discharge point, preventing flow to working areas. (RP 2T)

SUBSEA MANIFOLD – The subsea well template may incorporate a subsea manifold when wells are completed with subsea trees. Here, production fluid is conveyed from the trees via pipes on the template to a subsea manifold at the base of a production riser. Production fluid may be commingled at the manifold if the number of subsea wells exceeds the number of production risers available. (RP 2T)

SUBSEA TREE – A subsea tree is a Christmas tree, wet or dry, placed below the ocean surface. (RP 6G)

SUBSEA WELL TEMPLATE – A structural frame which provides location and anchor points for the subsea wellheads, riser systems, and guidance systems. (RP 2T)

SUBSTRUCTURE – Structure on which the derrick and engines sit. May provide space for wellhead and well control equipment. (RP 54)

SUBSURFACE CONTROLLED SUBSURFACE SAFETY VALVE (SSCSV) – A SSSV actuated by the pressure characteristics of the well. (RP 14C)

SUBSURFACE DISCONTINUITY OR IMPERFECTION – Any discontinuity that does not open onto the surface (either ID or OD). (RP 5A5)

SUBSURFACE EQUIPMENT – Equipment put into a well to perform an operation below the wellhead. (WLOP)

SUBSURFACE SAFETY VALVE (STORM CHOKE) – A safety device installed in the well's tubing below the surface to automatically shut the well in when predetermined flow rate, pressure, or other conditions are reached. (ITOGP)

SUBSURFACE SAFETY VALVE – A device installed in the production tubing in a well below the wellhead and designed to prevent uncontrolled well flow when actuated. These devices can be installed and retrieved by wireline (wireline retrievable) and pump down methods or be an integral part of the tubing string (tubing retrievable). (RP 57)

SUBSURFACE SAFETY VALVE (SSSV) – A device installed in a well below the wellhead with the design function to prevent uncontrolled well flow when actuated. (PR 14C)

SULFATE RESISTANCE – The ability of a cement to resist deterioration in the presence of sulfate ions. (Bul 10C)

SULFIDE STRESS CRACKING – The stress corrosion cracking of high strength steels which results when the corrosive media contains hydrogen sulfide (H_2S). Spec 14A)

SULFIDE STRESS CRACKING – The stress corrosion cracking of susceptible materials which occurs when exposed to wellstreams containing Hydrogen Sulfide (H_2S) in high enough concentrations. (RP 14H, Spec 14D)

SULFIDE STRESS CRACKING – Cracking of metallic materials due to exposure to hydrogen sulfide containing fluids. (Spec 6A)

SULFIDE STRESS CRACKING SERVICE – Process streams which contain water or brine and hydrogen sulfide (H_2S) in concentrations high enough to induce stress corrosion cracking of susceptible materials. (RP14E)

SULFUR DIOXIDE – A toxic product of combustion of hydrogen sulfide bearing fluids in operations such as well flaring or well ignition. This gas is slightly heavier than air. Inhalation at certain concentrations can lead to injury or death. (RP 49)

SUMMARY OF OCCUPATIONAL INJURIES AND ILLNESSES – Annual report form used to submit experience to the National Safety Council for inclusion in the annual evaluation of incidence rates and the annual industry rates series of reports to the National Safety Council. (Bul T5)

SUN-RESISTANT – Ability to withstand exposure to direct sunlight as defined by UL Std. 62, Safety Standard for Flexible Cord and Fixture Wire. (RP 14F)

SUPERSATURATION – A solution containing a higher concentration of a solute in a solvent than would normally correspond to its solubility at a given temperature. (Bul 10C)

SUPERSATURATION – If a solution contains a higher concentration of a solute in a solvent than would normally correspond to its solubility at a given temperature, this constitutes sueprsaturation. This is an unstable condition, as the excess solute separates when the solution is seeded by introducing a crystal of the solute. The term “supersaturation” is frequently used erroneously for hot salt drilling fluids. (Bul D11)

SUPERVISOR – Person who has been given the control, direction, or supervision of work performed by one or more employees. (RP 54)

SUPPLIER – The manufacturer and/or distributor of the coating material and their authorized qualified technician. (RP 5L2)

SUPPLIER – Any individual or organization who furnishes materials, products, or services to the manufacturer. (Spec Q1)

SUPPORT BAR – Member of the screening surface support frame that forms the crown of the deck. Also knows as bar rail, bridge rail, bucker-up bar, or longitudinal bar. (Bul 13C)

SUPPORT FRAME – A vibrating frame component which supports the screening surface. (Bul 13C)

SUPPORT RUBBER – Resilient member covering the support bar. (Bul 13C)

SURFACE-ACTIVE MATERIALS – See Surfactant. (Bul 10C, Bul D11)

SURFACE CASING – The shallowest casing string required to protect fresh water zones, to provide sufficient pressure control during drilling operations, and to support the wellhead. It is not to be confused with a drilling conductor pipe nor with a large caisson in an offshore area which enclosed several separate and unique surface casings at the surface. (Bul 12A)

SURFACE CASING – The first string of casing to be set in a well. Its principal purpose is to protect fresh water sands. (ITOGP)

SURFACE CASING – Outside and first casing string installed in the wellbore, except for drive pipe or conductor pipe, to seal off surface sands and provide blowout protection and prevent loss of circulation while drilling deeper. (RP 54)

SURFACE CONTOURS – Lines of equal elevation drawn on a surface map, resulting in a topographic map. (SSWID)

SURFACE CONTROL SYSTEM – The surface equipment including manifolding, sensors, and power source to control the SCSSV. (RP 14B)

SURFACE CONTROLLED SUBSURFACE SAFETY VALVE (SCSSV) – A SSSV controlled from the surface by hydraulic, electric, mechanical or other means. (RP 14C)

SURFACE DISTANCE – The surface projection of metal path distance. (RP 2X)

SURFACE EQUIPMENT – Equipment used above ground level. (WLOP)

SURFACE PIPE – See Pipe. (Bul 10C)

SURFACE PRESSURE – Pressure measured at the wellhead. (WLOP)

SURFACE SAFETY VALVE (SSV) – An automatic wellhead valve assembly which will close upon loss of power supply. (RP 14C)

SURFACE SAFETY VALVE (SSV) – An automatic wellhead valve which will close upon loss of power supply. When used in this specification it includes SSV valve, SSV actuator, and heat sensitive lockopen device. (RP 14B, RP 14H, Spec 14D)

SURFACE SAFETY VALVE – A Christmas tree valve and actuator assembly designed to prevent uncontrolled well flow when actuated. (RP 57)

SURFACE SAFETY VALVE – A device mounted in the wellhead assembly that serves to stop the flow of fluids from the well should damage occur downstream of the well. (WLOP)

SURFACE SPEED – Velocity of transducer shoe over the surface of the pipe. (RP 5A5)

SURFACE TENSION – Generally, the force acting within the interface between a liquid and its own vapor which tends to maintain the area of the surface at a minimum and is expressed in dynes per centimeter. (Bul 10C)

SURFACE TENSION – Generally, the force acting within the interface between a liquid and its own vapor which tends to maintain the area of the surface at a minimum and is expressed in dynes per centimeter Since the surface tension of a liquid is approximately equal to the interfacial tension between the liquid and air, it is common practice to refer to values measured against air as surface tension, and to use the term “interfacial tension” for measurements at an interface between two liquids, or a liquid and a solid. (Bul D11)

SURFACE TREES – A combination of valves which may be placed on the top of production risers to control pressure and divert flow. (RP 2T)

SURFACTANT – A material which tends to concentrate at an interface and lower interfacial tension. (Bul 10C)

SURFACTANT – A surface-active agent that tends to concentrate at an interface. Such agents lower the surface tension of water and aid in emulsifying oil and dispersing materials in water. Used in drilling fluids to control the degree of emulsification, aggregation, dispersion, interfacial tension, foaming, defoaming, etc. (Bul D11)

SURFACTANT – A material which tends to concentrate at an interface. Used in drilling fluids to control the degree of emulsification, aggregation, dispersion, interfacial tension, foaming, defoaming, wetting, etc. (Bul D11)

SURFACTANT – A substance that affects the properties of the surface of a liquid or solid by concentrating in the surface layer. Surfactants are useful in that they can ensure that the surface of one substance or object is put on contact with the surface of another substance. A soap or detergent (SSWID)

SURFACTANT MUD – A drilling fluid which contains a surfactant. (Bul 10C)

SURFACTANT MUD – A drilling fluid which contains a surfactant. Usually refers to a drilling fluid containing surfactant material to effect control over degree of aggregation and dispersion or emulsification. (Bul D11)

SURGE – Horizontal motion of the platform in the plant north-south direction. (RP 2T)

SURGE LOSS – The flux of fluids and solids which occurs in the initial stages of any filtration before pore openings are bridged and a filter cake is formed. Also called "spurt loss." (Bul D11)

SURGE TANK – A vessel on a flow line whose function is to receive and cushion sudden rises or surges in the stream of liquid. (ITOGP)

SURVEILLANCE SYSTEM – A monitoring system to determine environmental quality. Surveillance systems are established to monitor all aspects of progress toward attainment of environmental standards and to identify potential episodes of high pollutant concentrations in time to take preventive action. (Bul D11)

SURVEY – An evaluation of the radiation levels incident to the presence and use of radioactive materials. (RP 5A5)

SURVEY – A documented investigation, including examination of objective evidence conducted by API to verify that a manufacturer is in conformance with the provisions of the API license agreement. (Spec Q1)

SURVEY CALCULATION METHODS – Refer to Wellbore Survey Calculation Methods. (Bul D20)

SURVEY DATA SHEET – Commonly called the calculation sheet. A paper form on which to tabulate the data and results of calculations of a wellborn survey. (Bul D20)

SURVEY INSTRUMENT – An instrument used to measure inclination of the wellbore and the direction of the inclination from a position within the wellbore. (Bul D20)

SURVEY METER – A portable instrument which measures dose rate of exposure of radiation intensity. (RP 5A5)

SURVEYING FREQUENCY – Refers to the number feet between survey records. (Bul D20)

SUSPENDED SOLIDS (SS) – Small particles of solid pollutants that contribute to turbidity and that resist separation by conventional means. The examination of suspended solids and the BOD test constitute the two main determinations for water quality performed at waste-water facilities. (Bul D11)

SUSPENSOID – A mixture consisting of finely divided colloidal particles floating in a liquid. The particles are so small that they do not settle but are kept in motion by the moving molecules of the liquid (Brownian movement). (Bul D11)

SWAB – A rubber-faced device, which closely fits the inside of tubing, that is pulled through the tubing to lift fluid from the well. Also to pull such a device through the tubing. (ITOGP)

SWAB – n. A rubber-faced, hollow cylinder mounted on a hollow mandrel with a pin joint on the upper end to connect to the swab line. A check valve installed on the lower end of the swab and opening upward may be used to unload a well (remove fluids) when the well ceases to flow. (WLOP)

SWAB – v. To operate a swab on a wire line to bring well fluids to the surface when the well does not flow naturally. This is a temporary operation to determine whether or not the well will flow. If the well does not flow after being swabbed, it is necessary to install a pump or other permanent lifting device to bring oil to the surface. (WLOP)

SWAB VALVE – The uppermost valve in vertical line on the Christmas tree, always above the flow-wing valve. (RP 57)

SWABBING – When pipe is withdrawn from the hole in a viscous drilling fluid or if the bit is balled, a suction is created. (Bul D11)

SWABBING – Operation of a SWAB on a wire line (SWAB LINE) to bring well fluids to the surface when the well does not flow naturally. This is a temporary operation to determine whether or not the well can be made to flow or if artificial lift is needed. (ITOGP)

SWABBING – The lowering of the hydrostatic pressure in the hole due to upward movement of pipe and/or tools. (RP 53)

SWABBING – Planned lifting of well fluids to the surface using a piston-like device installed on a wireline. Swabbing may inadvertently occur due to piston action as pipe or assemblies are pulled from the well. (RP 54)

SWAGE – A Tool for straightening damaged or collapsed tubing in a well. (WLOP)

SWAGE NIPPLE – A pipe fitting having external threads of one size on one end and a different size on the other end. (WLOP)

SWAY – Horizontal motion of the platform in the plant east-west direction. (RP 2T)

SWEEP – The uniform and repeated movement of an electron beam across the CRT. (RP 2X)

SWEET – Said of oil or gas when it contains no sour impurities. (ITOGP)

“S” WELLBORE – Refers to S-type Well. (Bul D20)

SWELLING – See Hydration. (Bul D11)

SWING – Rotation of the upperstructure for movement of loads in a horizontal direction about the axis of rotation. (Spec 2C)

SWING BEARING – A combination of rings with balls or rollers capable of sustaining radial, axial, and moment loads of the revolving upperstructure with boom and load. (Spec 2C)

SWING CHECK – A type of check valve. (ITOGP)

SWING CIRCLE – See Swing Bearing and Roller Path. (Spec 2C)

SWING GEAR (ALSO KNOWN AS RING GEAR OR BULL GEAR) – External or internal gear with which swing pinion on revolving upperstructure meshes to provide swing motion. (Spec 2C)

SWING MECHANISM – The machinery involved in providing dual directional rotation of the revolving upperstructure. (Spec 2C)

SWINGING SQUARE – A square drill collar located between two round drill collars. (Bul D20)

SWINGLINE – A vertically suspended rope knotted on the lower end to provide hand grips, hung above the boat landing on an offshore platform, and used to facilitate safe personnel transfer between boat and platform and vice versa. (RP 54)

SWIVEL – Device at top of the drill stem which permits simultaneous circulation and rotation. (RP54)

SWIVEL – A load carrying member with thrust bearings to permit rotation under load in a plane perpendicular to the direction of the load. (Spec 2C)

SWIVELING – The rotation of the load attachment portion (hook or shackle) or a load block (lower) or hook assembly about its axis of suspension in relation to the load lines(s). (Spec 2C)

SYNERESIS – The separation of liquid from a gel caused by contraction. (Bul 10C)

SYNERGISM – The cooperative action of separate substances so that the total effect is greater than the sum of the effects of the substances acting independently. See Synergism in Section 1. (Bul D11)

SYNERGISM, SYNERGISTIC PROPERTIES – An effect obtained when two or more products are used simultaneously to obtain a certain result. Rather than the results of each product being additive to the other, the result is a multiple of the effects. (Bul 10C)

SYNERGISM, SYNERGISTIC PROPERTIES – Term describing an effect obtained when two or more products are used simultaneously to obtain a certain result. Rather than the results of each product being additive to the other, the result is a multiple of the effects. See Synergism in Section 2. (Bul D11)

SYSTEM, EMERGENCY GAS RELIEF – A system for discharging gas by manual actuation or by an automatic pressure relief valve from a pressurized system to the atmosphere for the purpose of relieving an abnormally high pressure. (RP 2G)

SYSTEM, FLARE – A system for discharging gas through a control valve from a pressurized system to the atmosphere during normal operations. This discharge may be either continuous or intermittent, and may or may not be ignited. (RP 2G)

SYMMETRICAL – Of the same size and shape, repetition of data or a series of data where one series of events is the same as the immediately preceding series over same period of time. (WT)

-T-

TACKLE-HOIST – Assembly of ropes and sheaves arranged for pulling. (Spec 2C)

TAIL CHAIN – The short length of chain, with a hook attached, on the end of a winch line. (ITOGP)

TAIL GAS (RESIDUE GAS) – Gas from a processing unit after extraction of liquids. (ITOGP)

TAIL OUT RODS – To pull the bottom end of a sucker rod away from a well when laying rods down. (ITOGP)

TAIL PIPE – Pipe run in a well below a packer. (ITOGP)

TAIL PLUG – The plug in the end of a gas lift valve which is the final seal on the dome. (GL)

TAIL SWING – Clearance distance from center of rotation to maximum rear extension of revolving upperstructure. Also called Rear End Radius. (Spec 2C)

TAKE A STRAIN ON – To begin to pull on a load. (ITOGP)

TALLY – To measure and record the length of pipe or tubing. (ITOGP)

TALLY – The overall length of the pipe and connections measured in 1/100 of a foot. This dimension is commonly used when purchasing casing and tubing. At the well site commonly a "makeup" tally is made measuring from the last scratch on the pin end to the far end of the coupling or box. (RP 5A5)

T & C – Acronym for threaded and coupled. (RP 5A5)

TANDEM SQUARES – Two or more square drill collars adjacent in a bottom-hole assembly. (Bul D20)

TANDEM STABILIZERS – Refers to the use of two or more stabilizers at one position in a bottom-hole assembly. (Bul D20)

TANGENTIAL METHOD – Uses only the inclination and direction angles measured at the lower end of the course length. The wellbore path is assumed to be tangent to these angles throughout the course. This method is not recommended. (Bul D20)

TANK BATTERY – See Battery. (ITOGP)

TANK DIKE – See Fire Wall. (ITOGP)

TANK TABLE – A table giving the barrels of fluid contained in a storage tank corresponding to the linear measurement on a gage line. See Strapping. (ITOGP)

TANK TABLES – A tabulation of total tank contents from bottom to top, usually in barrels for oil field use. Normally shown for each 1/8 inch increase in liquid depth. (WT)

TANNIC ACID – The active ingredient of quebracho and other organic tannins. (Bul 10C)

TANNIC ACID – The active ingredient of quebracho and other quebracho substitutes such as mangrove bark, chestnut extract, hemlock, etc. (Bul D11)

TAP – A threaded opening in a line or vessel in which a gage or valve may be installed. Also, a notched tool used to cut inside threads. (ITOGP)

TAPER – The change in the pitch diameter of round thread and the change in the root diameter of the buttress thread. (RP 5A5, RP 5B1)

TARGET – A bull plug or blind flange at the end of a tee to prevent erosion at a point where change in flow direction occurs. (RP 53)

TARGET AREA – A defined area at a prescribed vertical depth which is planned to be intersected by the wellbore. (Bul D20)

TARGET POINT – The coordination in space considered to be the preferred point within the target area for the wellbore intersection. The planned point, within the target area, for the wellbore to intersect. (Bul D20)

TATTLETALE – A device on an instrument control panel to indicate the cause of a system shutdown or alarm signal. (ITOGP)

TCG – Time controlled gain circuitry in the instrument which compensates for attenuation losses in the metal. (RP 2X)

TD – Total depth. The maximum depth drilled. (WLOP)

TECHNICIAN – A person capable of performing adequate UT inspections, given clear instructions. (RP 2X)

TEE – A pressure containing fitting with three openings. Two openings opposite one another to form the run portion of the tee, and one opening at 90^{o} to the line of the run. Tees may be threaded, flanged, or studded-flange. (Spec 6A)

TEFC – Totally Enclosed Fan Cooled.

TELEMETRY – A system for the electronic transmission of oil field data. (ITOGP)

TELESCOPIC JOINT – Riser joint designed to permit a change in length of the riser to accommodate platform movements. Sometimes called a slip joint. (RP 2T)

TELESCOPING BOOM – Consists of a base boom from which one or more boom sections are telescoped for additional length. (Spec 2C)

TEMPERATURE – The degree of heat, usually expressed in either U.S. customary units as degrees Fahrenheit (^{o}F) or metric equivalent units as degrees Celsius (^{o}C).
Casing Cementing Temperature – The temperature of a cement slurry at any point while it is being displaced in a cementing operation.
Circulating Temperature – The temperature of any fluid at any specified depth in a well while it is being circulated.
Squeeze Cementing Temperature – The temperature of any fluid at any specified depth in a well while it is being displaced at the maximum cementing depth in a squeeze cementing operation.
Static Temperature – The temperature attained at a specified depth in a well after the well is shut-in long enough to reflect the ambient formation temperature at that depth. (Bul 10C)

TEMPERATURE BOMB – An instrument lowered into a well to record down-hole temperature. (ITOGP)

TEMPERATURE GRADIENT – The rate of change of temperature with displacement in a given direction. As the depth of a well increases, so does the temperature; this phenomenon is known as the temperature gradient. It varies according to geographical location and geological formations encountered. (WLOP)

TEMPERATURE STABILITY – The chemical characteristics of a material which determine its resistance to thermal decomposition (Bul 10C)

TEMPERATURE SURVEY – An operation to determine temperatures at various depths in the hole. Usually a continuous log over a given depth range. (Bul 10C)

TEMPERATURE SURVEY – An operation to determine temperatures at various depths in the hole. This survey is used to find the location of inflows of water into the hole, where doubt exists as to proper cementing of the casing and for other reasons. (Bul D11)

TEMPERATURE SURVEY – An operation to measure and record the temperatures at various depths in the wellborn with the well either producing or shut-in. The temperatures may be measured and recorded at either a self-contained unit run on a solid wireline or a unit run on an electric wireline with an instantaneous recording at the surface. (GL)

TEMPERATURE SURVEY – An operation to determine temperatures at various depths in the wellbore. This survey is used to determine the height of cement behind the casing when there is doubt as to the height, to find the location of water influx into the wellbore, and for other reasons. Wireline equipment may be used. (WLOP)

TENDON – A system of components which form a link between the TLP platform and the subsea foundation for the purpose of mooring the TLP. (RP 2T)

TENDON ACCESS TUBE – A conduit within a platform column between the bottom of the column and the tendon top connector through which a tendon passes. (RP 2T)

TENDON CONNECTOR – A device used to connect a tendon to the platform hull (top connector) or to the foundation template (bottom connector). (RP 2T)

TENDON COUPLING – A device which connects one tendon element to another or to a specialty component. (RP 2T)

TENDON ELEMENT – Each of the similar or identical but discrete structural components which, when assembled with the flex elements, top and bottom connectors, and any other special components, comprise a complete tendon. (RP 2T)

TEN-MINUTE GEL – See Gel Strength, 10-min. (Bul D11)

TENSION – Actual tension in the pipe due to its own weight plus the product of the drilling fluid pressure and the cross-sectional area on which the pressure acts. (Bul D20)

TENSION BOLT – Threaded bolt used with tension member. (Bul 13C)

TENSION LEG – The collective group of tendons associated with one column of the platform. (RP 2T)

TENSION MEMBER – A general term for any of a number of devices which engage the edge of the screen surface and pull it taut over the support frame. (Bul 13C)

TENSION PLATE (BOARD) – Type of tension member that is located above the screening surface and closes the gap between the edge of the screen surface and the sideplate. (Bul 13C)

TENSIONER – A device, usually pneumatically or hydraulically powered, used to apply tension to tendons or riser. (RP 2T)

TENSIONER SYSTEM – Tensioner units are used to maintain risers in tension as the platform moves in response to wind, waves and current. Horizontal motions, heave, and setdown of the platform necessitate changes in length of the risers. Tensioners accommodate these movements, as well as relative angular motion between the platform and riser, while maintaining a nearly constant tension on the risers. (RP 2T)

TENSIONING – The stretching of the screening surface within the vibrating frame. (Bul 13C)

TENV – Totally enclosed Nonventilated.

TERMINAL ANGLE – The inclination and direction angles of the lower end of the course. (Bul D20)

TERMINAL ANGLE METHOD – Refer to “Tangential Method.” (Bul D20)

TERTIARY TREATMENT – Waste-water treatment, beyond the secondary or biological stage, that includes removal of nutrient such as phosphorous, nitrogen, and a high percentage of suspended solids. Tertiary treatment, also known as advanced waste treatment, produces a high-quality effluent. (Bul D11)

TEST AGENCY – Any independent third party which owns or otherwise provides a test facility and administers a testing program recognized by the manufacturers and/or operator as being capable of meeting the SSSV performance test requirements of this specification. (Spec 14A)

TEST AGENCY – Any independent third party which owns or otherwise provides a test facility and administers a testing program recognized by the operator as being capable of meeting the Class 2 SSV/USV Valve Performance Test requirements of API Spec 14D. (RP 14H)

TEST BLOCK – Special precision-made blocks, used as standards to facilitate rapid calibration of an inspection instrument. (RP 5A5)

TEST RACK (TESTER) – An arrangement of gas lift receivers, gages, valving, etc., so that nitrogen gas pressure may be applied to the bellows of a gas lift valve and simultaneously measured to determine the pressure required to open the gas lift valve. (GL)

TEST SURFACE – That surface of a part through which the ultrasonic energy enters or leaves the part. (RP 2X)

TEST TANK – A receiving vessel used for temporary measurement and storage of produced liquid during a well test. (WT)

TESTING SIEVE – A cylindrical or tray-like container with a screening surface bottom of standardized apertures. (Bul 13C)

TFL – The abbreviation “TFL” stands for through flowline. (TP 6G)

THEORETICAL PERMEABILITY RATIO – The theoretical permeability ratio (k_i/k_o) is the ratio of the ideal perforated permeability to the original effective permeability. (RP 43)

THERMAL ANOMALIES – Unusual or abnormal temperature differences. (WT)

THERMAL DECOMPOSITION – The chemical breakdown of a compound or substance by temperature into simple substances or into its constituent elements. Starch thermally decomposes in drilling fluids as the temperature approaches 300 F. (Bul D11)

THERMAL HORSEPOWER (THP) –

$$\frac{\text{Btu/min}}{42.42}$$

(Bul D10)

THERMAL SHIELD – A heat sink and insulator used to prolong the life of heat sensitive instruments used in wellbore surveys. (Bul D20)

THETA ANGLE – The angle that will correct grid north to true north. (Bul D20)

THICK THREADS – Threads that have the appearance of being cut off-form. This appearance would have to be substantiated with the use of a thread comparator, lead gauge, and/or depth gauge. (Bul 5T1, RP 5A5)

THICKENING TIME – The time required for a cement slurry of a given composition to reach a consistency of 100 Bearden units of consistency (Bc), determined by methods outlined in API Spec 10. (Bul 10C)

THIEF – A metal cylinder with a spring actuated closing device that is lowered into a tank to obtain samples of oil at any given depth. (ITOGP)

THIEF HATCH – An opening in the top of a tank large enough to admit a thief and other oil-sampling equipment. (ITOGP)

THIEFING – Obtaining fluids at different levels in a vessel to determine BS&W content. (WT)

THINNER – Any of various organic agents (tannins, lignites, lignosulfonates, etc.) and inorganic agents (pyrophosphates, tetraphospates, etc.) that are added to a drilling fluid to reduce the viscosity and/ore thixotropic propreties. (Bul 10C, Bul D11)

THIRD PARTY INSPECTOR – An independent (not employee of manufacturer or user) inspector or company contracted to determine whether the produce meets the required specification(s). Persons retained by the owner to observe the inspection being done by others are usually agents for the owner. (RP 5A5)

THIXOTROPY – The property exhibited by certain systems of gelling when in a static state, and then liquefying when subjected to agitation. (Bul 10C)

THIXOTROPY – The ability of fluid to develop gel strength with time. That property of a fluid which causes it to build up a rigid or semi-rigid gel structure if allowed to stand at rest, yet can be returned to a fluid state by mechanical agitation. This change is reversible. (Bul D11)

THREAD (SCREW THREAD) – A ridge of uniform section in the form of a helix on the internal or external surface of the pipe. (RP 5B1)

THREAD ANGLE – The included angle between the thread flanks. The flank angle of thread shall be defined as the angles between the flanks and a perpendicular to the thread axis. For 60 degree threads, the flank angles are half angles of the thread and therefore equal. For buttress threads, the leading flanks are 20 degrees and the following flanks are 3 degrees. For extreme-line threads, the leading flanks are 6 degrees and the following flanks are 6 degrees. (Spec 5B)

THREAD AXIS – The axis of pitch cone of the thread, and the longitudinal central line through the threads. In basic thread design, all length measurements are related to the thread axis. (RP 5A5, RP 5B1)

THREAD FORM – The form of thread is the thread profile in an axial plane for a length of one pitch. (RP 5A5, RP 5B1, Spec 5B)

THREAD PROTECTOR – A device screwed onto pipe threads to protect the threads from damage when not in use. (ITOGP)

THREAD PROTECTOR – Plastic or steel protection device placed on the end of the pipe to protect threads and seals from damage. (RP 5B1)

THREAD RUN-OUT ON FACE – See Featheredge. (Bul 5T1)

THREADS PER INCH – The number of threads in one inch of thread length. (RP 5B1)

THREE-DIMENSIONAL RADIUS OF CURVATURE METHOD – Refer to "Minimum Curvature Method." (Bul D20)

THREE PHASE SEPARATOR – Production vessel capable of separating gas, oil and water, and discharging in three separate streams. (WT)

THREE-PIECE SUCKER ROD – A rod whose body and pin or box ends are joined by threaded connections. (Spec 11B)

THRESHOLD DOSE – The minimum dose of a given substance necessary to produce a measurable physiological or physiological effect. (Bul D11)

THROUGH TRANSMISSION – A test method using two transducers in which the ultrasonic vibrations are emitted by one and received by another on the opposite side of the part. The ratio of the magnitudes of vibrations transmitted and received is used as the criterion of soundness. (RP 2X)

THROW – See Preferred Term: Stroke. (Bul 13C)

TIGHT FORMATION – A formation of relatively low permeability. (ITOGP)

TIGHTEN UP EMULSION OR DRILLING FLUID – Drilling fluid jargon to describe a condition in some systems to which oil has been added and the oil breaks out and rises to the surface. Any chemical or mechanical means which will emulsify the free oil is known as "tightening up." (Bul D11)

TILTED RIG – Refer to "Slant Rig." (Bul D20)

TITRATION – A method, or the process of using a standard solution, for the determination of the amount of some substance in another solution. The known solution is usually added in a definite quantity to the unknown until a reaction is complete. (Bul D11)

TOLERANCE – The relative capability of an organism to endure an unfavorable environmental factor. (Bul D11)

TOLERANCE – The permissible deviation from the specified value. (RP 5A5)

TOLERANCE – The amount of variation permitted. (RP 5B1)

TOOL AZIMUTH ANGLE – The angle between north and the projection of the tool reference axis onto a horizontal plane. (Bul D20)

TOOL HIGH-SIDE ANGLE – The angle between the tool reference axis and a line perpendicular to the hole axis and lying in the vertical plane. (Bul D20)

TOOL JOINT – A drill pipe coupler consisting of a pin and box of various designs and sizes. The internal design of tool joints has an important effect on drilling fluid hydrology. (Bul D11)

TOOL JOINT – A heavy coupling element for drill pipe having coarse, tapered threads and seating shoulders designed to sustain the weight of the drill stem, withstand the strain of repeated makeup and breakout, and provide a leak-proof seal. The male section (pin) is attached to one end of a length of drill pipe and the female section (box) is attached to the other end. Tool joints may be welded to the drill pipe, screwed onto the pipe, or a combination of screwed on and welded. (Bul D20)

TOOL MARK – Surface roughness on thread, chamfer, or counterbore surfaces caused by the machining action and condition of the cutting edge of single-point, die, or chaser tools; also can occur in the form of a longitudinal ridge across thread crests due to an improperly shaped or adjusted chaser. (Bul 5T1)

TOOL MARKS – Cuts or tears to thread crests caused by thread dies or chasers; ridges, steps, or burrs in the thread flanks caused by chipped or broken threading tools, and shaved threads. (RP 54)

TOOLPUSHER – Supervisor in charge of one or more drilling or well servicing rigs. (RP 54)

TOP – See Preferred Term: Overflow. (Bul 13C)

TOP CONNECTION – The uppermost fitting of a Christmas tree through which the tubing of the well may be entered with completion or workover tools. (Spec 6A)

TOP OUT – To finish filling a tank. (ITOGP)

TORN THREAD (TEARS) – Thread surfaces which have portions that are chipped, rough, or ragged. (Bul 5T1)

TORN THREADS (TEARS) – Thread crests which have portions that are chipped, rough, or tagged. (RP 5A5)

TORQUE – A measure of the force or effort applied to a shaft causing it to rotate. (Bul 10C)

TORQUE – The tangential force (pounds) times lever arm length. (Bul D10)

TORQUE - A measure of the force or effort applied to a shaft causing it to rotate. On a rotary rig this applies especially to the rotation of the drill stem in its action against the bore of the hole.

Torque reduction can usually be accomplished by the addition of various drilling fluid additives. (Bul D11)

TORQUE – A twisting force that tends to produce rotation – the force causing a threaded connection to makeup. (RP 5B1)

TORQUE CONVERTER – Fluid drive which increases torque and reduces rpm. (Bul D10)

TORQUE CONVERTER – Auxiliary transmission connected to prime mover which multiples engine torque as load increase with corresponding decrease in speed. (Sec 2C)

TOTAL CORE PENETRATION (TCP) – Total core penetration, TCP, is the distance from the original Berea sandstone core face to the depth probed. It is obtained by subtracting from the total target penetration, TTP, the combined thickness of the steel and Hydromite. (RP 43)

TOTAL CURVATURE – Implies three-dimensional curvature (refer to "Dogleg Severity"). (Bul D20)

TOTAL DEPTH (OR TD) – The greatest depth reached by the drill bit. (Bul 10C, Bul D11)

TOTAL DEPTH (TD) – The maximum depth reached in a well. (ITOGP)

TOTAL HARDNESS – See Hardness of Water. (Bul 10C, Bul D11)

TOTAL SOLIDS – The total amount of solids in a waste water, both in solution and suspension. (Bul D11)

TOTAL TARGET PENETRATION (TTP) – Total target penetration, TTP, is the distance from the exterior steel face of the core target to the probe depth. The probe depth shall be determined by the maximum depth from the exterior steel face to the deepest point that can be probed with a 0.1-in. OD tube using 50 psi air pressure and a probe force not exceeding 10 pounds. (RP 43)

TOUR – A person's turn in an orderly schedule. The word, which designates the shift of a drilling crew, is pronounced as if it were spelled t-o-w-e-r. (Bul D11)

TOXIC SUBSTANCE – A substance or material which can be detrimental to human health or the functional capacity of a person having exposure to it. (RP 57)

TOXICANT – A substance that kills or injures an organism through its chemical pr physical action, or by altering its environment; for example, cyanides, phenols, pesticides, or heavy metals. (Bul D11)

TOXICITY – The quality or degree of being poisonous or harmful to plant or animal life. (Bul D11)

TRACEABILITY – The ability to determine the product history through markings and records. (Spec Q1)

TRACEABILITY, JOB LOT – The ability for parts to be identified as originating from a job lot which identifies the included heat(s). (Spec 6A, Spec 16A)

TRANSDUCER – An instrumentation device for converting a signal from one form to another. A pressure transducer. (ITOGP)

TRANSDUCER – An electro-acoustical device for converting electrical energy into acoustical energy and vice versa. (RP 2X)

TRANSDUCER – Device used for converting a pipe condition into an electrical signal. This is a term which includes all ultrasonic proves, search coils, eddy current probes and most other detectors. (RP 5A5)

TRANSFER MECHANISM – A procedure to account for the effects of differences in surface texture, curvature, etc. between calibration block and workpiece. (RP 2X)

TRANSITION ZONE – The ice region existing between fast ice and the artic pack, usually heavily deformed. It may vary in width from hundreds of feet to tens of miles depending on seasonal and annual changes. Fast ice may be found in this zone, adjacent to grounded features. (Also referred to as the shear or Stamukhi zone.) (Bul 2N)

TRANSMISSION ANGLE – The incident angle of the transmitted ultrasonic beam. It is zero degrees when the ultrasonic beam is perpendicular to the test surface. (RP 2X)

TRANSMISSION LOSS – The difference between output horsepower and input horsepower. It may conveniently be expressed as percentage of input horsepower. (Bul D10)

TRANSVERSE – Literally means "across," usually signifying circumferential or substantially circumferential in direction. (RP 5A5)

TRANSVERSE WAVE – Same as shear wave. (RP 2X)

TRAP (GEOLOGIC) – An arrangement of rock strata or structures that halts the migration of oil and gas and causes them to accumulate. (ITOGP)

TRAPEZOIDAL METHOD – Uses of the measured inclination and direction angles at both ends of the measured course in a fashion that recreates the wellbore path. This is done by a sequence of trapezoidal integration segments using the measure angles as constraints on the integral over the measured course. Results obtained are essentially the same as the "Acceleration." Balanced Tangential," and "Vector Averaging" Methods. (Bul D20)

TRAVELING CYLINDER VIEWS – A plat of the well profile within the control cylinder. (Bul D20)

TRAVERSE TABLES – Tables of numerical values used in calculating wellbore survey results. (Bul D20)

TREATER – Production vessel equipped to heat liquid, and in which treating chemical is usually added to aid in separating oil and water emulsions. (WT)

TREATING – Separation of gas, oil and water from emulsified well streams by gravity and enhanced means of breaking emulsions such as heating, chemical and/or coalescing sections. (Spec 12L)

TREE, CHRISTMAS – An assembly of valves and fittings used for production control which includes, as applicable, the tubing head top flange, the bottom most master valve, the crown valve (swabbing valve), the wellhead choke and all valves and fittings in between. (RP 14H, Spec 14D)

TRIGGER BIT – A bit with a removable center through which surveying instruments were run into the open hole. Used prior to industry's general acceptance of non-magnetic drill collars. (Bul D20)

TRIP – See Round-trip. (ITOGP)

TRIP GAS – An accumulation of gas which enters the hole while a trip is made. (RP 53)

TRIPPING – Torsional buckling of stiffener. (Bul 2V)

TROUBLESHOOTING – The process of determining and correcting a problem with a gas lift well. (GL)

TRUE NORTH – The direction from any geographical location on the earth's surface to the north geometric pole. (Bul D20)

TRUE VERTICAL DEPTH (TVD) – The actual vertical depth of an inclined wellbore (refer to "Vertical Depth"). (Bul D20)

TUBING – In petroleum production this is the tubular product used to bring the product to the surface. API sixes range from 1.050 inch OD to 4.5 inch OD inclusive. (RP 5A5)

TUBING – Pipe used in wells to conduct fluid from the well's producing formation into the Christmas tree. Tubing is distinguished from casing as being susceptible to manipulation under operating conditions; whereas, casing is ordinarily considered a fixed or permanent installation. (Spec 6A)

TUBING – Pipe installed in the wellbore inside all casing strings and extending from the wellhead to an elevation at or above the formation, and through which formation fluids normally are transported to the surface. (RP 54)

TUBING ANCHOR – A downhole, packer-like device run in a string of tubing that grips the wall of the casing to prevent up and own movement of the lower section of tubing as the well is pumped by a rod pump. (ITOGP)

TUBING COUPLINGS – May be called tubing collars. Tubular steel with internal threads into which are made up the ends of tubing joints, to form a continuous flow string. (WT)

TUBING FLOW – Formation fluids are produced up through and recovered form the tubing at the surface. (GL)

TUBING HANGER, THREADED (MANDREL) – A mechanism used to support a tubing string in a tubing head by means of a male or female thread attached to the tubing. (Spec 6A)

TUBING HEAD – The top of the string of tubing with control and flow valves attached. (ITOGP)

TUBING HEAD ADAPTER – That equipment which adapts the uppermost flange of a tubing head to the lowermost valve of the Christmas tree. (Spec 6A)

TUBING HEAD SPOOL – A piece of equipment attached to the uppermost casing head or smallest casing string which serves to suspend the tubing and to seal the annular space between the tubing and casing. (Spec 6A)

TUBING JOB – The pulling and running of tubing. (ITOGP)

TUBING RETRIEVABLE GAS LIFT VALVE – Commonly called a conventional gas lift valve. A gas lift valve mounted on a tubing retrievable mandrel. It is necessary to pull the tubing to recover the valves. This was the first method of mounting gas lift valves; consequently the name of conventional gas lift valve. (GL)

TUBING RETRIEVABLE MANDREL – Commonly called conventional or standard mandrel. A tubing pup joint with a lug for mounting a conventional or tubing retrievable gas lift valve. The mandrel is an integral part of the rubbing string. (GL)

TUBINGLESS COMPLETION – A method of completing a well in which a small diameter production casing is set through the producing zone with no tubing or inner production string employed to bring formation fluids to the surface. (RP 57)

TUBULAR GOODS – Any kind of pipe. Oilfield tubular goods include tubing, casing, drill pipe, and line pipe. (WLOP)

TUGGER LINE – Tugger line is a wire rope line powered by a motor (pneumatic, hydraulic, or other) and used for the controlled lifting and lowering of light loads around a rig. (RP 54)

TURBIDITY – A measure of the resistance of water to the passage of light caused by suspended and colloidal matter. (Bul 10C, SSWID)

TURBOLATORS – A core of baffles designed to induce turbulence in the return leg of firetubes which enhances heat transfer efficiency. (Spec 12L)

TURBULENT FLOW – Fluid flow in which the velocity at a given point changes constantly in magnitude and the direction of flow. (Bul 10C)

TURBULENT FLOW – Fluid flow in which the velocity at a given point changes constantly in magnitude and the direction of flow; pursues erratic and continually varying courses. Turbulent flow is the second and final stage of flow in a Newtonian fluid; it is the third and final stage in a Bingham plastic fluid. See Critical Velocity and Reynolds Number. (Bul D11)

TURN – Change in bearing of the hole. Usually spoken of as the right or left turn with orientation that of an observer who views the well course from the surface site. (Bul D20)

TURNS PER INCH – The number of thread turns in one inch of thread length. (RP 5B1)

TURNTABLE – See Revolving Upperstructure. (Spec 2C)

TWIST-OFF – The severing in two of a joint of drill pipe or other pipe stem elements by excessive force applied by the rotary table. (Bul D11)

TWO-BLOCKING – The condition when the lower load block or hook assembly comes in contact with the upper load block or boom point sheave assembly. (Spec 2C)

TWO-CRYSTAL METHOD – Use of two transducers for sending and receiving. May be send-receive or through-transmission method. (RP 2X)

TWO PHASE SEPARATOR – Production vessel capable of separating gas from liquid. (May also include water knockouts which separate water from oil). (WT)

TYPE – An SSSV with unique control characteristics which differentiate it from other SSSVs. The SCSSV, the Velocity Type SSCSV and the Low Tubing Pressure Type SSCSV are examples of SSSV types. (Spec 14A)

-U-

UL – Underwriters' Laboratories, Inc.

ULTIMATE LIMIT STATE – Function of design variables which defines the resistance of a member to failure (i.e., its maximum load carrying capacity at failure). (Bul 2V)

ULTRASONIC – Pertaining t mechanical vibrations having a frequency greater than approximately 20,000 H_2. (RP 2X)

ULTRASONIC – Relating to frequencies above the audible range, i.e., in excess of 20 kilohertz (kHz). (RP 5A5)

ULTRASONIC ABSORPTION – A dampening of ultrasonic vibrations that occurs when the wave transverses a medium. (RP 2X)

ULTRASONIC INSPECTION – An examination of materials and fabrication by a qualified technician, responsible to the inspector, using pulse echo ultrasonic equipment for the purpose of

locating and sizing discontinuities in the welds and reporting such findings to the inspector for evaluation of compliance with the acceptance criteria. (RP 2X)

ULTRASONIC INSPECTION PROCEDURE – The detailed written procedure outlining the specific ultrasonic inspection techniques and criteria to be utilized during the construction of a particular platform. (RP 2X)

ULTRASONIC SPECIALIST – An individual with extensive experience in the preparation and application of ultrasonic inspection procedures. (Individuals classified by the American Society for Nondestructive Testing Certification Panel as Level III technicians or any engineering technician specializing in nondestructive inspection with emphasis on ultrasonic techniques.) (RP 2X)

ULTRASONIC SPECTRUM – The frequency span of elastic waves greater than the highest audible frequency, generally regarded as being higher than 2.0 x 10 cycles per second, to approximately 10 cps. (RP 2X)

ULTRASONIC TESTING (UT) – A nondestructive method of inspecting materials by the use of high frequency sound waves. (RP 5A5)

ULTRAVIOLET LIGHT – Light waves shorter than the visible blue-violet wave of the spectrum. Crude oil, colored distillates, residuum, a few drilling fluid additives, and certain minerals and chemicals fluoresce in the presence of ultraviolet light. These substances, when present in drilling fluid, may cause the fluid to fluoresce. (Bul D11)

ULTRAVIOLET LIGHT (UV) – Light in the ultraviolet wavelengths of 3200 to 4000 Angstrum, just shorter than visible light. (RP 5A5)

UMBRELLA DISCHARGE – See Preferred Term: Spray Discharge. (Bul 13C)

UNCLASSIFIED LOCATION – See Classification. (RP 14F, RP 500B)

UNCLASSIFIED LOCATION – An unclassified location is a location not classified as Division 1 or Division 2. (RP 500B)

UNCONTROLLED SIDETRACK (BLIND SIDE-TRACK) – The side tracking of a wellbore where direction is unimportant and not controlled. (Bul D20)

UNDER-CUT – Under-cutting on submerged arc-welded pipe is the reduction in thickness of the pipe wall adjacent to the weld where it is fused to the surface of the pipe. (Bul T1)

UNDER-REAM – To enlarge a drill hole below the casing. (Bul 10C)

UNDERFILL – Formed during bar rolling when the bar does not completely fill the rolling die. Also formed during rod end forging when there is insufficient material to fill the die. (Spec 11B)

UNDERFLOW – (See General Term: Solids Discharge.) The discharge stream from centrifugal separators that contains a higher percentage of solids than does the feed. (Bul 13C)

UNDERFLOW HEADER – (See Related Term: Underflow Manifold.) A pipe, tube, or conduit into which two or more hydrocyclones discharge their underflow. (Bul 13C)

UNDERFLOW MANIFOLD- An arrangement by which the underflow from one or more hydrocyclones or from one or more underflow headers can be diverted. (Bul 13C)

UNDERFLOW OPENING – The actual opening through which the underflow leaves the centrifugal separator. (Bul 13C)

UNDERGROUND BLOWOUT – An uncontrolled flow of well fluids and/or formation fluids into lower pressured subsurface zones. See Blowout. (Bul D11)

UNDERPRESSURE – Pressure in a process component less than the design collapse pressure. (RP 14C)

UNDERSATURATED FLUID – A liquid capable of holding additional gaseous components in solution or a vapor capable of holding additional liquid components in solution at the specified pressure and temperature. (RP 44)

UNDERSIZE – Material consisting of particles smaller than a specified aperture. (Bul 13C)

UNDERWATER SAFETY VALVE (USV) – An automatic valve assembly (installed at an underwater wellhead location) which will close upon loss of power supply. When used in this specification, it includes USV valve and USV actuator. (Spec 14D)

UNDERWATER SAFETY VALVE (USV) – An automatic valve assembly (installed at an underwater wellhead location) which will close upon loss of power supply. (RP 14C)

UNDERWATER SAFETY VALVE (USV) – An automatic valve assembly (installed at an underwater wellhead location) which will close upon loss of power supply. When used in this standard, it includes USV valve and USV actuator. (RP 14H)

UNDESIRABLE EVENT – An adverse occurrence or situation in a process component or process station which poses a threat to safety such as overpressure, underpressure, liquid overflow. etc. (RP 14C)

UNFIRED PROCESS AREA – That area that contains process equipment that does not have a flame. (RP 2G)

UNIFORMITY COEFFICIENT – A term used in specifying sand. It is the ratio of the sieve size that will pass 60 percent of the filter sand, to the effective size. (SSWID)

UNION – A coupling device used to connect pipe without the need to rotate the pipe. The makeup is accomplished by a flanged, threaded collar on the union. (WLOP)

UNIT – A single qualified reporting establishment, such as a plant or location. See paragraphs 3 through 8 under Award Plan. (Bul T5)

UNIT OPERATOR – The company designated to operate unitized properties. (ITOGP)

UNITIZATION – Unitization is the process whereby the owners of adjoining properties pool their reserves and form a single UNIT for the operation of the properties by only one of the owners. The production from the UNIT is then divided on the basis established in the UNIT AGREEMENT. The purpose of such agreement is to produce the reserves more efficiently, increasing the recovery for every participant. Important where enhanced recovery is anticipated. (ITOGP)

UNIVALENT – Monovalent. See Valence. (Bul D11)

UNMANNED PLATFORM – A platform upon which persons may be employed at any onetime, but upon which no living accommodations or quarters are provided. (RP 2A)

UP-DIP WELL – A well located high on the structure. (ITOGP)

UPPER DECK – Upper or roof deck level consisting of girder beam and plate elements. (RP 2T)

UPPERSTRUCTURE – See Revolving Upperstructure. (Spec 2C)

UPSET – A forged metal pipe end with increased wall thickness and diameter used for threading or welding. (RP 5A5)

UPSET TUBING – Tubing that is “upset” is made with a thicker wall and larger outside diameter on both ends of a joint to compensate for cutting the threads. (ITOGP)

UPSET UNDERFILL – A depression on the outside of inside surface of an upset caused by insufficient flow of metal to completely fill out the upset to the desired shape. (Bul 5T1)

UPSET WRINKLES – Surface irregularity occurring on pipe upsets in the form of transverse forging laps. (Bul 5T1)

USAS – United States of America Standard. (Now American National Standards Institute.)

USCG – United States Coast Guard.

USERS – A term denoting individuals or companies who use equipment and/or material, or implement Recommended Practices. (Bul S1)

USGS – Abbreviation for United States Geological Survey. See MMS). (WLOP)

-V-

VACUUM – Pressure in a process component less than atmospheric pressure. (RP 14C)

VACUUM – Theoretically, a space absolutely devoid of all matter and exerting zero pressure. However, vacuum is commonly used to describe a condition that exists in system when pressure is reduced below atmospheric pressure. (WLOP)

VACUUM STRIPPING – To remove gases from a liquid by applying a vacuum. (SSWID)

VALENCE OR VALENCY – A number representing the combining power of at atom, i.e. the number of electrons lost, gained, or shared by an atom in a compound. It is also a measure of the number of hydrogen atoms with which an atom will combine or replace, e.g., an oxygen atom combines with two hydrogens, hence has a valence of 2. Thus, there are mono-, tri-, etc., valent ions. (Bul D11)

VALENCE EFFECT – In general, the higher the valence of an ion the greater the loss of stability to emulsions, colloidal suspensions etc., these polyvalent ions will impart. (Bul D11)

VALVE – A device used to control the rate of flow in a line, to open or shut off a line completely, or to serve as an automatic or semiautomatic safety device. Those valves that find extensive usage in the oil industry include the gas valve, plug valve, globe valve, needle valve, check valve, and relief valve (also called a safety valve). (WLOP)

VALVE BORE SEALING MECHANISMS – Those internal valve parts which close off the flow through the valve bore, such as gates, balls, plugs, poppets, flappers, and their respective seats. (Spec 6A)

VALVE, CHECK – A valve that permits fluid to flow freely in one direction and contains a mechanism to automatically prevent flow in the other direction. (Spec 6A)

VALVE CROWN – The uppermost valve on the vertical bore of the Christmas tree above the flowline outlet. (Spec 6A)

VALVE DRILLING OPERATION – Drilling of a hole through the blocking element of a valve that is stuck in the closed position with pressure on the well side of the valve. The drilling is accomplished through a lubricator that confines the pressure after the valve is penetrated. (RP 54)

VALVE, DRILLING THROUGH – A valve with an oversize bore. These valves must pass a drift test. (Spec 14D)

VALVE, FULL-BORE – A valve whose closure mechanism has the same bore dimensions as the valve body. (Spec 6A)

VALVE, FULL-BORE – A valve with a minimum opening dimension corresponding to the nominal end connection size. (Spec 14D)

VALVE, GATE – A valve assembly with a gate operating within the body, 90 degrees to the conduit, to effect a closure. (Spec 6A)

VALVE, GATE – A valve designed to function in either a full open or full close position in which the closure member (gate) is moved in a direction perpendicular to the flow direction (Spec 14D)

VALVE, MASTER – The lowermost valve on the vertical bore of the Christmas tree. It is used to completely shut in the well. (Spec 6A)

VALVE, MASTER – A valve located in the vertical run of a Christmas tree whose primary purpose is to shut off well flow. (RP 14H, Spec 14D)

VALVE, PLUG – A valve assembly with a plug (straight, tapered, ball, etc.) permanently mounted across the conduit so that when rotated 90 degrees it effects a closure. (Spec 6A)

VALVE, PLUG – A valve in which the closure member (plug) is rotated. This plug may be cylindrical, conical or spherical in shape, solid, or split, with a conduit bore which aligns with the seat bore in the open position. (Spec 14D)

VALVE, REDUCED-OPENING – A valve which has a reduced opening through its closure mechanism. (Spec 6A)

VALVE, REGULAR OPENING – A valve which may have a reduced opening, either round or oblong, through the closure member. The area of this opening is usually from 50 to 100 percent of the pipe cross sectional flow area. (Spec 14D)

VALVE, SWAB – See definition for crown valve. (Spec 6A)

VALVE, VENTURI – A valve with a reduced opening, in which the transformation from the full opening ends to the reduced closure area is well streamlined to reduce pressure loss. (Spec 6A)

VALVE, VENTURI – A valve with a reduced opening, either round or substantially rectangular, through the closure member in which the transformation from the full opening ends to the reduced closure member opening is well streamlined to reduce the pressure loss. The area of the opening is usually about 40 percent of the cross sectional flow area of the pipe of the same nominal size as the valve. (Spec 14D)

VALVE, WING – A valve located on the Christmas tree, but not in the vertical run, which can be used to shut off well flow. (RP 14H, Spec 6A, Spec 14D)

VANISH POINT – The location where the thread root runs out or terminates on the pipe surface. The point where the lead of the chaser tool makes its final cut. (RP 5A5)

VANISH POINT – That location where the thread took mark runs out or terminates on the pipe surface. (RP 5B1)

VAPOR RECOVERY UNIT – A facility for collecting stock or storage tank vapors to prevent their loss to the atmosphere. (ITOGP)

VAPOR-TIGHT LIGHTING FIXTURE – See Enclosed and Gasketed Lighting Fixture. (RP 14F)

VARIANCE – Sanction granted by a government body for delay or exception in the application of a given law, ordinance, or regulation. (Bul D11)

VD (Vertical Pump Intake Setting Depth (Ft.) – Is the true vertical pump setting depth measured from the surface.

VECTOR AVERAGING METHOD – Uses inclination and direction measurements at both ends of the measured course to establish vector space directions. It is then assumed that each of these two vectors is projected for one-half the course length in creating the wellbore path. Each "half-course length" segment can be treated tangentially. Results obtained are essentially the same as the "Acceleration," "Balanced Tangential," and "Trapezoidal" Methods. (Bul D20)

VEE PATH – The angle-beam path in materials starting at the search-unit examination surface, through the material to the reflecting surface, continuing to the examination surface in front of the search unit, and reflection back along the same path to the search unit. The path is usually shaped like the letter "V." (RP 2X)

VELOCITY – Time rate of motion in a given distance. (Bul 10C)

VELOCITY – Time rate of motion in a given direction and sense. It is a measure of the fluid flow and may be expressed in terms of linear velocity, mass velocity, volumetric velocity, etc. Velocity is one of the factors which contribute to the carrying capacity of a drilling fluid. (Bul D11)

VELOCITY – The speed at which sound waves travel through a medium. (RP 2X)

VELOCITY, CRITICAL – That velocity at the transitional point between laminar and turbulent types of fluid flow. This point occurs in the transitional range of Reynolds numbers of approximately 2,000 to 3,000. (Bul 10C, Bul D11)

VELOCITY, ULTRASONIC – The speed at which sound waves travel through a medium. (RP 5A5)

VENT – A connection in a vessel, line or pump to permit the escape of air or gas. (ITOGP)

VENT – A pipe or hatch on a vessel that opens to the atmosphere. A vent line might contain a pressure and/or vacuum relief device. (RP 14C)

VENT – An opening to allow gas to escape, and to prevent pressure buildup in the vessel to which attached. (WT)

VENTILATION, ADEQUATE – Ventilation (natural or artificial) which is sufficient to prevent the accumulation of significant quantities of vapor-air mixtures in connections above 25% of their lower flammable (explosive) limit (LEL). (RP 500B)

VENTILATION, INADEQUATE – Ventilation which is less than adequate. (RP 500B)

VENTILATION, LIMITED – Ventilation (natural or artificial) which is sufficient to reasonably assure that significant quantities of vapor-air mixtures in concentrations above 25% of the lower flammable (explosive) limit (LEL) will not accumulate for significant periods of the time due to hydrocarbon emissions which are relatively small in size or short in duration. (RP 500B)

VERIFY – To determine conformance to specified requirements. (Spec Q1)

VERTICAL DEPTH – Vertical component of the measured well depth. (Bul D20)

VERTICAL DRILLING – The action of drilling a hole with the intent of maintaining the borehole in a position vertically below the surface location. (Bul D20)

VERTICAL HOLE – A hole in which the wellbore is nearly maintained in a position vertically below the surface location. (Bul D20)

VERTICAL LIMIT – The maximum readable level of vertical indications determined either by an electrical or a physical limit an A-scan presentation. (RP 2X)

VERTICAL PROFILE (VERTICAL SECTION) – A projection of the borehole into a vertical plane parallel to the course bearing and scaled with vertical depth. (Bul D20)

V-G METER OR VISCOSITY-GEL VISCOMETER – The name commonly used for the direct-indicating viscometer. See Viscometer, Direct-Indicting. (Bul 10C, Bul D11)

VIBRATING SCREEN – A screen with motion in a vertical plane which operates generally above 600 RPM at less than 1-inch stroke. (Bul 13C)

VIBRATING SCREEN – See Shale Shaker. (Bul D11)

VIDEO PRESENTATION – The rectified rf signal. (RP 2X)

VISC – Viscosity (SSU).

VISCOMETER, DIRECT-INDICATING – Commonly called a “V-G meter.” The instrument is a rotational-type device powered by means of an electric motor or handcrank, and is used to determine the apparent viscosity, plastic viscosity, yield point, and gel strengths of fluids. See API Spec 10 or RP 13B for operational procedures. (Bul 10C, Bul D11)

VISCOMETER STORMER – A rotational shear viscometer used for measuring the viscosity and gel strength of drilling fluids. This instrument has been largely superseded by the direct-indicating viscometer. See Viscometer, Direct-indicting. (Bul D11)

VISCOMETER (VISCOSIMETER) – An apparatus to determine the viscosity of a fluid or suspension. (Bul 10C)

VISCOMETER – (VISCOSIMETER) – An apparatus to determine the viscosity of a fluid or suspension. Viscometers vary considerably in design and methods of testing. (Bul D11)

VISCOSIMETER- See Viscometer. (Bul D11)

VISCOSITY – A measure of the thickness of fluid or how easily it will pour. (SSWID)

VISCOSITY – The internal resistance offered by a fluid to flow. See Apparent Viscosity and Plastic Viscosity. (Bul 10C)

VISCOSITY – The internal resistance offered by a fluid to flow. This phenomenon is attributable to the attractions between molecules of a liquid, and is a measure of the combine effects of adhesion and cohesion to the effects of suspended particles, and to the liquid environment. The greater this resistance, the greater the viscosity. See Apparent Viscosity and Plastic Viscosity. (Bul D11)

VISCOSITY – A measure of how easily a liquid will pour or flow. (ITOGP)

VISCOSITY – A measure of the resistance of a liquid to flow. (WLOP)

VISCOSITY, FUNNEL – See Marsh Funnel. (Bul 10C)

VISCOSITY, FUNNEL – See Funnel Viscosity. (Bul D11)

VISCOUS FLOW – See Laminar Flow. (Bul 10C, Bul D11)

VISUAL EXAMINATION – Examination of parts and equipment for visible defects in material and workmanship. (Spec 6A, Spec 16A)

VOLATILE – Evaporating readily at a relatively low temperature. (Bul D11)

VOLATILE FLAMMABLE LIQUID – A flammable liquid having a flash point below 100^{o}F (37.8^{o}C), or a flammable liquid whose temperature is above its flash point, or a Class II combustible liquid having a vapor pressure not exceeding 40 psia (276 kPa) at 38^{o}C (100F) whose temperature is above its flash point. (RP 500B)

VOLATILE MATTER – Normally gaseous products, except moisture, given off by a substance, such as gas breaking out of live crude oil that has been added to a drilling fluid. In distillation of drilling fluids, the volatile matter is the water, oil, gas, etc., that are vaporized, leaving behind the total solids which can consist of both dissolved and suspended solids. (Bul D11)

VOLTAGE (V) – The unit of potential causing the flow of current. (RP 5A5)

VOLUMETRIC EFFICIENCY – The percentage relation between the actual delivered capacity of a pump and the calculated displacement of the pump. (Bul D10)

VOLUMETRIC NONDESTRUCTIVE EXAMINATION – Examination for internal material defects by method such as radiography and/or ultrasonic testing. (Spec 6A, Spec 16A)

VORTEX (AIR) – A cylindrical or conical shaped core of air or vapor lying along the central axis of the rotating slurry inside a hydrocyclone. (Bul 13C)

VORTEX BREAKER – A device located on outlet nozzles to prevent vortex formation. (Spec 12L)

VORTEX FINDER – A hollow cylinder extending axially into the barrel of a hydrocylcone forming an annulus into which the feed enters tangentially. The overflow exists from the separating chamber through the vortex finder, and the vortex is centered in the hydrocyclone by the hole in the vortex finder, hence the name. (Bul 13C)

VUG – Natural cavity formed in certain formations caused by leaching out of soluble minerals. (Bul 10C)

-W-

WAITING ON CEMENT – The time necessary for the cement to set or harden in the well bore (abbr. W.O.C.). (Bul D20)

WALK (OF BIT) – The action of the bit to change the direction of the wellbore by its tendency to turn into the side of the wellbore while rotating. (Bul D20)

WALK (OF HOLE) – The tendency of a wellbore to deviate in the horizontal plane; generally thought to be caused by the bit rotating preferentially into the side of the hole and the anisotropic nature of the formation. (Bul D20)

WALL CAKE – The solid material deposited along the wall of the hole resulting from filtration of the fluid part of the drilling fluid or cement slurry into the formation. (Bul 10C, Bul D11)

WALL STICKING – See Differential-Pressure Sticking. (Bul D10, D11)

WARM UP (A CONNECTION) – See Heat. (A connection). (ITOGP)

WASHOUT (OF HOLE) – Excessive wellbore enlargement by solvent or erosional action of the drilling fluid. (Bul D20)

WASTE WATER – Water carrying wastes from homes, businesses, and industries that is a mixture of water and dissolved or suspended solids. (Bul D11)

WATER-BASE DRILLING FLUID – Common conventional drilling fluids. Water is the suspending medium for solids and is the continuous phase, whether or not oil is present. (Bul D11)

WATER BLOCK – Reduction of the permeability of a formation caused by the invasion of water into the pores (capillaries). (Bul 10C)

WATER BLOCK – Reduction of the permeability of a formation caused by the invasion of water into the pores (capillaries). The decrease in permeability can be caused by swelling of clays, thereby shutting off the pores, or in some cases by a capillary block of the pores due to surface tension phenomena. (Bul D11)

WATER CEMENT RATIO – The ratio by weight of water to cement in a cement slurry (abbr. W/C). (Bul 10C)

WATER-CONING – The upward encroachment of water into a well due to pressure drawdown from production. (ITOGP)

WATER DRIVE – The Reservoir-Drive Mechanism whereby oil is produced by the expansion of the underlying water, which forces the oil into the wellbore. (ITOGP)

WATER FEED – Water to be added for dilution of the mud feed into a centrifugal separator. (Also see Dilution Water.) (Bul 13C)

WATER FLOODING – One method of enhanced recovery in which water is injected into an oil reservoir to force additional oil out of the reservoir rock and into the well bores of producing wells. (ITOGP)

WATER-IN-OIL EMULSION – See Invert Oil-emulsion Mud. (Bul D11)

WATER LOSS – See Fluid Loss. (Bul 10C, Bul D11)

WATER LOSS CONTROL – See Fluid Loss Control. (Bul D10C)

WATER OF HYDRATION – The water chemically combined with the solid to form a crystalline compound. (Bul 10C)

WATER PATH – The distance from the transducer to the test surface in immersion or water column testing. (RP 2X)

WATER POLLUTION – The addition of sewage, industrial wastes, or other harmful or objectionable material to water in concentrations or in sufficient quantities to result in measurable degradation of water quality. (Bul D11)

WATER QUALITY CRITERIA – The levels of pollutants that affect the suitability of water for a given use; generally, water use classification includes: public water supply, recreation, propagation of fish and other aquatic life, agricultural use, and industrial use. (Bul D11)

WATER QUALITY STANDARD – A plan for water quality management containing four major elements: the use (recreation, drinking water, fish and wildlife propagation, industrial, or agricultural) to be made of the water; criteria to protect those uses; implementation plans (for needed industrial-municipal waste treatment improvements); and enforcement plans and an antidegradation statement to protect existing high quality waste water. (Bul D11)

WATER SAVER – A chamber may be directly connected to the heater shell to permit the shell to be completely filled with water. The water in this chamber exists at a lower temperature than the heater bath which reduces evaporation losses. It may also be referred to as an economizer or expansion tank. Its capacity should be sufficient to contain the water expansion between ambient and operating temperatures. (Spec 12K)

WATER SIPHON (WATER LEG, GRASSHOPPER) – A piping system for the controlled flow of water from the treater which sets the water/oil interface level with the treater. To accomplish this control the water flows through a vertical loop of piping set at an adjustable level below the treater oil level with the top of the loop equalized in pressure with the gas zone of the treater. (Spec 12L)

WATER-SOLIDS RATIO – The ratio by weight of water to the total solids in a cement slurry. (Bul 10C)

WATER TABLE – The upper level of ground water. (Bul D11)

WATER WELL – A well drilled to (1) obtain a fresh water supply to support drilling and production operations, or (2) obtain a water supply to be used in connection with an enhanced recovery program. (ITOGP)

WATERFLOOD KICK – The first indication of increased oil production as the result of a waterflood project. (ITOGP)

WAVE FRONT – A continuous surface drawn through the most forward points in a wave disturbance which have the same phase. (RP 2X)

WAVE LENGTH – The distance in the direction of propagation of a wave for the wave to go through a complete cycle. (RP 2X)

WAVE TRAIN – A succession of ultrasonic waves arising from the same source, having the same characteristics, and propagating along the same path. (RP 2X)

WAVY THREAD – A cyclic variation in the helix angle of a thread, and/or its radial location. (Bul 5T1)

WEATHERED CRUDE – Crude oil which has lost an appreciable quantity of its entrained gas due to evaporation during storage. (ITOGP)

WEDGE – A device used to direct ultrasonic energy into the material at an angle. (RP 2X)

WEIGHT – In drilling fluid terminology, this refers to the density of a drilling fluid. This is normally expressed either lb/gal, lb/cu ft, or psi hydrostatic pressure per 1,000 ft of depth. (Bul D11)

WEIGHT INDICATOR – An instrument that shows the weight suspended from a wireline or hook. (WLOP)

WEIGHT MATERIAL – Any of the high specific gravity materials used to increase the density of drilling fluids. This material is most commonly barite but can be galena, etc. In special applications limestone is also called a weight material. (Bul D11)

WEIGHTED RATES – Incidence rates determined by combining percentages of separate industry rates in proportions equal to the reporter's employee-hours of exposure in the separate industries. Used for evaluation of organization wide experience of multi-establishment organizations only. (Bul T5)

WEIGHTING MATERIAL – A material which when added to a cement slurry increases the density of the slurry. (Bul 10C)

WELD AREA CRACK – A crack in or immediately adjacent to the weld line. (Crack – A stress-induced separation of the metal which, without any other influence, is insufficient in extent to cause complete rupture of the material.) (Bul 5T1)

WELD AREA CRACK – A crack in the weld line or the weld upset zone. (Crack – A stress-induced separation of the metal which, without any other influence, is insufficient in extent to cause complete rupture of the material.) (Bul 5T1)

WELD AREA CRACK – A crack that occurs in the weld deposit, the fusion line, or the heat affected zone. (Crack – A stress-induced separation of the metal which, without any other influence, is insufficient in extent to cause complete rupture of the material.) (Bul 5T1)

WELD, FABRICATION – A weld joining two or more parts. (Spec 6A, Spec 16A)

WELD GROOVE – An area between two metals to be joined that has been prepared to receive weld filler metal. (Spec 6A, Spec 16A)

WELD JOINT – A description of the way components are fitted together in order to facilitate joining by welding. (Spec 6A, Spec 16A)

WELD, NON-PRESSURE CONTAINING – A weld, the absence of which will not reduce the pressure containing integrity of the part. (Spec 6A, Spec 16A)

WELD, PRESSURE-CONTAINING – A weld, the absence of which will reduce the pressure-containing integrity of the part. (Spec 6A, Spec 16A)

WELDING – The fusion of materials, with or without the addition of filler materials. (Spec 6A, Spec 16A)

WELL – The hole-in-the-ground drilled from the point of entry at the earth's surface to total depth of the hole. The well is normally drilled through a single and specific surface causing for the purpose of: (1) finding or producing crude oil or natural gas; or (2) providing services related to the production of crude oil or natural gas. (Bul D12A)

WELL – A hole drilled in the earth for the purpose of finding or producing crude oil or natural gas. Also see Service Well. (ITOGP)

WELL DEPTH – Measured depth in the wellbore. Usually measured form the bushing, derrick floor, or foundation as a datum. Refer to "Measured Depth." (Bul D20)

WELL LOG – A record of one or more physical parameters of geological formations as a function of depth in a bore hole. Distinction is sometimes made between a log as an entire record which may contain several curves showing specific measurements and the individual cures themselves, which are also called logs. (Bul 10C)

WELL LOGGING – See Electric Logging and Mud Logging. (Bul D11)

WELL PERMIT – The authorization to drill a well issued by a governmental regulatory agency. (ITOGP)

WELL PLATFORM – An offshore structure with a platform above the surface of the water that supports the producing well's surface controls and flow piping. (ITOGP)

WELL PROFILE – The projection of the wellbore onto a plane. (Bul D20)

WELL PLATFORM – An offshore structure with a platform above the surface of the water that supports the producing well's surface controls and flow piping. (ITOGP)

WELL PROFILE – The projection of the wellbore onto a plane. (Bul D20)

WELL SERVICING – The maintenance work performed on an oil or gas well to improve or maintain the production from a formation already producing in the well. Usually, it involves repairs to the pump, rods, gas-lift vales, tubing, packers, etc. (ITOGP)

WELL SERVICING – Maintenance and repair work performed on an oil or gas well to improve or maintain the production from a formation already producing in the well. Usually, it involves repairs to the pump, rods, gas-lift valves, tubing, packers, etc. Also refers to people who do this work, such as a well servicing company. (WLOP)

WELL SERVICING RIG – Equipment and machinery assembled primarily for the purpose of any well work involving pulling or running tubulars or sucker rods, to include but not limited to, redrilling, completing, recompleting, workover, sucker rod or tubing pulling, and abandoning operations. (RP 54)

WELL SIMULATION TEST – A test performed in accordance with API Spec 10 under conditions simulating those encountered in wells. (Bul 10C)

WELL TEST – The measurement of any factor, or factors relating to production or injection of oil, water or gas from, or into, a well in a given length of time for a given or established set of conditions to assist in prediction of production or injection capability. (WT)

WELL TEST RATE – The stabilized rate at which the well is currently being produced on a routine basis. (RP 14B)

WELL TESTER – One who performs well tests. The title is usually reserved for one whose duty involves only well tests, or may be one who performs specialized tests such as buttonhole pressure measurement, or critical measurement of specific production characteristics. Some tests may be performed by lease operator rather than well tester. (WT)

WELLBORE SURVEY CALCULATION METHODS – Refers to the mathematical methods and assumptions used in reconstructing the path of the wellbore and in generating the space curve path of the wellbore from inclination and direction angle measurements taken along the wellbore. These measurements are obtained from magnetic or gyroscopic instruments of either the single-shot or multi-shot type. (Bul D20)

WELLBORE SURVEY CALCULATION METHODS – Refers to the mathematical methods and assumptions used in reconstructing the path of the wellbore and in generating the space curve path of the wellbore from inclination and direction angle measurements taken along the wellbore. These measurements are obtained from gyroscopic or magnetic instruments of either the single-shot or multi-shot type.
Acceleration Method – Utilizes the angles at the top and bottom of the course length and from these generates a curve on the assumption that the measured angles change smoothly from top to bottom of the measured course as though under the influence of a constant force of an acceleration. The results obtained are the same as "Balanced Tangential," "Trapezoidal," and Vector Averaging" Methods.
Average Angle Method – Uses the angles measured at both the top and bottom of the course length in such a fashion that the average of the two sets of measured angles is the assumed inclination and direction. The well bore survey is then calculated tangentially using these averaged angles over the course length.

Angle Averaging Method – Refer to "Average Angle Method."
Backward Station Method – Refer to "Tangential Method."
Balanced Tangential Method – Uses the inclination and direction angles at the top and bottom of the course length in a manner so as to tangentially balance the two sets of measured angles over the course length. Results obtained are the same as the "Acceleration," "Trapezoidal," and Vector Averaging" Methods.
Circular Arc Method – Uses both sets of measured angles associated with each course length to recreate the wellbore path as a sequence of small circular arcs constrained by the measured angles to pass through the end points with inclination and direction angles as measured.
Compensated Acceleration Method – Refer to "Mercury Method."
Combined Method – Refer to "Mercury Method."
Mercury Method – A combination of the "Tangential" and "Balanced Tangential" Methods so as to treat that portion of the measured course defined by the length of the measuring tool as a straight line (tangentially) and the remainder of the measured course trapezoidally. Refer to "Compensated Acceleration Method" and "Combined Method."
Minimum Curvature Method – Uses the sets of angles measured at the top and bottom of the course length to establish coordinate velocities through which a space curve (which represents the calculated path of the wellbore) passes in a manner that minimizes its total curvature.
Quadratic Method – A method in math modeling considering the wellbore as a curve; the projections into three orthogonal planes are quadratic functions.
Radius of Curvature Method – Uses the sets of angles measured at the top and bottom of the course length to generate a space curve (representing the wellbore path) that has the shape of a

spherical arc passing through the measured angles at both the upper and lower ends of the measured course.
Secant Method – This name has been applied with two different meanings: (1) meaning the "Trapezoidal Method," and (2) meaning the "Average Angle Method."
Simpson's Rule Method – Uses as many measured angle values as are available (a minimum of three sets) to recreate the wellbore path through Simpson's Rule for numeric integration, which approximates by passing a parabola through three points.
Tangential Method – Uses only the inclination and direction angles measured at the lower end of the course length. The wellbore path is assumed to be tangent to these angles through the course.
Terminal Angle Method – Refer to "Tangential Method."
Trapezoidal Method – Uses the measured inclination and direction angles at both ends of the measured course in a fashion that recreates the wellbore path. This is done by a sequence of trapezoidal integration segments using the measured angles as constraints on the integral over the measured course. Results obtained are essentially the same as "Acceleration," "Balanced Tangential," and "Vector Averaging" Methods.
Vector Averaging Method – Uses inclination and direction measurements at both ends of the measured course to establish vector space direction. It is then assumed that each of these two vectors is projected for one-half the course length in creating the wellbore path. Each "half course length" segment can be treated tangentially. Results obtained are essentially the same as the "Acceleration, "Balanced Tangential," and "Trapezoidal" Methods. (Bul D20)

WELLHEAD – The stack of valves and fittings at the surface on top of a well. (GL)

WELLHEAD – The equipment used to maintain surface control of a well. (ITOGP)

WELLHEAD – As assembly of valves and fittings used for control of the flow from a producing well or to an injection well. A wellhead usually includes a casing head, tubing head, master valve(s), wing valve or choke may be included. Offshore structures usually include several wellheads. (RP 2G)

WELLHEAD – The wellhead is a composite of equipment used at the surface to maintain control of the well. Included in wellhead equipment are casing heads – lowermost and intermediate – tubing heads, Christmas three equipment with valves and fittings, casing and tubing hangers, and associated equipment. (RP 14B)

WELLHEAD – An assemblage of valves and spools located below the Christmas tree and above the casing strings for the purpose of handing and isolating the various tubular strings. (RP 57)

WELLHEAD – A wellhead is all permanent equipment between the uppermost portion of the surface casing and the tubing head adapter flange. (Spec 6A)

WELLHEAD – The equipment used to maintain surface control of a well. It is formed of the casing head, tubing head, and appropriate valves. The Christmas tree is installed on top of the tubing head. (WLOP)

WELLHEAD – Equipment installed on a well at surface to permit well control, to hang tubing in well, and to which production lines are connected. (WT)

WELLHEAD AREA – That area of deck that surrounds the individual wellhead(s). (RP 2G)

WELLHEAD PRESSURE – The maximum shut-in surface pressure that may exist in a well. (RP 14E)

WET GAS – Natural gas containing significant amounts of liquefiable hydrocarbons. (ITOGP)

WET JOB – Pulling tubing full of oil or water. (ITOGP)

WET METHOD – The magnetic particle inspection method employing ferromagnetic particles suspended in a liquid path. (RP 5A5)

WETTING – The adhesion of a liquid to the surface of a solid. (Bul D11)

WETTING AGENT – A chemical or composition which, when added to a liquid, reduces the surface tension and increases the spreading of the liquid on a surface or the penetration of the liquid into a material. (Bul D11)

WETTING AGENT – A substance or composition which, when added to a liquid, increases the spreading of the liquid on a surface or the penetration of the liquid into a material. (Bul D11)

WETTING AGENT – A substance which lowers the surface tension of a liquid. (RP 5A5)

WHIPLINE – A secondary rope system usually of lighter load capacity than provided by the main rope system. Also known as "Auxiliary." (Spec 2C)

WHIPSTOCK – A device inserted in a well bore used for deflecting or for directional drilling. (Bul 10C, Bul D11)

WHIPSTOCK – A long wedge and channel-shaped piece of steel with a collar at its top through which the subs and drill stem can pass, the face of the whipstock sets an angle to deflect the bit. (Bul D20)

WICKER (OR WHISKER) – A wire-like piece of metal peeled from a thread or chamfer surface, and which may be attached to the machined surface at one end. (Bul 5T1)

WILDCAT – A well in unproved territory. (Bul D11)

WILDCAT WELL – A well drilled in previously unexplored areas. Also RANK WILDCAT. (ITOGP)

WINCH – A machine used for pulling or hoisting by winding rope or cable around a power-driven drum or spool. (ITOGP)

WINDOW – A section of casing milled out to provide an opening to sidetrack or kick off. (Bul D20)

WIRE CLOTH – Screen cloth of woven wire. (Bul 13C)

WIRELINE – See Solid Wire Line. (WLOP)

WIRE ROPE – A flexible, multi-wired member usually consisting of a core member around which a number of multi-wired strands are "laid" or helically wound. (Spec 2C)

WIRE ROPE – A rope composed of steel wires twisted into strands that are twisted around a central core. Wire rope is sometimes referred to as "wireline" or "cable." (WLOP)

WIRELINE CUTTING TOOL – A special device, usually run on a solid wire line, that is used to cut another wire line that may be stuck in a well. (WLOP)

WIRELINE OPERATIONS – Operations performed in a wellbore by use of tools which are run and pulled on small diameter slick, braided, or electric wirelines. (RP 57)

WIRELINE PREVENTERS – Preventers installed on top of the well or drill string as a precautionary measure while running wirelines. The preventer packing will close around the wireline. (RP 53)

WIRELINE PREVENTER – A manually, operated, ram type blowout preventer that is especially adapted for closure around a wire line. (WLOP)

WIRELINE (RETRIEVABLE) MANDREL – A tubular member with an internal receiver for a wireline (retrievable) gas lift valve. The mandrel becomes an integral part of the tubing string. (GL)

WIRELINE (RETRIEVABLE) VALVE – A gas lift valve mounted inside the tubing that can be installed and recovered by solid wireline operations without disturbing the tubing. (GL)

WIRELINE SPEAR – A special fishing tool fitted with prongs to catch and recover wireline that has been broken and left in a well. (WLOP)

WIRELINE TOOLS – Special tools or equipment made to be lowered into and retrieved from the well on a wireline (small-diameter steel cable), e.g., packers, swabs, gas lift valves, measuring devices, etc. (ITOGP)

WIRELINE TRUCK (WIRELINE UNIT) – A service vehicle or unit on which the spool of wireline is mounted for use in downhole wireline work. (ITOGP)

WIRELINE WIPER – A flexible, rubber device used to wipe off mud, oil, or other liquid from a wire line as it is pulled out of a well. (WLOP)

WIRELINE WORK AREAS – Those areas in which wireline work is being performed on a well through a lubricator. (RP 500B)

WMO – World Meteorological Organization.

WOGA – Western Oil and Gas Association.

WOODPECKER DRILL COLLAR – Refer to "Indented Drill Collar." (Bul D20)

WORK BOAT – A boat or self-propelled barge used to carry supplies, tools, and equipment to job site off-shore. (ITOGP)

WORK-OVER – To perform one or more of a variety of remedial operations on a producing well with the hope of restoring or increasing production. (Bul 10C)

WORKING INTEREST – The operating interest under an oil and gas lease. (ITOGP)

WORKING PRESSURE – The pressure to which a particular piece of equipment is subjected during normal operations. (Bul 10C)

WORKING PRESSURE – Maximum internal pressure for which the SSV/USV valve or SSV/USV actuator is designed. (RP 14H, Spec 14D)

WORKING PRESSURE – The pressure at which a system or item of equipment is designed to operate. (ITOGP)

WORKING PRESSURE – The maximum pressure at which an item is to be used at a specified temperature. (SSWID, WLOP)

WORKOVER – Operations on a producing well to restore or increase production. A workover may be done to wash out sand, acidize, hydraulically fracture, mechanically repair or for other reasons. See Reworking a Well. (ITOGP)

WORKOVER FLUID – Any type of fluid used in the workover operation of a well. (Bul 10C, Bul D11)

WRENCH TIGHT – When thread protector is tightened by hand using strap wrench, pipe wrench or thread protector wrench, i.e., 30-100 foot-pounds torque. (RP 5A)

WROUGHT PRODUCTS – Products shaped by means of forging. (Spec 6A)

WROUGHT STRUCTURE – One that contains no cast dendritic structure. (Spec 6A)

WYE SECTION – The wye section is that piping section where the loop joins the vertical tubing bore. (RP 6G)

-Y-

YAW – Platform rotation about the vertical axis. (RP 2T)

YIELD – A term used to define the quality of a clay by describing the number of barrels of a given centipoise slurry that can be made from a ton of the clay. Based on the yield, clays are classified as bentonite, high-yield, low-yield, etc., types of clays. Not related to yield value below. See API RP 13B for procedures. (Bul D11)

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YIELD POINT – In drilling-fluid terminology, yield point means yield value (see Yield Value). Of the two terms, yield point is by far the mostly commonly used expression. (Bul D11)

YIELD POINT – The shear stress intercept resulting from an extrapolation of higher shear stress-shear rate values to a zero shear rate. (Bul 10C)

YIELD STRENGTH – The stress level measured at room temperature, expressed in pounds per square inch of loaded area, at which material plastically deforms and will not return to its original dimensions when the lead is released. All yield strengths specified in this standard shall be considered as being the 0.2% yield offset strength per ASTM A370. (Spec 6A, Spec 16A)

YIELD STRESS – The yield stress of the material determined in accordance with ASTM A307. (Bul 2U)

YIELD VALUE – See Yield Point. (Bul 10C)

YIELD VALUE – The yield value (commonly called "yield point") is the resistance to initial flow, or represents the stress required to start fluid movement. This resistance is due to electrical charges located on or near the surfaces of the particles. The values of the yield point and thixotropy, respectively, are measurements of the same fluid propreties under dynamic and static states. The Bingham yield value, reported in lb/100 sq ft, is determined using the direct-indicating viscometer by subtracting the plastic viscosity from the 300 rpm reading. (Bul D11)

YOKE – A C-shaped piece of soft magnetic material, either solid or laminated, around which is wound a coil carrying the magnetizing current. (RP 5A5)

YOKE MAGNETIZATION – A magnetic field induced in a pipe, or in an area of a pipe, by means of an external electromagnet shaped like a yoke. (RP 5A5)

-Z-

ZERO – The act of setting a dial indicating depth gauge for "zero depth." Past tense is "zeroed." (RP 5A5)

ZERO-ZERO GEL – A condition wherein the drilling fluid fails to form measurable gels during a quiescent time interval (usually 10 min.). (Bul 10C, Bul D11)

ZETA POTENTIAL – Electrokinetic potential of a particle as determined by its electrophoretic mobility. This electric potential causes colloidal particles to repel each other and stay in suspension. (Bul D11)

ZINC CHLORIDE (ZnCl) – A very soluble salt used to increase the density of water to points more than double that of water. Zinc, chloride will accelerate the thickening time of a cement slurry. (Bul 10C)

ZINC CHLORIDE (ZnCl) – A very soluble salt used to increase the density of water to points more than double that of water. Normally added to a system first saturated with calcium chloride. (Bul D11)

ZONE – The term "zone," as applied to reservoirs, is used to describe a unique interval which has one or more distinguishing characteristics, such as lithology, porosity, saturation, etc. (ITOGP)

ZONE – A term used to distinguish different rock strata (e.g., shale zone, sand zone, pay zone, etc.) (RP 57)