

LATHAM & WATKINS LLP

*The*  
BOOK  
*of*  
JARGON®  
Oil & Gas

The Latham & Watkins Glossary of  
Oil & Gas Terminology

First Edition



*The Book of Jargon®: Oil & Gas is one of a series of practice area-specific glossaries published by Latham & Watkins.*

*The definitions contained in The Book of Jargon® are designed to provide an introduction to the applicable terms often encountered in the oil & gas industry. These terms raise complex legal issues on which specific legal advice will be required. The terms are also subject to change as applicable laws and customary practice evolve.*

*As a general matter, The Book of Jargon®: Oil & Gas is drafted from a US perspective. The information contained herein should not be construed as legal advice.*

*If you have suggestions for additional terms or expanded or clarified definitions for the current terms, please send an email to [oil.gasglossary@lw.com](mailto:oil.gasglossary@lw.com).*

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*1031 Exchange*: another term for Like-Kind Exchange.

*8/8ths / 8/8ths Basis*: a term used to describe either the full Working Interest or full Net Revenue Interest with respect to a given Tract. Pursuant to an Oil and Gas Lease, the Lessor retains the Lessor Royalty. Historically, the most common Lessor Royalty was 1/8th, meaning the Lessor was entitled to 1/8th of the gross revenue attributable to the Tract and the Lessee received 7/8ths of the Net Revenue Interest attributable to the Tract. Due to the fact that most Lessor Royalties were historically set at a 1/8th Royalty, the expression 8/8ths or on an 8/8ths Basis has become commonly used to reflect the complete and undivided Net Revenue Interest (with respect to entitlement to revenues) and/or Working Interest (with respect to the obligation to pay costs and expenses), in each case, prior to any carve-outs or reservations.

*AAPL Model Form 610 Joint Operating Agreement (AAPL Form JOA)*: a standard form of Operating Agreement published by the AAPL and designed for use in the joint development of domestic oil and gas interests. To date, the AAPL has promulgated four versions of the AAPL Form JOA, and the 1989 form and 1982 form are the most commonly used. Generally, the AAPL Form JOA governs the relationship between two or more parties, establishes procedures and obligations for the operation of a Tract for oil and/or gas Development, specifies the party to serve as Operator and provides for the sharing of operating expenses and Proceeds of Production.

The AAPL recently published a modified version of the 1989 form designed to address matters unique to Horizontal Drilling operations.

*CO2 Injection*: a method of Enhanced Oil Recovery that increases the Production of oil from a given Well by injecting the Reservoir in question with carbon dioxide, thereby reducing the Viscosity of the oil contained therein.

*Form P-4*: the Designation of Operator form filed with the RRC with respect to Oil and Gas Properties located in the State of Texas.

The Form P-4 is entitled "Certificate of Compliance and Transportation Authority" but is commonly referred to as "the Form P-4," and must be filed any time there is a change of Operator with respect to a Well or Lease located in Texas in order that responsibility and accountability for the Well or Lease can be properly assigned to the new Operator.

*P10 / P50 / P90 / PMean*: a probability methodology used to describe the size of the Reserves in a Field. More specifically, this methodology is used to define the probability that the actual size of the Reserves in a Field exceeds a specified amount. For example, if a Field has a P10 of one million Barrels, there is a 10% probability that the Field's Reserves exceed one million Barrels. The P50 number is the median, or estimated to be the median, as there is a 50% chance that actual Reserves will exceed that number.

*Producer's 88*: a colloquial term used to refer to the "Standard Producers 88 Oil, Gas, and Mineral Lease," which is a common form of Oil and Gas Lease.

*PV-10*: the SEC-reported value of particular Reserves. PV-10 is a standard metric utilized in company disclosure filings with the SEC for valuation of a company's oil and gas Reserves, defined as the present value of the estimated future oil and gas revenues, reduced by direct expenses and discounted at an annual rate of 10%.

See also Reserve Report.

*Rule 37 (Texas)*: the RRC's Spacing rule applicable to all Oil and Gas Wells in Texas (to the extent not preempted by special Field Rules), Rule 37 requires that all Wells be located a certain distance away from Lease lines and other Wells that are drilled to the same Formation. Specifically, a Well may not be located nearer than 467 feet from "any property line, Lease line or subdivision line" or 1,200 feet from "any Well Completed in or Drilling to the same Horizon on the same Tract or farm." The purpose of Rule 37 is to prevent waste of natural resources and protect owners' Correlative Rights regarding common oil and gas Reservoirs. The RRC may grant exceptions to Rule 37 after an Operator files an exception application.

*Rule 38 (Texas)*: the RRC's density rule applicable to all Oil and Gas Wells in Texas (to the extent not preempted by special Field Rules), Rule 38 specifies that only a certain number of Wells may be drilled within a certain surface Acreage area. Although Rule 38 is Field specific and can change based on several factors centered around efficient recovery, typically, a single Oil Well is allotted 40 surface acres and a single Gas Well is allotted 640 surface acres (such surface acres allotment being a Drilling Unit). The purpose of Rule 38 is to prevent clustering of Wells and overproduction of a common Reservoir. The RRC may grant exceptions to Rule 38 after an Operator files an exception application.

*Seismic Data / 2D Seismic / 3D Seismic / 4D Seismic*: a type of technology used to identify features and characteristics of subsurface Reservoirs by bouncing sound waves off of subsurface rock Formations. 2D Seismic results in a cross-section or square of data; 3D Seismic results in a cube section of data; and 4D Seismic results in a cube section of data that additionally shows how fluid moves through the applicable Formation. Seismic testing can be conducted both on land or under water.

*Uniform Commercial Code Financing Statement / UCC Financing Statement / UCC-1 / UCC-3*: in connection with a lien, a statement filed by a creditor with the appropriate Secretary of State of the jurisdiction where the relevant property is located or the jurisdiction where the debtor is domiciled in order to perfect such creditor's security interest in the debtor's personal property or in the equity interests of the debtor, respectively (*i.e.*, the creditor becomes a secured party). Perfection of

an interest in oil and gas assets (whether such assets are tangible or intangible or real or personal property) also requires a filing in the office where a Mortgage on the real property concerned would be filed or recorded.

A UCC-1 is used to perfect a new lien, and a UCC-3 is used to amend or terminate an existing UCC Financing Statement.

*A&D*: abbreviation of Acquisitions & Divestitures.

*AAA*: acronym for American Arbitration Association.

*AAPL*: acronym for American Association of Petroleum Landmen.

*AAPL Form JOA*: abbreviation of AAPL Model Form 610 Joint Operating Agreement.

*AAPL Model Form 610 Joint Operating Agreement (AAPL Form JOA)*: a standard form of Operating Agreement published by the AAPL and designed for use in the joint development of domestic oil and gas interests. To date, the AAPL has promulgated four versions of the AAPL Form JOA, and the 1989 form and 1982 form are the most commonly used. Generally, the AAPL Form JOA governs the relationship between two or more parties, establishes procedures and obligations for the operation of a Tract for oil and/or gas Development, specifies the party to serve as Operator and provides for the sharing of operating expenses and Proceeds of Production.

The AAPL recently published a modified version of the 1989 form designed to address matters unique to Horizontal Drilling operations.

*Abandon / Abandonment*: in the oil and gas context, discontinuing the use of a Well or other property, oftentimes due to a Well's or other property's failure to yield Production in Paying Quantities. In the case of a Well, Abandonment may be temporary (*i.e.*, shut-in pending a change in market conditions) or permanent (*i.e.*, Plugged & Abandoned).

See also Shut-In Well.

*Abstract / Abstract of Title*: a chronology of the title of a Tract comprised of all of the recorded instruments affecting the title to the Tract, which may include complete copies of the recorded instruments or only a summary of the instruments' effects. A complete Abstract covers the period from the land patent (*i.e.*, the original grant issued from a sovereign power or government) granted for the Tract through to the present day and tracks all grants, Conveyances, gifts, severances, Encumbrance, liens and other legal actions taken in relation to the Tract, including both the Surface Estate and the Mineral Estate related thereto. An Abstract is most commonly used during a Title Examination.

*Accommodation Doctrine*: with respect to a Severed Property, the Accommodation Doctrine provides that, although the Mineral Estate is the Dominant Estate (and the Surface Estate is the Servient Estate),

the owner of the Mineral Estate may nevertheless be required to accommodate the Surface Estate owner's use of the surface. The Accommodation Doctrine applies when: (i) there is an existing use of the Surface Estate prior to the Development of the Mineral Estate; (ii) the Development of the Mineral Estate interferes with or impairs the existing use of the Surface Estate; and (iii) reasonable alternatives are available to develop the Mineral Estate without interfering with the existing use of the Surface Estate.

*Acidizing*: a Production enhancing process that pumps hydrochloric acid into an oil-bearing rock under high pressure, thereby dissolving the rock and enlarging the pores in the rock, which allows the oil to flow into the Wellbore more freely.

*Acquisition Agreement*: another term for PSA or Purchase Agreement.

*Acquisition Costs*: the costs a party incurs to secure an Oil and Gas Lease, which will typically primarily consist of the Lease Bonus, but may also include broker fees, legal fees, filing and recording fees, title insurance and examination costs, and transfer taxes.

*Acquisitions and Divestitures (A&D)*: a term used to describe a transaction wherein an entity or person purchases or sells an asset, as opposed to a transaction that includes the purchase and/or sale of equity or stock of an entity or a joint venture arrangement.

*Acreage*: a general term most commonly used to describe and identify the Lands subject to an Oil and Gas Lease. Acreage is used as a measure of the amount of land that is the subject of an agreement or proposed transaction.

An acre is equal to 43,560 square feet.

See also Producing Acreage and Undeveloped Acreage.

*Acreage Exchange / Acreage Swap / Acreage Trade*: a type of oil and gas transaction in which the parties to the transaction exchange lease or fee Acreage or other interests in oil and gas that the parties deem to be of substantially similar or equal value. In contrast to a typical purchase and sale transaction, often the consideration for these transactions does not include a cash payment, though a cash component may exist in the form of a true-up in the event that the Acreage or rights exchanged are not substantially equivalent.

*Ad Valorem Taxes*: taxes imposed on property owners based on the value of the property owned. Many counties and other political subdivisions impose these taxes on owners of Mineral Interests.

*Adjusted Purchase Price*: a term used to describe the amount paid at the Closing of a purchase and sale transaction after all adjustments allowed under the applicable PSA have been made to the original purchase price. In the oil and gas context, these adjustments may include adjustments to

account for Title Defects, Casualty Losses, Environmental Defects, Pref Rights, Consents, Working Capital adjustments, revenues and expenses attributable to the applicable assets for the period between signing of the PSA and Closing, and the exclusion of certain properties.

*Advance Royalty*: a specified Royalty paid under an Oil and Gas Lease by the Lessee prior to the date that operations begin. An Advance Royalty is typically not contingent upon whether any oil or gas is extracted during the term of the Lease.

See also Shut-in Royalty.

*AFE*: abbreviation of Authority for Expenditure.

*After Payout (APO)*: the period after Payout has occurred.

In the context of a JOA or similar agreement, APO is often used to describe the period after the Consenting Parties have recovered the costs of Production plus the Non-Consent Penalty.

In the context of a PSA, a buyer will often want to know the seller's BPO Working Interest and APO Working Interest for Title Defect purposes and in order to verify certain of the seller's Representations and Warranties. A party's BPO interest and APO interest will often differ due to the existence of a Back-In Interest, which will cause a reduction in the amount of the party's interest once Payout occurs.

*Aggregate Defect Deductible*: a limitation on the remedies available to a buyer under a PSA or similar agreement. An Aggregate Defect Deductible operates to require that a buyer assume the risk and liability associated with Title Defects and Environmental Defects up to a specified amount (which is often measured as a percentage of the applicable purchase price). Once the aggregate amount of Title Defects and Environmental Defects exceeds the Aggregate Defect Deductible, then the buyer will be entitled to remedies from the seller for defect amounts over and above the Aggregate Defect Deductible only.

*AIPN*: acronym for Association of International Petroleum Negotiators.

*AIPN Form JOA*: abbreviation of AIPN Model Form International Operating Agreement.

*AIPN Model Form International Operating Agreement (AIPN Form JOA)*: a standard form of Operating Agreement published by the AIPN and designed for use in the joint Development of international oil and gas interests. Like the AAPL Form JOA, the AIPN Form JOA governs the relationship between two or more parties, establishes procedures and obligations for the operation of a Tract or offshore block for oil and/or gas Development, specifies the party to serve as Operator, and provides for the sharing of operating expenses and Proceeds of Production.



*Allocated Value*: that portion of the purchase price in a purchase and sale transaction that is allocated to a specific asset pursuant to the applicable PSA. The Allocated Values are often set forth on an exhibit to the PSA. Allocated Values are commonly used in PSA purchase price adjustments, particularly with respect to title issues.

See also Adjusted Purchase Price.

*Allowable*: the amount of Crude Oil or Natural Gas that a Well, Lease or Field is permitted to produce in a set period of time as prescribed by the applicable governmental authority.

See also Overages and Permitted Overages.

*American Arbitration Association (AAA)*: a non-profit organization focused on alternative dispute resolution. The AAA administers arbitration proceedings and mediations, provides administrative services in the US and abroad, and develops alternative dispute resolution systems for businesses, government agencies, unions and the courts.

The AAA is the most commonly designated governing arbitration organization used in US domestic arbitration agreements and provisions.

*American Association of Petroleum Landmen (AAPL)*: a non-profit, professional association for Landmen and land-related personnel in the US focused on "landwork ," including negotiating Mineral Rights, arranging property-related business agreements, determining ownership and title to Mineral Rights, and managing the rights and obligations of pooled or unitized Mineral Interest owners.

The AAPL provides seminars, programs and workshops for oil and gas industry professionals and promulgates various model form agreements used in domestic oil and gas operations (e.g., the AAPL Form JOA).

*American Petroleum Institute (API)*: a national trade association that represents all facets of the US oil and gas industry and has traditionally been focused on domestic projects. Among its most notable contributions to the industry is the development of petroleum and petrochemical equipment as well as operating standards.

See also API Gravity and API Well Number.

*American Society for Testing and Materials / ASTM International (ASTM)*: an international testing organization that creates standards for various products, systems and services through research and development.

See also Reid Vapor Pressure and True Vapor Pressure.

*AMI*: abbreviation of Area of Mutual Interest.

*Ancillary Documents*: additional agreements, instruments and other documents that all or some of the parties to a central agreement (e.g., a PSA) may execute in connection with the consummation of the

transaction(s) contemplated by the central agreement. Examples of ancillary documents include: Assignments and Bills of Sale, TSAs, Officer's Certificates, Secondment Agreements, JOAs, parent guarantees, Recording Memoranda and Tax Partnership Agreements, among others.

*Annulus*: a void or gap between two concentric objects such as the piping or Casing of an Oil Well that allows fluid (e.g., Crude Oil) to circulate in the gap. We'll save you from our juvenile humor on this one.

*Anticline*: in structural geology, an Anticline is an arch-shaped fold formed because of the compression and thrusting of rock formations due to the Earth's tectonic processes. In the context of oil and gas, Anticlines are a very common type of Trap and often indicate the presence of Hydrocarbons.

*API*: acronym for American Petroleum Institute.

*API Gravity*: a standard which the API has adopted to measure the density of a liquid. Gravity, which is a liquid's weight per unit of volume, is expressed in degrees based on a system which the API has promulgated. Less dense, lighter oils have a higher API Gravity.

*API Well Number*: a unique permanent 12-digit identifier that the API assigns to each Oil Well and Gas Well drilled in the US.

*APO*: abbreviation of After Payout.

*Appalachian Basin*: a regional Basin that includes the states of Alabama, Georgia, Kentucky, Maryland, New York, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia, and contains the Marcellus Shale and the Utica Shale.

*Appraisal Well*: a Well drilled after the discovery of oil and gas in order to determine the physical extents, Reserves and likely production rate of a Field, as well as the characteristics of the Hydrocarbons to be produced therefrom.

*Approved for Development*: in connection with Reservoir Engineering and management, Approved for Development means that all approvals have been obtained and the necessary capital is committed to the development project.

See also On Production and Justified for Development.

*Aquifer*: an underground layer of Permeable and porous rock that either contains or transmits Groundwater. The amount of Groundwater in an Aquifer is measured by the Aquifer's water table and can vary at any given time depending on the season and the amount of Groundwater that has passed through the Aquifer at that point in time.

*Area of Mutual Interest (AMI)*: a geographic area generally defined by a contract (e.g., Farmout, JOA, JDA or similar agreement) within which two or more persons hold an interest. Under the AMI provision of an

agreement, the parties to the agreement agree to offer to share all new acquisitions of oil and gas interests located in the AMI according to certain negotiated percentages.

*Arms-Length Transaction:* a transaction between two unaffiliated parties or entities acting independently. The phrase is used to describe a transaction in which both parties are presumed to have equal bargaining power and equal information regarding the transaction, and that the agreed upon price or determination of Fair Market Value is fair without influence from the shared interests of, or relationship between, the parties (if any).

*Artificial Lift:* a process used to enhance the production rate of a Well by increasing the pressure within the Reservoir. Artificial Lift generally falls into two categories: (i) pumping systems (e.g., Beam Pumping and electrical submersible pump systems); and (ii) Gas Lifts.

*As Is, Where Is:* a phrase used in PSAs and related real property Conveyance instruments pursuant to which the seller states that the property is being sold in its present condition, with whatever faults or defects that may exist, and disclaims all Representations and Warranties as to the applicable property other than those contained in the applicable documents at the time of the sale.

Also seen as a colloquial term used to describe a transaction in which the seller gives no title, environmental, or other representations or warranties with respect to the applicable assets being sold. What you see (or even if you don't see it) is what you get.

*Asset Taxes:* a term often used to describe taxes assessed with respect to the ownership and/or operation of oil and gas assets or the Production therefrom, which typically include Ad Valorem, property, excise, Severance, Production and similar taxes.

*Assignment and Bill of Sale:* an instrument used to evidence the sale, transfer or Conveyance of an ownership interest in real property (including oil and gas rights).

*Assignment of Production:* the Conveyance or transfer of an interest in the Hydrocarbons produced from a certain Well, Unit or area based on a pre-agreed metric. The assignment may be for a set term (e.g., until a certain amount of Production has been received or for a set period of time) or may be indefinite.

*Associated Gas:* Natural Gas produced from a Reservoir in connection with the Production of Crude Oil. Associated Gas can manifest itself as either free gas or in a solution with water and/or oil.

In contrast, see Unassociated Gas.

*Association of International Petroleum Negotiators (AIPN)*: a non-profit professional association that supports international energy negotiations. The AIPN provides seminars, programs and workshops for oil and gas industry professionals, and promulgates various model form agreement documents that are recognized as the standard in international energy transactions (e.g., the AIPN Form JOA).

*Assumed Obligations*: the specific risks, liabilities and obligations that a buyer (in an asset or equity transaction) expressly agrees to assume pursuant to the applicable PSA. Assumed Obligations may be, but are not always, delineated by the time period (e.g., prior to Closing or the Effective Time) in which the obligations arose. Assumed Obligations often serve as the basis for a buyer's indemnity obligations under a PSA.

See also Our Watch, Your Watch.

*ASTM*: acronym for American Society for Testing and Materials.

*Authority for Expenditure (AFE)*: a document or invoice detailing the estimated costs of a particular oil and gas operation. If utilized in connection with an oil and gas operation, the Operator typically prepares the AFE and submits the AFE to the non-operating parties for approval prior to the commencement of the operation.

*Back-In / Back-In Interest*: a reversionary interest held by a party (generally pursuant to a Farmout, JOA, JDA, Lease or Assignment and Bill of Sale) that entitles the party to a specified share of the Working Interest once Payout occurs.

*Bakken Shale*: a Shale Play located primarily in North Dakota, Montana and portions of Southern Canada.

*Barnett Shale*: a Shale Play located in North Central Texas.

*Barrel (Bbl)*: a standard unit of liquid measurement used in the oil and gas industry. One Barrel is equal to 42 US gallons.

*Barrel of Oil Equivalent (BOE)*: a metric used to convert volumes of different Hydrocarbons (e.g., NGLs, Natural Gas and Crude Oil) into a single, liquid-based, volumetric measure for comparison purposes. A unit of BOE is based off of the approximate (because different grades of Crude Oil have different heating values) energy released from burning one Barrel of Crude Oil, calculated on a Btu basis.

*Barrel of Oil Equivalent Per Day (BOE/d)*: a rate at which BOE is produced per day.

*Barrel of Oil Per Day / Barrel Per Day (Bopd) (Bbl/d)*: a rate at which Crude Oil or other liquids are produced per day.

*Base Case*: a report that a financial institution may prepare as part of the oil and gas loan underwriting process that analyzes the ability to

convert the applicable underlying oil and/or gas assets into cash in order to repay the loan based on standard assumption scenarios.

*Basin*: a geologic term used to describe a depression in the crust of the Earth in which sediments accumulate. Basins that contain Shale or other Hydrocarbons may be referred to as a Play.

*Bbl/d*: abbreviation of Barrel Per Day.

*Bcf*: abbreviation of Billion Cubic Feet.

*Bcfe*: abbreviation of 1 billion Cubic Feet Equivalent.

*Beam Pumping*: another term for Sucker-Rod Lift.

*Before Payout (BPO)*: the period before Payout occurs.

In the context of a JOA or similar agreement, BPO is often used to describe the period before the Consenting Parties have recovered the costs of Production, plus the Non-Consent Penalty.

In the context of a PSA, a buyer will often want to know the seller's BPO Working Interest and APO Working Interest for Title Defect purposes and in order to verify certain of the seller's Representations and Warranties. A difference between a party's BPO interest and APO interest is often due to the existence of a Back-In Interest, which may cause a reduction in the amount of the party's interest once Payout occurs.

*Behind Pipe*: Non-producing Reserves that are expected to be recovered from the productive Zones in existing Wells with additional Completion or Recompletion work.

*Bell Nipple*: not nearly as interesting as it sounds. A piece of pipe at the top of a Casing String used as a guide for inserting the drilling tools into the top of a Well. A Bell Nipple is often designed with a side outlet that attaches to Flowline in order to allow the Drilling Mud to Flow Back to the Drilling Mud tanks.

*BIA*: acronym for Bureau of Indian Affairs.

*BIA Lease*: an Oil and Gas Lease that is promulgated and used by the BIA in connection with the leasing of Indian Lands.

*Billion Cubic Feet (Bcf)*: a unit of measurement for Natural Gas volumes.

*Bit*: a rotating tool designed to grind, cut, scrape, and crush rock and other subsurface materials in order to create a Wellbore.

*Bitumen*: a heavy tar-like substance found in natural Oil Sands Deposits. The presence of Bitumen leads Oil Sands to be colloquially referred to as "tar sands."

*Black Oil*: the dark, colored oils extracted from petroleum (e.g., lubricating oils).

*Bleed Off*: not just what happens to the oil and gas industry when commodity prices hit rock bottom. The process of slowly Venting fluid from a vessel or system in order to equalize or relieve pressure from the vessel or system, and make the next phase of the operation possible. This process is often used at the end of a high-pressure test / treatment.

*BLM*: acronym for Bureau of Land Management.

*BLM Lease*: an Oil and Gas Lease covering Lands that the US federal government owns and the BLM administers.

*Blowout*: a sudden escape of Hydrocarbons from a Well, often caused by uncontrolled high pressure (including as the result of mechanical failure or other error). Blowouts typically occur during the drilling phase of operations. Like your tire blowing out on a deserted stretch of highway ... Blowouts are bad news.

*Blowout Preventer*: a piece of equipment installed at the Wellhead to aid in controlling the pressure in the Well Tubing during Drilling, Completion and Workover operations.

*BOE*: abbreviation of Barrel of Oil Equivalent.

*BOE/d*: abbreviation of Barrel of Oil Equivalent Per Day.

*BOEM*: acronym for Bureau of Ocean Energy Management.

*Bonus*: a form of consideration paid to the Lessor in connection with the execution of an Oil and Gas Lease that is in addition to any Royalty granted to the Lessor; a Bonus is typically calculated on a dollar per acre basis.

*Bopd*: abbreviation of Barrel of Oil Per Day.

*Borehole*: another term for Wellbore.

*Bottomhole Agreement*: an agreement wherein one party agrees to contribute either Acreage or cash in exchange for geological or drilling information with respect to a Well that is drilled to a specified depth or Formation.

*Bottomhole Assembly*: the portion of a Drilling Rig composed of the Drill Bit and the equipment connecting the Drill Bit to the Drill Pipe.

*Bottomhole Contribution*: another term for Bottomhole Agreement.

*Bottomhole Location*: the location of the deepest part of a Well. In a traditional (*i.e.*, Vertical) Well, the Bottomhole Location and the Surface Hole Location are essentially the same; however, in Horizontal Wells, which are intentionally deviated from the vertical, the Bottomhole Location and Surface Hole Location are different. For Horizontal Wells, the Bottomhole Location is used as the reference point for certain identifying metrics (*i.e.*, Well numbering) and to identify the persons entitled to Royalties on the Well.

*Bottomhole Pressure:* the Reservoir or Formation pressure at the Bottomhole Location.

*Brent Crude:* a particular trading classification of light Sweet Crude Oil extracted from certain Reservoirs underlying the North Sea that serves as a benchmark price for light Sweet Crude Oil in particular and as a global benchmark price for Crude Oil in general.

The price of Brent Crude is often referenced alongside the price of WTI (among others), although Brent Crude is not as light or sweet as WTI.

*Brine:* the salty water produced in connection with oil Production from an Oil Well.

*British Thermal Unit (Btu):* the measure of heat energy content in Hydrocarbons (*i.e.*, the amount of heat a particle of the Hydrocarbon generates when burned). One Btu is the amount of heat required to increase the temperature of 16 ounces of water by one degree Fahrenheit.

*Btu:* abbreviation of British Thermal Unit.

*Buck the Line Pressure:* a colloquial phrase used to describe the situation when Compression is needed to push Natural Gas into a Pipeline because the pressure of the gas being produced is less than the pressure in the Pipeline. Just picture the force of a bucking bronco ...

*Burden / Burden on Production:* those amounts that an Oil and Gas Lease or other agreement requires to be paid out of or measured by the Production of Hydrocarbons from the Tract(s) covered by the Lease or agreement (*e.g.*, Lessor Royalties, ORRIs, NPRIs and NPIs).

*Bureau of Indian Affairs (BIA):* the US government agency charged with handling all affairs with regard to Indian Lands, including with respect to oil, gas and/or other minerals underlying Indian Lands. The BIA is a bureau within the US Department of the Interior.

*Bureau of Land Management (BLM):* the US government agency charged with managing onshore public lands and federally owned Mineral Estates. The BLM is a bureau within the US Department of the Interior.

*Bureau of Ocean Energy Management (BOEM):* the US government agency charged with managing offshore oil and gas and renewable energy-related resources, specifically those located in the Outer Continental Shelf. The BOEM is a bureau within the US Department of the Interior.

*Butane:* a gaseous hydrocarbon chain consisting of four carbon atoms. Butane is often a component of unrefined Natural Gas. Butane is a type of NGL and is sometimes colloquially referred to as "C4."

*CA:* abbreviation of Confidentiality Agreement.

*CAA:* acronym for Clean Air Act.

*Cap Ex*: abbreviation of Capital Expenditures.

*Capacity*: the size, volume or amount of an applicable substance that a particular vessel, Pipeline, storage unit or other similar asset can hold, transport or service.

*Capacity Use Agreement*: an agreement related to the use of a reserved amount of Capacity on a Midstream asset system (e.g., a Pipeline system) and other rights related to the handling of Hydrocarbons on the asset system.

*Capital Expenditures (Cap Ex)*: the aggregate expenses paid to purchase, acquire, or upgrade any fixed, physical, non-consumable or capital asset (e.g., a Well, buildings or Well equipment) that should be capitalized in accordance with GAAP (exclusive of normal replacements and maintenance expenditures that are properly charged to current operations).

*Carried Costs / Carry*: a disproportionate funding arrangement used in oil and gas joint development programs whereby one party pays all or a portion of another party's Working Interest costs with respect to a particular Oil and Gas Property, whether for a set period of time or up to a set amount of Carried Costs.

See also Development Costs.

*Carried Interest / Carried Working Interest*: the fractional, non-possessory interest carved out of a Working Interest that is exclusive from all costs of Development and/or operations for a set period of time (i.e., the Carry Period). During the Carry Period, the Carrying Party(ies) advance all or a portion of the Carried Interest owner's share of development and/or operating costs. At the expiration of the Carry Period, the Carried Interest will bear the development and/or operating costs and share in any subsequent Production according to an agreed sharing ratio, typically based on Working Interest ownership.

*Carry Period*: the set period (which may be based off a set period of time, a total number of wells drilled, a defined set of operations or the recoupment of a defined dollar amount of Carried Costs) during which the Carrying Party pays Carried Costs on behalf of a Carried Working Interest owner.

*Carrying Party*: in a joint development arrangement involving a Drilling Carry, the party that is obligated to pay the applicable Carried Costs.

*Cash and Carry*: a type of transaction in which a portion of the consideration for the applicable assets is paid in cash at the Closing of the transaction (and/or in periodic installments), and the remainder of the consideration is paid in the form of Carried Costs.

*Cash Balancing*: a true-up mechanism (often seen in hydrocarbon sales contracts, Midstream Service Agreements and Acreage Trade



agreements) that allows parties to an agreement to correct an imbalance (e.g., a Pipeline Imbalance or Acreage imbalance) by a cash settlement.

In contrast, see In-Kind Balancing.

**Cash Call:** sadly, it's not Ed McMahon on the phone from Publisher's Clearinghouse (in fact, it's quite the opposite really). A request an Operator sends to the Working Interest owners participating in a given operation for the payment of each such Working Interest owner's share of costs related to the operation. Cash Calls may be used to solicit advance payment of anticipated costs or the reimbursement of previously incurred costs.

In the context of a joint venture entity, Cash Calls are delivered to the entity's members, partners or shareholders, as applicable, for the advancement or reimbursement of certain costs of the entity.

**Casing:** a part of the completion process during which a hollow steel pipe (a setting pipe) is run down the Wellbore and cement is poured into the Annulus to protect the raw sides of the Wellbore from damage (e.g., prevent cave-ins and isolate the Wellbore from the subsurface fluids).

**Casing String:** another term for Casing.

**Casinghead Gas:** Natural Gas that is produced together with Crude Oil from an Oil Well, which generally contains dissolved and/or Associated Gas.

**Casualty Loss:** a concept seen in a PSA that affords the buyer certain protections against certain losses of, damage to, and/or governmental taking of, the applicable assets being purchased with respect to the time period between signing and Closing. The scope of what constitutes a Casualty Loss, and the applicable remedies available to the buyer, will vary from transaction to transaction and may or may not include a repair requirement, a monetary make whole payment, the receipt of applicable insurance proceeds, and/or an ability to terminate the applicable PSA and the underlying transaction.

**Cat Line:** a rope or cable used to move small rig components and loosen or tighten the joint on pipe tongs.

**Catwalk:** not the type frequented by supermodels, an elongated platform that runs adjacent to the rig floor which is used as a staging area for pipe and other Drill String tools prior to lifting them into the Derrick.

**CBM:** abbreviation of Coalbed Methane.

**Cellar:** a hole dug at the drillsite before the Derrick is erected, the purpose of which is to serve as a work space for equipment underneath the Derrick floor.

**CERCLA:** acronym for Comprehensive Environmental Response, Compensation, and Liability Act; commonly pronounced "surk-la."

*Certificate of Non-Foreign Status:* a certificate, meeting explicit regulatory requirements, executed by a transferor (*i.e.*, the seller) of US real property assets and delivered to the transferee (*i.e.*, the buyer) to protect the transferee from liabilities that may arise from the failure to withhold taxes that apply to the transfer of US real property by a foreign transferor pursuant to FIRPTA.

*Cessation of Production Clause:* a Savings Clause included in many US Oil and Gas Leases that allows for a temporary pause in Production without terminating the Lease; provided, that the Lessee begins subsequent Drilling or Reworking operations that are intended to restore Production under the Lease within a set period of time.

*CFE:* abbreviation of Cubic Feet Equivalent.

*CFIUS:* acronym for Committee on Foreign Investment in the United States; commonly pronounced "siff-ee-us."

*Chain of Title:* with respect to real property interests, the chronological sequence of title ownership that tracks ownership from the present time back to a specified point in time (often back to the original grant from the sovereign entity). A Chain of Title may include deeds, estate distributions, certificates of death of joint tenants, foreclosures, judgments of quiet title, assignments and any other instrument made of public record affecting the ownership of the specific real property interest in question.

*Change-in-Control Provisions:* a provision in an agreement that creates a restriction on transfer against a party and gives the other party certain rights (*e.g.*, Consent, rights of first refusal or termination) in the event that the first party undergoes (or is planning to undergo) a change in control (*i.e.*, when the first party ceases to be controlled by the persons or entities currently controlling the first party).

*Christmas Tree:* an assembly of valves, spools and fittings connected at the top of a Well that is used to direct and regulate the flow of fluids from the Well. The assembly is often triangular in appearance and painted green, giving rise to the term Christmas Tree, and if your Well has Production in Paying Quantities, it may feel like Christmas too.

*Clean Air Act (CAA):* a federal law that regulates the emissions of air pollutants from stationary and mobile sources, including oil and gas equipment and operations.

*Clean Out Costs:* the costs incurred in connection with removing Wellbore-fill materials (*e.g.*, sand and other debris) that are not otherwise carried to the surface in the produced fluid in order to maintain or restore the productive capacity of a Well.

*Clean Water Act (CWA):* a federal law that establishes standards for surface water quality and for the discharge of pollutants into regulated waters. The CWA also includes regulations governing the dredging

and filling of regulated wetlands and stormwater runoff from certain industrial, commercial and construction sites.

*Close / Closing:* yee-haw! The consummation of a transaction. Closing is typically the point in time when all agreements between the parties to the transaction are finalized, executed and delivered, when the applicable consideration is exchanged, and, if applicable, when title to the applicable oil and gas interests are transferred to the buyer. Closing is also the point when the parties' attorneys can finally get some sleep and remind their families that they exist.

*CO<sub>2</sub> Injection:* a method of Enhanced Oil Recovery that increases the Production of oil from a given Well by injecting the Reservoir in question with carbon dioxide, thereby reducing the Viscosity of the oil contained therein.

*Coalbed Methane (CBM) / Coal Seam Gas:* the Methane-rich Natural Gas that occurs in association with coal (as opposed to petroleum). Coalbed Methane and Coal Seam Gas are also known as Sweet Gas due to the lack of hydrogen sulfide present in the gases.

*Commencement of Drilling Operations / Commencement of Operations:* a Savings Clause often included in a US Oil and Gas Lease that generally permits a Lease to be preserved after the expiration of its Primary Term without Production in Paying Quantities if the Lessee has undertaken modest preparations for Drilling (e.g., obtaining Drilling Permits, moving tools and equipment to the drill site, arranging for water supply for Drilling and similar on-site activities) with the good-faith intention to drill a Well on the applicable Lease. Note, however, that certain jurisdictions have interpreted the clause to require actual Drilling (i.e., that a Drill Bit has penetrated the ground) in order for the Lease to be preserved.

*Commercial Risk:* an economic risk resulting from the operation of a business, which may include financial risks, production risks and market risks.

*Commercial Well:* another term for a Well that has Production in Paying Quantities or Production in Commercial Quantities.

*Commingle:* not quite as awkward as your office holiday party. To mix Hydrocarbons originating from two or more sources in an unsegregated manner.

*Committee on Foreign Investment in the United States (CFIUS):* an inter-agency committee of the US government authorized to review, investigate, approve, and/or block any transaction or investment that may result in foreign control of a US business, in each case, in order to determine the effect, if any, of the transaction or investment on US national security.

*Communitization*: the combining of small Tracts of federal and/or Indian Lands with other Lands to create Tracts large enough to conform to the established Well Spacing program and regulations for the applicable jurisdiction.

See also Pooling and Unitization.

*Community Lease*: a Lease covering two or more separately owned Tracts used to effectuate voluntary Pooling Agreements.

*Complete a Well / Completion / Completion Services / Completed*: the process and/or operation(s) necessary to bring a Wellbore into Production after Drilling operations have been completed. Completion may include installation of all production facilities, installation of Casing, Perforating, Hydraulic Fracturing, conducting Well simulation and Production Testing, and commencement of hydrocarbon sales.

In the case of an unsuccessful Well, this term may be used to describe the temporary or permanent Plugging and Abandonment of the Well.

*Completion Report*: a certified report or form that many state conservation regulations require to be filed by a Well Operator with the applicable conservation entity after a Well has been Completed (or Recompleted). A Completion Report often includes information related to the Well location, Lease name, date of first Production, name and depth of produced Reservoir, Well Logs and test results, and Well construction details.

*Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*: CERCLA, also known as the Superfund Act, is legislation that provides for the clean-up of contaminated sites. Two of CERCLA's most important aspects are that it (i) generally provides for joint and several liability of all potentially responsible parties, and (ii) is retroactive, meaning that the EPA has the power to sue any potentially responsible party at sites that were contaminated before CERCLA was enacted.

Potentially responsible parties under CERCLA include the: (a) current owner or Operator of the site; (b) owner or Operator of the site at the time that disposal of the regulated pollutant(s) occurred; (c) person who arranged for disposal of the regulated pollutant at the site; and (d) person who transported the regulated pollutant at the site.

*Compressor / Compressor Station / Compression*: a device or facility located along a Natural Gas Pipeline that raises the pressure of the Natural Gas flowing in the Pipeline, which in turn compresses the Natural Gas, thereby both increasing the effective Capacity of the Pipeline and allowing the Natural Gas to travel longer distances (and at a higher rate) to the intended Delivery Point.

*Compulsory Pooling / Compulsory Unitization*: other terms for Forced Pooling.

*Condensate*: the heavier liquid hydrocarbon mixture that (i) condenses out of petroleum Hydrocarbons that exist in a gaseous state in the underground Reservoir during Production, and (ii) is removed at the Wellhead without additional Processing. Condensate is most commonly associated with Gas Fields.

*Confidentiality Agreement (CA)*: an agreement by which the applicable parties agree to protect the confidentiality of certain information that will be, or has been, shared between the parties, generally regarding an underlying transaction. A Confidentiality Agreement restricts each party's ability to disclose or share the confidential information, other than in certain permitted situations (e.g., as may be required by law).

*Connate Water*: another term for Brine.

*Consent*: the approval or authorization required from a party (or parties) before another party can perform certain actions (e.g., transfer a given asset or contract) or conduct certain operations.

*Consenting Party*: a party that approves or authorizes the action that is the subject of the requested Consent. In the context of a JOA, a Working Interest owner who has Consented to, or otherwise agreed to participate in, a given operation.

*Conservation*: the act of preventing the loss and/or waste of natural resources, which state or federal regulations often accomplish through imposing limitations on the development of those resources, such as regulations that maximize utilization of Reservoir energy or encourage early uses of Secondary Recovery operations.

*Contingent Resources*: resources that are potentially recoverable from a particular Formation but that are not currently commercially recoverable for technological (e.g., lack of necessary equipment) or business reasons (e.g., lack of required environmental or governmental approvals). For Contingent Resources to move into the Reserves category, the technological and/or business hurdles preventing commercial development must be removed.

*Continuation Statement*: an amendment to a financing statement that is filed with the appropriate governmental authorities to extend the period of perfection of a lien and security interest.

*Continuous Drilling Obligation*: a Savings Clause in many US Oil and Gas Leases that allows a Lease to be maintained beyond its Primary Term without Production in Paying Quantities if the Lessee is actively engaged in the types of Drilling operations specified in the Lease.

In a Farmout or similar joint development situation, the developing party's (e.g., the Farmee's) agreed obligation to drill a certain number of Wells (at a certain frequency and to a specified depth) in the prospective area in order for the developing party to earn its share of the applicable Acreage.

*Contract Area:* the geographic area designated under an applicable agreement (e.g., a JOA, JDA or Seismic Data sharing agreement) in which the participants may share responsibilities, duties, costs and rights (e.g., development or acquisition rights). A Contract Area is usually defined in the applicable agreement with a narrative description and a set of defined coordinate points or a plat.

*Contract Depth:* the depth designated by an applicable agreement (e.g., a Farmout agreement or drilling contract) to which a Well must be drilled in order to satisfy the agreement's requirements. The Contract Depth may be a final depth (i.e., Total Depth) or an intermediate point or milestone.

*Contract Operating Agreement:* an agreement between an Operator of record, who is also a Working Interest owner, and a third party non-Working Interest holder, in which the parties agree that the third party will act as the Operator of a certain Contract Area, but the other party will remain the Operator of record for that Contract Area. These agreements are often similar to a traditional JOA and used in situations where the Operator of record must be a Working Interest owner but no such owner is capable of acting as Operator.

*Contract Operator:* the person a Contract Operating Agreement designates to act, on behalf of the Operator of record, as the Operator regarding a given operation and/or Contract Area.

*Contribution Agreement:* in a joint venture or joint development context, an agreement under which one party contributes (i.e., transfers) certain assets, stock and/or cash to the joint venture or joint development entity (which at the time of the contribution is typically an affiliate of the contributing party). Typically, immediately following the contribution, a portion of the equity in the joint venture entity will be sold to the other joint venture parties. A Contribution Agreement often contains similar provisions and terms as a PSA.

*Conventional Drilling:* a drilling method used both onshore and offshore in which the Operator drills a Well vertically below the surface until a Reservoir is reached by the Well, after which time the Hydrocarbons in the Reservoir are brought to the surface through the Wellbore.

*Conventional Reservoirs:* a Reservoir consisting of sandstone or carbonate rock that allows Hydrocarbons to migrate and collect naturally. In a Conventional Reservoir the Hydrocarbons are typically held in place by a sealing caprock.

*Conventional Resources:* a term used to describe the oil and gas produced by Conventional Drilling means and methods.

*Convertible Overriding Royalty Interest:* an ORRI that, upon a triggering event, converts into a full Working Interest.

*Conveyance:* a transfer of property or an interest in property by means of a written instrument (e.g., an Assignment and Bill of Sale).

**COPAS:** acronym for Council of Petroleum Accountants Societies; commonly pronounced "co-pus."

**COPAS Accounting Procedure:** a form accounting procedure COPAS promulgates that is attached as an exhibit to the AAPL Form JOA. The procedure delineates the accounting treatment of the operations conducted pursuant to the applicable JOA, including how (i) to classify certain costs incurred under the JOA as Direct Charges or credits to the Joint Account, (ii) to calculate the Operator's overhead charges and how the Operator is to recover the overhead charges, (iii) to manage materials and inventory relating to JOA operations, and (iv) audits may be conducted.

**Core / Core Sample / Coring:** a representative cylindrical section of rock and/or sediment extracted during the Drilling process, which geologists use to evaluate the applicable Formation from which the Core was taken.

**Correlative Interval:** in a Field in which a Horizontal Well has been Completed, the depth interval that is the producing interval for that Field.

**Correlative Rights Doctrine:** a doctrine that governs the concurrent rights of multiple land owners in a common resource (e.g., a Producing Formation). While the doctrine's specifics and application to oil and gas Production will vary by jurisdiction, the Correlative Rights Doctrine generally has two aspects: (i) a person's right to produce Hydrocarbons from his Well (as a corollary to the Rule of Capture); and (ii) a mineral owner's right to protect against Drainage of a common oil and gas Reservoir and his right to his fair share of the Hydrocarbons in the Reservoir.

**Cost Depletion:** determined by allocating certain costs of extracting natural resources over a property's life, Cost Depletion assesses the total amount of the natural resource to be extracted, how much of the natural resource was extracted during the relevant tax year, and the taxpayer's tax basis in the property. The percentage used to determine the deduction in that period is the proportion of (i) the natural resources extracted from the applicable property, divided by (ii) the total amount of recoverable natural resources from the applicable property.

In contrast, see Percentage Depletion.

**Cost Oil:** the share of Production allocated to the Operator pursuant to a Production Sharing Contract to pay for certain exploration costs, Production Costs and/or Development Costs.

**Co-Tenant / Co-Tenancy:** a type of concurrent real property estate where two or more persons own an undivided interest in the same Tract through separate titles, but each owner has an equal right to possess and enjoy the entirety of the applicable Tract. In the oil and gas context, each Co-Tenant has the right to explore for and produce any oil and gas attributable to the Tract without any other Co-Tenant's permission.

*Council of Petroleum Accountants Societies (COPAS):* a non-profit organization comprised of oil and gas industry accounting professionals that, among other things, promulgates the COPAS Accounting Procedure.

*Cross-Conveyance / Cross-Assignment:* a type of Conveyance typically seen in the context of the joint development of a set of properties where each party involved owns disparate interests across the properties. A Cross-Conveyance is used to make the interests of the parties uniform as to each applicable property, and provides that each party assigns to each of the other parties certain fractional interests in the applicable properties such that, after making the Cross-Conveyance, each of the parties then owns a uniform interest across the applicable properties (which interests, however, may or may not be the same for each of the parties).

*Crude Oil:* a mixture of Hydrocarbons that exists in a liquid state in natural underground Reservoirs and that remains liquid at atmospheric pressure after passing through surface separating facilities. Crude Oil is traditionally comprised primarily of unrefined petroleum and a lesser amount of other organic compounds and various metals, and is typically Refined to produce products such as gasoline and diesel.

*Cubic Feet Equivalent (CFE):* a metric used to convert volumes of different Hydrocarbons (e.g., NGLs, Natural Gas and Crude Oil) into a single, gaseous-based, volumetric measure for comparison purposes. CFE are used to compare Crude Oil Production (measured in Barrels) to Natural Gas Production (measured in cubic feet). CFE are also used to compare Dry Gas Production and Wet Gas Production, as the Cubic Feet Equivalent calculation includes the NGL components present in the Wet Gas stream.

Typically, 6,000 CFE is considered equal to one Barrel of Crude Oil, but the exact conversion factor is dependent upon the particular composition of the Natural Gas (i.e., whether the gas is Wet Gas or Dry Gas and the NGL content of any Wet Gas).

*Cumulative Production:* the aggregate amount of Hydrocarbons produced from a Reservoir as of a specific point in time. Cumulative Production metrics may also be tied to a particular Well, Basin or Field.

*Curative Work:* actions performed or documents provided to correct a defect in the Chain of Title (e.g., correcting recorded instruments, securing affidavits of non-production or stipulations of interest, obtaining Quitclaim Deeds) in order to perfect title to the property or interest, or satisfy requirements in a Title Opinion.

*Cure Period:* a set time period delineated in a contract (e.g., a PSA) during which a party to the contract may attempt to cure a breach of the contract or a defect with respect to a property governed by the contract (e.g., Title Defect Property or Environmental Defect Property).



*Curtailment:* an interruption, suspension, reduction or cessation of (i) Hydrocarbon Production or (ii) performance under a Gathering, Processing, marketing or other Midstream agreement.

*Cushing Hub / Cushing, Oklahoma:* a significant trading hub for Crude Oil in North America located in Cushing, Oklahoma, and the location specified for physical delivery of West Texas Intermediate futures contracts traded on the NYMEX. Relatedly, Cushing, Oklahoma is also the locus for a considerable amount of Crude Oil storage Capacity. The Cushing Hub interconnects with multiple interstate and intrastate Crude Oil Pipelines.

*Customary Post-Closing Consents:* consents and approvals from governmental authorities that are customarily obtained after the Closing of a transaction (e.g., pro-forma filings with government entities and requests for change of operatorship or ownership of a BLM Lease).

*Cuttings:* rock chips broken-off from a Formation by the Drill Bit and analyzed to make geological determinations about the Formation.

*CWA:* acronym for Clean Water Act.

*Day Rate Contract:* an agreement between an Operator and a Drilling Contractor under which the Drilling Contractor is paid a set amount of money per day until an agreed upon Well depth is reached.

*Debtor in Possession (DIP) / DIP Financing:* a type of financing granted to an entity that has filed for bankruptcy while its bankruptcy case is pending. DIP Financing is typically only provided if the lenders believe that the applicable entity has a plan for (and credible chance of) turning the entity around (rather than an instance where the lenders believe the entity must liquidate all or a portion of its assets to fund operating and restructuring expenses during the case).

*Decline Curve:* a tool used in the oil and gas industry to forecast future production rates and analyze historic production data to determine the expected ultimate recoverable Reserves of a Well or Reservoir. The most common technique is to plot production rates versus time or Cumulative Production.

*Decommissioning:* in connection with P&A activities, Decommissioning involves the removal of related production equipment and facilities, typically in connection with offshore oil and gas development.

*Dedicated Area:* a geographic area, typically found in a hydrocarbon Purchase Agreement or Midstream services agreement, that the party who is the holder of the applicable Hydrocarbons will dedicate to the applicable agreement. Depending on the context, a Dedicated Area may be a Dedication to sell all Hydrocarbons produced from that Dedicated Area to the applicable buyer or deliver all the Hydrocarbons produced from that Dedicated Area to the applicable Midstream service provider.

*Dedication*: a promise or commitment of a certain amount of Production from a Dedicated Area to the purchaser in a hydrocarbon Purchase Agreement or to the service provider in a Midstream services agreement.

*Deed of Trust*: an instrument used in a Deed of Trust State to secure a lien on real property interests located in the state and typically recorded in the county records in which the pledged real property is located.

A Deed of Trust conveys the title to real property collateral pledged to secure an obligor's debt or other payment obligation to a third-party trustee to hold for the benefit of the secured party, with the condition that the collateral be re-conveyed to the obligor (or conveyed to the secured party, as applicable) upon the occurrence of certain events. If the debt or other payment obligation is fully satisfied or discharged, the collateral will be re-conveyed to the obligor. However, if an event of Default occurs, the trustee has the right to sell the collateral at auction and distribute the proceeds to, or convey the collateral to, the secured party (to the extent of the debt or other payment obligation).

In contrast, see Mortgage.

*Deed of Trust State*: a state that uses a Deed of Trust to secure a debt or other payment obligation rather than a Mortgage. All Deed of Trust States are "title theory" states, meaning the Deed of Trust is viewed as a Conveyance of title to the collateral rather than only creating a lien on the collateral. Examples of Deed of Trust States include Texas, California and Oklahoma.

In contrast, see Mortgage States.

*Deepening*: the process of Re-entering a Well and Drilling to a deeper Reservoir to produce Hydrocarbons from another Formation or Zone.

*Default*: the failure or omission to fulfill or perform a duty or obligation under an agreement or under applicable law (e.g., failure to pay money when due, failure to comply with Lease terms, failure to comply with Implied Covenants).

*Defeasible Fee*: an interest (i.e., estate) in real property that may be divested, either automatically or by the Grantor's affirmative actions, from the Grantee (the property's then-current owner) upon the occurrence of a specified event or point in time. Many states characterize the interest in real property created by an Oil and Gas Lease to be a Defeasible Fee interest because the Lease entitles the Lessee to all the rights of a Fee Simple owner until such time that the Lease expires or terminates, at which point the interest reverts back to the Lessor.

*Defect Claim Date*: the date designated in a PSA by which the parties must submit any Environmental Defects and Title Defects related to the subject assets that have been discovered during Due Diligence.

*Defect Deductible*: another term for Aggregate Defect Deductible.

*Defensible Title:* in general, this term denotes title to a real property interest that, while not perfect Record Title, is possible to defend. However, there is no legal or commonly accepted meaning of Defensible Title, and therefore the term is typically defined in each transaction according to the parties' business interests and risk.

In a PSA, a seller will typically represent and warrant that it has Defensible Title (as the term is defined in the applicable PSA) to the assets in question. Such representation, if made, will typically provide that the seller (i) holds Record Title to the assets, subject to certain negotiated Encumbrances and defects, (ii) is entitled to a Net Revenue Interest of not less than a specified amount from the assets, and (iii) is not obligated to bear a greater Working Interest than specified with respect to the assets, in each case, subject to certain exceptions and caveats.

The Defensible Title representation and warranty in a PSA will, if present, typically form the basis for a Title Defect mechanism in the PSA. See also Loss of Title.

*Dehydration Unit:* a system used to remove water from Hydrocarbons in order to make the Hydrocarbons commercially marketable. Dehydration Units typically use glycol to absorb the water naturally found in the produced Hydrocarbons. After the water is removed, the dehydrated Hydrocarbons are removed (and continues downstream) and the glycol is recycled (by removing the water from the glycol) and reused.

*Delaware Basin:* a regional Basin covering portions of West Texas and Southern New Mexico and part of the larger Permian Basin.

*Delay Rental:* an amount payable by a Lessee to the Lessors of an Oil and Gas Lease for the privilege of delaying the Commencement of Drilling Operations during the Lease's Primary Term.

*Delineation Well:* an Exploratory Well Drilled after a Field has been discovered to appraise the Field's geographic extent, Reserves and/or potential production rate.

*Delivery Point:* the particular physical location under a given contract where oil or gas will be delivered. In the context of a hydrocarbon Purchase Agreement, the Delivery Point will also likely serve as both the custody transfer point and the point where legal title to the oil or gas is transferred to the purchaser. In the Midstream services context, the Delivery Point will be the location to which a shipper nominates certain volumes of Hydrocarbons for re-delivery back to the shipper (*i.e.*, return of custody to the shipper).

*Depletion:* an accounting concept and income tax deduction similar to Depreciation and most often associated with the oil and gas industry. Depletion represents the using up of natural resources. The Depletion deduction allows an owner of an Economic Interest to account for the reduction of a property's Reserves.

For an Oil and Gas Property, there are two ways of computing the Depletion deduction: Cost Depletion and Percentage Depletion. A taxpayer generally must use the method that gives him the larger deduction.

*Deposit:* in the context of a PSA, a Deposit is an amount (often expressed as a percentage of the purchase price) paid by the buyer to the seller or a third-party Escrow Agent at the signing of the PSA. Should the Closing of the transaction contemplated under the PSA occur, the Deposit is credited (with or without accrued interest, depending on the agreed terms) against the final purchase price to be paid at Closing. Should the Closing not occur, the Deposit is either returned to the buyer or paid to the seller depending on the reason the Closing did not occur (e.g., due to a breach of buyer or seller).

In the geologic context, a Deposit is a subsurface accumulation of Hydrocarbons that are trapped by a layer of Impermeable rock.

*Depreciation:* an accounting and income tax concept that allows a taxpayer a deduction to recover the cost or other basis of certain property over the property's useful life. Depreciation is an annual allowance for the property's wear and tear, deterioration or obsolescence. Property is depreciable from the point in time that it is placed in service until the time that its cost or other basis has been fully recovered or the property is retired from service, whichever occurs first.

*Depth Severance:* a vertical division of the Mineral Estate that segregates out certain Zones, Formations or depths for purposes of conveyancing or Development.

Many Oil and Gas Leases contain a Depth Severance clause that provides that the Lease will terminate as to all depths below the deepest depths that the Lessee is producing at a certain point in time (e.g., at the end of the Primary Term).

*Derrick:* a support structure for the drilling equipment used to raise and lower the Drill String in and out of the Wellbore.

*Derrickman:* a member of a rig crew that works on a platform attached to a Derrick and assists in the Drilling of the Wells.

*Designation of Operator Form (DOO):* a form that a Lessee under an Oil and Gas Lease must submit to the appropriate governmental authorities in order to designate the Operator of record with respect to the Lease. The form also serves as authority for the designated Operator to act on behalf of all of the Lessees under the Lease.

DOOs are often colloquially referred to by their applicable form numbers, such as the "P-4 Form" that is submitted to the RRC and the "BOEM-1123 Form" that is submitted to the BOEM.

*Deterministic v. Probabilistic Reserve Calculation Methods:* two generally accepted methods (by the SPE) of determining Reserve quantities. The Deterministic method uses a single value for each parameter used in the calculation to obtain a single quantity, while the Probabilistic method uses a distribution curve for each parameter, thereby producing a range of probable quantities.

*Developed Acreage:* a term generally used to describe those acres allocated to Producing Wells or Wells capable of Production.

*Development / Development Phase:* the phase in oil and gas Exploration and Production when steps are taken to bring a proven Oil or Gas Field into the production phase by drilling Development Wells and installing the infrastructure necessary for full-scale Production.

*Development Costs:* the costs and expenses incurred during the Development Phase (e.g., Drilling, Completion and equipping of a Well), which may include costs or expenses associated with permitting, logging, Deepening and Sidetracking, evaluating and testing a Well, site reclamation, costs of mobilizing and demobilizing Drilling and/or Workover Rigs to and from the wellsite, sales and similar taxes, title review costs, and geotechnical, geophysical and seismic costs.

In a Carried Interest scenario, the Carried Costs are generally comprised of the Carried Interest owners' share of the Development Costs (though the parties may agree to modify the definition of Carried Costs as they deem appropriate).

*Development Plan:* a detailed outline or proposal that addresses each step in the Development of an Oil or Gas Field from initial discovery through Production and Abandonment. A Development Plan often includes a Drilling plan, a surface use plan, and a description of all Wells, roads, Pipelines and other infrastructure necessary for the outlined Development to occur, as well as maps and plats depicting the proposed development area.

*Development Well:* a Well drilled into a proved Zone of a Reservoir (as opposed to, for example, a Test Well) with the intent of producing oil or gas from the Zone.

*Deviated Well:* a Wellbore that is intentionally directed away from vertical in order to reach a particular Formation.

*Dip:* many of our readers may be thinking about the can in their back pockets, but in the oil and gas context this is a geologic term used to describe the degree to which a particular plane in a Formation deviates from horizontal.

See also Down Dip and Up Dip.

*DIP:* abbreviation of Debtor in Possession.

*Direct Charge:* a non-overhead item incurred by a party to a JOA that may be charged to the Joint Account (and therefore borne by all parties to the JOA in proportion to each party's percentage interest in the applicable operation) pursuant to the COPAS Accounting Procedures. Examples of Direct Charges include costs related to rentals, Royalties, labor, materials, third-party services, legal fees, insurance premiums, reclamation, and other non-overhead or general and administrative items.

*Directional Drilling:* the process of Drilling Directional Wells. Directional Drilling encompasses both Horizontal Drilling and slant hole drilling.

*Directional Well:* a non-vertical Well, meaning a Well where the Terminus is not directly beneath the Surface Location.

*Discovered Unrecoverable Resources:* Resources that have been discovered but are not currently recoverable due to commercial or technical constraints. Discovered Unrecoverable Resources may become recoverable at a future date under a different commodity price environment, following technological advances, or following a reduction in costs associated with exploration, production and development activities.

*Discovery Well:* the initial Well drilled into a particular Reservoir, demonstrating that the Reservoir is capable of Producing in Paying Quantities.

*Disposal Well:* another term for Saltwater Disposal Well.

*Dissolved Gas:* Natural Gas constituent in Crude Oil, which separates from the Crude Oil as temperature and pressure in the Reservoir changes. Under certain conditions, this process can increase Production by propelling Crude Oil to the surface.

*Division Order / Division of Interest:* a contractual agreement setting out individual ownership percentages in the Hydrocarbons produced from a particular Well (based on or pursuant to which the Operator will disburse the applicable Royalties from the Well).

*Dominant Estate:* in the case of a Severed Property, a real property legal term used to describe the relationship of the Mineral Estate to the Surface Estate, whereby the rights of the Mineral Estate owner are dominant over the rights of the Surface Estate owner; and, subject to the Accommodation Doctrine (if applicable), the Mineral Estate owner has the right to enter and use the Surface Estate as is reasonably necessary for the Development of the Mineral Estate.

In contrast, see Servient Estate.

*DOO:* abbreviation of Designation of Operator Form.

*Down Dip:* with respect to the Dip in a Reservoir, Down Dip refers to a section of the Reservoir located at a lower depth.

See also Up Dip.

*Downhole:* the portion of a Well below the surface.

*Downstream:* a colloquial term for one of the three major sectors of the oil and gas industry, Downstream refers to the last phase, which generally includes Refining, Processing, storage, marketing of Hydrocarbons and hydrocarbon products, and transportation of hydrocarbon products (e.g., LNG export).

In contrast, see Upstream and Midstream.

*Drag-Along Rights:* a contractual arrangement that provides (i) if multiple parties own interests in the same or related properties or entity, and (ii) if one owner elects to sell its interest to a third party, then the selling owner has the right to compel the other owners to sell all or a pro rata portion of the other owners' interests in the applicable properties or entity to the third party purchaser on the same terms and conditions as the selling owner's transaction.

In the corporate context, Drag-Along Rights are typically only granted to the majority partner, member or shareholder of a given entity, if at all.

In contrast, see Tag-Along Rights.

*Drainage / Drained:* the Depletion of Hydrocarbons from a Reservoir through Production.

Drainage is also commonly referenced in connection with the Rule of Capture; when a Well drilled on one Mineral Interest owner's Tract depletes the Hydrocarbons under another Mineral Interest owner's Tract, the first Mineral Interest owner is said to have Drained the Hydrocarbons under the second Mineral Interest owner's Tract.

*Drainage Area:* the area within a Reservoir that is Drained by a particular Well.

*Drill Bit:* another term for Bit.

*Drill Pipe:* on a Drilling Rig, tubular steel pipe connecting the Bottomhole Assembly with the surface equipment that is used to rotate the Drill Bit and supply the Drill Bit with Drilling Mud. Together with the Bottomhole Assembly, the Drill Pipe makes up the Drill String.

*Drill Ship:* a self-propelled vessel containing a Drilling Rig used in offshore drilling operations. As an alternative to traditional anchoring, many Drill Ships utilize computerized control systems to maintain their positions, allowing them to Drill in deepwater areas. This is known as a "dynamic positioning system."

*Drill String*: the portion of a Drilling Rig composed of the Drill Pipe and the Bottomhole Assembly (including the Drill Bit).

*Drill to Earn*: a type of joint development structure in which the owner of the applicable Acreage contracts with a counterparty to drill a certain number of Wells in exchange for a certain interest in the Wells (and oftentimes the surrounding Leases and Acreage as well). Upon completing stated Drilling milestones, whether by Drilling a number of Wells to a specified depth or expending a certain amount of Development Costs, the counterparty earns the applicable interest.

See also Drilling Dollars Structure, Farmout and Net Well Structure.

*Drilled and Uncompleted (DUC)*: a Well that has been Drilled but not yet Completed for commercial reasons. Because a relatively larger portion of a Well's EUR is produced at the beginning of the Well's life, in a low commodity-price environment an oil and gas company may choose to drill a Well, but defer the Well's Completion (and thus defer Production of a relatively large portion of its EUR) until commodity prices rise.

*Driller*: the party operating the Drilling Rig during drilling operations.

*Drilling*: the process of boring a hole into the surface of the Earth to explore for and extract Hydrocarbons. Drilling may also be conducted for the purposes of extracting water or disposing of certain waste byproducts, in each case, in connection with oil and gas operations.

See also Spud and Turning to the Right.

*Drilling Budget*: the budget that a company prepares and approves for Drilling and related hydrocarbon Development activities. In a joint development context, the applicable Drilling Budget will usually be based on the then-current Development Plan applicable to the joint development.

*Drilling Carry*: another term for Carried Costs.

*Drilling Contractor*: an oilfield services contractor that owns and operates Drilling Rigs.

*Drilling Dollars Structure / Drilling Dollars Target*: a type of Drill to Earn joint development transaction in which the applicable earning counterparty's obligations are measured against a required Development Cost spending threshold, rather than a particular number of Wells being Drilled and Completed.

In contrast, see Net Well Structure.

*Drilling Engineer*: a petroleum engineer specializing in overseeing the process of Drilling a Well, including engineering the technical specifications of the Drilling Rig and planning and helping to implement the actual drilling process.



*Drilling Fluid / Drilling Mud:* a mixture of Mud and chemicals that performs several functions in the process of Drilling a Well, including: assisting in removal of debris from the Wellbore; preventing solids and liquids from entering the Wellbore; and cooling the Drill Bit.

*Drilling Fluid Engineer:* another term for Mud Engineer or Mud Logger.

*Drilling Pad:* another term for Well Pad.

*Drilling Permit:* a permit granted by a governmental agency with jurisdiction over the applicable oil and gas operations that gives a party the authority to Drill a Well. Drilling Permits typically specify the following information: the type of Hydrocarbon for which the Well will be drilled (*i.e.*, Crude Oil or Natural Gas); whether the Well will be drilled with a vertical, horizontal or slant trajectory; whether the Well at issue is a new Well or a Recompletion or Reworking of an existing Well; the Well's Surface Location and Terminus location; and any applicable regulations (and/or exceptions) applicable to such Well.

*Drilling Program:* a strategic program pursuant to which a company explores for, and develops, Hydrocarbons. A Drilling Program can apply to the prospective Development of Undeveloped Acreage or the Development of Producing Acreage through Infill Drilling.

*Drilling Report:* a report generated to provide detailed information and statistics on ongoing Drilling operations, typically on a daily basis. Drilling Reports cover information related to the scope of work performed and hours logged to individual activities, statistics related to the Drill Bit and Drilling Mud, and any other noteworthy information related to the drilling operations.

*Drilling Rig:* the entire mechanical system used to Drill a Well, primarily consisting of a Derrick and the drilling equipment on the surface, and the Drill String and Bottomhole Assembly below the surface.

*Drilling Unit:* a type of Unit within which Mineral Interests are Pooled to attain the minimum Acreage the applicable governmental agency requires to drill a single Well. Production and costs incurred for Drilling and other operational items are allocated pro rata within the Drilling Unit. Drilling Units promote Conservation and efficient Production by nullifying the effects of Drainage (as between multiple Mineral Interest owners) and the Rule of Capture within the Drilling Unit.

*Drillsite Title Opinion:* a Title Opinion an oil company requests prior to Drilling a Well. The specific purpose of the Drilling Title Opinion is to ensure that the oil company correctly identifies the ownership of the individual Tracts in the applicable Spacing Unit prior to Spudding a Well, so that an unleased third party cannot claim an interest in the Well's Production after the Well is drilled.

*Drillsite Tract:* the Tract containing the Surface Location from which a Well is drilled.

*Dry Gas:* a colloquial term for Natural Gas that contains sufficiently small constituent quantities of liquid or condensable Hydrocarbons to be considered of marketable quality. Dry Gas typically contains Methane and Ethane and may be produced directly from a Reservoir or may be the remaining Natural Gas product following Processing designed to remove liquid or condensable Hydrocarbons.

*Dry Hole:* a Well drilled with the intention of producing Hydrocarbons that does not actually yield Production in Paying Quantities.

*Dry Hole Contribution:* a contractual arrangement under which a party that drills a Dry Hole receives a payment from a third party that owns no interest in the Well (but that likely owns an interest in Acreage that is adjacent or otherwise nearby the Dry Hole) in exchange for technical data related to the Dry Hole.

*Dry Well:* another term for Dry Hole.

*Dual Completion:* a Wellbore Completed with Take Points in two separate Zones to produce Hydrocarbons from both Zones (promoting efficiency in Production by avoiding the need to drill two separate Wells).

*DUC:* abbreviation of Drilled and Uncompleted; commonly pronounced "duck."

*Due Diligence:* the cross-disciplinary exercise of conducting research and analysis to determine the feasibility (and profitability) of a prospective investment. In the oil and gas industry, Due Diligence often involves: extensive technical analysis (including an analysis of Reserves); financial analysis; environmental analysis (including determining whether there are present or past violations of Environmental Laws related to the target assets or whether Remediation is required with respect to the target assets); title analysis (including determining whether the represented title to the target assets is, in fact, as advertised by the seller); and other legal analysis (including ensuring that appropriate contractual arrangements are in place to conduct business as contemplated following the investment). Otherwise known as the bane of young associates' existence.

*Duster:* a colloquial term for Dry Hole.

*E&P:* abbreviation of Exploration and Production.

*Eagle Ford Shale:* a liquids-rich Shale Formation located primarily in South Texas with physical characteristics that favor the use of Hydraulic Fracturing.

*Earning Trigger:* pursuant to a Drill to Earn arrangement, the stated milestones (whether a Drilling Dollars Target or Net Well Target) that determine when (or if) the applicable counterparty earns the Acreage in question.

**Easement:** a non-possessory Encumbrance on real property that (i) provides a person with a right to use and/or enter onto the burdened property for a particular purpose, or (ii) restricts a person from using such person's property in a particular way.

An Easement that grants specific rights (e.g., the right to use another's property to cross from point A to point B) is referred to as an "affirmative" Easement, while an Easement that restricts certain rights (e.g., prevents a person from building a structure above a certain height so as not to block another person's view) is referred to as a "negative" Easement. An Easement can also be "appurtenant," meaning that it benefits and "runs with the land," or the Easement can be "in gross," meaning it benefits a particular individual or entity.

**EBITDA:** earnings before interest, taxes, Depreciation and amortization. A measurement of a company's operating profit intended to disregard the effects of the company's financing, accounting and tax activities. Commonly pronounced "E-bit-da."

**EBITDAX:** earnings before interest, taxes, Depreciation, Depletion, amortization and exploration expense. A measurement of an E&P company's operating profit intended to disregard the effects of the company's financing, accounting, tax and exploration activities. Commonly pronounced "E-bit-dax."

**Economic Interest:** for US federal income tax purposes, the ownership in a Mineral Interest a taxpayer is required to hold in order to secure a tax deduction for Depletion.

A taxpayer has an Economic Interest when the taxpayer acquires by investment any interest in a Mineral Interest in place and secures, by any form of legal relationship, income derived from the extraction of the Mineral Interest, to which the taxpayer must look for a return of its capital.

**Economically Recoverable Resources:** Resources that can be profitably produced under current market conditions.

**Effective Time:** the point in time under a PSA at which the economic benefits, burdens and risks associated with owning the assets (or entity) being sold are transferred from the seller to the buyer. Typically, the Effective Time precedes the execution date (and/or Closing, as applicable) in order to allow the parties to the PSA adequate time to appropriately settle revenues and expenses, as well as certain other negotiated items, in order to accurately estimate the final purchase price as of Closing.

**Election Procedures:** the procedures prescribed in a JOA for making operational Elections, including the time period in which parties may exercise the Elections, the information to be included in a notice of election, and the consequences of consenting or not consenting to a particular operation.

*Elections*: a party's decisions under a JOA on whether or not to participate in certain operations for purposes of sharing revenues and expenses related to the operations. Parties Electing not to participate in a particular operation are deemed Non-Consenting Parties regarding that operation.

*Electrical Log*: an electrical device used to measure the characteristics of a Formation undergoing a Drilling operation to determine a Well's viability and where to direct the Drill Bit to maximize Hydrocarbon Production. Electrical Logs commonly test for measurements related to stratigraphy, Porosity and radioactivity.

*Elevator*: a mechanical device attached to a Drill String used to raise or lower the Drill String in the Wellbore.

*Encumbrance*: in the oil and gas context, a right that attaches to a real property interest that affects, directly or indirectly, the owner's title to the real property interest, including liens, Mortgages and other security interests, Royalties, options, and other contractual restrictions, such as an AMI.

*Endangered and Threatened Species – Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA) and Migratory Bird Treaty Act (MBTA)*: the ESA, MMPA and MBTA are the primary federal laws that were established to protect endangered, threatened and certain other species of flora and fauna. The ESA can impose time and place restrictions on oil and gas operations. Notably, the ESA, MMPA and MBTA can all impose civil and criminal liability in the event that a protected species is harmed or killed.

*Engineering, Procurement and Construction (EPC) Contract*: a contract between a project owner and a third party contractor used to implement the design, engineering and construction of a facility. EPC Contracts are typically used to build capital-intensive projects requiring special engineering and construction expertise. EPC Contracts are most prevalent in the Downstream sector of the oil and gas industry.

*Enhanced Oil Recovery (EOR) / Enhanced Recovery*: a general term used to refer to the various artificial drive mechanisms and hydrocarbon Stimulation techniques that are employed to increase the recovery of Hydrocarbons after the natural energy in a Reservoir is depleted during the Primary Recovery phase. EOR techniques often involve heating or introducing chemicals to the applicable Hydrocarbons in place in the Reservoir.

See also Secondary Recovery, Tertiary Recovery, CO<sub>2</sub> Injection, Thermal Recovery, Steam Flood and Water Flooding. In contrast, see Primary Oil Recovery.

*Enhanced Recovery Unit*: a Unit created to implement a common Enhanced Oil Recovery plan across unitized Tracts under a single Operator.

*Entirety Clause:* a clause in an Oil and Gas Lease providing that, in the event the Mineral Interest covered by the Lease is subsequently divided among multiple owners, the divided interests will continue to be operated as a single Mineral Interest under the Lease, and the Lessee will ratably apportion the Proceeds among the Lessors (rather than the Lessee being considered to hold a separate Lease with each individual Lessor). An Entirety Clause promotes efficient Development of the Mineral Interests by preventing the Lessee from becoming subject to any duty to develop neighboring Tracts to prevent Drainage following the Mineral Interests' division.

*Environmental Condition / Environmental Defect:* a defined term under a PSA that typically encompasses a condition existing on the target assets that (i) causes the assets not to be in compliance with applicable Environmental Laws, or (ii) requires remedial or corrective action under Environmental Laws. The scope of the term may, in some cases, be expanded to cover violations of applicable contractual provisions related to environmental matters or applicable Oil and Gas Leases.

*Environmental Defect Deductible:* under an Environmental Defect Mechanism, a negotiated deductible below which the seller has no liability to the buyer for Environmental Defects. If the aggregate Remediation Amounts attributable to claimed Environmental Defects exceed the Environmental Defect Deductible, then the buyer is only entitled to, and the seller is only responsible for, remedies with respect to Environmental Defects to the extent that the Remediation Amounts of such Environmental Defects exceed the Environmental Defect Deductible.

See also Aggregate Defect Deductible.

*Environmental Defect Mechanism:* a typical contractual provision in an oil and gas PSA under which the buyer may seek remedies from the seller for certain Environmental Defects. Under an Environmental Defect Mechanism, between signing and Closing the buyer conducts environmental Due Diligence on the assets to be purchased, and must assert any claim for Environmental Defects in the manner specified in the PSA by the applicable Defect Claim Date. Remedies for Environmental Defects are negotiated for each transaction, but typically include (i) the seller's right to cure the Environmental Defect prior to Closing, (ii) the right to exclude the applicable Environmental Defect Property from the assets to be sold (with a corresponding adjustment to the purchase price), (iii) a reduction in the purchase price by the applicable Remediation Amount, and (iv) entering into an Environmental Indemnity Agreement.

*Environmental Defect Notice:* under an Environmental Defect Mechanism, a notice prepared by the buyer (or in many cases its environmental consultant) in which the buyer describes in detail the claimed Environmental Defects for which the buyer seeks remedies.

*Environmental Defect Period:* under an Environmental Defect Mechanism, the negotiated period of time within which the buyer may conduct environmental Due Diligence and claim Environmental Defects.

*Environmental Defect Property:* under an Environmental Defect Mechanism, the specific assets affected by a claimed Environmental Defect.

*Environmental Defect Threshold:* under an Environmental Defect Mechanism, a de minimis threshold that also serves as a limitation on the seller's liability for Environmental Defects (in addition to, and not in substitution of, an Environmental Defect Deductible or Aggregate Defect Deductible). If a claimed Environmental Defect's Remediation Amount is below the applicable Environmental Defect Threshold, then, regardless of whether the Environmental Defect Deductible or Aggregate Defect Deductible has been reached, the buyer is not entitled to, and the seller is not responsible for, any remedies related to the Environmental Defect.

See also Individual Defect Threshold. In contrast, see Environmental Defect Deductible.

*Environmental Indemnity Agreement:* an agreement under which the seller under a PSA indemnifies the buyer for any losses arising out of a claimed Environmental Defect. Environmental Indemnity Agreements are commonly used as a remedy for Environmental Defects under an Environmental Defect Mechanism. In this instance, the seller would, notwithstanding the claimed Environmental Defect, transfer the Environmental Defect Property to the buyer at Closing (with no adjustment to the purchase price) and agree to indemnify the buyer for all losses arising out of the claimed Environmental Defect. Whether the applicable Environmental Indemnity Agreement includes a dollar value cap or expires after a certain period of time is subject to negotiation between the parties.

*Environmental Laws:* a catch-all term used in oil and gas industry agreements to encompass all applicable international, foreign, and US federal, state, and local laws relating to the protection of public health, welfare and the environment. The definition of Environmental Laws in these agreements also often includes applicable occupational health and safety laws and regulations enacted by OSHA and the states.

*Environmental Protection Agency (EPA):* the US federal agency charged with protecting human health and the environment. The EPA promulgates and administers environmental regulations applicable to air, water, and soil with which oil and gas companies are required to comply.

*EOR:* abbreviation of Enhanced Oil Recovery.

*EPA:* acronym for Environmental Protection Agency.

*EPC:* abbreviation of Engineering, Procurement and Construction.

*Escrow Agent*: the third party financial institution that holds funds (e.g., a Deposit under a PSA) in escrow pursuant to an Escrow Agreement.

*Escrow Agreement*: an agreement entered into between the buyer and seller under a PSA and an Escrow Agent governing the terms upon which the Escrow Agent will hold (and disburse) the applicable Escrow Fund.

*Escrow Fund*: the amount placed into escrow, typically including any and all interest earned thereon while the amount is held in escrow.

*Estimated Ultimate Recovery (EUR)*: the estimated total quantity of the amount of Hydrocarbons recoverable from a particular Well or Reservoir.

*Ethane*: a gaseous hydrocarbon chain consisting of two carbon atoms. Ethane is often a component of unrefined Natural Gas. Ethane is considered to be Dry Gas and is sometimes colloquially referred to as "C2."

*Excluded Assets*: in a PSA, certain assets that are specifically excluded from the assets to be transferred to the buyer, which typically consist of assets related to the seller's general business, assets arising out of pre-Effective Time operations, and other specific negotiated assets that the seller wishes to retain.

*Executive Committee*: another term for Operating Committee.

*Executive Right / Executory Right / Executory Interest*: in the oil and gas context, the exclusive right of a party that owns a Mineral Interest to enter into an Oil and Gas Lease covering the Mineral Interest.

Upon the execution of a Lease, the Executive Right is typically part of the Working Interest, but the Executive Right may be severed from the Working Interest. In the event of this severance, the Working Interest owner cannot, on its own, lease its Mineral Interest and must rely on the holder of the Executive Right to develop the applicable Mineral Interest. A Working Interest that does not contain Executive Rights is often referred to as a nonparticipating Mineral Interest.

*Exploitation*: the process of developing a Reservoir to maximize economic Production of Hydrocarbons therefrom, including drilling and production operations.

*Exploration Agreement*: another term for Joint Development Agreement.

*Exploration and Production (E&P)*: the activities generally considered to constitute the Upstream sector of the oil and gas industry.

"Exploration" generally refers to the prospecting for and Drilling of Oil and Gas Wells (including researching and analyzing potential Surface Locations, conducting seismic operations, acquiring Acreage and conducting drilling activities).

"Production" generally refers to the extraction of Hydrocarbons from the Oil and Gas Wells that were Drilled during the exploration phase.

*Exploration Costs:* costs incurred in the exploration phase of Upstream oil and gas activities, including researching and analyzing potential Surface Locations, conducting seismic operations, acquiring Acreage and conducting drilling activities.

*Exploration Well / Exploratory Well:* a Well that is Drilled into an area in which the Operator has not previously Drilled another Well capable of Production in Paying Quantities in an effort to locate previously undiscovered Reservoirs.

*Extra-Heavy Oil:* a grade of Crude Oil characterized by extreme thickness and low mobility within a Reservoir, requiring Stimulation activities to achieve economic Production. The US Geological Survey categorizes Extra-Heavy Oil as Crude Oil with an API Gravity below 10°.

*Fair Market Value (FMV):* a measure of the cash value for which a particular property or service would be purchased in a bona fide, arms' length transaction between parties of equal bargaining power.

*Farmee:* pursuant to a Farm-In or Farmout, the party to receive an assignment of an interest in Oil and Gas Properties in exchange for conducting (and/or paying for), or a commitment to conduct (and/or pay for), certain development operations with respect to the properties.

*Farm-In:* used as a noun, an agreement by which a Farmor agrees to assign an interest in Oil and Gas Properties to a Farmee in exchange for the Farmee funding, or committing to fund, all or a portion of the Farmor's share of certain development operations with respect to the properties. A Farm-In transaction is distinguished from a Farmout transaction, in which the Farmee itself performs the development operations.

Used as a verb, the act of a Farmee acquiring an interest in Oil and Gas Properties pursuant to a Farm-In or Farmout transaction.

*Farmor:* pursuant to a Farm-In or Farmout, the party granting an assignment of an interest in Oil and Gas Properties in exchange for the Farmee having conducted (and/or paying for), or committing to conduct (and/or pay for), certain development operations with respect to such properties.

*Farmout:* used as a noun, an agreement by which a Farmor agrees to assign an interest in Oil and Gas Properties to a Farmee in exchange for the Farmee conducting, or committing to conduct, certain development operations with respect to the properties.

A Farmout is distinguished from a Farm-In transaction, where the Farmee only funds the applicable development operations rather than conducting the operations itself.

Used as a verb, the act of a Farmor granting an interest in Oil and Gas Properties pursuant to a Farm-In or Farmout transaction. See also Drill to Earn.



*Fault*: a break in a Formation resulting from a tectonic shift. Faults often form Traps where producible Deposits of Hydrocarbons are located.

*Federal Energy Regulatory Commission (FERC)*: the US federal agency charged with regulating the interstate transmission of gas, oil, and electricity, as well as hydroelectric and certain Natural Gas projects.

*Federal Exploratory Unit*: a Unit consisting of BLM Leases that the BLM approves for Unitization upon a demonstration that the Unitization will promote Conservation of natural resources and be necessary or advisable in the public interest.

*Federal Lease*: another term for BLM Lease.

*Fee Land*: a Tract that is held in Fee Simple.

*Fee Owner Royalty*: another term for Lessor Royalty.

*Fee Simple*: a present possessory estate in real property, representing the most absolute real property right under US law.

A person who holds a Tract in Fee Simple has the right to both the surface and the subsurface (*i.e.*, the Surface Estate and the Mineral Estate), with no depth limitations (but not taking into account any limitations prescribed by governmental authorities).

See also Fee Lands.

*Fee Simple Determinable*: a present possessory estate in real property that remains with the Grantee until the occurrence of a specified condition, upon which the interest reverts to the Grantor. Most Oil and Gas Leases create a Fee Simple Determinable estate for the Lessee. The discussion of Fee Simple Determinable estates may have been the point where your eyes glazed over in your first year property law course.

*FERC*: acronym for Federal Energy Regulatory Commission; commonly pronounced "furk."

*Field*: a Reservoir containing Deposits of Crude Oil and/or Natural Gas from which a producer seeks to exploit the Hydrocarbons.

*Field Rules*: the rules and regulations governing E&P activities in a particular Oil Field or Gas Field, such as Well depth requirements, Spacing requirements and Unit sizes. Individual Fields have different Field Rules based on the applicable regulatory agency and physical characteristics of the Field.

*Final Settlement Statement*: a document exchanged between the parties to a PSA following Closing to reflect the final calculations of the contractually stipulated purchase price adjustments. Typically delivered two to four months post-Closing, the Final Settlement Statement allows additional time post-Closing to account for revenues, expenses and other

negotiated items related to the period between the applicable Effective Time and Closing.

In contrast, see Preliminary Settlement Statement.

*Firm Service*: in the context of Midstream service agreements, Firm Service provides a customer with a guarantee of Capacity (up to the applicable portion paid for or reserved by the customer) on the applicable Midstream assets in question. Firm Service is only subject to interruption (without compensation from the service provider) in the event of certain negotiated events, such as Force Majeure, maintenance, and governmental allocation orders, and volumes entitled to Firm Service may only be curtailed after all volumes entitled to Interruptible Service have first been curtailed completely. Typically, in order to receive Firm Service, the applicable customer will pay a premium to the service provider.

*FIRPTA*: acronym for Foreign Investment in Real Property Tax Act; commonly pronounced "furp-ta."

*FIRPTA Certificate*: another term for Certificate of Non-Foreign Status.

*First Purchaser*: the first person to purchase Hydrocarbon Production after the Hydrocarbons are produced. Under Texas law, a producer has an automatically perfected lien against the Hydrocarbons while the Hydrocarbons are held by the First Purchaser.

*Fish*: a colloquial term used to refer to obstructions or debris in a Wellbore, including tools lost Downhole during operations, pieces of damaged Drill Pipe or naturally occurring obstructions such as rock Cuttings. Like its counterpart in the water, Fish can be very slippery and hard to catch.

*Fishing / Fishing Procedures*: the process of removing Fish from a Wellbore. Fishing Procedures involve inserting a tool into the Wellbore designed to remove any Fish and attempting to bring the Fish to the surface. If Fishing Procedures are unsuccessful (which does happen from time to time), it may be necessary to Sidetrack the Well. Like they say, "that's why it's called fishin' and not catchin'."

*FL&U*: abbreviation of Fuel, Lost and Unaccounted For.

*Flaring*: the controlled burning of Natural Gas at various stages along the production and processing cycle. Flaring is often conducted to control pressure within a particular facility or Pipeline or in the instance when Associated Gas takeaway capability does not exist for a given Oil Well.

In contrast, see Venting.

*Flow Back*: a mixture of water, Drilling Mud, Frac Fluid and other constituents that flow to the surface following Hydraulic Fracturing activities.

*Flow Meter*: a mechanical device measuring the speed at which fluids flow through a Pipeline or Well.

*Flow Rate*: the speed at which fluids flow through a Pipeline or Well.

*Flowing Well*: another term for Naturally Flowing Well.

*Flowline*: a Pipeline through which Hydrocarbons and other constituents flow from the Wellhead downstream to other transportation systems, such as a Gathering System or interstate Pipeline or to tanks located on the Lease site.

*Flowline Trap*: another term for Possum Belly.

*FMV*: abbreviation of Fair Market Value.

*Force Majeure*: a negotiated concept common in oil and gas industry agreements that excuses the performance by the parties to the agreement due to events outside of the parties' control; provided that the party claiming Force Majeure was not able to prevent the event through the exercise of due diligence and uses reasonable efforts to overcome the event after its occurrence. Typical examples include natural disasters, acts of God, strikes, weather events, acts of war and terrorism, acts of governmental authorities (including, in some cases, the enactment of new or modified laws), and breakage or unavailability of machinery and equipment.

*Forced Pooling*: a regulatory requirement imposed by the applicable oil and gas regulatory agency to Pool or Unitize Tracts from which Hydrocarbons are produced for purposes of operations and allocation of Production. Compulsory Pooling and Unitization promote Conservation and efficient Production by nullifying the effects of Drainage (as between multiple owners) and the Rule of Capture within the Drilling Unit.

See also Pooling Order.

*Foreign Investment in Real Property Tax Act (FIRPTA)*: a US tax law that imposes income tax on gains of foreign persons resulting from a disposition of US real property interests, and requires purchasers of US real property interests to withhold a portion of the purchase price relating to the disposition.

See also Certificate of Non-Foreign Status.

*Form P-4*: the Designation of Operator form filed with the RRC with respect to Oil and Gas Properties located in the State of Texas.

The Form P-4 is entitled "Certificate of Compliance and Transportation Authority" but is commonly referred to as "the Form P-4," and must be filed any time there is a change of Operator with respect to a Well or Lease located in Texas in order that responsibility and accountability for the Well or Lease can be properly assigned to the new Operator.

*Formation*: another term for Reservoir.

The terms Formation, Reservoir and Zone, on a highly technical level, have slightly different meanings, but as a general matter the terms are often used interchangeably in the oil and gas industry.

*Frac Fluid*: a mixture of water, Proppant and chemical additives used in Hydraulic Fracturing to extend fractures, reduce friction and carry Proppant into the Target Formation. The composition of Frac Fluid will vary by Target Formation and Operator.

*Frac Gun*: a string of shaped charges lowered into the Casing of a Well, and once lowered to the desired depth, detonated to perforate the Casing and cement.

*Frac Job*: another term for Hydraulic Fracturing.

*Frac Sand*: a type of Proppant made of sand (which may be chemically treated) that is mixed into Frac Fluid and, when shot into a Target Formation, holds or props open fractures or cracks in the Target Formation so that Hydrocarbons may pass through the fractures and into the Wellbore.

*Frac Stage*: a portion of a Well that is currently undergoing Hydraulic Fracturing. Frac Stages are Fracked starting at the Terminus of the Wellbore and working back towards the Penetration Point. The number of Frac Stages in a Well will vary by Target Formation and Operator.

*Fracking / Fracing*: other terms for Hydraulic Fracturing.

*Fractionation / Fractionation Agreement / Processing and Fractionation Agreement*: the process through which NGLs are separated into separate components (e.g., Propane, Butane and Pentane) following Processing in order to meet commercial specifications.

A Fractionation Agreement establishes the terms upon which the applicable facility Operator will Fractionate a combined NGL stream, including the fees the applicable customer must pay for the services. Fractionation and Processing are often handled under the same agreement.

*Free Well Agreement*: an agreement whereby one party bears the entire cost of Drilling a jointly owned Well and, in exchange for bearing all the costs, receives all or a portion of the other owners' interests in the Well.

*Fuel, Lost, and Unaccounted For (FL&U)*: a term used in connection with the Gathering, Processing and transporting of Natural Gas to represent the volume of Natural Gas used as fuel plus any Natural Gas lost or unaccounted for (e.g., due to leaks, evaporation or inaccurate gas meters) through the provision of the applicable Midstream services.

*Fugitive Emissions*: emissions of Natural Gas that escape into the atmosphere during the Upstream and Midstream processes.

**Fundamental Representations:** Representations and Warranties, typically seen in a PSA, that relate to a party's organizational documents, legal standing and authority to enter into and conduct the applicable underlying transaction, among other things.

These Representations and Warranties are considered to be "fundamental" to the party's ability to participate in the contemplated transaction, and therefore typically are (i) subject to longer survival periods than other Representations and Warranties (e.g., the survival periods are often indefinite), and (ii) often excluded from the application of any Indemnity De Minimis, Indemnity Deductible and/or Indemnity Cap.

**Future Location:** the physical location of a Future Well. This concept is typically used for purposes of the Title Defect Mechanism and Environmental Defect Mechanism in a PSA that contains a Future Well concept.

**Future Well:** a specific and identifiable Well location that is contemplated to be drilled in the future. This concept is typically seen in a PSA with respect to Undeveloped Acreage, or where the seller has highlighted, and buyer has specifically allocated value to, the ability to Drill additional Wells on the assets being purchased. The Future Well concept is typically worked into a PSA alongside the existing Wells for the buyer's benefit, including for purposes of representations and covenants, the Title Defect Mechanism and the Environmental Defect Mechanism.

**GAAP:** a commonly used acronym for "generally accepted accounting principles" that have been formulated by policy boards in the accounting industry and/or have become common practice and are regarded as the framework for standard financial accounting practices.

**Gas Balancing:** in connection with Pipelines, Gas Balancing is an adjustment procedure used, if necessary, to equalize the volume of Natural Gas tendered into a Pipeline (or other Midstream system) by a party at the applicable Receipt Points with the volumes of Natural Gas received by the party from the Pipeline (or other Midstream system) at the applicable Delivery Points.

In connection with a JOA, Gas Balancing is an adjustment procedure used, if necessary, to equalize the volume of Natural Gas attributable to a party's interest in a Well (or Wells) with the volume of Natural Gas taken from the Well(s) by such party.

**Gas Balancing Agreement:** an agreement setting forth the terms and procedures the applicable parties are to use in connection with the relevant Gas Balancing efforts. A Gas Balancing Agreement is most often seen in the JOA context of Gas Balancing.

**Gas Cap:** an accumulation of Natural Gas found at the top of an oil Reservoir. As oil is produced from the Reservoir, the Gas Cap expands, providing additional pressure in the Reservoir for oil Production.

*Gas Field:* another term for Field.

*Gas Hydrates:* methane in solid, crystal-like form. Methane may form Gas Hydrates under the right temperature (cold) and pressure (high) conditions. In the context of Gathering Systems and other Midstream assets, Gas Hydrates may form and impede the flow of Natural Gas. Gas Hydrates also form in large quantities in certain areas of the ocean floor.

*Gas Injection Well:* another term for Injection Well.

*Gas Lift / Gas Lift Drive:* a system that creates Artificial Lift by injecting Natural Gas into a Well with the intent of increasing the Bottomhole Pressure and thereby helping to lift or drive the oil into the Wellbore, increasing the Production of oil from the Well.

The lift or drive may be only intermittent if the Well is periodically shut-in (to allow pressure to build), if the Formation is in advanced production stages (causing pressure to be lower), or if the gas injection program calls for only intermittent injections.

*Gas Lift Gas:* another term for Injection Gas.

*Gas Processing Plant:* a set of facilities that takes raw or only lightly treated Natural Gas from the Field and filters out impurities in order to separate NGLs and other fluids from the Dry Gas. In some cases a Gas Processing Plant may have Fractionation capabilities as well.

*Gas Well:* a Well that is primarily targeting the Production of Natural Gas.

*Gas-Oil Ratio:* a ratio comparing the volumes of gas and oil that are either produced from, or recoverable from, a Well or Formation.

*Gathering:* the process of collecting, aggregating and transporting Hydrocarbons after they are brought to the surface. Gathering typically begins at multiple Receipt Points, with redelivery of the Hydrocarbons occurring at a typically smaller universe of Delivery Points.

*Gathering Agreement:* an agreement between a producer of Hydrocarbons and a gatherer of Hydrocarbons that sets forth the terms and conditions upon which the gatherer will provide Gathering services to the current and, in most cases, future hydrocarbon Production of the producer. Oftentimes a Gathering Agreement (whether servicing Natural Gas or Crude Oil) will contain a Dedication of the applicable producer's Acreage.

*Gathering Line:* a small to medium-sized Pipeline used to transport Hydrocarbons over relatively short distances, such as from the Wellhead or a Lease Tank to a Gas Processing Plant or a Trunk Line.

*Gathering System:* a network of Midstream and infrastructure assets, which may include, in addition to Gathering Lines, tanks, compression facilities, Heater Treaters, and/or other related facilities and equipment,

and which is used to Gather production to a Trunk Line, a Gas Processing Plant, Storage Facility, Terminal or other points of sale.

*Gauge Report*: a well-level report created by a Gauger, specifying the Flow Rate, pressure and other variables with respect to the applicable Well for a certain period of time (e.g., 24 hours).

*Gauger*: an employee of the Operator or applicable service provider who is responsible for monitoring and maintaining production from a Producing Well, including measuring the quantity of Hydrocarbons produced.

*General Land Office (GLO)*: the Texas GLO is a state agency that oversees and manages Texas state Lands, including state Oil and Gas Leases and Leases on Permanent School Fund lands.

*General Warranty of Title / General Warranty Deed*: the highest Warranty of Title standard, where a seller, among other things, represents to the buyer that the seller has title to the applicable real property and covenants to the buyer that the seller will defend the buyer's right to ownership of the real property interest against anyone else claiming ownership of the interest. A General Warranty of Title is the default title warranty given when real property is sold, unless the seller expressly disclaims such warranty. As a result, in most sophisticated oil and gas transactions, a seller will seek to expressly disclaim any General Warranty of Title.

A Conveyance that contains a General Warranty of Title is sometimes referred to as a General Warranty Deed.

In contrast, see Quitclaim Deed and Special Warranty Deed.

*Geographic Information System (GIS) Data*: computerized, spatial geographic data and maps that are utilized in oil and gas exploration, Production and Development. Uses in the oil and gas industry include mapping the spatial relationships of Leases, Wells, operations, Pipelines, and other facilities and otherwise providing the user the ability to analyze, translate and manipulate the applicable geographic data.

*Geological and Geophysical (G&G) Data*: certain data regarding the subsurface geology and geophysics of an area of interest. This data may include Seismic Data captured through seismographs and Well-Log data captured through loggings and Corings as a Well is drilled.

*Geophysical Survey*: surveys used to create maps or models of the Earth's geography, stratigraphy and geological structure. In the oil and gas industry, Geophysical Surveys, including seismic surveys, are used to find geologic Structures that could contain hydrocarbon Deposits.

*Geophysicist*: a type of geologist who specializes in the study of the physics of the Earth, and, in the Oil and Gas Field, is responsible for interpreting geophysical data and generating maps or models based upon such data.

*Gone to Water:* with respect to an Oil Well or Gas Well, the point in time when the Production of water has increased and the Production of Hydrocarbons has decreased, reducing the Well's profitability to the point that Production is no longer economically desirable.

*Good and Workmanlike Manner:* a Standard of Care contained in contractual arrangements that is not specific to the oil and gas industry. This standard looks to service providers' performance in the same geographic area and in the same industry to delineate what constitutes negligent performance.

In the oil and gas context, the standard is commonly applied to the Operator's obligations under a JOA.

*Good Oilfield Practices:* a Standard of Care used in contractual arrangements that is specific to the oil and gas industry. This standard looks to the oilfield service providers' performance, generally (and not necessarily with respect to a particular geographic area), to delineate what constitutes negligent performance of the services.

*Governmental Section:* another term for Section.

*Grantee:* the person who receives a real property interest from a Grantor.

*Granting Clause:* a clause in Conveyances of real property (including Oil and Gas Leases and Assignments and Bills of Sale) that contains words of grant (e.g., grant, transfer, assign and convey) in order to create and/or convey an interest in real property.

*Grantor:* the person who grants a real property interest to a Grantee.

*Gross Acres:* the total number of acres in which a person has any type of interest in oil and gas (i.e., a Working Interest or a Royalty Interest). Gross Acres is a measurement of surface area alone and does not include any component of the particular quantum of interest owned in the applicable Mineral Estate underlying the Gross Acres in question.

See also Net Acres.

*Groundwater:* subsurface water that both accumulates and passes through Aquifers. Groundwater can flow to the surface naturally, resulting in springs or seeps, or it can be extracted by Drilling water Wells that target Aquifers.

*Gumbo:* not quite as tasty as the Cajun favorite, but depending on the quality of the chef they may look similar. A colloquial term used to describe the wet clay frequently encountered in certain types of subsurface Formations.

*Gusher:* a colloquial term used to describe a prolific Well that will usually result in a happy Lessor and Lessee.



*Habendum Clause*: the clause in an Oil and Gas Lease that sets forth the specific period of time for which the Lease may be held without Production in Paying Quantities (*i.e.*, the Primary Term). The Habendum Clause will typically provide that the Lease will be held for so long as Hydrocarbons are produced from the Lease in Paying Quantities (*i.e.*, the Secondary Term).

*Hand*: a colloquial term for an oilfield worker (*e.g.*, floorhand, toolhand, etc.). To our knowledge, there is no similar usage of "Foot."

*Hard Consent*: typically, a type of Consent that explicitly provides that (i) any assignment of any rights under the applicable agreement is void if the Consent is not obtained prior to the transfer, or (ii) the applicable agreement itself will, or may be, terminated (either directly or at the discretion of the party that holds the Consent right) due to a party's failure to obtain the applicable Consent prior to any assignment. What constitutes a Hard Consent will, however, vary among oil and gas industry participants and their respective counsel. Despite the label, the name has nothing to do with how difficult it may be to obtain a Consent.

In contrast, see Soft Consent.

*Hart Scott Rodino Act (HSR Act)*: the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, is a US anti-trust law that requires filing a notification with the Federal Trade Commission with respect to any sale or merger that exceeds a certain dollar threshold (which varies depending on the types of assets included in the applicable underlying transaction). With respect to Upstream oil and gas transactions, notably (i) the applicable dollar threshold is much higher than for most other asset types, and (ii) Undeveloped Acreage / non-producing properties are ascribed zero value for purposes of the applicable HSR Act test.

*Haynesville Shale*: a popular name used for a Shale Formation that is generally located under parts of East Texas, Northwest Louisiana and Southwestern Arkansas that generally produces Dry Gas.

*Hazardous Substances*: a class of substances defined by federal law, the EPA and OSHA, and/or state law as being hazardous to the environment. Substances defined as hazardous must be used and handled according to specific regulatory guidelines. The term Hazardous Substances is often used in oil and gas industry agreements and may be ascribed a meaning in the applicable agreement that is different from how the term is defined under Environmental Laws. In both contexts (*i.e.*, the EPA regulations and the agreements), Hydrocarbons themselves are not always considered Hazardous Substances.

*HBP*: abbreviation of Held by Production.

*Heads Up / Heads Up Basis*: a colloquial term used to indicate a joint development scenario in which no party's Development Costs will be

paid by another person, and each applicable party will pay its own costs relative to its interest in the applicable operation. You gotta pay if you want to play.

*Heater Treater:* a piece of equipment located downstream of the Wellhead and often connected to a Tank Battery that processes produced oil by using heat to separate out water, Natural Gas and other substances from the oil. It heats, it treats, is there anything it can't do?

*Heavy Crude Oil:* Crude Oil that has relatively less "light" components, such as gasoline, and relatively more "heavy" components, such as asphalt, than does Light Crude Oil. Heavy Crude Oil is generally harder to produce (as it is more viscous) and is less valuable than Light Crude Oil. Heavy Crude Oil is typically understood to be Crude Oil with an API Gravity that is less than 20°.

*Hedge Contract:* a derivative contract, with Crude Oil, Natural Gas or NGLs of certain specifications as the underlying commodity. A Hedge Contract may settle with physical delivery of the underlying hydrocarbon or settle financially and may be traded on an exchange or directly between counterparties. Hedge Contracts are used in the oil and gas industry to reduce exposure to future commodity price fluctuations.

*Held by Production (HBP):* the Secondary Term of most Oil and Gas Leases allows for the Lessee to retain the Lease for so long as there is Production in Paying Quantities. Leases (and the underlying Lands) that are in their Secondary Term are commonly referred to as being Held by Production or HBP.

*Henry Hub:* a significant trading hub for Natural Gas in North America located in Erath, Louisiana, and the location specified for physical delivery of Natural Gas futures contracts traded on the NYMEX. The Henry Hub interconnects with multiple interstate and intrastate Natural Gas Pipelines.

*High Splits:* the IDR tier in which the holder of the IDR receives 50% of every incremental dollar paid in a cash distribution to the limited partners.

*Holdback Amount:* in the context of a PSA, a Holdback Amount is a portion of the applicable purchase price that is paid into an escrow account at Closing (instead of directly to the seller) of the transaction to secure certain post-Closing obligations of the seller.

*Holdback Period:* the period of time that a Holdback Amount is to be held in escrow prior to being eligible to be distributed to the seller.

*Hookie Dook:* in the context of debt financing in the oil and gas industry, a colloquial term for provisions in an indenture that provide significant flexibility to borrowers to take on additional debt without violating the

covenants of the indenture. Who came up with this name? But at least it's fun to say!

*Horizon*: another term for Stratum.

*Horizontal Drainhole Displacement*: another term for Lateral Length.

*Horizontal Drilling*: the process of Drilling one or more Horizontal Wells. Horizontal Drilling entails Drilling an initial vertical segment, a Kick-Off Point where Drilling begins to deviate from vertical, and thereafter Drilling a Lateral that is intended to be within the Target Formation. As compared to conventional vertical drilling, Horizontal Drilling, coupled with other techniques such as Hydraulic Fracturing, significantly increases a Wellbore's exposure to a Target Formation, which is particularly helpful in producing Hydrocarbons from low Permeability Formations, such as Shale.

*Horizontal Spacing*: spacing describes the number of acres assigned to a Well by a state regulatory agency. Horizontal Spacing applies to Horizontal Wells and dictates how far the Wellbore of the Horizontal Well must be set back from lease lines.

See also Rule 37 and Rule 38. In contrast, see Vertical Spacing.

*Horizontal Well*: a Well in which the Lateral of the Wellbore exceeds the vertical component of the Wellbore within the Target Formation. Note that what constitutes a Horizontal Well may be defined differently by Field Rules, statutes or applicable transaction documents.

In contrast, see Vertical Well.

*Hot Oiler*: not just the glistening guy sporting the Speedo on the beach. A machine, usually attached to or carried on a truck, that creates heat which is used to cause oil, wax or other clogging constituents in a Wellbore to become less viscous and therefore increase the flow out of the Wellbore.

*HSR Act*: abbreviation of Hart Scott Rodino Act.

*Hydraulic Fracturing*: a Stimulation operation that increases the Production of Hydrocarbons from a Well by pumping Frac Fluid into the Well at high pressure, thereby causing fractures in the Target Formation to extend out from the Wellbore. These fractures are then held open by the Proppant contained in the applicable Frac Fluid. Hydraulic Fracturing is often used in connection with Oil and Gas Wells drilled in low Permeability Formations to increase the rate of Production. The evolution of Hydraulic Fracturing technology has allowed for the economic Production of Hydrocarbons from Formations that were otherwise historically uneconomic.

See also Multi-Stage Hydraulic Fracturing.

*Hydrocarbons*: naturally occurring molecules that contain various combinations and permutations of at least hydrogen and carbon. Generally, the spectrum of Hydrocarbons included within the context of oil and gas runs from Dry Gas to Heavy Crude Oil.

*IDC*: abbreviation of Intangible Drilling Costs.

*IDR*: abbreviation of Incentive Distribution Right.

*IEA*: acronym for International Energy Agency.

*Imbalances*: a general term used to refer to a Pipeline Imbalance and/or a Well Imbalance.

*Impermeable*: in the context of oil and gas Drilling, subsurface Formations that cannot be drilled through by ordinary means of Drilling.

In the context of geology, Formations through which Hydrocarbons cannot flow.

*Implied Covenant*: in the oil and gas context, an obligation implied to exist in an Oil and Gas Lease under state law that is binding upon the Lessee unless the covenant is specifically addressed in the Lease.

*Implied Covenant of Development*: if not expressly waived in an Oil and Gas Lease, many states will read into an Oil and Gas Lease an Implied Covenant requiring the Lessee to continue to develop the leased property even after Production in Paying Quantities has been achieved.

*Implied Covenant to Prevent Drainage*: if not expressly waived in an Oil and Gas Lease, many states will read into an Oil and Gas Lease an Implied Covenant requiring the Lessee to protect the leased property from Drainage. This Implied Covenant can be met by Drilling additional Wells, including Offset Wells, or Pooling the leased Acreage with other adjacent Acreage in order to drill another Well.

*Improved Oil Recovery (IOR)*: another term for Enhanced Oil Recovery or Enhanced Recovery.

*Incentive Distribution Right (IDR)*: an interest in an MLP that gives the holder (often times the general partner of the MLP) the right to an increasing share of cash distributions upon certain cash distribution thresholds being met.

*Increased Density Well*: another term for Infill Well.

*Indemnity Cap*: in the context of a PSA, a dollar ceiling (often expressed as a percentage of the applicable purchase price) that limits the seller's indemnification liability (and sometimes the buyer's as well). An indemnifying seller will not be required to indemnify the indemnified buyer for any amounts the buyer claims that, together with the amounts of all other indemnity claims made by the buyer against the seller, are in excess of the applicable Indemnity Cap.

*Indemnity De Minimis / Indemnity Threshold:* in the context of a PSA, a dollar threshold that limits the seller's indemnification liability (and sometimes the buyer's as well). In order for the indemnifying seller to be liable for any claim for indemnification, the claim must be in excess of the Indemnity Threshold. All claims that fail to reach the applicable Indemnity Threshold are, unless otherwise expressly excepted from the application of the Indemnity Threshold, essentially waived by the indemnified buyer. The interplay between the Indemnity Threshold and Indemnity Deductible in any PSA is important, as both benchmarks must typically be met for the indemnified buyer to be entitled to any recovery. Unlike the Indemnity Deductible, once reached by a particular claim, the Indemnity Threshold does not limit the indemnified buyer's recovery on such claim to only amounts over and above the Indemnity Threshold.

*Indemnity Deductible:* in the context of a PSA, a dollar threshold (often expressed as a percentage of the applicable purchase price) that limits the seller's indemnification liability (and sometimes the buyer's as well). In order for the indemnifying seller to be liable for any claim for indemnification that is not otherwise expressly excepted from the application of the Indemnity Deductible, the total value of all claims for indemnification made against the seller must exceed the Indemnity Deductible for the indemnified buyer to be entitled to recovery. Importantly, in an Indemnity Deductible context, the indemnifying seller is only liable for amounts over and above the Indemnity Deductible.

*Independent Landman:* a Landman who does not work for an oil and gas company.

*Independent Producer / Independent Oil Company:* an oil and gas company that focuses exclusively on the Upstream segment of the oil and gas business, as opposed to an Integrated Oil Company.

In the oil and gas industry, certain tax deductions, such as Percentage Depletion, are available only to Independent Producers. The IRS defines an Independent Producer as a taxpayer with less than 75,000 Bbl/d of refining Capacity and less than US\$5 million per year in retail sales.

*Indian Lands:* federal lands owned by Native American tribes. Indian Lands generally fall into one of two categories: (i) tribal lands (e.g., lands owned by a Native American tribe collectively with rights of perpetual occupancy); and (ii) allocated lands (e.g., lands an individual Native American holds with specific restrictions on alienation). Leasing of Indian Lands often involves specific Lease forms and BIA approval.

*Individual Defect Threshold:* in the context of a PSA, a dollar threshold that limits the seller's liability for Title Defects and/or Environmental Defects. In order for the Title Defect Mechanism or Environmental Defect Mechanism to apply to any claimed Title Defect or Environmental Defect, the defect must have a Title Defect Amount or Remediation Amount in excess of the Individual Defect Threshold. All claimed defects

that fail to reach the applicable Individual Defect Threshold are, unless otherwise expressly excepted from the application of the Individual Defect Threshold, essentially waived by the buyer.

See also Environmental Defect Threshold and Title Defect Threshold.

*Individual Environmental Defect Threshold:* another term for Individual Defect Threshold and/or Environmental Defect Threshold.

*Individual Title Defect Threshold:* another term for Individual Defect Threshold and/or Title Defect Threshold.

*Industry Player:* in the context of oil and gas transactions, a term used to refer to an oil and gas company or other industry-specific entity that is a party to a transaction, in contrast to parties to the transaction that are financial investors or lenders. For example, in a joint venture transaction, often at least one party to the joint venture will be an Industry Player with the experience and know-how to operate the joint venture assets, while the other parties will contribute financially but will participate as Non-Operators.

*Infill Well / Infill Drilling:* a Well that is drilled in an already delineated Formation, typically between Producing Wells, in order to increase the total recovery of Hydrocarbons from the Formation. Infill Wells are drilled after Exploratory Wells and Delineation Wells have been drilled. Field Rules (and any exceptions thereto) will determine the allowed density of Infill Wells.

*Initial Reservoir Pressure:* the pressure of a Reservoir before the Production of Hydrocarbons has depleted the Reservoir. Initial Reservoir Pressure is determined by shutting in the Discovery Well upon first discovering Hydrocarbons for a certain period of time to allow the pressure lost from penetrating the Reservoir to rebuild, and then measuring the pressure of the subsequent initial Production over a certain period of time (e.g., 24 hours).

*Initial Shut-In Period:* the period of time when a Discovery Well is first shut-in after the first discovery of Hydrocarbons in order to determine the Initial Reservoir Pressure.

*Initial Well:* in connection with the AAPL Form JOA, the Initial Well is a Well the parties have agreed and approved at the time the JOA is executed. Note that under the AAPL Form JOA the parties do not have to specify an Initial Well, but may choose to do so.

*Injection Gas:* Natural Gas that is injected through an Injection Well into an oil Reservoir to increase the pressure of the Reservoir and thereby increase the recovery of oil.

See also Gas Lift, Gas Lift Gas and Secondary Recovery.

*Injection Well:* a Well used to inject Natural Gas or carbon dioxide into a producing Reservoir in connection with Secondary Recovery or Gas Lift operations and the maintenance of Reservoir Pressure.

*In-Kind Balancing:* a true-up mechanism (often seen in hydrocarbon sales contracts, Midstream service agreements, and Acreage Trade agreements) that allows parties to an agreement to correct an imbalance (e.g., a Pipeline Imbalance or Acreage imbalance) by adjusting the amount of Hydrocarbons or Acreage to be received and/or exchanged between the parties.

In contrast, see Cash Balancing.

*In-Situ Recovery:* in the context of extracting hard minerals, an alternative extraction method to mining the minerals. In-Situ Recovery is also used for extracting certain Hydrocarbons with physical traits more similar to hard minerals than to Liquid Hydrocarbons.

In the context of oil Production, In-Situ Recovery is the process of converting very viscous Heavy Crude Oil / Oil Sands / Bitumen into a less viscous form, while the Hydrocarbons are "in place" (i.e., still contained within the hydrocarbon-bearing rock). Most In-Situ Recovery processes use heat to decrease the Hydrocarbons' Viscosity (and often upgrade the gravity). A Steam Flood, Water Drive or similar method then sweeps the heated, less viscous Hydrocarbons to a Producing Well.

*Intangible Drilling and Development Costs (IDCs):* costs for certain intangibles that a Working Interest owner may, for US federal income tax purposes, elect to deduct in the year incurred rather than recover over the property's useful life. These costs must be incident to and necessary for preparing or Drilling Oil and Gas Wells and must be incurred for items that themselves have no salvage value, including labor, fuel, repairs and hauling. Expenditures for coring analyses, cement, Mud and the erection of drilling platforms, as well as an allocable portion of overhead expenses clearly related to Drilling and Development activities, are also considered IDCs.

IDCs generally constitute 65-80% of the total cost of Drilling a Well and are generally themselves 100% deductible in the year incurred.

In contrast, see Lease Operating Expenses.

*Integrated Oil Company:* an oil and gas company that has businesses across the various sectors of the oil and gas industry (e.g., Upstream, Midstream and Downstream).

*Interconnect Agreement:* an agreement entered into between the owners of two (or more) interconnecting facilities (e.g., Pipelines, Terminals). An Interconnect Agreement will typically set forth, among other things, the allocation of liabilities with respect to any damages that may occur at the point of interconnection, access rights to inspect and maintain the point of interconnection, and procedures regarding modifying or upgrading the interconnecting facilities.

*Interim Period / Interim Period Covenants:* in the context of a PSA where the signing and Closing of the applicable transaction are not simultaneous, this term refers to the time period between the signing of the PSA and the Closing.

During an Interim Period, the Interim Period Covenants typically (i) require the seller to continue the operation and maintenance of the applicable assets or entity in the ordinary course of business, and (ii) restrict the seller from taking certain actions without the buyer's permission, in each case, in order to ensure that the buyer receives the benefit of the bargain as it existed at the PSA's signing.

*Intermediate Crude Oil:* Crude Oil with a sulfur content between 0.5% and 2.5%.

In contrast, see Sour Crude Oil and Sweet Crude Oil.

*Intermittent Gas Lift:* another term for Gas Lift or Gas Lift Drive.

*International Energy Agency (IEA):* an international agency (whose members are comprised of primarily OECD nations) that provides energy security policy recommendations to its member nations, as well as widely followed statistics regarding worldwide oil and gas Production, demand and Development.

*Interruptible Service:* in the context of Midstream service agreements, Interruptible Service does not provide a customer with a guarantee of Capacity on the applicable Midstream assets. The service provider may typically curtail or interrupt Interruptible Service at any time, and for any reason. As a result, Interruptible Service rates are typically lower than those for Firm Service.

*Interstate Oil and Gas Compact Commission:* a US, multi-state, governmental body that promotes the safe and efficient Development of domestic oil and gas resources, and is a leader in oil and gas policy issues.

*Jack-Ups / Jack-Up Rig:* an offshore rig that, once on location, is stabilized by legs that extend to the seafloor and that are adjustable in height. Jack-Up Rigs are therefore primarily designed for relatively shallow waters.

*JDA:* abbreviation of Joint Development Agreement.

*Jeffersonian Section:* another term for Section.

*JIB:* abbreviation of Joint Interest Billing. Also a term commonly used to refer to the invoices and other notifications delivered to an applicable party pursuant to Joint Interest Billing.

*JOA:* abbreviation of Joint Operating Agreement.

*Joint Account:* a term often used in connection with JOAs (and the accompanying COPAS Accounting Procedure) that represents the



account to which a party incurring expenses (typically the Operator) may charge certain expenditures attributable to the Participating Parties in an operation. Charges made for the Joint Account are then billed directly to the Participating Parties in accordance with their pro rata interests in the operation.

*Joint Development Agreement (JDA):* a type of agreement under which two or more parties agree to jointly explore and/or develop oil and gas interests within a defined geographic area or based on other specified criteria. This type of agreement takes different forms depending upon the parties involved and the commercial terms of the applicable transaction.

*Joint Interest Billing (JIB):* a type of accounting specific to the oil and gas industry where more than one party has an ownership interest in the asset or operation. Joint Interest Billing allocates the revenue and expenses regarding the asset or operation among the parties that have an ownership interest in the applicable asset and/or that are participating in the applicable operation.

*Joint Loss Agreement:* an agreement between joint owners of the same interest regarding the treatment and distribution of losses between the joint owners.

In the context of a JOA, this term means that the JOA provides that all parties to the JOA share any Loss of Title in accordance with their Working Interest across the entire Contract Area, instead of just the party who previously held the lost interest.

*Joint Operating Agreement (JOA):* an agreement oil and gas industry participants use to facilitate the joint development of the Tract(s) subject to the agreement.

See also AAPL Model Form 610 Joint Operating Agreement and AIPN Model Form International Operating Agreement.

*Joint Tenancy:* an undivided ownership interest in a single Tract between two or more persons or entities (each a "joint tenant"). In a Joint Tenancy, the death of one joint tenant causes the property interest held by the deceased joint tenant to transfer automatically to the surviving joint tenant because of the presence of the right of survivorship (a right not present in a Tenancy in Common). Joint tenants cannot prevent other joint tenants from developing the applicable Tract, and each joint tenant has the right to use and occupy the Tract.

In contrast, see Tenancy in Common.

*Junk:* not to be confused with what may be in your trunk, this is another term for Fish.

*Justified for Development:* in connection with Reservoir Engineering and management, Justified for Development means the development project is considered justified based upon geologic and economic forecasts, and

there is a reasonable expectation that the development project will be approved.

See also Approved for Development and On Production.

*Kelly*: part of a Drilling Rig that is a square or hexagonal steel tube or pipe that transfers rotary motion from the swivel to the Rotary Table and the Drill String.

*Kelly Bushing*: a device used on a Drilling Rig that helps transmit the torque of the Rotary Table to the Kelly.

*Kick*: the force of fluids into the Wellbore caused by penetration of a Reservoir when there is a sufficiently large pressure differential between the pressure in the Formation and Wellbore. Kicks can be a classic “good news” (e.g., there are Hydrocarbons present) / “bad news” (e.g., a Kick may be a precursor to a Blowout) situation.

*Kick-Off Point*: the depth or location in the vertical Wellbore in which the Wellbore is deviated from vertical to a slanted or horizontal orientation. After the Kick-Off Point, the Wellbore’s orientation becomes increasingly horizontal until the Lateral segment of the Wellbore levels out.

*Kill a Well*: the intentional or unintentional action of causing a Well to temporarily or permanently cease Production of Hydrocarbons. A Well is killed by the uphole presence of fluids sufficiently heavy to prevent the Hydrocarbons from continuing uphole, including through injecting high density Drilling Mud into the Wellbore. RIP Well.

*Kill Line*: a high pressure pipe that is used in connection with Blowout Preventers to pump kill fluid Downhole to help Kill a Well in the event of an emergency.

*LACT*: abbreviation of Lease Automatic Custody Transfer.

*Landman*: just might happen to be the club champion at your local golf course, and also a professional in the oil and gas industry who is responsible for securing and managing Mineral Rights (e.g., through signing up an Oil and Gas Lease and Running Title), facilitating the permitting of Wells, and managing and maintaining oil and gas interests, including relations with Landowners and Lessors. We would also be remiss if we didn’t make clear that both females and males can make excellent Landmen.

*Landowner*: generally this term is used to refer to someone who owns either the Surface Estate and/or the Mineral Estate, which (if the Mineral Estate owner) is often times the Lessor under an Oil and Gas Lease.

*Landowner’s Royalty*: another term for Lessor Royalty.

*Lands*: a term used to refer generally to the real property interests (including both the Surface Estate and the Mineral Estate) that are the subject of an Oil and Gas Lease or agreement.

*Lateral*: the horizontal segment of a Horizontal Well. Once the Well is Completed, all or a portion of the Lateral is meant to serve as the drainhole for Hydrocarbons in the Target Formation.

*Lateral Length*: the length of a Horizontal Well's Lateral.

*Lay Down Pipe*: in connection with the Drilling of a Well, this term refers to the process of pulling Drill Pipe from the Well and placing the pipe back on the pipe racks or on the ground. In connection with Pipelines,

Lay Down Pipe is also a colloquial term used to refer to the installation of Pipelines.

*Lay-Down Spacing Unit v. Stand-Up Spacing Unit*: on a map with a northerly orientation, a Lay-Down Spacing Unit is shown as a rectangle that is wider (from east to west) than it is tall (from north to south), and a Stand-Up Spacing Unit is shown as a rectangle that is taller (from north to south) than it is wide (from east to west).

*Laying Pipe*: another term for Lay Down Pipe.

*Lease*: although ultimately characterized by state law, this term represents the agreement between a Landowner and a Lessee whereby the Lessee is granted the right to enter the leased property to conduct Drilling operations to exploit and remove any Hydrocarbons produced from the Mineral Estate subject to the Lease.

An Oil and Gas Lease is typically considered a Fee Simple Determinable interest in real property.

*Lease Automatic Custody Transfer (LACT) Unit / LACT Meter*: a LACT Unit is a device used on a Lease site to automatically transfer Hydrocarbons at a given interconnection point and to record the transfers by preparing a Run Ticket.

A LACT Meter is used to measure the volume of Hydrocarbons passing through the LACT Meter at the applicable interconnection point, which is often the point of entry into a Pipeline or other point at which custody of the Hydrocarbons will be transferred to another party.

*Lease Bonus*: another term for Bonus.

*Lease Condensate*: another term for Condensate.

*Lease Exhibit*: an exhibit to an oil and gas industry agreement or instrument that sets forth the Oil and Gas Leases subject to the applicable agreement or instrument. The Lease Exhibit will describe the applicable Leases in sufficient detail so that the Leases can be identified and/or transferred. This information may include a Legal Description, recording information, Gross Acres, Net Acres, Working Interest and Net Revenue Interest.

*Lease Operating Expenses (LOE)*: in the context of oil and gas industry transaction documents, LOE is generally used as a catch-all for certain

costs and expenses associated with operating and maintaining a Lease that is already producing Hydrocarbons (as opposed to being developed).

For US federal income tax purposes, LOE are those expenses incurred to operate and maintain producing Oil and Gas Leases. LOE includes costs and expenses for labor, equipment repair and maintenance, utilities, insurance and Overhead. LOE are deductible in the year incurred. In the case of certain Workover and re-drilling costs, it can be difficult to distinguish costs that are IDCs from those that are LOE. While the distinction may appear unimportant as taxpayers generally elect to deduct, rather than capitalize, IDCs, the distinction is relevant to the alternative minimum tax, the calculation of a corporate taxpayer's earnings and profits, and other tax matters.

In contrast, see Intangible Drilling and Development Costs.

*Lease Tank:* tanks that are on the producing Lease or Unit to collect Hydrocarbons as they are produced.

*Leasehold Assignment:* an assignment or Conveyance of a Leasehold Interest. A Leasehold Assignment is typically made by an Assignment and Bill of Sale.

*Leasehold Interests:* a general term used to refer to the rights that a Lessee has to enter upon the leased property to conduct E&P operations, which can also be used to refer to duties owed by the Lessee or retained by the Lessor.

*Legal Description / Legal Property Description:* a written description of real property that is legally sufficient to identify and precisely locate the subject property. Transactions involving the transfer of real property universally require a Legal Description of the subject property. Some of the more common methods of providing a Legal Description include using Metes and Bounds, Section-Township-Range, reference to another instrument or document, name designation and Subdivision Lot.

*Lessee:* the person or entity that receives from the Lessor the rights to explore for and produce Hydrocarbons from a given property by virtue of an Oil and Gas Lease.

*Lessor:* the person or entity which conveys to the Lessee the right to explore for and produce Hydrocarbons by virtue of an Oil and Gas Lease. A Lessor owns the minerals that are the subject of the Oil and Gas Lease.

*Lessor Royalty:* the percentage of gross Production from an Oil and Gas Lease that is paid or owed to the Lessor as part of the consideration for the leasing of the applicable Mineral Interest.

*Letter of Credit:* a letter guaranteeing payment of a certain amount of money to the recipient of the letter, which a financial institution usually provides on behalf of a client. Letters of Credit are often used in the oil and gas industry as a form of security for payments owed under

agreements, or to provide protection for potential future liabilities such as environmental liabilities.

*Letter of Intent (LOI):* a generally non-binding agreement between two or more parties setting forth the parties' expressions of intention as to the basic tenets of a proposed transaction. Typically, very few provisions of an LOI are binding on the parties. Examples of typically binding provisions include exclusivity, sharing of costs and expenses, governing law and confidentiality.

*Letters in Lieu of Transfer Orders:* a letter that a seller of producing Oil and Gas Properties sends to purchasers of Production from the properties in order to direct the purchasers to begin paying the applicable Proceeds to another party (typically the buyer of the producing Oil and Gas Properties).

See also Transfer Order.

*Lifting Costs:* another term for Production Costs.

*Light Crude Oil:* Crude Oil that has relatively more "light" components, such as gasoline, and relatively less "heavy" components such as asphalt, than does Heavy Crude Oil. Light Crude Oil has a lower density and lower Viscosity than Heavy Crude Oil.

*Like-Kind Exchange:* property that is either held for investment or held for use in a trade or business may be exchanged for property of a "like kind" without recognizing gain or loss for US federal income tax purposes. The taxpayer's tax basis in the property the taxpayer receives in a Like-Kind Exchange is equal to its basis in the property surrendered, as measured immediately before the exchange. The taxpayer's recognition of gain from the property it receives in a Like-Kind Exchange is then deferred until the received property is disposed of in a taxable transaction.

A Like-Kind Exchange may be structured to allow a taxpayer to simultaneously exchange like-kind property, or, provided certain requirements are satisfied, to allow a taxpayer to receive and relinquish like-kind property in separate transactions.

In general, Fee Simple interests, Working Interests and Royalty Interests are all of "like-kind." Like-Kind Exchange treatment is not available for exchanges of partnership interests (including Mineral Interests treated as held by a Tax Partnership), exchanges involving property that is stock in trade (or other property held primarily for sale), and exchanges of US real property for non-US real property. There are also restrictions on Like-Kind Exchanges between related parties.

*Liquefied Natural Gas (LNG):* Natural Gas that is cooled in a liquefaction facility into liquid form. LNG is produced in order to more easily transport and store Natural Gas, as LNG can be transported more economically over long distances and/or stored than can gaseous Natural Gas, as LNG is more concentrated in volume.

*Liquefied Petroleum Gas (LPG):* flammable hydrocarbon gases such as Butane and Propane that are in a liquid state. LPGs may be derived from Natural Gas Processing or from Crude Oil Refining.

*Liquid Hydrocarbons:* a broad term that captures Hydrocarbons in liquid form, such as Crude Oil, Condensate, NGLs, LNG and LPG.

*Liquid-Rich Shales:* Shale rock Formations that bear relatively more Crude Oil and Condensate than Dry Gas. Within a given Basin, certain areas may be more liquid-prone than others.

*Live Oil:* Crude Oil infused with a very high concentration of Natural Gas, causing the Crude Oil to be volatile and more combustible.

*LNG:* abbreviation of Liquefied Natural Gas.

*Location Exception:* an exception that must be obtained from the relevant governmental agency to drill a Well that does not otherwise comport with the Field Rules or Spacing rules.

*LOE:* abbreviation of Lease Operating Expenses.

*Log:* records that are created during the process of Drilling a Well to its Total Depth. Well Logs are used to analyze the various properties of the strata and fluids through which a Wellbore passes and are also used in recording a Well's depth and the delineation of the Reservoir(s) penetrated.

*LOI:* abbreviation of Letter of Intent.

*Losing the Hole:* good luck finding it again ... a colloquial term used to refer to the loss of usability of a Wellbore, usually due to a collapse caused during the Drilling of a Well or from mechanical difficulties.

*Loss of Title:* in the oil and gas context, the loss of all or a portion of an Oil and Gas Lease or interest, often due to the failure to properly submit a payment necessary to maintain the interest (e.g., rentals, Shut-In Royalty payments, Royalties).

In the context of a Title Defect Mechanism, Loss of Title means failure to have Defensible Title to a property.

*LPG:* abbreviation of Liquefied Petroleum Gas.

*Lubricant:* a liquid or mixture of liquids and solid constituents added to Drilling Fluid in order to reduce friction in the Wellbore during Drilling operations.

*MAC:* abbreviation of Material Adverse Change.

*MAE:* abbreviation of Material Adverse Effect.

*Mailbox Money:* a colloquial term for Royalty checks that an owner of a Royalty Interest receives. Mailbox Money is what allowed the Clampetts to up and move to Beverly Hills.

*Maintenance of Uniform Interest (MUI):* a contractual restriction applicable to jointly owned properties within a given area that stipulates that the interests of the parties in the applicable properties are uniform across the entire area. Practically, an MUI provision commonly requires that any transfer of property within the applicable area be a transfer of the transferor's entire interest, or an undivided percentage of the transferor's interest, including as to all applicable depths involved, in order to maintain the uniformity of ownership.

The AAPL Form JOA contains an MUI provision, although parties using the AAPL Form JOA often elect to delete such provision to allow the parties greater freedom in the use of their respective interests in the covered properties.

*Making Hole:* biting our tongues here ... but just a colloquial term for the act of Drilling a Well.

*Management Committee:* another term for Operating Committee.

*Marcellus Shale:* a popular name used for a Shale Formation that is generally located under parts of Ohio, West Virginia, Pennsylvania and New York.

*Marginal Well:* generally, a Well that is only slightly profitable or is no longer profitable to operate due to low Production. A Marginal Well is generally a Well in which the average Production is less than 15 Bbl/d or Boe/d.

*Marketable Title:* a standard of title that generally means title that is free and clear of liens and is not subject to a claim that would present a real and substantial likelihood of Loss of Title or litigation that would prevent the property from being sold at a fair price.

*Marketing Agreement:* an agreement whereby one party agrees to sell or market the Hydrocarbons produced by another party for a period of time, often for a fee based upon the volumes marketed.

*Mark-to-Market Accounting:* an accounting method whereby an asset or liability's value is determined by periodically revaluing the asset or liability against its market value, as opposed to the traditional Full Cost Accounting methodology. Mark-To-Market Accounting is often most appropriate in determining the value of fungible, liquid assets (e.g., Hydrocarbons at or near a market) and financial products derivatives related to such assets. Hedging and trading programs typically value their books by the Mark-To-Market Accounting methodology.

*Master Limited Partnership (MLP):* simply put, an MLP is a partnership that is publicly traded and listed on a national securities exchange. More specifically, an MLP must meet the following criteria:

First, the MLP must be a state law entity that can be treated as a tax pass-through entity. Most MLPs are formed as Delaware limited partnerships.

Alternatively, the MLP may be a state law limited liability company or even a state law trust, such as a Delaware statutory trust. Although the governance structure may differ among these entity types, any of these entities may be treated as partnerships for federal income tax purposes.

Second, the MLP must be publicly traded. Owners of MLP units can buy and sell interests in the MLP. The publicly traded element of an MLP simply provides for the same type of liquidity (or float) that a public corporation enjoys — although for the most part MLPs' float and trading volume are relatively small compared to publicly traded corporations. This is largely because of the nature of MLP unitholders; retail investors seeking yield hold the majority of MLP units. Moreover, given certain tax limitations, these investors are typically domestic, rather than foreign. Institutional ownership of MLPs has been limited (although growing in recent years), mainly because MLPs generate income that is not conducive to tax-exempt investors' ownership.

Third, the MLP must be listed on one of the major exchanges. Today, the most common securities exchange for MLPs is the NYSE, although quite a few MLPs are listed on the NASDAQ.

Finally, in order for an MLP to be treated as a pass-through entity for US federal income tax purposes, rather than a corporation, the MLP must meet the "qualifying income" test, which requires at least 90% of an eligible entity's gross income to be Qualifying Income.

For further discussion of MLPs, see Latham & Watkins' *The Book of Jargon: MLPs*.

*Master Services Agreement (MSA)*: a contract that facilitates an ongoing relationship between a service provider and a customer by detailing each party's ongoing duties and obligations. Usually the parties will agree upon a simplified work order for each project, with the work order containing the applicable details of the requested individual service. Each work order is subject to the general terms and conditions of the relationship that are set forth in the body of the MSA.

*Material Adverse Effect (MAE) / Material Adverse Change (MAC)*: in the context of mergers and acquisitions agreements, a Material Adverse Effect is a change, fact, condition, event and/or circumstance occurring before the Closing that, individually or in the aggregate, is materially adverse to (i) the ownership, operation, or value of the asset(s) or business subject to the agreement, as the asset(s) or business is operated or expected to be operated as of the agreement's execution date; or (ii) the seller's ability to consummate the transactions or perform its obligations under the agreement. The term is frequently subject to heavy negotiation. With respect to mergers and acquisitions in the oil and gas industry, some events that are commonly excluded from the definition of MAE are events resulting from: (a) entering into or publicly announcing the subject agreement; (b) any action taken by the seller in accordance



with the terms of the agreement or with the buyer's Consent; (c) changes in general market conditions; (d) Force Majeure events; (e) matters that are cured or no longer exist at the Closing; (f) any reclassification or recalculation of reserves in the ordinary course of business; (g) changes in the prices of any Hydrocarbons; and (h) natural declines in Well performance.

*Material Contracts*: in connection with a PSA, Material Contracts are typically those contracts specifically identified in a representation and warranty to be significant or important, due either to the contract's value or the types of provisions, obligations and/or restrictions provided in the contract.

*Maturation*: the process whereby organic material in a Source Rock becomes a Hydrocarbon; the type and form of the Hydrocarbon depending, generally, on the duration, heat and pressure exerted upon the Source Rock.

*Mbbl*: abbreviation of large quantities of liquids produced, Mbbl means one thousand Barrels.

*Mbbl/d*: abbreviation of the rate at which liquids are produced, Mbbl/d means one thousand Barrels per day.

*Mboe*: abbreviation of the quantity of BOE produced, Mboe means one thousand Barrel of Oil Equivalents.

*Mboe/d*: abbreviation of the production rate of BOE, Mboe/d means one thousand Barrel of Oil Equivalents per day.

*Mcf*: abbreviation of large quantities of Natural Gas, Mcf means 1,000 cubic feet of Natural Gas.

*Mcfe*: abbreviation of 1,000 Cubic Feet Equivalent.

*Measured Depth*: the measurement of the Wellbore's total length, often measured by using the Drill String in the Wellbore.

In contrast, see True Vertical Depth.

*Measuring Tank*: a tank equipped to measure volumes of Liquid Hydrocarbons as they pass through the tank, often in connection with Well testing.

*Mechanic's and Materialman's Lien / M&M Lien*: a statutorily created lien which arises when improvements are made to Oil and Gas Properties (e.g., services and materials provided by a contractor to facilitate the Production of Hydrocarbons). Since an M&M Lien is created by statute, the procedures and filing requirements for establishing the lien vary by jurisdiction.

In Texas, M&M Liens are governed by Chapter 56 of the Texas Property Code.

*Memorandum of Understanding (MOU)*: another term for Letter of Intent, although MOUs often are more comprehensive than LOIs, with MOUs typically containing greater detail and more provisions that are binding upon the parties to the MOU.

*Meridian*: a measurement of longitude passing through specific locations on the Earth's surface. Meridians can be used as points of reference in connection with land Surveys and maps.

*Meter*: a piece of equipment used to track a specified unit of measurement (e.g., volume of Natural Gas or Crude Oil) at a particular location, whether at a particular point in time or for a specific time period. Flow Meters and LACT Meters are two types of Meters commonly used in the oil and gas industry.

*Meter Station*: a station, placed downstream of a Well that measures the quantity of Hydrocarbons produced from the Well. Pipeline Operators use these facilities to continuously measure all volumes of Hydrocarbons entering or leaving the applicable Midstream asset system, to manage the total amount of Hydrocarbons in the system.

*Metes and Bounds*: a method of describing real property that relies on physical geographical features (e.g., an apple tree, the intersection of two stone walls, artificial monuments, land of adjoining owners) and distances between them to define and describe the subject property's boundaries.

Metes and Bounds descriptions are still used in many of the original 13 colonies as well as Tennessee, Kentucky and Texas.

*Methane*: a gaseous hydrocarbon chain consisting of one carbon atom. Methane is often the primary component of unrefined Natural Gas and is considered to be Dry Gas.

*Midland Basin*: one of the Basins that makes up the Permian Basin of West Texas. The Midland Basin can be subdivided into several Formations that are capable of producing Hydrocarbons (e.g., the Spraberry, Dean and Wolfcamp, among others).

*Midstream*: a colloquial term for one of the three major sectors of the oil and gas industry, Midstream refers to the second phase, which involves the movement and storage of Hydrocarbons and is comprised of Gathering, shipping and transporting, Processing and storage of Hydrocarbons.

In contrast, see Upstream and Downstream.

*Migration*: the naturally occurring subsurface movement of Hydrocarbons, including movement from a Source Rock to a Reservoir and movement within a Reservoir. The Porosity and Permeability of the Source Rock or Reservoir Rock affects Migration.

*Mineral Deed:* a Conveyance of the Mineral Estate as a Fee Simple interest in real property.

*Mineral Estate:* an estate in real property comprised of the right of the owner to explore for, develop and produce the minerals below the surface of a particular Tract. The Mineral Estate generally includes all organic and inorganic substances, from all depths, that form part of the Lands underlying the applicable Tract, but commonly excludes certain subsurface minerals that are reserved for the Surface Estate.

A Mineral Estate may be “severed” from the Surface Estate and owned by a person other than the owner of the Surface Estate, in which case the Mineral Estate will be the Dominant Estate and the Surface Estate will be the Servient Estate.

*Mineral Interest:* a legal interest in the ownership of the minerals underlying a property, which grants the holder the right to enter and occupy the surface as is reasonably necessary to explore, drill, mine, remove and market such minerals and the right to assign or convey such rights to third parties. The Mineral Interest is cost bearing, meaning it bears the costs associated with exploring, Drilling, mining, removing and marketing.

In contrast, see Royalty Interest.

*Mineral Lien:* another term for Mechanic's and Materialman's Lien.

*Mineral Rights:* another term for Mineral Interest.

*Minimum Royalty / Minimum Royalty Clause:* a provision in some Oil and Gas Leases that requires the Lessee to pay a stipulated Royalty to the Lessor over a set time period (usually annually), regardless of the Production from such Lease (or Well).

*Minimum Volume Commitment (MVC):* in connection with Midstream services, an MVC is a contractual commitment from a customer to provide a minimum amount of volumes of Hydrocarbons to the service provider over a set time period. Often, a Shortfall Payment will be owed if the volumes provided to the Midstream service provider are below the applicable MVC.

*Mississippi Lime Shale:* a relatively shallow Shale Formation generally located between the depths of 4,000 to 7,000 feet below the surface in parts of Northern Oklahoma and Southern Kansas.

*MLP:* abbreviation of Master Limited Partnership.

*Mmbl:* abbreviation of large quantities of liquids produced, Mmbl means one million Barrels.

*Mmboe:* abbreviation of the quantity of BOE produced, Mmboe means one million Barrel of Oil Equivalents.

*MMBtu*: abbreviation of one million British Thermal Units.

*Mmcf*: abbreviation of large quantities of Natural Gas, Mmcf means one million cubic feet.

*Mobilization*: in the context of a Drilling Rig or other type of rig, the process of moving such rig from one location to another.

*Moonpool*: an opening in the center of a Drill Ship or Semi-Submersible Drilling Rig, which allows for passage of equipment and/or divers into and from the water. Like you, we thought this definition would be more exciting than it is. Sorry.

*Mortgage*: a Mortgage is an instrument used in a Mortgage State to secure a lien on real property interests located in such state and is typically recorded in the county records in which the pledged real property is located.

In Mortgage States that follow the “title theory” of Mortgages, a Mortgage is an instrument that conveys title to the collateral securing an obligor's debt or other payment obligation to the relevant secured party, with the condition that the secured party will re-convey the collateral to the obligor upon full satisfaction or discharge of the debt or other payment obligation. However, if an event of Default occurs, the secured party has the right to retain the collateral or sell the collateral and retain the proceeds (to the extent of the debt or other payment obligation).

In Mortgage States that follow the “lien theory” of Mortgages, a Mortgage is an instrument that creates a security interest in or lien on collateral securing an obligor's debt or other payment obligation for the benefit of the secured party, with the condition that the lien be released upon full satisfaction or discharge of the debt or other payment obligation. However, if an event of Default occurs, the secured party has the right to foreclose on and retain or sell the collateral (to the extent of the debt or other payment obligation), at which time title transfers to the secured party.

In contrast, see Deed of Trust.

*Mortgage State*: a state that uses a Mortgage to secure a debt or other payment obligation rather than a Deed of Trust. Some Mortgage States are “title theory” states, meaning that the Mortgage is viewed as a Conveyance of title to the collateral, while other Mortgage States are “lien theory” states, meaning that the Mortgage is viewed as creating a lien on the collateral, with the obligor retaining title.

Examples of “title theory” Mortgage States include Alabama and Massachusetts. Examples of “lien theory” Mortgage States include Florida and New York.

In contrast, see Deed of Trust State.

*Mother Hubbard Clause*: sadly no cupboards or rhymes involved here. A common clause included in Oil and Gas Leases providing that the Lease covers, in addition to the real property specifically described in the Lease, any adjacent or contiguous properties the Lessor owns that may have been inadvertently left out of the applicable property description.

*MOU*: abbreviation of Memorandum of Understanding.

*Mousehole*: a hole in the floor of a Drilling Rig in which a joint of pipe can be held in anticipation of connecting that pipe to the Drill String. Won't find any cheese in here.

*MSA*: abbreviation of Master Services Agreement.

*Mud*: another term for Drilling Fluid or Drilling Mud.

*Mud Engineer / Mud Logger*: the person responsible for maintaining adequate Mud weight to maintain the correct hydrostatic pressure in the Wellbore and sufficient Viscosity to carry the Cuttings out of the Wellbore. Mud Engineers also log cutting samples from the Wellbore for the geologists and other engineers.

*Mud Gas Separator*: another term for Poor Boy.

*MUI*: abbreviation of Maintenance of Uniform Interest.

*Multilateral Well*: a Horizontal Well that has multiple Laterals drilled from the same vertical Wellbore, whether in the same Target Formation or in different Zones.

*Multiple Completions*: a single Wellbore designed to produce from two or more producing Zones.

*Multi-Stage Hydraulic Fracturing*: a method of Hydraulic Fracturing whereby portions of the Lateral are isolated and fractured at various times; the entire Lateral is fractured in stages.

*MVC*: abbreviation of Minimum Volume Commitment.

*NASDAQ*: acronym for National Association of Securities Dealers Automated Quotations.

*National Association of Securities Dealers Automated Quotations (NASDAQ)*: a large global securities exchange that trades in both large and emerging growth companies, including many energy companies.

*National Environmental Policy Act (NEPA)*: a federal environmental law that governs the approval of major projects that receive federal funding or require federal permits. The law contains no substantive environmental regulations, but rather outlines a process by which federal agencies may approve major projects, including the requirement that the relevant federal agency (often with the project sponsor's support) prepare various impact reports on how the project will affect the environment.

*National Oil Company (NOC):* an oil company that is owned, completely or in the majority, by a national government, as opposed to an oil company that is independently owned. Examples of NOCs include Pemex (Mexico), Eni (Italy) and Saudi Aramco (Saudi Arabia).

*Native Gas:* in the context of Underground Gas Storage, Native Gas is the Natural Gas that was already present in the applicable Formation being utilized for storage, as opposed to the Natural Gas that is injected into the storage Formation.

*Natural Gas:* a mixture of gaseous Hydrocarbons, traditionally comprised primarily of Methane, but which may also contain lighter hydrocarbon chains such as Ethane, Propane, Butane and/or Pentane, as well as other gaseous impurities such as carbon dioxide and hydrogen sulfide.

See also Dry Gas and Wet Gas.

*Natural Gas Liquid (NGL):* hydrocarbons typically found in unrefined Natural Gas that are liquid or condensable under certain temperature and pressure conditions. Some NGLs, such as Propane, Butane and Pentane, are gaseous at standard temperature and pressure conditions, but may become liquid during Production or other operations. Other NGLs, such as Natural Gasoline, are liquid at standard temperature and pressure conditions.

Such Hydrocarbons are typically referred to as liquid or condensable hydrocarbon components when present in unrefined Natural Gas, and as NGLs after Processing and/or Fractionation.

See also Wet Gas.

*Natural Gas Policy Act (NGPA):* enacted in November 1978 as part of the National Energy Act, the NGPA expanded FERC's authority over Natural Gas Production to cover both intrastate and interstate Production. The NGPA introduced a complex system of price ceilings for first sales from the Wellhead based on the category of the gas sold, in order to create a single Natural Gas market, equalize supply and demand, and establish a system in which market forces drive the price of Natural Gas.

*Natural Gasoline:* an NGL made of longer hydrocarbon chains than other types of NGLs (generally more than five Hydrocarbons). Unlike NGLs with shorter hydrocarbon chains, Natural Gasoline is liquid at standard temperature and pressure conditions. Natural Gasoline is typically classified based upon its molecular composition and vapor pressure. Natural Gasoline can be combined with other Hydrocarbons to produce commercial gasoline.

*Naturally Flowing Well:* a Well in which the natural Reservoir Pressure is sufficient to lift Hydrocarbons to the surface without the need for any external pumping enhancement (e.g., a Pump Jack or Artificial Lift drive).

*Naturally Occurring Radioactive Material (NORM)*: radioactive material that is naturally present in various mediums. NORM is often exposed (or potentially exposed) in connection with oil and gas E&P activities.

*NDA*: abbreviation of Non-Disclosure Agreement.

*NEPA*: acronym for National Environmental Policy Act.

*Net Acres*: the amount of Acreage in a given Tract to which a Working Interest owner is entitled after taking into account other Working Interest owners and other shared Mineral Interest owners in the Tract.

The Net Acres present in a leased Tract are computed by multiplying (i) the Gross Acres covered by such Tract, by (ii) the percentage Mineral Interest owned by the applicable Lessor in the Tract, by (iii) the Lessee's Working Interest in the Tract.

*Net Profits Interest (NPI)*: a non-cost bearing interest that is carved out of a Working Interest. An NPI is, depending on the jurisdiction, regarded as a Conveyance of real property (often only for a limited time period), and the NPI owner shares in the net profits, if any, with respect to the properties from which the NPI was created.

*Net Revenue Interest (NRI)*: a type of interest in an Oil and Gas Property that entitles the holder thereof to a percentage of all hydrocarbon Production attributable to the property, after giving effect to all Burdens applicable to such property.

*Net Well*: the portion of a Well held by a certain Working Interest owner after accounting for the fractional ownership of other Working Interest owners in the same Well. For instance, a Well in which a Working Interest owner holds a 50% Working Interest would constitute 0.50 Net Wells.

*Net Well Structure / Net Well Target*: a type of Drill to Earn joint development transaction where the applicable "earning" counterparty's obligations are measured against the Drilling and Completion of a certain number of Net Wells, rather than by expending a certain amount of capital.

In contrast, see Drilling Dollars Structure.

*New York Mercantile Exchange (NYMEX)*: a commodity futures exchange headquartered in New York, New York. The NYMEX is the largest commodity exchange in the world and primarily trades in energy products.

The prices of Crude Oil and Natural Gas futures traded on NYMEX are commonly used in the oil and gas industry as reference points for certain Spot Prices and Strip Prices.

*New York Stock Exchange (NYSE)*: the largest global securities marketplace in the world. NYSE is the most common securities exchange for MLPs.

*NGL*: abbreviation of Natural Gas Liquid.

*NGPA*: acronym for Natural Gas Policy Act.

*Niobrara Shale*: a Shale Formation located under Northeast Colorado, Northwest Kansas, Southwest Nebraska and Southeast Wyoming.

*Nipple Down*: the process of disassembling a Drilling Rig and its related equipment, typically to prepare the Drilling Rig to be moved from one drilling location to another.

*Nipple Up*: the process of assembling a Drilling Rig and its related equipment for use at a Drilling location. If you've learned anything by now, it's that "nipple" is always a popular term.

*NOC*: abbreviation of National Oil Company; commonly pronounced "knock."

*Nodding Donkey*: something you would never see Eeyore do and a colloquial term for Pump Jack.

*Nomination*: most commonly seen in the context of Midstream services agreements, a Nomination is a customer's notification (or request, as applicable) of the volumes to be delivered into (and/or redelivered from) the applicable asset system with respect to a given time period.

*Nonassociated Gas*: another term for Unassociated Gas.

*Non-Commercial*: a Well, Formation or Play that is not capable of, or not currently capable of Production in Paying Quantities (whether due to insufficient reserve quantities, high Development Costs or technological hurdles).

*Non-Conforming Hydrocarbons*: in connection with Midstream services agreements or Marketing Agreements, Non-Conforming Hydrocarbons are those Hydrocarbons that do not meet the applicable Quality specifications for such Hydrocarbons contained in such agreement.

*Non-Consent / Non-Consenting Party*: a party's Election not to participate in or proceed with a proposed operation under the terms and provisions of an oil and gas joint development arrangement (typically a JOA). Such party is said to have gone "Non-Consent" and is referred to as a "Non-Consenting Party."

Depending on the applicable agreement's terms, a Non-Consenting Party's interest in the asset underlying such operation may thereafter be subject to a Non-Consent Penalty.



*Non-Consent Operation / Non-Consent Well:* an operation conducted (which may be the Drilling of a Well) under an oil and gas joint development arrangement (typically a JOA) in which less than all parties to the arrangement elect to participate.

*Non-Consent Penalty:* a penalty assessed against a Non-Consenting Party in favor of the Participating Parties in order to compensate the Participating Parties for the risk(s) they take in conducting a Non-Consent Operation. A Non-Consent Penalty is traditionally expressed as a percentage of the total costs the Participating Parties incur for such Non-Consent Operation, and is typically between 200% and 500% of such costs. Note that a Non-Consent Penalty is in addition to the right of the Participating Parties to recover 100% of their respective costs for such Non-Consent Operation. After the Participating Parties recover the applicable Non-Consent Penalty, the Non-Consent Party is thereafter entitled to its share of revenue from the applicable operation.

See also Payout.

*Non-Disclosure Agreement (NDA):* another term for Confidentiality Agreement.

*Non-Operating Working Interests / Non-Operating Interest / Non-Operator / Non-Op:* working Interest owners of a Well(s) who are not the Well's Operator, whether under a JOA, Unit agreement, Contract Operating Agreement or other similar contractual arrangement.

*Non-Participating Royalty Interest (NPRI):* an expense-free Royalty Interest carved out of the Mineral Estate that does not share in the Lease Bonus and Lease rentals and does not have Executive Rights to the Mineral Estate.

*NORM:* abbreviation of Naturally Occurring Radioactive Material.

*Not to be Unreasonably Withheld:* a limitation or condition commonly placed on a party's right to Consent or approve certain actions under an agreement. Such limitation allows a party to withhold the requested Consent or approval only if there are reasonable grounds for doing so.

See also Soft Consent.

*NPI:* abbreviation of Net Profits Interest.

*NPRI:* abbreviation of Non-Participating Royalty Interest.

*NRI:* abbreviation of Net Revenue Interest.

*NYMEX:* acronym for New York Mercantile Exchange; commonly pronounced "ny-mex."

*NYSE:* acronym for New York Stock Exchange.

*Obligation Well / Obligatory Well:* an Obligation Well is a specific Well or Wells that the parties to an agreement commit to Drilling through the execution of such agreement. Oftentimes a party's rights to earn interests in a joint development arrangement (or a Lessee's rights to continue Development) will be contingent upon the Drilling and Completion of the applicable Obligation Well(s).

This concept is typically seen in the context of a JOA or other joint development arrangement, but may also be seen in the context of an Oil and Gas Lease where the Lessor has a high level of bargaining power.

*Occupational Safety & Health Act:* the primary federal law that governs occupational health and safety in the private sector and federal government.

*Occupational Safety & Health Administration (OSHA):* the US government agency charged with ensuring that workers are provided safe and healthful working conditions. OSHA promulgates and administers health and safety regulations with which oil and gas companies are required to comply.

*OCS:* abbreviation of Outer Continental Shelf.

*OCSLA:* acronym for Outer Continental Shelf Lands Act.

*OECD:* acronym for Organization for Economic Co-operation and Development.

*Officer's Certificate:* a certificate an officer of a party to a PSA executes, and delivers at Closing. An Officer's Certificate typically attests to the party's compliance with the party's Representations and Warranties and Interim Period Covenants under the PSA as of the Closing date.

*Off-Ramp:* in the context of a joint development arrangement, Off-Ramp is a colloquial term used to describe a contractual provision that provides one or more parties an opportunity, under specified conditions (*e.g.*, commodity prices falling below a certain threshold or a party realizing a certain rate of return), to suspend or terminate the parties' obligations under the applicable contractual arrangement.

*Offset Well:* a Well drilled on one Tract to prevent Drainage by an existing Well on an adjacent or nearby Tract. Oil and Gas Leases will often contain an express or Implied Covenant requiring the Lessee to drill an Offset Well to protect against Drainage if certain requirements are met.

See also Implied Covenant to Prevent Drainage.

*Off-Spec Hydrocarbons:* another term for Non-Conforming Hydrocarbons.

*Oil and Gas Lease:* another term for Lease.

*Oil and Gas Properties:* a general term meant to capture a broad group of oil and gas real property interests, such as Leases, Wells, units, fee interests, Royalties and other Burdens. In the context of a PSA, this term may be defined to mean a certain set of specific interests in oil and gas that are the subject of the applicable PSA.

*Oil and Gas Separator:* a mechanical device, typically located at the Wellhead of a Producing Well, which separates Crude Oil from Natural Gas after a combined production stream reaches the surface.

See also Heater Treater.

*Oil Bank:* in the context of EOR operations, that portion of the Reservoir containing an increased amount of recoverable oil due to such EOR operations.

*Oil Field:* another term for Field.

*Oil Pollution Act (OPA):* a federal law that provides a civil liability regime for oil spills and imposes obligations on the owners and Operators of oil storage facilities and vessels that seek to prevent oil spills and mitigate any damage to regulated waters.

*Oil Pool:* another term for Oil Zone.

*Oil Prone:* a geological term used to describe a Formation or Source Rock that tends to produce relatively more oil, as opposed to Natural Gas, than do comparable Formations or Source Rocks.

*Oil Sands:* a Bitumen bearing sand that must be mined and heated to produce usable oil, typically Heavy Crude Oil. The processes used to develop Oil Sand Deposits are different than for Conventional or Unconventional Drilling, and, as a result, Oil Sands Deposits are typically more expensive to produce.

*Oil Well:* a Well that primarily produces Crude Oil. The determination of whether a Well is an Oil Well or a Gas Well can affect the amount of Acreage the Well can hold under the pertinent Oil and Gas Lease, and the Well's treatment under state regulatory schemes (e.g., Well Spacing rules, production allocation).

*Oil Zone:* the Formation or Reservoir, or portion thereof, that contains oil. Depending upon the Formation, the Oil Zone might be located between a Zone of water (below) and gas (above).

*Oil, Gas and Mineral Lease:* another term for Lease.

*Oil-in-Place (OIP):* a petroleum geology term referring to the estimate of the total amount of oil contained in an applicable Reservoir.

See also Petroleum Initially in Place.

*OIP:* abbreviation of Oil-in-Place.

*Oklahoma Corporation Commission:* the state agency that regulates the oil and gas industry, utility companies and telecommunications companies in the State of Oklahoma.

*On Production:* in connection with Reservoir Engineering and management, On Production refers to a project that is receiving revenue (i.e., the project is currently producing Hydrocarbons and the Hydrocarbons produced are being marketed).

See also Approved for Development and Justified for Development.

*On the Pump:* a phrase used in the oil and gas industry to describe when a Well is not, or is no longer, a Flowing Well, and a Pump Jack is being used to drive the Hydrocarbons to the surface.

*OPA:* not just a Greek toast, an acronym for Oil Pollution Act; commonly pronounced "oh-pa."

*Open Flow Potential:* this term refers to the rate of flow of Production from a Well, at a given point in time, if the Well were allowed to flow without artificial restriction.

*Open Formation:* a Formation or Reservoir in which Hydrocarbons are able to migrate due to good Porosity and Permeability.

*Open Hole / Open Hole Completion:* an Open Hole is when the targeted Zone / Formation is open to the Wellbore. An Open Hole Completion refers to a Completion in which Casing is not run in the targeted Zone / Formation.

*Operating Agreement:* an agreement between two or more parties regarding the operation (and often the maintenance) of a given asset or set of properties. Operating Agreements will typically also include provisions regarding allocation of liabilities and payment of costs and expenses with respect to such asset or properties.

Operating Agreement is also often used as a general term for Joint Operating Agreement.

*Operating Committee:* a committee formed in order to allow each party the right to participate in the planning and analysis of operational and Development plans. Such committees are typically provided for in joint development arrangements. The committee may have binding authority over the parties' actions and the joint development operations, or they may only serve in an advisory or informational role, with such distinction oftentimes being tied to the size of each party's contractual interest in the joint development arrangement.

*Operating Interest / Operating Rights Interest:* this term typically refers to the Working Interest an Operator holds under a JOA or other similar operating arrangement.

However, in the context of a BLM or BOEM Oil and Gas Lease, this term may refer to a right that is severable from such Oil and Gas Lease in which the recipient of the Operating Rights Interest receives the right to conduct drilling operations, but only with respect to certain depths.

See also Non-Operating Interest and Record Title.

*Operational Flow Order*: notices Pipeline Operators issue to transporters on the applicable Pipeline in order to protect the integrity of the Pipeline system and related facilities. An Operational Flow Order may be delivered as a result of pressure concerns, Off-Spec Hydrocarbon concerns or inclement weather, among other events.

*Operator*: the entity designated as being responsible for conducting the operations under an Operating Agreement.

*Operator's Lien*: a lien arising from an Operating Agreement in favor of the applicable Operator. The Operator's Lien covers the Non-Operators' interests in the subject oil and gas interests and related equipment subject to the Operating Agreement, and secures the Non-Operators' obligations under the Operating Agreement, including the payment or reimbursement of applicable costs. An Operator's Lien is conceptually similar to an M&M Lien.

*Or Lease*: an Oil and Gas Lease under which the Lessee promises to commence Drilling operations or undertake some other action (e.g., pay Delay Rentals) by a specified date. If the Lessee fails to act by the specified date, the Lessor has a cause of action against the Lessee for breach of contract; however, such failure to act does not automatically terminate the Lease.

Both Unless Leases and Or Leases are designed to ensure the Lessor a periodic return during the Primary Term in the event there is no Production, and to allow the Lessee to postpone Drilling operations by paying Delay Rentals.

The Or Lease structure is common in West Coast states.

*Organization for Economic Co-operation and Development (OECD)*: an international organization that provides economic policy recommendations to its member nations. The OECD also publishes statistical, economic and social data related to international economic developments.

*ORRI*: abbreviation of Overriding Royalty Interest; commonly pronounced "O-R-R-I."

*OSHA*: acronym for Occupational Safety & Health Administration; commonly pronounced "oh-sha." Like its pronunciation, a violation of OSHA can be a true "oh sh\*t" moment.

*Our Watch, Your Watch*: a phrase used to describe a type of indemnity structure that allocates risks and liabilities between the buyer and seller under a PSA based on a certain point in time (e.g., the Effective Time or the Closing date). For example: seller retains responsibility for all liabilities arising from actions occurring prior to Closing, and buyer assumes responsibility for all liabilities arising from actions occurring on and after Closing.

See also Assumed Obligations.

*Outer Continental Shelf (OCS)*: a term used to describe those internationally recognized underwater landmasses that extend from certain portions of the US and that have been deemed by the US to lie beyond the jurisdictions of individual states. The OCS is comprised of four regions: Gulf of Mexico; Atlantic; Pacific; and Alaska.

*Outer Continental Shelf Lands Act (OCSLA)*: a federal law that defines the area of the OCS that is subject to federal jurisdiction for purposes of offshore oil and gas Development. The OCSLA grants the Secretary of the Interior the responsibility to administer mineral Development and exploration from the OCS.

*Overage*: the quantity of Hydrocarbons produced from a given Unit in excess of the Unit's Allowable.

See also Permitted Overages.

*Overburden*: this term may refer to either a rock that is above a targeted Formation or Reservoir, or, to a Working Interest that is burdened with sizable Royalty Interests (or other Burdens on revenue), meaning that the remaining NRI held by the Working Interest owner is marginally economic.

*Over-Delivered*: a term used to describe a Pipeline Imbalance at a certain point on a Pipeline, typically an interconnection point, due to the fact that the amount of Hydrocarbons a party has delivered to such point at a particular point in time exceeds the amount of Hydrocarbons Nominated by or allocated to such party at such interconnection.

In contrast, see Under-Delivered.

*Overhead*: an accounting term used to quantify the amount of costs and expenses incurred in connection with supporting operations. Overhead is typically accounted for in JOAs, TSAs and other joint development arrangements to compensate the applicable Operator for its Overhead costs related to the Operator's work on behalf of the other parties to the contractual arrangement. For example, in the context of a JOA, the COPAS Accounting Procedure is typically used to outline the agreement of the parties to the JOA regarding the Operator's Overhead costs.

*Over-Produced*: a term used to describe a Well Imbalance due to the fact that the amount of Hydrocarbons produced from an applicable Well and allocated to a party exceeds the share of Production from such Well to which the party is entitled.

In contrast, see Under-Produced.

*Overriding Royalty Interest (ORRI) / Override*: a non-cost bearing and Non-Operating Interest carved out of a Working Interest that entitles the ORRI holder to a Royalty from the applicable Production. An ORRI can be carved out of the Mineral Estate or could be carved out of an Oil and Gas Lease (in which case the ORRI terminates upon the termination of the underlying Lease). ORRIs are sometimes only granted for a specified term, and in this format are sometimes used in financing transactions such as VPPs.

*P&A*: abbreviation of Plugging and Abandonment.

*P10 / P50 / P90 / PMean*: a probability methodology used to describe the size of the Reserves in a Field. More specifically, this methodology is used to define the probability that the actual size of the Reserves in a Field exceeds a specified amount. For example, if a Field has a P10 of one million Barrels, there is a 10% probability that the Field's Reserves exceed one million Barrels. The P50 number is the median, or estimated to be the median, as there is a 50% chance that actual Reserves will exceed that number.

*Packer*: a device placed into a Wellbore during Completion of a Well that seals the space between the outside of the Production Tubing and the Annulus.

*Paid-Up Lease*: an Oil and Gas Lease that contains a Delay Rental clause, but where such Delay Rental payments, for the Lease's entire Primary Term, are paid at Lease signing (along with the Bonus). Paid-Up Leases avoid the risk of violating the Delay Rental clause, which in most cases would cause the automatic termination of the Lease.

*Partial Release*: a term used to describe a Release in which only a portion of the applicable Encumbrance is cleared from the relevant property and/or assets.

*Participating Interest*: in joint development arrangements (typically a JOA), that portion (measured on an 8/8ths Basis) of the applicable operation and related costs that each Participating Party holds and will bear after taking into account any Non-Consenting Parties and their interests in the operation (and Carried Costs / Carried Interests).

*Participating Parties*: the parties electing to participate in or proceed with a proposed operation under a joint development arrangement (typically a JOA).

*Participation Agreement / Participation and Development Agreement:* other terms for Joint Development Agreement.

*Partition / Partition Rights:* a property law concept that allows for two or more undivided interest owners in the same real property interest to divide the interest between themselves, with each interest owner receiving a portion of the interest outright. Partitioning is often used to separate Co-Tenants' real property interests into separate individual Tracts of land.

*Pay Zone:* a Zone, Formation or strata in which oil and gas are found, or expected to be found, in Paying Quantities.

*Paying Quantities:* another term for Production in Paying Quantities.

*Payout:* the point in time when all applicable costs of a project or operation have been recouped, along with any Non-Consent Penalty or rate of return hurdle, in each case, as may be applicable to the underlying transaction.

Oftentimes, achieving Payout will trigger a change in the Working Interest and Net Revenue Interest (e.g., a reversion) of the parties in the underlying properties subject to the applicable Payout hurdle.

*PDNP:* abbreviation of Proved Developed Non-Producing Reserves.

*PDP:* abbreviation of Proved Developed Producing Reserves.

*Penetration Point:* in certain states, state law defines this term, but generally this term means the point in which the Well being drilled encounters the applicable target interval, Formation or Zone. Sorry, we weren't allowed to make any jokes about this one.

*Pentane:* a gaseous hydrocarbon chain consisting of five carbon atoms. Pentane is often a component of unrefined Natural Gas. Pentane is a type of NGL and is sometimes colloquially referred to as "C5."

*Percentage Depletion:* a deduction determined by multiplying (i) a pre-set percentage, specified for each natural resource for which a Percentage Depletion deduction is available, by (ii) the gross income from the applicable property during a particular tax year. Percentage Depletion deductions are subject to numerous limitations, including those based on overall Production, gross income from the property, and the taxpayer's status.

In contrast, see Cost Depletion.

*Perforating Gun:* another term for Frac Gun.

*Perforation / Perforating:* an opening created in the cement Casing of the Wellbore, usually by a Frac Gun or other explosive charge. Perforation occurs at targeted points in the Wellbore, typically that portion of the Wellbore running through the Target Formation.



*Performance Bond*: a debt instrument used as security for an obligation or potential obligation, such as Plugging and Abandoning a Well, decommissioning costs, or potential environmental damages. State and Federal agencies often have bonding requirements, including some specific bonding requirement for Operators, particularly in the offshore context.

*Permanent School Fund*: a perpetual endowment the State Board of Education and the Land Commissioner's office manages for the benefit of public education in Texas. The Permanent School Fund receives the revenue state-owned Lands generate (including revenues oil and gas leasing activities generate) in certain Lands in West Texas, and all of the submerged Lands in Texas coastal waters.

*Permeability*: a measure of the capacity of a Source Rock or Formation to transmit Hydrocarbons (in the oil and gas context) within itself. Hydraulic Fracturing is used to artificially increase the Permeability of a Source Rock or Formation.

*Permitted Encumbrances / Permitted Liens*: in the context of oil and gas transactions (e.g., PSAs, joint development arrangements or financing documents), they are specified Encumbrances that the applicable parties to the transaction have agreed are allowed to encumber the subject assets and, therefore, will not form the basis of a breach of covenant, breach of representation, Title Defect claim or other similar contractual claim. Typically, the scope of Permitted Encumbrances will only pick up those Encumbrances that are considered to exist in the ordinary course of the applicable business, though the scope can vary widely from transaction to transaction based on the leverage of the parties and/or the assets / business in question.

*Permitted Overages*: a Permitted Overage is an Overage the applicable state agency responsible for setting the applicable Allowables consents to, or otherwise allows. The treatment of Allowables and related Overages varies from state to state.

*Petroleum Initially in Place (PIIP)*: an estimate of the total quantity of petroleum in a Formation before Production begins, including discovered and undiscovered Reserves. PIIP is determined based on initial Production, Decline Curves and pressure, among other things, and is continually updated as Production continues.

See also Oil-In-Place.

*Phase I*: abbreviation of Phase I Environmental Site Assessment.

*Phase I Environmental Site Assessment (Phase I)*: a non-invasive environmental site assessment that is performed pursuant to the American Society for Testing and Materials ASTM E-13 (as amended from time to time). A Phase I may include a site visit, review of public records and/or interviews with the property owner's employees. A potential buyer

of Oil and Gas Properties (particularly producing properties) typically performs Phase Is as part of environmental Due Diligence, usually through retaining third party environmental consultants.

Sometimes other types of environmental assessments are characterized as Phase Is that are limited to, for example, a compliance evaluation of the target property.

*Phase II:* abbreviation of Phase II Environmental Site Assessment.

*Phase II Environmental Site Assessment (Phase II):* an invasive environmental site assessment typically undertaken after a Phase I has been performed that indicates a certain likelihood of site contamination. A Phase II typically includes soil and water sampling to test contamination levels.

*Pig:* lipstick wouldn't make it any prettier. A mobile device that is placed within a Pipeline, and moves through the Pipeline, that can accomplish a number of tasks, including checking for any structural deficiencies or leaks in the Pipeline, cleaning the Pipeline, and/or acting as a flushing tool to move certain NGLs and other Hydrocarbons through the Pipeline.

*PIIP:* abbreviation of Petroleum Initially in Place.

*Pill:* a small volume of Drilling Fluid that is specially tailored to handle a specific Downhole problem that is encountered while Drilling and that regular Drilling Fluid alone cannot handle.

*Pilot Hole:* in the context of Drilling a Horizontal Well, a Pilot Hole is an initial Borehole that may be drilled to determine the depth of the top of the target interval, so that the Kick-Off Point and Drilling deviation for the planned Horizontal Well may be properly determined.

*Pipeline:* a broad term used for a single pipe or tube (or a system or network of pipes and/or tubes) used to transport liquids and/or gaseous substances. Pipelines come in a variety of sizes and specifications, depending on the distance the applicable substance is to be transported and the properties (e.g., corrosiveness) of the specific type of substance to be transported.

In the oil and gas context, Pipelines are typically used to transport Hydrocarbons or water from a Wellhead to a storage tank or to another Pipeline for purposes of accessing the Midstream and Downstream sectors.

*Pipeline Imbalance:* a discrepancy between the quantity of Hydrocarbons required or Nominated to be delivered under any contract relating to the purchase and sale, Gathering, transportation, storage, Processing or marketing of Hydrocarbons and the quantity of Hydrocarbons actually delivered pursuant to the contract.

*Platform:* a broad term typically used for offshore oil and gas Drilling Rigs and production facilities.

*Play*: not the artistic or childish kind, a general term used to refer to a certain Basin, Reservoir, Formation or Horizon that is ripe for Development, or a drilling concept related thereto (e.g., a Shale Play or Resource Play).

See also Prospect.

*PLSS*: acronym for Public Land Survey System.

*Plug Back*: a Downhole operation where a deeper Zone or Formation is Abandoned (or plugged) in order to target a shallower Zone or Formation for Development.

*Plugging and Abandonment (P&A) / P&A Liabilities*: to P&A a Well is the process of permanently closing and relinquishing a Well by using cement to create plugs at specific intervals within a Wellbore to prevent the Migration of Hydrocarbons inside (and up) the Wellbore. The desire to P&A a Well may be due to a Well (i) being a Dry Hole, (ii) no longer being considered capable of Production in Paying Quantities, or (iii) being Junked or running into Impermeable subsurface strata in the drilling process. State regulatory bodies typically establish requirements for how and when a Well must be P&A'd.

Poorly or improperly P&A'd Wells could result in later contamination, injury or other hazards (or violations of applicable regulations) that could result in liabilities, which are termed P&A Liabilities.

*Pooled Acreage / Pooled Unit*: Mineral Interests that are Pooled together in a Drilling Unit or Spacing Unit, often to satisfy regulatory requirements in order to obtain a Drilling Permit.

*Pooling*: no, this has nothing to do with swimming. The process of bringing together small Tracts of land and related Mineral Interests to create a Pooled Unit for purposes of Drilling a Well. Pooling can be done voluntarily under a Pooling Agreement or by force under a Pooling Order.

See also Communitization and Unitization.

*Pooling Agreement*: an agreement among applicable interest owners to Pool together Acreage in order to form a Pooled Unit. Often Oil and Gas Leases will specifically address what rights the Lessee has to Pool the leased Acreage.

*Pooling Amendment*: an amendment or revision to a Pooling Agreement, typically to change the amount of Pooled Acreage.

*Pooling Interval*: in the context of a Pooled Unit that is depth or interval specific, the depth or interval that is so Pooled.

*Pooling Order*: an order a governmental agency issues to the owners of adjacent Mineral Interests, typically upon an owner's petition, to bring the interests together into a Pooled Unit.

See also Forced Pooling.

*Poor Boy*: a safety device for controlling unexpected pressure differentials between the Wellbore and the Producing Formation by separating free gas from Drilling Mud after the Mud is brought to the surface.

*Porosity*: a relative measure of the physical property of a rock with respect to the amount of open space (i.e., pores) in the rock. A rock's Porosity is a fundamental indicator in petroleum engineering of the amount of open space in an applicable Formation that could contain Hydrocarbons.

*Possible Reserves*: generally speaking, an estimate of the Hydrocarbons that may be extracted from a Formation or Reservoir under the current economic and technological conditions. Possible Reserves are the least likely to be recovered of all Hydrocarbons officially classified as Reserves, meaning they are less likely to be recovered than Proved Reserves and Probable Reserves. There is a 10% chance that the ultimate recovery from such Formation or Reservoir will meet or exceed the total quantity of Proved Reserves, Probable Reserves and Possible Reserves for such Formation or Reservoir.

*Possum Belly*: a container attached to a Drilling Rig that receives Drilling Fluid and Drilling Mud as it enters into the Shale Shaker.

*Pour Point*: the lowest temperature at which a fluid is still transferable as a fluid (i.e., "pourable"). Different types of Hydrocarbons have different Pour Points (e.g., Natural Gas has a lower Pour Point than Crude Oil).

*PPQ*: abbreviation of Production in Paying Quantities.

*Preferential Right to Purchase / Pref Right*: a transfer restriction that grants the Pref Right holder the right to acquire the property burdened by such Pref Right if and when the property owner desires to sell, transfer or otherwise convey such property. Typically, a Pref Right requires the owner of the burdened property to offer the property to the Pref Right holder upon the same terms and conditions the owner would receive from the applicable third-party purchaser.

Pref Rights are common in the oil and gas industry, and are often found in JOAs and other joint development arrangements, particularly in the offshore context.

See also Right of First Refusal.

*Preliminary Settlement Statement*: a statement or accounting delivered under a PSA prior to the applicable Closing that estimates the adjustments and calculations to be made to determine the Adjusted Purchase Price. Because this statement is preliminary, the PSA will typically provide for the parties to true up the applicable estimated adjustments and calculations following the Closing, using actual numbers.

In contrast, see Final Settlement Statement.

*Primary Recovery / Primary Production:* the initial recovery of Hydrocarbons from a Reservoir using only the natural energy found in the Reservoir.

In contrast, see Enhanced Oil Recovery, Secondary Recovery and Tertiary Recovery.

*Primary Term:* the specified period of time that an Oil and Gas Lease will remain in effect without Production in Paying Quantities.

See also Habendum Clause and Secondary Term.

*Priority of Operations:* in the context of a JOA or other joint development arrangement, a provision setting forth the hierarchy of different categories of Proposed Operations if two or more proposals that conflict with each other are submitted for the same subject Lands.

*Probable Reserves:* generally, an estimate of the oil or gas that may be extracted from the applicable Formation or Reservoir under the current economic and technological conditions. Probable Reserves are less likely to be recovered than Proved Reserves but more likely than Possible Reserves. There is a 50% chance that the ultimate recovery from such Formation or Reservoir will meet or exceed the total quantity of Proved Reserves and Probable Reserves for the Formation or Reservoir.

*Proceeds of Production / Proceeds:* the consideration received from the sale of hydrocarbon Production, calculated prior to accounting for Royalties and other Burdens to be paid out of such Proceeds.

*Processing / Processing Agreement / Processing and Fractionation Agreement:* processing consists of separating the Dry Gas from the NGLs (as well as other substances and impurities) contained in a Wet Gas stream received at the applicable Processing facility.

A Processing Agreement establishes the terms upon which the applicable facility Operator will Process the Wet Gas stream, including the fees the applicable customer will pay for such services. Processing and Fractionation are often handled under the same agreement.

*Produced Water:* naturally occurring saltwater produced with the Hydrocarbons that are produced from a Well.

*Producer's 88:* a colloquial term used to refer to the "Standard Producers 88 Oil, Gas, and Mineral Lease," which is a common form of Oil and Gas Lease.

*Producer's Lien:* another term for Operator's Lien.

*Producing Acreage / Productive Acreage:* acreage subject to an Oil and Gas Lease that is Producing in Paying Quantities and thereby holding an underlying Oil and Gas Lease beyond the Lease's Primary Term.

*Producing Formation:* the Formation from which Hydrocarbons are being produced. Producing Formation can also refer to only those Formations that are producing Hydrocarbons in Paying Quantities.

*Producing Well:* a Well currently producing Hydrocarbons. Producing Well can also refer to only those Wells that are producing Hydrocarbons in Paying Quantities.

*Production:* a term used to refer to the volume of Hydrocarbons produced (or extracted) by E&P activities, typically over a specified time period (e.g., a daily basis).

*Production Costs:* the costs and expenses incurred with Production and marketing of Hydrocarbons, which often include operating and maintenance costs after Drilling is complete.

*Production in Paying Quantities (PPQ) / Production in Commercial Quantities:* a term used to describe whether the Production from a Well and its underlying Leases (and the related Proceeds) is sufficient to pay the ongoing costs of operating and maintaining the Well and Leases, but specifically excluding drilling costs and Development Costs, over a reasonable amount of time. During the Secondary Term of an Oil and Gas Lease, there must be Production in Paying Quantities from such Lease in order for the Secondary Term (and therefore the Lease itself) to remain in effect.

*Production Payment:* a right to a fractional share of the Hydrocarbons produced for a certain period of time or until a specified revenue amount (or production volume) is received, typically conveyed as a term ORRI. A Production Payment is typically granted in consideration for an upfront cash payment. If properly structured, a Production Payment (other than a Production Payment in which the related Proceeds are pledged for E&P purposes) will be treated as a financing for US federal income tax purposes.

See also Volumetric Production Payment.

*Production Sharing Contract (PSC):* an agreement between an investor (e.g., an oil company or the parties to a Well) and a host government under which the government grants the investor an exclusive right to develop the Hydrocarbons (i.e., control of the Field), and the investor commits to develop such Hydrocarbons at the investor's sole cost, expense and risk. The investor and the host government or such country's NOC typically share any Production from the area covered by the PSC.

*Production Taxes:* Production Taxes are state taxes imposed upon the value or quantity of oil and gas produced.

*Production Testing:* a broad term used for the types of tests that can be conducted on a Well to determine the Well's productivity, flow, pressure and other characteristics.

*Production Tubing:* a pipe inserted into a Well during Completion that runs inside the Casing and through which the produced Hydrocarbons flow to the surface.

*Profits à Prendre:* a non-possessory interest in land that gives the holder the right to take from another's land something that is part of the soil and is otherwise considered the landowner's property (e.g., minerals or timber).

*Propane:* a gaseous hydrocarbon chain consisting of three carbon atoms. Propane is often a component of unrefined Natural Gas. Propane is a type of NGL and is sometimes colloquially referred to as "C3."

*Property Taxes:* another term for Ad Valorem Taxes.

*Proposed Operations:* pursuant to a JOA, additional operations that a party to the JOA proposes to conduct beyond the initial operations expressly prescribed in the JOA. Upon receiving notice of a Proposed Operation, the other Working Interest holders under the JOA generally have the right to elect whether to participate in such Proposed Operation.

*Proppant / Propping Agent:* a type of solid material used to "prop open" a fracture in a Formation, typically through Hydraulic Fracturing operations. Propping Agents are typically low density and resistant to crushing or corrosion, and the formulas for specific Proppants are heavily guarded intellectual property. Types of Proppants include silica sand, resin-coated sand, gravel and ceramic beads, which are typically suspended in Frac Fluid and pumped into the Target Formation.

See also Frac Sand.

*Proration Unit:* the Acreage assigned to a Producing Well for purposes of determining the Well's Production Allowable in accordance with state regulatory allocation rules. Proration Units can be based on either a Well or productive surface acre basis.

*Prospect:* a colloquial term used to refer to a specific hydrocarbon Reservoir, Basin, Formation or any portion thereof.

See also Play and Resource Play.

*Prospective Resources:* a Resource classification for certain quantities of petroleum that are estimated to be potentially recoverable from unknown accumulations identified on the basis of indirect evidence, but which have not yet been drilled. This classification represents a higher risk than Contingent Resources since the risk of discovery is also added.

*Proved Developed Non-Producing Reserves (PDNP):* a Reserve classification for Proved Reserves that can be expected to be recovered through existing Wells with existing equipment and operating methods, but that are not currently being produced for reasons such as being Behind Pipe, lack of necessary Pipeline connections, mechanical problems with a Well, or market conditions.

*Proved Developed Producing Reserves (PDP)*: a Reserve classification for Proved Reserves that can be expected to be recovered through existing Wells with existing equipment and operating methods and that are currently being produced.

*Proved Reserves*: a classification used for oil and gas Reserves that have been determined to have a reasonable certainty of recoverability based on technologies available at the time of such determination. The precise definition of Proved Reserves will vary depending on the definition's intended use.

An example of a commonly used definition of Proved Reserves is the SEC definition, which public companies use in providing reserves data in their Form 10-K reports: "Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known Reservoirs, and under existing economic conditions, operating methods, and government regulations."

Note that the SEC definition is more conservative. The term "reasonable certainty" is generally accepted to mean a 90% or higher probability, meaning that estimates are only for areas with solid data from existing Wells and production history. The definition also excludes any projection of future technology improvements, and implies that producing the resource must be economic under current market conditions. Proved Reserves can be further classified into three different categories: (i) Proved Developed Producing Reserves, (ii) Proved Developed Non-Producing Reserves and (iii) Proved Undeveloped Reserves.

In contrast, see Unproved Reserves.

*Proved Undeveloped Reserves (PUD)*: a Reserve classification for Proved Reserves that are expected to be recovered from new Wells on undrilled Acreage or from existing Wells where a relatively major expenditure is required for Completion.

*PSA*: abbreviation of Purchase and Sale Agreement.

*PSC*: abbreviation of Production Sharing Contract.

*Public Land Survey System (PLSS)*: a method of describing certain real property that relies on a rectangular system of Surveys regulated by the BLM. PLSS generally divides land into six-mile-square Townships, each of which are subdivided into one-mile-square Sections, which may be further subdivided to Quarter Sections, quarter-quarter Sections or irregular lots.

Thomas Jefferson originally proposed the PLSS, which is sometimes referred to as the "Jeffersonian Method."

*Publicly Traded Partnership*: another term for Master Limited Partnership.



*PUD*: abbreviation of Proved Undeveloped Reserves.

*Pugh Clause*: a Lessor-friendly Oil and Gas Lease clause that, once triggered, operates to release Acreage that is not then-producing as part of a Pooled Unit from the Lease. Pugh Clauses encourage the Lessee to fully develop the Acreage under the Lease (rather than seeking to hold the entire Lease by developing only a small portion), by preventing the Lessee from Pooling only a small portion of the leased Acreage in order to perpetuate the remainder of the leased Acreage.

See also Retained Acreage Clause.

*Pumper*: another term for Gauger.

*Pumping Unit / Pump Jack / Pump*: a piece of equipment used to mechanically pump Hydrocarbons out of the ground when natural Bottomhole Pressure dissipates.

Purchase and Sale Agreement (PSA) / Purchase Agreement:

An agreement entered into between a buyer and a seller, whereby the buyer divests certain assets (which may be in the form of equity interests) to the seller for an agreed consideration.

*PV-10*: the SEC-reported value of particular Reserves. PV-10 is a standard metric utilized in company disclosure filings with the SEC for valuation of a company's oil and gas Reserves, defined as the present value of the estimated future oil and gas revenues, reduced by direct expenses and discounted at an annual rate of 10%.

See also Reserve Report.

*Qualifying Income*: Qualifying Income includes, among other things, income and gains derived from the exploration, Development, mining or Production, Processing, Refining, transportation (including Pipelines transporting gas, oil or products thereof), or the marketing of any mineral or natural resource, as well as certain passive-type income, including interest, dividends and real property rents. An MLP must generate at least 90% Qualifying Income in each taxable year in which the MLP is publicly traded in order to maintain its status as a partnership for federal income tax purposes. If the MLP fails this test in any year, the MLP will be treated as a corporation for federal income tax purposes and, thereby, lose its status as a pass-through entity.

*Quality*: with respect to any Production, Gathering, Processing or transportation of Hydrocarbons, Quality refers to the particular composition of such Hydrocarbons. The applicable governing document regarding any of the above services will typically include specific Quality requirements for the Hydrocarbons handled under such agreement, which, if not met, may entitle a contractual counterparty, among other things, to refuse to accept the Hydrocarbons for service. For example,

Quality specifications under a gas Gathering Agreement may include limitations on the total volume of sulfur or carbon dioxide present in the gas, or may require the gas to be delivered within a specific temperature range.

*Quarter*: under the PLSS Legal Descriptions of geographical areas, a Quarter denotes one-fourth of a Section, typically described as either the NW/4, NE/4, SE/4 or SW/4 and comprising 160 acres or a one-quarter square mile.

*Quitclaim / Quitclaim Deed*: a type of deed by which the Grantor conveys any and all of the Grantor's interest in the applicable asset (if any) to the Grantee, but without any Warranty of Title from the Grantor.

In contrast, see General Warranty Deed and Special Warranty Deed.

*Rail Car*: in the oil and gas industry, a rolling car attached to a train used to transport and market Hydrocarbons, chemicals, sand or other related products to and from refiners, processors, wholesalers, Terminals and plants, among others. Rail Cars vary in type, including freight, auto carrier, box, gondola, hopper, intermodal, specialty and Tank Cars.

*Range*: a land Survey measure used in the PLSS system to identify a specific Township, the Range is a measure of the distance east or west from a referenced principal Meridian.

*Rate of Penetration*: measurement of the speed at which a Drill Bit deepens a Wellbore.

*Rathole*: a colloquial term for a hole in the floor of a Drilling Rig used to store certain equipment. Maybe a little bit bigger than a Mousehole?

*RCRA*: acronym for Resource Conservation and Recovery Act; commonly pronounced "rick-ra."

*Reasonable and Prudent Operator (RPO)*: an industry Standard of Care used to determine the appropriateness of an Operator's conduct by assessing such conduct against the common industry practices other similar Operators employ.

*Reassignment Clause*: a clause in an Oil and Gas Lease that requires a Lessee to reassign its rights under the Lease back to the Lessor under certain circumstances; for example, if the Lessee is not Producing in Paying Quantities or the Lessee has not drilled a Well within a certain time period prior to expiration of the Primary Term.

*Recapture*: the process of recovering Hydrocarbons that have previously been produced and reinjecting them into an existing Reservoir for storage purposes.

*Receipt Point*: with respect to Midstream services, an agreed upon interconnection point with the applicable Midstream asset system where a customer delivers the applicable Hydrocarbons to the service provider.

*Recompleting / Recompletion:* the process of completing a Well in a different productive Formation by moving either uphole or Downhole in an existing Wellbore from the Formation in which the Well was previously Completed.

*Record Title:* a term that denotes ownership of real property interests (including oil and gas interests) as set forth in the public records of the applicable governmental entity.

*Recording:* the process of publicly filing a particular document relating to real property interests (including oil and gas interests) in the county courthouse where the applicable real property is located, or in such other public records as applicable law may require. Documents are recorded in order to establish Record Title, evidence the existence of a Burden and/or Encumbrance, or to document a transfer relating to such real property and provide notice to the public.

*Recording Memorandum / Recording Supplement:* a shortened form of an oil and gas transaction document (e.g., an Oil and Gas Lease or JOA) that is Recorded in the appropriate county courthouse index in order to evidence the existence of Burdens and/or Encumbrances on real property created by such transaction document, without publicly disclosing the majority of the document's material terms.

*Recoupment:* as a general matter, Recoupment is a contractual risk-mitigation principle under which obligations multiple parties owe may be netted out. In the oil and gas context, the right of Recoupment can refer to an Operator's right under a Lease to withhold future Royalty Payments if the Operator has previously overpaid Royalties, or the right of an Operator under an Operating Agreement to recover costs from production revenues in order to recoup amounts a Non-Operator owes. Notably, in bankruptcy proceedings, because Recoupment does not involve an action against the property of a bankruptcy estate, Recoupment is not subject to the automatic stay and may even take priority over a Mortgage held by a financial institution encumbering the debtor's interest.

*Recovery Factor / Recovery Efficiency:* measurement of the estimated percentage of Hydrocarbons that will likely be produced from a Reservoir, compared to the total amount of Hydrocarbons originally in place.

*Recycled Gas:* gas produced from a Well that is then injected back into the Reservoir after the gas is produced in order to maintain Reservoir Pressure.

Recycled Gas can also refer to Natural Gas produced from landfills.

*Re-enter:* the process of entering a non-Producing Well that has not been Plugged and Abandoned to restore Production from the Well.

*Refining*: a component of the Downstream sector of the oil and gas industry, Refining consists of the processing of Crude Oil into various byproducts such as kerosene, gasoline and diesel fuel.

*Reid Vapor Pressure (RVP)*: an ASTM test method for measuring the vapor pressure of Crude Oil and refined petroleum products (e.g., gasoline). RVP testing is used in various quality control and research and development applications. RVP testing, and vapor pressure testing in general, is an important safety check in the transport, storage and blending of Crude Oil and refined petroleum products.

See also True Vapor Pressure.

*Release*: a legal document evidencing a party's relinquishment of all or certain assets, rights or interests that were previously subject to a contractual arrangement. Releases are commonly utilized to clear Encumbrances from properties and to document the termination of a Lease, among other uses.

In the oil and gas context, Release can also refer to a release of Hydrocarbons, which occurs when Hydrocarbons, free radicals and/or other petrochemical compounds are discharged into the outside environment during oil and gas-related activities.

*Relief Well*: a method of controlling a Blowout by Drilling an adjacent Well in order to (i) intersect the damaged Wellbore and allow water, Mud or cement to be pumped into the damaged Wellbore, or (ii) divert the flow of Hydrocarbons from the damaged Well to the adjacent Well (i.e., the Relief Well). Pumping cement or Mud into the damaged Wellbore will control the Blowout because such materials are denser than oil.

*Relinquishment Act Lands*: Lands located in Texas that are subject to the Relinquishment Act of 1919, under which the State came to own minerals underlying certain parcels of land while the surface of the parcels are privately owned. On Relinquishment Act Lands, the surface owner acts as agent for the State for purposes of oil and gas Development, and is entitled to half of all Royalties, Lease Bonuses and other benefits accruing from any Oil and Gas Lease covering such Lands.

*Relinquishment Provision*: a Relinquishment Provision is typically found in an Oil and Gas Lease or an Operating Agreement. Under an Oil and Gas Lease (typically a State Lease or Federal Lease) the Relinquishment Provision sets forth the steps required for the Lessee to relinquish its interests in the Lease, which typically includes a filing in the appropriate land office. A Lease Relinquishment Provision typically releases the Lessee's obligation to drill, but not from any other liability under the Lease. Under an Operating Agreement, the Relinquishment Provision describes a Non-Consenting Party's relinquishment of its interest in or share of the applicable operation that was Non-Consent.

**Remediation:** the process of restoring a property to a specified condition (typically to the condition the property was in prior to oil and gas Development) by reversing or stopping any damage caused as a result of such Development, particularly with respect to Environmental Defects and other environmental matters.

**Remediation Amount:** the dollar amount required to Remediate a property to the desired condition, which may or may not be prescribed by law. A provision regarding Remediation Amounts is often included in Environmental Defect Mechanisms, whereby the purchase price may be adjusted downwards by an amount equal to the expected dollar amount that would be necessary to cure the Environmental Defect(s) at issue using appropriate Remediation methods.

**Removal of Operator:** under a JOA or other Operating Agreement, Non-Operators are often afforded the option to remove the Operator under certain conditions, typically including the Operator's gross negligence or willful misconduct.

**Representations and Warranties:** express or implied statements, guarantees, agreements and/or promises a party to a transaction document makes regarding a past, existing or future fact about such party and/or the assets that are subject to the transaction, in an effort to induce the other party(ies) into the contractual relationship. In the context of a PSA, the seller's Representations and Warranties will typically be more fulsome than the buyer's because the seller (and typically not the buyer) will be making Representations and Warranties regarding the assets being conveyed. A PSA often provides that a breach of a party's Representations and Warranties can lead to liability for indemnification or trigger the other party's ability to terminate the transaction prior to the Closing.

See also Fundamental Representations.

**Reserve Report:** a report of a company's estimated remaining quantities of oil and gas Reserves, including details regarding the Reserves' specific characteristics and forward-looking projections, which is commonly used as a valuation tool. A Reserve Report is typically prepared by an outside independent petroleum engineering firm, and the methodology and underlying reasoning used to value Reserves can vary. The SEC requires public oil and gas companies to file Reserve Reports periodically in order to publicly estimate remaining Reserves and help establish the company's valuation.

**Reserves:** an estimate of the amount of Hydrocarbons from an oil and gas Resource that are determined to be "recoverable." There is some ambiguity and disagreement as to what is considered to be recoverable, thus the precise definition of Reserves can vary. For example, Reserves can be based on Hydrocarbons that have been discovered or projections

of undiscovered Hydrocarbons; or can be based on what Hydrocarbons are technologically or commercially recoverable; or what Hydrocarbons have the potential to be recoverable at some point in time. The precise definition used for Reserves will depend on the intended use.

In comparison to Resources, engineers generally produce a Reserve estimate, which is based on a near-term conservative view of the Oil and Gas Properties' potential.

Note that the distinction between Reserves and Resources can be important in financing transactions, as financial institutions are typically more willing to provide financing on Reserves than Resources.

See also Proved Reserves and Unproved Reserves for further Reserve classifications.

*Reserves Adjustment Factors:* a range of factors used to calculate Reserve amounts (typically in a Reserve Report) by discounting the Reserves' value to account for the relative risks and uncertainties of different categories of Reserves (e.g., Proved Reserves and Unproved Reserves). There is no standard set of Reserves Adjustment Factors, and the particular adjustment factors applied in analyzing Reserves will depend on the purpose of the analysis. For example, a lender will typically use more conservative calculations (as a means of reducing risk) than an acquiring company.

*Reserves Growth:* the increase in the amount of recoverable Reserves in a particular oil and gas Reservoir, typically caused by the availability of new technology or enhanced data.

*Reservoir:* a subsurface accumulation of Hydrocarbons.

*Reservoir Drive:* the natural energy mechanisms existing in a Reservoir that cause Hydrocarbons to flow out of a Reservoir and into a Wellbore without artificial pressures or forces.

*Reservoir Engineer / Reservoir Engineering:* an engineering discipline focusing on hydrocarbon recovery and Reservoir characteristics. A Reservoir Engineer is a specific type of petroleum engineer who focuses on Reservoir behaviors and characteristics.

*Reservoir Pressure:* the fluid pressure in an oil and gas Reservoir.

*Reservoir Rock:* a type of subsurface rock with sufficient Porosity and Permeability to store and transmit Hydrocarbons relatively easily, often overlain by a caprock that serves to trap the Hydrocarbons from further Migration. The physical characteristics of Reservoir Rock render the Hydrocarbons easily accessible using classic recovery techniques.

In contrast, see Source Rock.

*Reservoir Stimulation:* another term for Stimulation.

*Residual Oil*: incremental amounts of oil that are produced from a Gas Well.

*Resource Conservation and Recovery Act (RCRA)*: a federal law governing the management (generation, storage, treatment and disposal) of non-hazardous and hazardous solid waste.

*Resource Play*: a colloquial term used to refer to a specific hydrocarbon Reservoir, Basin, Formation or any portion thereof.

See also Play and Prospect.

*Resources*: a general term used to refer to all prospective oil and gas estimated or speculated to be present in a particular area.

Resources can be further classified into four categories: (i) Contingent Resources; (ii) Prospective Resources; (iii) Technically Recoverable Resources; and (iv) Economically Recoverable Resources.

In comparison to Reserves, geologists generally estimate Resources, based on a long-term estimate of the potential of the Oil and Gas Properties. Note that the distinction can be important in financing transactions, as financial institutions are typically less willing to provide financing on Resources than Reserves.

*Retained Acreage Clause*: a Retained Acreage Clause of an Oil and Gas Lease operates to release from the Lease any portions of the leased Tract that are not included in a Drilling Unit at the end of the Primary Term. Under a Retained Acreage Clause, at the expiration of the Primary Term, the Lease will continue only with respect to that portion of the leased Tract that is included in a Drilling Unit for a Producing Well.

Pugh Clauses are similar in concept, but only apply if the Lessee exercises its authority to Pool the applicable Lease.

*Retained Liabilities*: existing liabilities associated with a property that a seller retains under the applicable PSA after divestment, whether for a set time period or indefinitely, through an indemnity mechanism. Typically, allocation of liabilities (and the scope of the applicable Retained Liabilities) in a PSA are heavily negotiated due to the potential risks associated with such liabilities.

*Retrograde Condensate*: a type of liquid hydrocarbon formed in a Reservoir that contains Condensate when such Condensate, due to certain temperature and pressure conditions, separates into a gas and a liquid. The term “retrograde” refers to the fact that the Condensate is compressed beyond the point of condensation, causing the liquid to evaporate again (essentially reversing the condensation process).

*Reworking*: efforts to restore a Well’s Production through additional operations, including Stimulation and Recompletion.

*Rig*: another term for Drilling Rig.

*Rig Down*: the process of dismantling and shutting down a Drilling Rig down after a Well has been drilled.

*Rig Hand*: another term for Roughneck.

*Rig Up*: the process of moving a Drilling Rig on location and commencing the Drilling of a Well.

*Right of First Offer (ROFO)*: a contractual right entitling the holder of such right to enter into negotiations with, and make the first offer to, a counterparty who desires to transfer a particular interest that is subject to the applicable ROFO provision, with such right vesting prior to the time the counterparty may enter into negotiations regarding such interest with third parties. Typically, the owner of the right, interests or assets burdened by a ROFO may not subsequently proceed with a transfer of the interest to a third party if the transaction is performed at a lower price than the holder of the ROFO's original offer (if any). It is important to note, however, that unlike with a Right of First Refusal, a ROFO does not grant the right holder the right to match an offer, only the right to make an offer.

*Right of First Refusal (ROFR)*: a contractual right granting the holder of such right a priority right to purchase interests from a counterparty who desires to transfer a particular interest that is subject to the applicable ROFR provision, with such right only vesting upon such time as a third party has made a bona fide offer for the interest. Typically, the ROFR holder need only match the highest offer made by a third party in order to acquire the subject interests burdened by the ROFR.

See also Preferential Right to Purchase.

*Right-of-Way (ROW)*: a type of Easement granted (or reserved) by an owner of a Tract that provides the Grantee with the right to travel across or pass through the Tract (whether the surface or the shallow subsurface depths). ROWs are typically granted for transportation purposes, such as for highway or railway line construction, or in the case of oil and gas operations, for laying Pipelines.

*ROFO*: abbreviation of Right of First Offer; commonly pronounced "row-fo."

*ROFR*: abbreviation of Right of First Refusal; commonly pronounced "row-fir."

*Rotary Table*: a piece of equipment located on the drill floor used to turn the Kelly by using clockwise rotational force.

*Roughneck*: a colloquial term for a member of the drilling crew that assists with daily operations and maintenance on the Drilling Rig. Also the frontrunner name submission in the event Midland, Texas ever gets an NFL team.



*Round Trip*: a colloquial term used to refer to the process of removing and replacing the entire Drill String in a Wellbore.

*Roustabout*: another term for Roughneck.

*ROW*: abbreviation of Right-of-Way.

*Royalty / Royalty Payment*: a fraction of the gross revenue generated from oil and gas produced under a Lease or license or other similar arrangement, free and clear of any production or marketing costs, that is paid to a party (typically the Lessor under an Oil and Gas Lease) in connection with the applicable oil and gas operations. The Royalty, along with the Bonus, are the primary sources of consideration paid to the Lessor under an Oil and Gas Lease.

*Royalty Clause*: the clause in an Oil and Gas Lease specifying the amount of the Lessor Royalty, how and when such Royalty must be paid, and sometimes setting forth what expenses, if any, the Lessor will bear (and, therefore, effectively subtract from the applicable Royalty).

*Royalty Interest*: a non-participating interest in the minerals produced from a particular Tract, which interest is free and clean of all costs associated with exploring for, Drilling, mining, removing and marketing such minerals. A Royalty Interest owner does not have the right to explore, mine or otherwise remove the minerals and does not have the right to use the surface overlying the minerals to which the Royalty Interest relates.

In contrast, see Mineral Interest.

*RPO*: abbreviation of Reasonable and Prudent Operator.

*RRC*: abbreviation of Texas Railroad Commission.

*Rule 37 (Texas)*: the RRC's Spacing rule applicable to all Oil and Gas Wells in Texas (to the extent not preempted by special Field Rules), Rule 37 requires that all Wells be located a certain distance away from Lease lines and other Wells that are drilled to the same Formation. Specifically, a Well may not be located nearer than 467 feet from "any property line, Lease line or subdivision line" or 1,200 feet from "any Well Completed in or Drilling to the same Horizon on the same Tract or farm." The purpose of Rule 37 is to prevent waste of natural resources and protect owners' Correlative Rights regarding common oil and gas Reservoirs. The RRC may grant exceptions to Rule 37 after an Operator files an exception application.

*Rule 38 (Texas)*: the RRC's density rule applicable to all Oil and Gas Wells in Texas (to the extent not preempted by special Field Rules), Rule 38 specifies that only a certain number of Wells may be drilled within a certain surface Acreage area. Although Rule 38 is Field specific and can change based on several factors centered around efficient recovery,

typically, a single Oil Well is allotted 40 surface acres and a single Gas Well is allotted 640 surface acres (such surface acres allotment being a Drilling Unit). The purpose of Rule 38 is to prevent clustering of Wells and overproduction of a common Reservoir. The RRC may grant exceptions to Rule 38 after an Operator files an exception application.

*Rule of Capture:* a common law rule of law that provides if a producer extracts or "captures" oil and gas from a Well that bottoms within the subsurface of his land, such producer acquires absolute ownership of the oil and gas and is not liable for subsurface trespass, regardless of whether the oil and gas migrated from a different part of the Reservoir that is located on another person's land.

See also Drainage.

*Run Sheet:* a document which a Landman typically generates using county courthouse records (specifically the Grantor / Grantee index), to track a particular interest a certain Grantor or Grantee owns. A Run Sheet is a faster method of checking records than updating a Title Opinion. For example, after a Title Opinion is drafted, a Landman may generate a Run Sheet to check if a certain Grantor or Grantee transferred its interest to a third party.

*Run Ticket:* a receipt or ticket a purchaser of Crude Oil issues to the seller indicating the quantity of oil that was sold and the oil's basic sediment and water content. The Run Ticket is used to determine the amount of payment for such Crude Oil.

*Running Title:* the process whereby a Landman or attorney determines the ownership of a Tract by reviewing the Chain of Title as filed in the public records. While there may be a race to the courthouse in some states, it doesn't have anything to do with Running Title.

*RVP:* abbreviation of Reid Vapor Pressure.

*Safe Drinking Water Act:* a federal law that was established to protect drinking water, and includes the regulation of the underground injection of a variety of fluids and materials. Hydraulic Fracturing (other than in cases using diesel fuel) is exempt from regulation under the Act.

*Salt Dome:* a geological feature commonly associated with trapped Hydrocarbons and therefore considered to be an indicator of the presence of Hydrocarbons within such feature.

*Saltwater Disposal Well (SWD):* a Well drilled to dispose of salt water produced as a byproduct of oil and gas Production, a SWD is utilized by injecting the salt water into a non-producing Formation.

*Salvable Equipment:* a petroleum accounting term for equipment that continues to have a useful life and can be reused in oil and gas operations (as opposed to discarded and having no salvage value). Salvable Equipment can be depreciated and such Depreciation can be

deducted as an operating expense in producing oil and gas. Note that this calculation is relevant to determining whether a Well is Producing in Paying Quantities.

*Savings Clause:* a type of clause in an Oil and Gas Lease that protects the Lease from expiration after the end of the Primary Term due to failure to achieve Production in Paying Quantities or loss of Production. For example, if Production from a Well is holding a Lease past its Primary Term and the Production ceases, a Temporary Cessation of Production Clause is triggered allowing the Lessee a certain number of days to restore Production before the Lease terminates, thus “saving” the Lease. Clauses that may serve as a Savings Clause include a continuous operations clause, a Temporary Cessation of Production Clause, or a Dry Hole clause.

*Scf:* the base unit of measurement for Natural Gas volumes, meaning a single “standard cubic foot” and commonly pronounced as “scuff.” The “standard” element of the definition denotes a certain constant atmospheric pressure and temperature, which may vary slightly by geographical area.

See also Mcf, Mmcf, Bcf and Tcf, as volumes of Natural Gas are typically expressed in larger quantities of Scfs.

*SEC:* acronym for Securities Exchange Commission.

*Secondary Recovery:* a type of Enhanced Oil Recovery method specifically utilized after Primary Recovery. The purpose of Secondary Recovery is to maintain Reservoir Pressure that was depleted during Primary Recovery by injecting gas or water into the Reservoir to drive Hydrocarbons into Producing Wells.

See also Water Flooding.

*Secondary Term:* in an Oil and Gas Lease, the Secondary Term begins at the expiration of the Primary Term. The most common way to perpetuate an Oil and Gas Lease past the Primary Term is by establishing Production in Paying Quantities or conducting operations in an effort to establish Production. Generally, the Secondary Term will continue for so long as there is Production in Paying Quantities and for a limited time period (typically from 30 to 90 days) in the absence of Production in Paying Quantities if the Oil and Gas Lease includes a Savings Clause.

*Secondment Agreement:* an agreement governing an employment arrangement under which a company’s employee (or group of employees) is assigned on a temporary basis to work for another company.

*Section:* under the PLSS Legal Descriptions of geographical areas, an approximately one square mile block of land (*i.e.*, 640 acres). There are 36 Sections in a Township.

*Section-Township-Range (S-T-R):* the PLSS designation of a particular geographical area (e.g., a Tract) according to a predetermined grid, which is located by identifying the specific Section, Township, and Range of the PLSS in which the Tract is located.

*Seismic Data / 2D Seismic / 3D Seismic / 4D Seismic:* a type of technology used to identify features and characteristics of subsurface Reservoirs by bouncing sound waves off of subsurface rock Formations. 2D Seismic results in a cross-section or square of data; 3D Seismic results in a cube section of data; and 4D Seismic results in a cube section of data that additionally shows how fluid moves through the applicable Formation. Seismic testing can be conducted both on land or under water.

*Seismic Data License:* an agreement whereby an owner of certain Seismic Data (i.e., the licensor) grants permission to a third party (i.e., the licensee) to use Seismic Data for the licensee's benefit. Typically, a Seismic Data License is very licensor-friendly and the licensee cannot assign the Seismic Data Licensee without paying a fee to the licensor (which may be up to 100% of the cost of obtaining the original Seismic Data License).

*Semi-Submersible Rig:* a specialized type of offshore oil rig with a floating drilling unit, columns and pontoons that will submerge to a predetermined depth when filled with water. The submerged lower hull of a Semi-Submersible Rig provides increased stability and enables deep water Drilling.

*Send-or-Pay:* in a transportation agreement, an obligation of a shipper of Hydrocarbons to pay for certain volumes of transportation Capacity on a Pipeline, independent of whether or not the shipper actually uses the Capacity.

*Separator:* another term for Oil and Gas Separator.

*Service Agreement:* an agreement governing services one party provides to another party, typically for a set fee. Service Agreements are often used in the oil and gas context where a third-party contractor is performing specialized management and/or operational services with respect to a particular set of oil and gas assets on behalf of the assets' owner or Operator.

*Servient Estate:* in the case of a Severed Property, a real property legal term used to describe the relationship of the Surface Estate to the Mineral Estate, whereby the rights of the Surface Estate owner are subservient to the rights of the Mineral Estate owner, and, subject to the Accommodation Doctrine (if applicable), the owner of the Mineral Estate has the right to enter and use the Surface Estate as is reasonably necessary for developing the Mineral Estate.

See also Dominant Estate.

*Servitude*: a limitation (or Burden) placed on real property for the benefit of the general public or a specific person. In the oil and gas context, a reference to a Servitude typically refers to a mineral Servitude, which is a Servitude granted for the benefit of a mineral owner that burdens the Surface Estate by allowing the mineral owner to enter upon the surface owner's property to explore and extract the underlying minerals.

*Set Back*: a regulatory requirement imposed on Operators to locate Wellbores a minimum distance from certain relevant sites, Leases or property lines. For example, a Set Back requirement may specify that a Wellbore must be a minimum of 100 feet from any surface property line and a minimum of 3,000 feet from any gas storage Reservoir. Precise Set Back requirements vary by jurisdiction and exceptions may be granted.

*Severance of Surface and Mineral Estates*: the division of the Mineral Estate from the Surface Estate with respect to a particular Tract, creating two separate and independent real property estates.

*Severance Tax*: a tax levied by certain states upon the removal or severance of oil and gas from the ground (*i.e.*, Production).

*Severed Property*: a Tract wherein the Mineral Estate and Surface Estate have been severed.

*Shale*: a tight Source Rock, meaning it has very low Permeability and Porosity. Shale is an example of an Unconventional Resource Play that was not economically recoverable until recent technological innovations (*e.g.*, Hydraulic Fracturing) made extracting oil and gas therefrom commercially viable. Development of Shale in recent years in the US (commonly referred to as the "shale boom" or "shale revolution") has significantly shifted the position of the US in the global energy market due to the increased domestic energy supply Reserves found in US Shale Plays.

*Shale Gas / Shale Oil*: Crude Oil or Natural Gas obtained from Shale.

*Shale Shaker*: an oilfield tool used to remove solid Deposits from Drilling Mud.

*Shared Use Agreement*: an agreement governing the rights and obligations of multiple parties that desire to share in the use of a particular asset or property.

*Ship-or-Pay*: another term for Send-or-Pay.

*Shoot a Well*: a colloquial term used to refer to an antiquated Secondary Recovery process that involved filling a container with explosives (referred to as a "torpedo"), sending it down a Wellbore and detonating the explosives. This technique originated in the 1860s and has long since been replaced by the modern day Hydraulic Fracturing techniques.

In contrast, see Well Shoot.

*Shooting Rights:* the right to conduct seismic operations with respect to a particular area, including both the applicable surface area and subsurface depths.

*Short Trip:* a colloquial term used to refer to the process of recovering a piece of Drill Pipe from a Well that is being drilled and replacing it back into the Wellbore. The piece of pipe that is recovered is normally limited to 10 to 20 Stands of Pipe, rather than the entire Drill String, and is therefore referred to as a Short Trip rather than a Round Trip in which the entire Drill String is recovered. A Short Trip is often used to gauge whether to proceed with a full Tripping Out of the Wellbore.

See also Tripping Out.

*Shortfall Credit:* under a Midstream services agreement that contains a Minimum Volume Commitment, a Shortfall Credit allows the customer to offset any throughput volumes that exceed the Minimum Volume Commitment in one period against future volume shortfalls and Shortfall Fees in subsequent periods.

*Shortfall Fee / Shortfall Payment:* under a Midstream services agreement that contains a Minimum Volume Commitment, a Shortfall Fee is a fee that the customer is required to pay if the Minimum Volume Commitment is not met for an applicable period.

*Shrinkage:* not what George Costanza claimed as an excuse, instead a negligible amount of Production that is lost during the transportation of Hydrocarbons from a Receipt Point to a Delivery Point. Shrinkage can also refer to the loss of Btu content in a gas stream due to the Processing of such gas to produce NGLs.

*Shut-In Royalty:* a Royalty paid to a Lessor under an Oil and Gas Lease for a Shut-In Well. The Shut-In Royalty payment allows the Lessee to perpetuate the Lease despite the absence of Production in Paying Quantities.

*Shut-In Well:* a Well capable of Production that has been shut-in due to lack of market, take-away Capacity or other adverse condition.

*Side Letter:* a contractually binding agreement, typically in letter agreement form, that provides for additional and/or ancillary agreements, terms and/or conditions (or a modification of the existing terms and conditions) of a related underlying transaction. A Side Letter is an alternative approach to executing a formal amendment to an agreement, but typically has a similar effect.

*Sidetracking / Sidetrack Operations:* a Drilling operation that uses a portion of an existing Wellbore to create a new Wellbore for the same Well. Sidetracking is typically utilized to bypass a portion of the existing Wellbore that is unable to be Re-entered because of Junk in the original Wellbore or impenetrable subsurface obstacles in the original Wellbore's path that cannot be drilled through.

*Sidewall Coring*: the process of taking a sample of a drilled Formation to gauge the Formation's Porosity and Permeability.

*Sign and Close*: a transaction that is simultaneously signed and consummated, with no Interim Period to perform Due Diligence, clear applicable transfer restrictions, or perform or satisfy other specified covenants.

*Sit-Down Title Opinion*: a type of Title Opinion a title attorney drafts based on examination of verbatim Abstracts furnished by an abstract company. A Sit-Down Title Opinion is more accurate than a Stand-Up Title Opinion, but takes more time to prepare (and certainly sounds like a more relaxing process). In contrast, see Stand-Up Title Opinion.

*Society of Petroleum Engineers (SPE)*: a professional organization founded in 1957 focused on the Upstream sector of the oil and gas industry. The purpose of the SPE is to provide a platform for disseminating technical expertise about the exploration, Development and production of oil and gas and provide opportunities for industry professionals to increase their technical and professional competence.

*Soft Consent*: a type of Consent that, while required for the transfer of an asset under the terms of the applicable agreement, is of a type under which failure to obtain such Consent will not result in the transfer being void or trigger the ability to terminate the applicable agreement.

Additionally, in many situations, a Consent that, by its terms, is Not to be Unreasonably Withheld, will be considered a Soft Consent, regardless of the implications set forth in the underlying agreement for the failure to obtain such Consent.

In contrast, see Hard Consent.

*Sour Crude Oil*: Crude Oil with sulfur content over 0.5%. Sour Crude Oil requires more processing than Sweet Crude Oil due to Sour Crude Oil's higher sulfur content. As a result, Sour Crude Oil is typically more costly and less valuable than Sweet Crude Oil. Would've hated to be the person who came up with this name ... talk about a sour taste in your mouth.

In contrast, see Intermediate Crude Oil.

*Sour Gas*: in addition to being what your elderly uncle may accidentally (or not) contribute to family gatherings, this is Gas with a high hydrogen sulfide and carbon dioxide content. Sour Gas is less valuable than Sweet Gas because Sour Gas requires purification to remove such contaminants. Due to its corrosive nature, Sour Gas requires specialized valves and Pipelines for transportation purposes.

In contrast, see Sweet Gas.

*Source Rock*: a type of rock rich in organic matter and with low Permeability and Porosity from which Hydrocarbons have been generated or are capable of being generated only with Enhanced Recovery techniques

(typically Hydraulic Fracturing). Examples of Source Rocks are Shales and limestones. In contrast, see Reservoir Rock.

*Spacing / Spacing Area / Spacing Unit / Spacing Order:* a regulatory mechanism established by state regulatory agencies to control the number of Wells located in a given surface area and Completed to a given Formation by designating how many acres a Well can efficiently Drain. Spacing was established to prevent both economic waste (Drilling an unnecessary amount Wells) and environmental waste (Drilling too aggressively can reduce overall recovery).

A Spacing Unit is the regulatory proscribed number of acres given to a Well, which can vary for each jurisdiction. Typical Spacing Units are 40 acres for one Oil Well per Formation and 640 acres for one Gas Well per Formation, but this can vary greatly based on Reservoir characteristics and jurisdiction.

*SPE:* acronym for Society of Petroleum Engineers.

*Special Warranty of Title / Special Warranty Deed:* a limited Warranty of Title in a Conveyance instrument a Grantor gives to a Grantee, warranting title "by, through, or under" the Grantor but not otherwise. As a result, the practical effect of a Special Warranty of Title is that it will only protect against actions by the Grantor itself and not third parties.

A Special Warranty of Title is more beneficial to a Grantee than a Quitclaim, but despite the name a Special Warranty isn't too special and is a lot less beneficial than a General Warranty of Title.

A Conveyance that contains a Special Warranty of Title is sometimes referred to as a Special Warranty Deed.

*Spot Price:* in the context of Natural Gas or Crude Oil futures contracts, the price that a person would pay for immediate purchase of the relevant commodity at the production site, also known as the "cash price."

In contrast, see Strip Price.

*Spud / Spud-In:* a colloquial term for the initial Drilling of a new Well, specifically referencing when the Drill Bit breaks the surface.

*Squeeze Job:* the act of pumping cement into a Casing in order to get an accurate pressure test on the applicable Well. Not as exciting as you thought it would be, huh?

*Stack a Rig:* a colloquial term used to refer to the act of preparing a Drilling Rig for long-term storage (i.e., the rig will be withdrawn from operations for a material period of time).

*Stand of Pipe / Stand:* a set of two or three pieces of Drill Pipe that remain connected to each other when removed from the Wellbore during Tripping. Stands of Pipe are stored on the Derrick during Tripping in order to reduce downtime and the need to unscrew every individual



piece of Drill Pipe for what is normally a short shutdown of operations (e.g., changing the Drill Bit).

See also Short Trip, Tripping In and Tripping Out.

*Standard of Care:* a degree of prudence and caution that a party performing obligations under an applicable contractual arrangement is required to exercise. The level of the Standard of Care required will depend on the circumstances of the underlying transaction and is often the subject of negotiation between the parties. Transaction documents will generally allocate liability for certain breaches of the Standard of Care, typically in the form of an indemnity from the obligated party breaching the applicable standard.

*Stand-By Costs:* the costs associated with having a Drilling Rig waiting on location to conduct operations. For example, if a pipe shipment is delayed, then Stand-By Costs may be incurred if the Drilling Rig is already on location and the pipe is needed for drilling operations to commence.

*Stand-Up Title Opinion:* a type of Title Opinion a Landman or title attorney drafts based directly on an examination of the county records where the subject land is located. A Stand-Up Title Opinion is generally less accurate, but available sooner than a Sit-Down Title Opinion.

In contrast, see Sit-Down Title Opinion (and together with Sit-Down Title Opinion, see Hokey-Pokey).

*State Leases:* a colloquial term for Oil and Gas Leases granted by a State covering State-owned minerals (i.e., the State or some other state-level governmental agency is the Lessor).

*Steam Flood:* a type of Thermal Recovery method used specifically for Heavy Crude Oil. Injection Wells are used to inject steam into a particular Formation in order to force the Heavy Crude Oil upward. Steam Flood operations also heat the oil on the oil's way into the applicable Wellbore in order to lower the Viscosity of the oil so the oil flows more efficiently.

*Stimulation:* a general reference to various operations or techniques employed to "stimulate" or increase Production of a Well by improving the flow of Hydrocarbons from the applicable Reservoir, such as through the use of Hydraulic Fracturing to extend the perforation tunnels and fractures or Acidizing to remove any blockage.

*Storage Facility:* a facility, whether in the form of a tanker, storage vessel, cavern or other underground Formation, constructed or utilized in order to store Hydrocarbons after they have been produced.

*S-T-R:* abbreviation of Section-Township-Range.

*Strategic Player:* a term used to refer to leaders in the energy industry. Strategic Players are typically fully-integrated oil and gas companies, meaning companies that are engaged in all aspects of the oil and gas

industry, from Upstream to Midstream to Downstream (e.g., ExxonMobil, BP, Chevron, ConocoPhillips and Shell). Strategic Players can also include the leading Independent Producers, refiners and marketers, Pipeline companies, service companies, and NOCs, among others.

*Stratigraphic Equivalent*: in the context of Drilling a Well, the Stratigraphic Equivalent refers to a comparable target depth for such Well based off of the actual depth of the same Target Formation measured in an existing Well. This comparative concept is used because the depth of a single Formation will vary over a wide geographic area. In the context of a Lease, the Stratigraphic Equivalent is often used as the standard in Pugh Clauses for releases of Leasehold Interests based on the deepest depth drilled.

*Stratum*: a subsurface geological Formation.

*Strip Price*: not just what used to commonly be charged to expense accounts in the 80s. In the context of Natural Gas or Crude Oil futures contracts, an average of the daily settlement prices of the next 12 months' futures contracts for the relevant commodity.

In contrast, see Spot Price.

*Stripper Well / Strippers*: a colloquial term used to reference a marginally-producing Well or an old Well beyond its economically useful life. Despite their low production rates, Strippers collectively generate a significant percentage of oil and gas Production in the US.

*Structure*: folding and faulting in rock Formations.

*Subdivision Lot*: a Legal Description of real property that references a plat, Survey, deed or similar instrument that the local government approved and recorded in the applicable real property records, that contains a full Legal Description of the Tract and that shows the individual recorded lot numbers.

*Sublease*: a concept that is not limited to the oil and gas industry that involves leasing certain rights and obligations arising under a given lease (not just an Oil and Gas Lease) from the applicable lessee to a third party that is not in privity of contract with the original lessor. In a Sublease, the original lessee will remain liable to the original lessor under the underlying primary lease for the actions of the sublessee.

*Subrogation Clause*: a mechanism that provides a third party with the right to "step into the shoes" of a party to a contract and directly pursue rights and remedies to which the party is entitled under the contract. Common examples of these rights are warranties and insurance claims. A variation of a Subrogation Clause can also be included in an Oil and Gas Lease, whereby the clause protects the Lessee if the Lessor fails to pay the costs covered by a Mortgage burdening the property or taxes due on the property. In this context, a Lessee may directly pay the taxes, Mortgage obligation or any other lien that has been assessed on the

property and then recover such payments from future Proceeds under the Lease.

*Subsequent Operations:* any operation conducted under a JOA after the Initial Well operations. A JOA typically sets forth a mechanism for proposing and participating in such operations. A Subsequent Operation may require the Consent of the other parties or may be undertaken solely by the Operator, depending on the circumstances.

*Subsequently Created Interest:* an interest a Lessee creates under an Oil and Gas Lease after the initial Conveyance of the oil and gas interests from the Lessor to the Lessee, such as an ORRI created for the benefit of a third party. The Subsequently Created Interest will affect the Lessee's interest in the Lease, but will cause no modification of the Lessor's interest in the leased Acreage or underlying Mineral Estate.

*Substitute Acreage:* a concept sometimes seen in a PSA or exchange agreement to remedy Title Defects discovered during the Title Diligence process. A Substitute Acreage provision in a PSA will typically allow the seller (and more rarely the buyer) to exclude all or a portion of the Acreage affected by a claimed Title Defect and replace such Acreage with other, non-defected Acreage not previously subject to the transaction and that is otherwise substantially similar to the excluded defected Acreage. This outcome is used rather than adjusting the applicable consideration by the applicable Title Defect Amount or any other common Title Defect remedy.

The mechanics of the Substitute Acreage provision works similarly under an exchange agreement, except that both parties, in their respective capacities as a seller under the exchange agreement, will typically have the option to offer Substitute Acreage.

*Substitute Well:* a Well drilled to replace a previously drilled Well that was unsuccessful for one reason or another. This concept is often included in Farmout Agreements, so that if the Farmee encounters an impenetrable Formation or other conditions that render further Drilling in the original Well impractical, the Farmee can still earn Acreage under the Farmout with a Substitute Well.

*Successful Efforts Accounting v. Full Cost Accounting:* companies involved in the exploration, Development and production of oil and gas may utilize one of two accounting approaches: the Successful Efforts method or the Full Cost method. The distinction between the two methods is in the treatment of specific operating expenses relating to the exploration of new Reserves, and the method chosen will affect how a company reports its net income and cash flow.

Under Successful Efforts Accounting, a company will capitalize only those operating expenses associated with successfully locating new oil and gas Reserves, and operating expenses associated with Dry Holes are counted against revenues for that period.

Under Full Cost Accounting, a company may capitalize all operating expenses associated with locating new Reserves (regardless of success).

The two alternative accounting methods are a result of differing views on which accounting method provides the greatest transparency regarding a company's earnings and cash flows.

*Successor Operator:* typically refers to an Operator that takes over (*i.e.*, succeeds) after the removal or resignation of the prior Operator, whether under a JOA or otherwise. Generally, the term can be used to refer to any scenario in which a new Operator succeeds a prior Operator.

*Sucker-Rod Lift:* yes, this is a real thing. An Artificial Lift technique that utilizes a surface-pumping Unit, which is linked by steel rods (referred to as "sucker rods") to, and drives, an underground Pump, causing the applicable components located in the Wellbore to move up and down, creating suction.

*Superfund Act:* another term for CERCLA.

*Surface Damages:* money a Lessee pays to a surface owner under an Oil and Gas Lease or Surface Use Agreement for disturbances to the surface owner's property; the amount of the Surface Damages will vary depending on the terms of the underlying agreements and the damage sustained.

*Surface Damages Clause:* a clause in a Lease or Surface Use Agreement that typically obligates the Lessee to pay for all, or certain specified, damages to roads, fences, improvements, crops and similar property the Lessee's operations cause in connection with the Lease or agreement and to repair, remediate and restore the surface to its original condition within a reasonable time period after the cessation of operations. A party's specific obligations under a Surface Damages Clause will vary depending on the terms of the agreement.

*Surface Estate:* an estate in real property that provides the Surface Estate owner with the right to use and develop the surface of the land above the Mineral Estate and the right to certain subsurface minerals, specifically, caliche, coal, gravel, iron, lignite (near surface), limestone, sand, surface shale and water. A Surface Estate may be "severed" from the Mineral Estate and owned by a person other than the owner of the Mineral Estate, in which case the Surface Estate will be the Servient Estate and the Mineral Estate will be the Dominant Estate.

*Surface Location / Surface Hole Location:* the location on the surface where a Well is Spud, usually consisting of a Well Pad and associated facilities.

*Surface Rights / Surface Interests:* the rights attributable to the owner of the Surface Estate. With respect to oil and gas operations, Surface Rights are a consideration when the Mineral Estate and Surface Estate are severed, resulting in split ownership of the same Tract. Although

the Mineral Estate is the Dominant Estate, the Mineral Estate owner is nevertheless required to reasonably accommodate the surface owner's existing use and Development of the Surface Estate.

See also Accommodation Doctrine.

*Surface Use Agreement:* an agreement between a surface owner and a counterparty that desires to use such surface for a certain purpose (e.g., oil and gas operations) that delineates the rights and obligations of each party with respect to the use of the surface.

*Surrender Clause:* a clause in an Oil and Gas Lease that allows a Lessee to relinquish the Lease, meaning the Lessee releases its interest in the Lease to the Lessor prior to the expiration of the Lease by its own terms.

*Survey:* a Metes and Bounds description of a particular geographical area that is used to determine legal property boundaries.

*Suspense Funds:* an accounting tool oil and gas companies use whereby Royalty Payments and other unclaimed funds that do not necessarily belong to the company (e.g., unclaimed Royalty Payments or payments that relate to a Title Dispute, clouded title or pending litigation) are held in suspense and not paid-out to an interest holder until a certain time (typically, the resolution of such dispute, litigation, etc.). In certain jurisdictions, Suspense Funds that are unclaimed after a specified period of time escheat to the applicable governmental authority.

*SWD:* Abbreviation of Salt Water Disposal Well.

*Sweet Crude Oil:* Crude Oil with a sulfur content of less than 0.5%. Sweet Crude Oil is more valuable than Sour Crude Oil because it requires less processing. Despite the name, you don't want to taste it ... trust us. Wait, what?

In contrast, see Intermediate Crude Oil.

*Sweet Gas:* contrary to what your spouse may try to tell you, this exists only in the oil and gas world. Natural Gas with a low sulfur content that requires little purification.

In contrast, see Sour Gas.

*Sweet Spot:* you'll know when you hit it! A colloquial term used to designate the most productive portion of an oil and gas Reservoir.

*Tag-Along Rights:* a contractual arrangement where, if (i) multiple parties own interests in the same or related properties or entity, and (ii) one owner elects to sell its interest to a third party, then the other owners have the right to compel the selling owner to require that all or a pro rata portion of the other non-selling owners' interests in the applicable properties or entity are included in the sale to the third-party purchaser on the same terms and conditions as the selling owner's proposed transaction.

In the corporate context, Tag-Along Rights are typically only granted to the minority partner, member or shareholder of a given entity, if at all.

See also Drag-Along Rights.

*Take or Pay*: a provision of a contract between a company seeking to sell its oil or gas Production and a party seeking to buy the Production, under which the receiving party is obligated to either take a specified amount of such Production from the seller (typically subject to certain limitations) or pay the seller a pre-determined penalty.

*Take Point*: in a Horizontal Well, any point along the Wellbore where Hydrocarbons can be produced from the applicable Reservoir.

*Take-in-Kind*: a Working Interest holder's right to take its pro rata portion of the physical Hydrocarbons Production under the applicable agreement (i.e., "in-kind") rather than receiving its share of the monetary Proceeds thereof.

*Tangible Drilling Costs*: a term used to classify certain costs incurred in Drilling or developing Wells for purposes of determining the tax treatment for such costs. Generally, Tangible Drilling Costs are costs incurred to acquire equipment (or other items) that has a salvage value and that is used in Drilling or developing Wells, such as Casings, well fittings, land and tankage. Tangible Drilling Costs are generally recovered through Depreciation of the applicable assets to which they apply, typically over a period of seven years.

In contrast, see Intangible Drilling Costs.

*Tank Battery*: the location of central processing, storage and measurement facilities on a Drillsite Tract. Production from Wells on such Tract will travel from the Wellbore(s) and into Flowlines and then into a central point, known as the Tank Battery, in order to minimize inefficiencies caused by the different locations of wells spread across such Tract.

*Tank Car*: another term for Rail Car.

*Tank Farm*: an area comprised of several hydrocarbon storage tanks and related facilities.

*Target Formation*: in the drilling context, the subsurface Formation that a given operation is targeting as the productive Zone to be penetrated and tested, and if successful, produced.

*Tax Partnership*: a term used to describe any joint venture or other joint development arrangement that is treated as a partnership for US federal income tax purposes, but for which no state law entity exists (e.g., the economic arrangement created by a JDA).

Under certain specific circumstances, parties to an arrangement that is otherwise treated as a Tax Partnership under the relevant US federal income tax rules may nevertheless "elect out." Following an election out,

parties meeting the applicable requirements will be treated as separately owning their Mineral Interests that would otherwise be subject to the applicable Tax Partnership for US federal income tax purposes.

*Tax Partnership Agreement:* an agreement used to define the rights and obligations of parties to a Tax Partnership. Typically a Tax Partnership Agreement is an Ancillary Document to a larger transaction.

*Tcf:* a unit of measurement for Natural Gas volumes. One Tcf means one trillion cubic feet.

*Technically Recoverable Resources:* a classification for Resources that are recoverable with current technology, regardless of oil and gas prices or Production Costs. As a general matter, Technically Recoverable Resources will typically not be produced, despite technological ability to do so, if Production is commercially not favorable.

*Temporary Cessation of Production Clause:* a Savings Clause in an Oil and Gas Lease that allows parties to perpetuate the Lease past the Primary Term if Production ceases but is restored within a set period of time.

*Tenancy in Common:* an undivided ownership interest in a single Tract between two or more persons or entities (each, a Co-Tenant). In a Tenancy in Common, the property interest is devisable and becomes part of the deceased's estate and may be transferred by will or intestacy (unlike in a Joint Tenancy, where the property interest transfers automatically on death due to the right of survivorship). Co-Tenants cannot prevent Development by other Co-Tenants of the applicable Tract and each Co-Tenant has the right to use and occupy the Tract.

In contrast, see Joint Tenancy.

*Tender:* in Midstream operations, the act of making Hydrocarbons available to a recipient upon delivery at a specified location, such as a Receipt Point.

*Terminal:* in the oil and gas context, a term used to refer to any facility that provides loading, offloading, and other similar services and that provides points of interconnection to other Midstream and Downstream facilities, such as Pipelines, processing facilities, Storage Facilities, refineries, etc.

*Terminus:* the end point of a horizontal Wellbore.

*Tertiary Recovery:* a type of Enhanced Oil Recovery method specifically used after Secondary Recovery. During Tertiary Recovery, steam or chemicals are injected into the Reservoir for the purpose of increasing the recovery of Hydrocarbons after both Primary Recovery and Secondary Recovery have been exhausted.

*Test Well / Testing Operations:* a Well that is used to determine the recoverability of Hydrocarbons from a given Reservoir or Formation. Testing Operations are operations typically conducted after Drilling,

but before Completion, to gather Reservoir and Production information using Well Logs and formation fluids.

*Texas Mineral Interest Pooling Act:* a Texas Compulsory Pooling statute enacted in 1968, under which a Lease Operator can force unleased Mineral Interest owners into a Pooled Unit. Under the statute, the Operator seeking to form the Pooled Unit must first make a good faith offer to the unleased Mineral Interest owners before filing an application with the RRC to Force Pool such unleased Mineral Interests into the Unit. The intent of the statute is to prevent waste and Drainage and protect Correlative Rights. The Act applies only to Oil and Gas Fields discovered after March 8, 1961.

*Texas Railroad Commission (RRC):* the Texas agency tasked with regulating oil and gas operations.

*Texas Two-Step:* not just the most popular dance down at the honky-tonk. A colloquial term used to refer to an approach to avoid both Consent restrictions and Pref Rights with respect to a particular interest that would be triggered by the transfer of the interest to a third party. A Texas Two-Step consists of structuring a transaction so that the interest at issue is first transferred to a wholly-owned subsidiary of the owner of the interest and then the owner sells the stock of the subsidiary to the third-party buyer.

*Thermal Recovery:* the process of injecting heat into a Reservoir to lower the Viscosity of the Hydrocarbons in the Reservoir and thereby enhance the recovery of Hydrocarbons.

See also Steam Flood.

*Third-for-a-Quarter:* a colloquial term used to describe a joint development arrangement in which the party providing the investment opportunity to the other parties sells a quarter of its Working Interest in return for an obligation to pay a third of the applicable costs. Oftentimes the owner of a property may enter into three Third-for-a-Quarter transactions for the property, resulting in the owner retaining a quarter of its original Working Interest but having all applicable costs Carried for the remaining Working Interest. And you thought you wouldn't have to do any math ...

*Tight Formation:* an oil and gas Reservoir with low Permeability and Porosity, making the Hydrocarbons located in the Reservoir difficult to recover without Enhanced Recovery methods.

*Tight Gas:* Natural Gas locked in Reservoirs with a very low Permeability which impedes the flow of the gas and requires additional efforts to develop such Natural Gas (e.g., Hydraulic Fracturing to increase Formation Permeability and Horizontal Drilling and/or multiple Wells for increased recovery).



*Title Arbitrator:* an arbitrator utilized to settle Title Disputes between two parties that arise in the course of a transaction.

*Title Benefit / Title Benefit Mechanism:* a typical contractual provision in an oil and gas PSA under which the seller may claim credit (in various forms) for any discoveries that are made in the course of buyer's Title Diligence review that increase the quantum of the seller's interest in the applicable Oil and Gas Properties above the quantum the seller represented at the time of PSA execution. Title Benefits typically result in an increased number of Net Acres or an increase in the applicable NRI that the seller originally purported to own. The amount of any Title Benefits the seller and buyer agree upon is usually accounted for as an upwards purchase price adjustment or as an offset against any Title Defects.

*Title Benefit Notice:* a notice delivered under a PSA from one party (typically the seller) to the other, notifying the other party of the existence of a claimed Title Benefit.

*Title Curative:* another term for Curative Work.

*Title Defect:* a defined term under a PSA that typically encompasses a condition existing on the target assets (e.g., a lien, charge, Encumbrance, obligation, or other similar defect) that (i) causes the seller not to have Defensible Title, or (ii) causes a decrease in the number of Net Acres or the Net Revenue Interest the seller purports to own at the time of PSA execution, in each case, that is discovered in the course of buyer's Title Diligence.

*Title Defect Amount:* with respect to a Title Defect that a seller is unable to or elects not to cure under a PSA, pursuant to the applicable Title Defect Mechanism, the Title Defect Amount is the dollar value assessed for the Title Defect, which is determined based on a range of variable factors. The Title Defect Amount for a particular Title Defect is often capped at the Allocated Value of the applicable property affected by the Title Defect and is typically used to reduce the purchase price to account for the loss of value to the buyer which the Title Defect causes.

*Title Defect Deductible:* pursuant to a Title Defect Mechanism, a negotiated deductible below which the seller has no liability to the buyer for Title Defects. If the aggregate Title Defect Amounts attributable to claimed Title Defects exceed the Title Defect Deductible, then the buyer is only entitled to, and the seller is only responsible for, liabilities with respect to Title Defects to the extent that the Title Defect Amounts exceed the Title Defect Deductible.

In contrast, see Title Defect Threshold.

*Title Defect Mechanism:* a typical contractual provision in an oil and gas PSA under which the buyer may seek remedies from the seller for certain Title Defects. Under a Title Defect Mechanism, between signing and

Closing the buyer conducts Title Diligence on the assets to be purchased, and must assert any claim for Title Defects in the manner specified in the PSA by the applicable Defect Claim Date. Remedies for Title Defects are negotiated for each transaction, but typically include (i) the seller's right to cure the Title Defect prior to Closing, (ii) the right to exclude the applicable Title Defect Property from the assets to be sold (with a corresponding adjustment to the purchase price), (iii) a reduction in the purchase price by the applicable Title Defect Amount, and (iv) entering into an Title Indemnity Agreement.

*Title Defect Notice:* pursuant to a Title Defect Mechanism, a notice prepared by the buyer in which the buyer describes in detail the claimed Title Defect for which it seeks remedies.

*Title Defect Period:* pursuant to a Title Defect Mechanism, the negotiated period of time within which the buyer may conduct Title Diligence and claim Title Defects.

*Title Defect Property:* under a Title Defect Mechanism, the specific assets affected by a claimed Title Defect.

*Title Defect Threshold:* pursuant to a Title Defect Mechanism, a de minimis threshold that also serves as a limitation on the seller's liability for Title Defects (in addition to, and not in substitution of, a Title Defect Deductible or Aggregate Defect Deductible). If the Title Defect Amount of a claimed Title Defect is below the applicable Title Defect Threshold, then, regardless whether the Title Defect Deductible or Aggregate Defect Deductible has been reached, the buyer is not entitled to, and the seller is not responsible for, any liabilities with respect to such Title Defect.

A Title Defect Threshold is also commonly referred to as a "tipping basket," because if the Title Defects meet or exceed the threshold, all Title Defects in the basket are tipped over and the purchase price is adjusted by the entire amount.

See also Individual Defect Threshold.

*Title Diligence:* the process of researching and examining title information regarding a particular property in order to verify the purported ownership thereof and any potential title issues through reviewing, among other things, courthouse records, Title Opinions, internal owner files and public databases. Title Diligence can be performed by both a Landman (compiling the Abstract) and/or a title attorney (drafting a Title Opinion) and is undertaken to understand and accurately depict the property's current ownership and Chain of Title.

*Title Dispute:* a disagreement between a buyer and a seller under a PSA as to the validity of a claimed Title Defect.

*Title Examination:* another term for Title Diligence.

*Title Failure / Title Loss:* other terms for Loss of Title.

*Title Indemnity Agreement:* an agreement pursuant to which the seller under a PSA indemnifies the buyer for certain losses or liabilities arising out of a claimed Title Defect. Title Indemnity Agreements are commonly used as a remedy for Title Defects pursuant to a Title Defect Mechanism. In such instance, the seller would, notwithstanding the claimed Title Defect, transfer the Title Defect Property to the buyer at Closing (with no adjustment to the purchase price) and agree to indemnify the buyer for certain losses or liabilities arising out of the claimed Title Defect. Whether or not the agreement includes a dollar value cap or expires after a certain period of time is subject to negotiation between the parties.

*Title Opinion:* a tabulation of the ownership in a Tract which a title attorney typically prepares that is based on record ownership and subject to the fulfillment of certain requirements.

See also Drillsite Title Opinion, Sit-Down Title Opinion and Stand-Up Title Opinion.

*Tool Pusher:* a colloquial term for an applicable Operator's (or more likely their applicable service provider's) employee in charge of a Drilling Rig. Must've sounded catchier than the other options of "Wrench Turner" and "Hammer Swinger."

*Top Lease:* a Lease taken on certain Mineral Interests that are still burdened by an existing Lease. The Top Lease will become effective if and when the existing Lease expires. Typically, Top Leases are taken when an existing Lease is at risk of termination (for example, if a single, marginally producing Well is holding a Lease). Other situations where Top Leases are taken include (i) when an existing Lessee seeks a Top Lease to secure the Lessee's interest in the underlying property, or (ii) when area competitors seek Top Leases in an attempt to secure leasehold rights in anticipation of the existing Lease soon terminating.

*Total Depth:* another term for Measured Depth.

*Total Vertical Depth:* another term for True Vertical Depth.

*Township:* the largest subdivision of land used in the PLSS system, a Township is identified by reference lines, an East-West base line (*i.e.*, township lines) and a North-South principal Meridian (*i.e.*, Range lines), to create a six-mile-square area. A Township is identified by specifying how many Townships it is North or South from a referenced principal line of longitude and how many Ranges it is East or West of the principal Meridian.

*Tract:* in the real property context, a Tract is a general term to describe a certain lot, plot or parcel of land that is intended to be owned or controlled. In the oil and gas context, a Tract generally refers to a parcel of land comprising a portion of the surface area covered by an Oil and Gas Lease.

*Transfer Order*: a standard notification issued to a remitter of oil and gas Production following the consummation of a sale of oil and gas assets notifying the remitter that a transfer of ownership of an applicable property has occurred. Parties to such a sale transaction will often execute and deliver Letters in Lieu of Transfer Orders.

*Transition Services Agreement (TSA)*: in the oil and gas context, typically an Ancillary Document to a PSA, whereby the seller agrees to provide certain services to the buyer during a defined transition period following Closing in order to allow the buyer and/or new Operator time to prepare to assume responsibility for the applicable service(s) and/or operatorship.

*Trap*: a type of rock or geological Structure with low Permeability and Porosity that prevents hydrocarbon Migration, effectively “trapping” the Hydrocarbons in place.

*Treater*: a vessel used to separate fluids that are not miscible (e.g., water-oil emulsions), which can utilize several different mechanisms, including Heater Treaters and electrostatic Treaters.

*Treatment Facility*: a facility that removes impurities from water (i) produced with oil and gas, or (ii) contaminated during certain operations, such as Hydraulic Fracturing. The treated water can be sold to other Operators or reused in later Drilling, Stimulation or Workover operations.

*Trip*: the process of inserting or removing the Drill String in a Wellbore.

*Trip In / Tripping In*: the process of running the Drill String into the Wellbore joint-by-joint of Drill Pipe or Stand-by-Stand until reaching the desired depth.

*Trip Out / Tripping Out*: the process of pulling the Drill String out of the Wellbore joint-by-joint of Drill Pipe or Stand-by-Stand. Not to be confused with the popular pastime for many a hippie in the 70s.

*True Vapor Pressure (TVP)*: an ASTM test method for measuring the vapor pressure of Crude Oil and refined petroleum products (e.g., gasoline). RVP testing is used in various quality control and research and development applications. RVP testing specifically, and vapor pressure testing in general, is an important safety check in the transportation, storage, and blending of Crude Oil and refined petroleum products.

*True Vertical Depth*: the measurement made from the surface to a point in the Wellbore (often the deepest subsurface depth drilled), by utilizing a straight line perpendicular to the surface.

In contrast, see Measured Depth.

*Trunk Line*: a large Pipeline that carries Hydrocarbons over long distances. Smaller Pipelines (e.g., Gathering Lines) feed into a Trunk Line.

*TSA*: abbreviation of Transition Services Agreement.

*tubing*: the inner lining of a Well, located inside the Casing, that is used as a conduit for Hydrocarbons to come to the surface.

*Turning to the Right*: a colloquial term used to refer to the act of Drilling a Well, derived from the fact that the Drill String and Drill Bit actually rotate clockwise during drilling operations and proof that NASCAR drivers would not make good drilling contractors.

*Turnkey Contract / Turnkey Well*: a type of construction contract (or in the case of a Turnkey Well, a drilling contract) whereby the contractor is paid a fixed sum to complete construction of a particular facility and place it into service (or drill a Well to Completion) based on certain specifications. When the contractor completes the facility or Well, and meets all specifications in the contract, the facility or Well is then turned back to the party that commissioned the services.

*TVP*: abbreviation of True Vapor Pressure.

*Type Curve*: a Production profile for a Play (based on a pre-plotted solution to a flow equation) used to analyze pressure drawdown and buildup tests related to such Play. A Type Curve is used to set a standard of comparison for new Wells drilled in the applicable Type Curve Area. Actual field data is plotted on the same coordinates as the Type Curve to help determine the qualitative and quantitative properties of the underlying Formation.

*Type Curve Area*: the geographical area that the Production profile for a Type Curve is based upon.

*Unassociated Gas*: Natural Gas that is produced from a Well other than an Oil Well (i.e., a Gas Well) or that is found in a non-oil bearing Formation.

In contrast, see Associated Gas.

*Unconventional Drilling*: drilling in Unconventional Resource Plays, such as Shale. Unconventional Drilling typically includes Horizontal Drilling and will often require Hydraulic Fracturing or other Stimulation techniques in order to effectuate Production from the applicable Well, as the Reserves in such Unconventional Resource Plays typically cannot be economically developed with Conventional Drilling methods alone.

*Unconventional Resource*: reservoirs that are difficult to produce with traditional techniques because of low Porosity and Permeability characteristics, thus requiring an Enhanced Recovery method. Includes Reservoirs composed of Bitumen, Shale, Coalbed Methane and Gas Hydrates.

*Under-Delivered*: a term used to describe a Pipeline Imbalance at a certain point on a Pipeline, typically a certain interconnection point, due to the fact that the amount of Hydrocarbons delivered by a party to the point by a particular time falls short of the amount of Hydrocarbons the party has Nominated or allocated to the interconnection.

In contrast, see Over-Delivered.

*Underground Gas Storage*: typically, a depleted cavern or subsurface Formation where Natural Gas that has previously been extracted from another Formation is reinjected and stored until a market is secured.

See also Storage Facility.

*Under-Produced*: a term used to describe a Well Imbalance due to the fact that the amount of Hydrocarbons produced from an applicable Well and allocated to a party falls short of the share of Production from the Well to which the party is entitled.

In contrast, see Over-Produced.

*Undeveloped Acreage*: acreage that does not have any Oil Wells or Gas Wells located thereon and that has not been otherwise developed through oil and gas operations, for whatever reason, regardless of whether the Acreage contains underlying Reserves.

*Uniform Commercial Code Financing Statement / UCC Financing Statement / UCC-1 / UCC-3*: in connection with a lien, a statement filed by a creditor with the appropriate Secretary of State of the jurisdiction where the relevant property is located or the jurisdiction where the debtor is domiciled in order to perfect such creditor's security interest in the debtor's personal property or in the equity interests of the debtor, respectively (*i.e.*, the creditor becomes a secured party). Perfection of an interest in oil and gas assets (whether such assets are tangible or intangible or real or personal property) also requires a filing in the office where a Mortgage on the real property concerned would be filed or recorded.

A UCC-1 is used to perfect a new lien, and a UCC-3 is used to amend or terminate an existing UCC Financing Statement.

*Unit / Unitization*: a large amount of Acreage joined together via contract or statute in order to develop a single Reservoir in the most efficient and cost effective manner.

*Unit Operator*: the Operator of a Unit. The Unit Operator is responsible for all operations within the Unit and invoices the Non-Op Working Interest owners for their proportionate share of the costs of operations. The rights and obligations of the Unit Operator and Non-Operators are typically set forth in an Operating Agreement for the Unit.

*United States Geological Survey (USGS)*: a government agency tasked with providing impartial scientific information for increased understanding of the Earth's energy, mineral and biological resources. The USGS is a public information source, focusing its oil and gas research efforts on the location, Quality and quantity of Hydrocarbons so it can evaluate Reserve growth, Unconventional Resources and energy economics in the United States.

*Unitization Agreement:* an agreement among Working Interest and Royalty owners to develop a Unit. A Unitization Agreement typically allows for all owners to proportionately share in costs and Production for Development operations within the Unit boundaries, regardless of the Surface Hole Location, the Bottomhole Location or the location of the Well's Terminus.

*Unless Lease:* an Oil and Gas Lease under which the Lessee promises to commence drilling operations by a specified date, and if the Lessee does not commence drilling operations by the specified date, the Lease automatically terminates, unless the Lessee pays Delay Rentals.

Both Unless Leases and Or Leases are designed to ensure the Lessor a periodic return during the Primary Term in the event there is no Production and to allow the Lessee to postpone drilling operations by paying Delay Rentals.

The Unless Lease structure is common in Texas.

*Unplugged Well:* a Well that is no longer capable of producing oil and gas but has not yet undergone P&A operations.

*Unproved Reserves:* a classification for Oil and Gas Properties that have been evaluated based on geologic and/or engineering data that is similar to the data used to determine Proved Reserves, but technical, economic or regulatory uncertainties make it unfeasible to classify the Reserves as Proved Reserves.

Unproved Reserves can be further classified into two different categories: Probable Reserves and Possible Reserves.

*Up Dip:* in the context of structural geology, the portion of an Anticline that rests above the Formation it cuts across. Hydrocarbons tend to accumulate in Up Dips, making them an important indicator of the presence of Hydrocarbons.

See also Dip and Down Dip.

*Upstream:* a colloquial term for one of the three major sectors of the oil and gas industry, Upstream refers to the first phase, which involves finding and Drilling for Hydrocarbons to extract Hydrocarbons from the earth, also known as E&P operations. In contrast, see Midstream and Downstream

*USGS:* acronym for United States Geological Survey.

*Utica Shale:* a Shale Formation located in the Mid-Atlantic / Northeastern regions of the US, typically thought to be centered in West Virginia, Ohio, Pennsylvania and New York. The Utica Shale underlies the Marcellus Shale in many locations.

*Vee-Door:* an opening in the side of a Derrick that allows long Drill Pipes and large tools to pass through easily.

*Venting*: the controlled Release of gases into the atmosphere during oil and gas operations.

See also Flaring.

*Vertical Spacing*: Vertical Spacing applies to Vertical Wells and dictates a Wellbore location (minimum distance from other Lease lines) as well as the number of Wells allowed in a geographic area. Although Vertical Spacing varies greatly from state to state and Field to Field, typically it is 40 acres for an Oil Well and 640 acres for a Gas Well.

See also Rule 37 and Rule 38. In contrast, see Horizontal Spacing.

*Vertical Well*: a traditional Oil Well or Gas Well, drilled vertically from the surface directly to the Target Formation.

In contrast, see Horizontal Well.

*Viscosity*: the measurement of a liquid's ability to flow.

*Volatile Oil*: oil that contains a higher gas content and typically has a higher Flow Rate than heavier Crude Oil types.

*Volumetric Production Payment (VPP)*: a right to a fractional share of the Hydrocarbons produced for a certain period of time or until a specified amount of revenue (or volume of Production) is received, typically conveyed as a term ORRI. VPPs are used as a means of financing oil and gas operations and are intended to be classified as real property interests, with the classification codified in the Bankruptcy Code. If properly structured, a VPP (other than a VPP in which the Proceeds therefrom are pledged for E&P purposes) will be treated as a financing for US federal income tax purposes.

See also Production Payment.

*Voting Provisions*: in a JOA, the mechanisms which the Working Interest owners use to vote on operational and development decisions.

*VPP*: abbreviation of Volumetric Production Payment.

*Warranty Deed*: a type of document used to legally transfer property from a Grantor to a Grantee. A Warranty Deed usually includes a Legal Description of the property, the named Grantor/Grantee and language conveying the ownership from Grantor to Grantee. A Warranty Deed also typically includes a Warranty of Title, either a Special Warranty or a General Warranty.

*Warranty of Title*: a warranty which a Grantor gives to a Grantee regarding a Conveyance of property, typically contained within a Warranty Deed legally transferring the property. A Warranty of Title will typically include a warranty that the Grantor has the right to transfer ownership of the property and that the property is Conveyed free and clear of any other claims, liens or other Encumbrances on title to the property (other than any Permitted Encumbrances). The scope of a Warranty of Title can vary.



Typically, a General Warranty provides the highest level of protection to a Grantee, while a Special Warranty provides less protection. In contrast, a property Conveyed under a Quitclaim Deed provides no warranties to the Grantee.

*Water Drive:* a type of Reservoir Drive mechanism, where water naturally located in the Reservoir is under enough natural pressure to push Hydrocarbons into the Wellbore during the Primary Recovery phase of a Well. As the Well is produced, the volume of Hydrocarbons in the Reservoir will eventually become lower than the volume of water in the Reservoir, and the Well will begin producing mostly water as a result. At such time, a Secondary Recovery method or Workover operation will be employed on the Well to increase Production.

*Water Flooding:* an EOR method whereby water is injected into the ground through Injection Wells in order to drive oil up through the various Wells Completed in such Reservoir Field-wide.

*Water Rights Agreement:* an agreement entered into between an owner of water rights and a counterparty under which the counterparty obtains the right to use a certain amount of water for its operations, subject to certain terms and conditions. Water Rights Agreements are often used in the context of Unconventional Resource Plays and in Hydraulic Fracturing operations.

*Water-Oil Ratio:* in produced oil, the ratio of water to oil.

*Weighting Up:* the process of adding Drilling Mud to a Wellbore to stabilize pressure and enhance Well Control.

*Well:* a hole drilled into the ground in order to bring Hydrocarbons to the surface.

*Well Casing:* another term for Casing.

*Well Control:* while Drilling a Well, the efforts made to control Kicks and prevent Blowouts.

*Well Data:* Information about a Well gathered during its Drilling and Completion, such as Formation fluids (e.g., Crude Oil, Natural Gas or water), Permeability characteristics and initial pressure.

*Well Exhibit:* an exhibit to an oil and gas industry agreement or instrument that sets forth the Wells subject to the applicable agreement of instrument. The Well Exhibit will describe the Wells in sufficient detail so that the Wells can be identified and/or transferred, as applicable. A Well Exhibit may include the Working Interest, Net Revenue Interest, county and API Well Number.

*Well Imbalances:* a discrepancy between the amount of Hydrocarbons produced from a Well and allocated to the Well's various interest owners and the shares of Production from the relevant Well to which each such interest owner is entitled.

*Well Log*: another term for Log.

*Well Pad*: the Surface Location from which several Horizontal Drilling or slant drilling Wells are drilled. The use of Well Pads in Horizontal and slant Drilling represents a significant advancement from conventional vertical drilling where only a single Well could be drilled from a given Surface Location, allowing for more efficient Production of Hydrocarbons.

*Well Shoot*: a colloquial term used to refer to a type of Wellbore seismic operation designed to measure the seismic travel time from the surface to a known depth.

In contrast, see Shoot a Well.

*Well Spacing*: another term for Spacing.

*Wellbore*: the actual hole drilled for a Well, together with its different components, such as Casing and Tubing.

*Wellbore Assignment*: a Conveyance limited to the Wellbore of a Well that only includes the rights in the underlying Leases insofar as is necessary to produce Hydrocarbons from such Wellbore, rather than a Conveyance of an undivided interest across an entire Lease.

*Wellhead*: the surface access point where the Casing and Tubing are found for a Wellbore.

*West Texas Intermediate (WTI)*: a particular trading classification of light Sweet Crude Oil extracted from certain Reservoirs underlying Texas that serves as a benchmark price for light Sweet Crude Oil in particular and as a global benchmark price for Crude Oil in general. WTI is the underlying commodity of all Crude Oil futures contracts traded on the NYMEX.

The price of WTI is often referenced alongside the price of Brent Crude (among others), although WTI is lighter and sweeter than Brent Crude.

*Wet Gas*: a colloquial term for Natural Gas that contains liquid or condensable Hydrocarbons when produced. Wet Gas typically contains Methane, Ethane, Butane, Pentane and Propane, among other types of Hydrocarbons, which can be separated through Processing the Wet Gas into NGLs and Dry Gas.

*Wildcat / Wildcatter*: a colloquial term for a person who drills Wildcat Wells. The term originated in the late 1800s during the early days of the oil industry when there was little technology available to explore for Hydrocarbons and commonly speculators simply tried their luck at Drilling in an unproven area. Like their namesake, Wildcatters are seen in ever-decreasing numbers.

*Wildcat Well*: a Well drilled in an area with no established oil and gas Production (i.e., an unproven area). Wildcat Wells are inherently riskier than Drilling new wells in established Oil and Gas Fields because of the

lack of Well Data and subsurface information available in a completely undeveloped area.

*Williston Basin:* a Play located in North Dakota, South Dakota, Montana and Southern Canada. Increased industry activity in the Williston Basin has centered recently around the success of Production from the Bakken Shale because of Horizontal Drilling.

*Wiper Trip:* a colloquial term for the process of recovery and replacement of part of the Drill String in a Wellbore.

*Wireline:* a type of logging procedure in which a measuring device is lowered into a Wellbore to gather Well information.

*Woodford Shale:* a Shale Formation located in Oklahoma. The Woodford Shale experienced a large increase in Production in the late 2000s due to the success of Horizontal Drilling and Hydraulic Fracturing.

*Working Capital:* a measure of a company's short term liquidity, which is determined by subtracting a company's current liabilities from its current assets. In the context of an equity sale PSA, the Working Capital of the target entity is a metric often used to adjust the purchase price at Closing.

*Working Interest (WI):* a type of interest in an Oil and Gas Property that obligates the holder thereof to bear and pay a portion of all of the property's maintenance, Development, and operational costs and expenses, without giving effect to any Burdens applicable to the property.

*Workover:* operations conducted on a Well that has previously been drilled to restore or increase Production from such Well.

*Workover Rig:* a Workover Rig is a Rig that is smaller in stature than a Drilling Rig and only performs Workovers.

*Write-Offs:* a colloquial term for tax deductions in the oil and gas industry, including Tangible Drilling Costs, IDCs and Depletion allowances.

*WTI:* abbreviation of West Texas Intermediate.

*Zone:* another term for Reservoir.

The terms Formation, Reservoir and Zone, on a highly technical level, have slightly different meanings, but as a general matter, the terms are often used interchangeably in the oil and gas industry.

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