



New York State Department of Environmental Conservation
Division of Mineral Resources

Glossary
for
Draft Supplemental Generic
Environmental Impact Statement

Term	Definition
Access Road:	A road constructed to the wellsite that provides access for the drilling rig and other drilling-related equipment. The road is also used to inspect and maintain the well during the operating phase. Once a well is plugged and abandoned, the land the access road is on must be reclaimed, unless the landowner wants to keep the road.
Accumulator:	The storage device for nitrogen pressurized hydraulic fluid, which is used in operating the blowout preventers.
AERMOD:	American Meteorological Society's and USEPA's Regulatory Model recommended by EPA for regulatory dispersion modeling.
Agarwal-Gardner Type Curve Analysis:	See definition for "Decline or Type Curve Analysis"
Air Channel Test:	Air Channel Strength testing is a method of checking thermal welds joining PVC geomembrane liners together. This test method eliminates the need to cut holes in the liner to perform the tests.
ALJ:	Administrative Law Judge
Amphibolite:	A metamorphic rock consisting mainly of amphibole and plagioclase.
Anaerobic:	Living or active in the absence of free oxygen.
Anhydrite:	A mineral; anhydrous calcium sulfate, CaSO ₄
Anisotropy:	A crystal exhibiting properties with different values when measured in different directions.
Annular Flow:	A multiphase flow regime in which the lighter fluid flows in the center of the pipe, and the heavier fluid is contained in a thin film on the pipe wall. Annular flow occurs at high velocities of the lighter fluid, and is observed in both vertical and horizontal wells.
Annular Space or Annulus:	Space between casing and the wellbore, or between the tubing and casing or wellbore, or between two strings of casing
Anorthosite:	A plutonic rock (formed at great depth) composed almost wholly of plagioclase.
Anticline:	A fold with strata sloping downward on both sides from a common crest.
API:	American Petroleum Institute.
API Number:	A number referencing system designed by the American Petroleum Institute to identify wells; each state and county has a specific number code.
API:	American Petroleum Institute
Aquifer:	A zone of permeable, water saturated rock material below the surface of the earth capable of producing significant quantities of water.
Arps Decline Curve Analysis:	See definition for "Decline or Type Curve Analysis"
AST:	Above-ground Storage Tank
Attenuation:	The act of lessening the amount, force, magnitude, or value of.
Bactericides:	Also known as a "Biocide." An additive that kills bacteria. Bactericides are commonly used in water muds containing natural starches and gums that are especially vulnerable to bacterial attack. Bactericides can be used to control sulfate-reducing bacteria, slime-forming bacteria, iron-oxidizing bacteria, and bacteria that attack polymers in fracture and secondary recovery fluids.
Baker Tanks:	Portable skid-mounted storage tanks for temporary use at a wellsite.
Ballast:	The soil or stone material meant to hold down a geomembrane or geotextile material used in constructing a liner.
Bank Run Gravel:	Gravel found in natural deposits with varying mixtures of sand, silt and clay.

Barrel:	42 U.S. gallons.
Base Gas:	Also called "Cushion Gas." It's the gas needed to help produce the "working gas" rapidly. Base gas is normally held permanently within a gas storage reservoir.
BBL or bbl:	Abbr for a Barrel which is a measure of volume for petroleum products. One barrel is the equivalent of 42 U.S. gallons or 0.15899 cubic meters.
BCF or bcf:	Abbr for Billion cubic feet, which is a measure of natural gas.
Benching:	Method of quarrying by alternating vertical and horizontal excavations yielding a step (stair) profile.
Benthic:	Of or pertaining to the bottom of a standing body of water, including life forms inhabiting that area.
Bentonite:	A natural clay, used as a cement or mud additive for its expansive characteristics and/or its tendency to not separate from water.
Berm:	A narrow shelf, path, or ledge typically at the top or bottom of a slope. The term also applies to a mound or wall of earth or sand, as in a landscaped <i>berm</i>
Biocides:	See definition for "Bactericides"
Blasingame Type Curve Analysis:	See definition for "Decline or Type Curve Analysis"
Blending Unit or Blender:	The equipment used to prepare the slurries and gels commonly used in stimulation treatments. The blender should be capable of providing a supply of adequately mixed ingredients at the desired treatment rate. Modern blenders are computer controlled, which enables efficient control of quality and quantity.
Blooie Line:	Pipe that diverts fluids from the wellbore to a reserve pit.
Blowout:	Uncontrolled flow of gas, oil or water from a well.
BMP	Best Management Practices
BOD:	Biochemical (or biological) oxygen demand.
BOP:	Blowout Preventer.
Borehole:	See wellbore.
Brachiopod:	Any of the phylum of marine, shelled animals with two unequal shells (Brachiopoda).
Breaker:	A chemical used to reduce the viscosity of a fluid (break it down) after the thickened fluid has finished the job it was designed for.
Bridge Plug:	A type of mechanical packer that is usually permanent which is used in a well casing to isolate a zone.
Brine Disposal Well:	A well (Class IID) for subsurface injection of associated produced brines from oil, gas and underground gas storage operations, or a well (Class V) for disposal of spent brine from geothermal and solution mining operations.
Brine:	A solution containing appreciable amounts of NaCl and/or other salts. Synonymous with salt water.
Brush Bridge Plug:	An obstruction placed in a well at a specified depth. It can be the stump of a tree, brush, sacks, rags or any other material used as the foundation for a plug isolating a zone in the wellbore or casing.
Bryozoan:	Any of the phylum of aquatic invertebrate animals (Bryozoa).
BTX:	Benzene, Toluene, and Xylene. These are all aromatic hydrocarbons.
BTEX:	Benzene, Toluene, Ethylbenzene, and Xylene. These are all aromatic hydrocarbons
BUD:	Beneficial Use Determination issued by NYSDEC's Division of Solid and Hazardous Materials
Buffer Zone:	An area designed to protect and separate an activity from things around it.

Cable Tool:	Equipment (rig) for cable-tool drilling consisting of a heavy metal bar sharpened to a chisel-like point and attached to a cable. The gravity impact of the heavy metal bar (bit) pulverizes the rock which is removed with a bailer.
Caliper Log:	A log that is used to check for any wellbore irregularities. It is run prior to primary cementing as a means of calculating the amount of cement needed. Also run in conjunction with other open-hole logs for log corrections.
Cambrian Period:	Time period ranging from 580 to 520 million years ago.
Capillary Effect:	The phenomenon where water in small spaces, such as a thin tube or the small pore spaces in rock, moves forward by surface tension.
Carbonate:	Containing the $(\text{CO}_3)^{+2}$ radical.
Carcinogen:	Cancer causing substance.
CAS Number:	Chemicals Abstract Service number, assigned by Chemical Abstracts Service, which is part of the American Chemical Society. The CAS registry is the most authoritative collection of disclosed chemical substance information, containing more than 48 million organic and inorganic substances and 61 million sequences. Each CAS Registry Number (often referred to as a CAS Number) is a unique numeric identifier; higher or lower numbers have no chemical significance.
Casing:	Steel pipe placed in a well to prevent the wall of the hole from caving in, to isolate fresh water aquifers from the wellbore, to prevent movement of fluids from one formation to another, and to aid in well control.
Casinghead:	Top of surface casing above the ground to which control valves and flow pipes are attached.
Casing Shoe:	Reinforcing collar screwed onto the bottom of surface casing that guides the casing through the hole while absorbing the brunt of the shock.
Cation:	A positively charged ion.
Caustic:	A material that eats away (corrodes) by chemical action, high alkalinity. A base with a very high pH.
CBS:	Chemical Bulk Storage
CEA:	Critical Environmental Area.
Cement Bond Log:	A log used to evaluate the effectiveness of a primary cement job based on the different responses of sound waves in metal pipe and cement. It can also be used to locate channels in the cement.
Cement Retainer:	An expandable plug (packer) run on tubing or casing that allows cement to be pumped below.
Centipoise:	A unit of viscosity equal to one hundredth of a dyne-second per square centimeter.
Centrifuge:	An item of solids-removal equipment that removes fine and ultrafine solids. It consists of a conical drum that rotates at 2000 to 4000 rpm. Drilling fluid is fed into one end and the separated solids are moved up the bowl by a rotating scroll to exit at the other end. Centrifuges generally have limited processing capacity (50 to 250 gpm) but are useful for processing weighted drilling fluids and can remove finer solids than can a hydrocyclone or shaker screens. They can also be used for water clarification or for processing oily cuttings.
CFR:	Code of Federal Regulations
CH ₄ :	Methane
Chemical Tracer:	An identifiable substance, for example a dye, added to a system under study that can be detected at successive points in time to gather information about how the system/ process is working.

Choke:	A device with an orifice installed in a line to restrict the flow of fluids. Surface chokes are part of the Christmas tree (wellhead) on a well and contain a choke nipple, or bean, with a small-diameter bore that serves to restrict the flow. Chokes are also used to control the rate of flow of the drilling mud out of the hole when the well is closed in with the blowout preventer and a kick is being circulated out of the hole.
Choke Manifold:	The arrangement of piping and special valves, called chokes, through which drilling mud is circulated when the blowout preventers are closed to control the pressures encountered during a kick.
Circulation:	The round trip made by the well fluids from the surface down the tubing, wellbore or casing, and then back to the surface.
Class GSB Water:	The best usage of Class GSB waters is as a receiving water for disposal of wastes. Class GSB waters are saline groundwaters that have a chloride concentration in excess of 1,000 milligrams per liter or a total dissolved solids concentration in excess of 2,000 milligrams per liter.
Clastic:	Rock consisting of fragments of rocks that have been transported from other places.
Clay Stabilizer/Clay Inhibitor:	A chemical additive used in stimulation treatments to prevent the migration and/or swelling of clay particles. Without adequate protection, some water-base fluids can affect the electrical charge of clay particles and cause pieces of clay to swell and/or migrate in the flowing fluid where they may plug the target formation and lower production.
CO ₂ :	Carbon Dioxide
CO ₂ e:	Carbon Dioxide equivalents
Coagulate:	To cause or become thickened or clotted.
COGCC:	Colorado Oil and Gas Conservation Commission
Completion:	Preparation of a well for production after it has been drilled.
Compressive Strength:	Measure of the ability of a substance to withstand compression.
Compressor Stations:	A device that raises the pressure of a compressible fluid, such as air or gas. Compressors create a pressure differential to move or compress a vapor or a gas.
Compulsory Integration:	New York's Environmental Conservation Law (Article 23, Titles 5 and 9 as amended by Chapter 386 of the Laws of 2005) gives all property owners the opportunity to recover or receive the gas beneath their property. To protect these "correlative rights," the Department of Environmental Conservation may establish spacing units whenever necessary. Compulsory integration is required when any owner in a spacing unit does not voluntarily integrate their interests with those of the unit operator. Compensation to the compulsory integrated interests will be established by a DEC Commissioner's Order after a public hearing.
Condensate:	Liquid hydrocarbons recovered by conventional surface separators from natural gas. Condensate has an API gravity of 50° to 120°.
Conductor Hole:	The hole for conductor pipe or casing.
Conductor Pipe or Casing:	This large diameter casing is usually the first string of casing in a well. It is set or driven into the unconsolidated material where the well will be drilled to keep the loose material from caving in. It is usually relatively short in length.
Conglomeritic:	Rock containing noticeable chunks of smaller rock materials.
Connate Water:	Water trapped in the pore space of sedimentary rocks at the time the rock was deposited.
Constituents:	Parts of a whole
Consumptive Uses:	Water withdrawn for a variety of personal, agricultural or industrial purposes.

Correlative Rights:	Rights of any mineral owner to recover resources that underlay their property.
Corrosion Inhibitor:	A chemical substance that minimizes or prevents corrosion in metal equipment.
Crosslinkers:	A compound, typically a metallic salt, mixed with a base-gel fluid, such as a guar-gel system, to create a viscous gel used in some stimulation or pipeline cleaning treatments. The crosslinker reacts with the multiple-strand polymer to couple the molecules, creating a fluid of high viscosity.
Cumulative Impact:	Two or more individual effects on the environment which, when taken together, may compound or increase the other's environmental impact.
Cushion Gas:	See definition for "Base Gas."
Cuttings or Samples:	Chips of rock cut by the drill bit and brought to the surface by the drilling fluid. They indicate to the wellsite workers what kind of rocks are being penetrated and can also indicate the presence of oil or gas.
CWA	Clean Water Act
CZM:	Coastal Zone Management.
DAR:	Division of Air Resources within the NYS Department of Environmental Conservation
DAR-1 (Air Guide-1)	Division of Air Resources program policy guidelines for the control of toxic air contaminants
Darcy:	A unit of permeability equal to one cubic centimeter of fluid of one centipoise viscosity flowing in one second under a pressure differential of one atmosphere through a porous medium having a cross section of one square centimeter and a length of one centimeter.
DEC:	New York State Department of Environmental Conservation
Decline or Type Curve Analysis:	A decline curve analysis is a method to fit observed production information from a well or wells to a mathematical function that forms a curve and to use this information to predict future production. Arps introduced the decline curve analysis using mathematical functions in the 1940s. In the early 1980s Fetkvoich introduced a new kind of decline curve analysis based on type curves. It is essentially a graphical technique for visual matching of production data using pre-plotted curves on log-log paper. In 1993 Blasingame and Palacio introduced improvements to address the issue of variable bottom-hole pressures in gas wells. In 1999 Agarwal et al. introduced new type curves that made further refinements allowing the user to clearly distinguish between transient and boundary-dominated flow periods. Aside from all the refinements, the essential function of these analytical techniques remains the same - to examine historic production from a well or wells and predict future production.
Decollement:	A subhorizontal zone of detachment between two lithologic (rock) layers.
Deflocculants:	A thinning agent used to reduce viscosity or prevent flocculation; incorrectly called a "dispersant." Most deflocculants are low-molecular weight anionic polymers that neutralize positive charges on clay edges. Examples include polyphosphates, lignosulfonates, quebracho and various water-soluble synthetic polymers.
Dehydrator:	A device used to remove water and water vapors from gas.
Deliverability:	Volume per unit of time that can be delivered.
De-silter:	A centrifugal device, similar to a desander, used to remove very fine particles, or silt, from drilling fluid. This keeps the amount of solids in the fluid to the lowest possible level.

De-sander:	A centrifugal device for removing sand from drilling fluid to prevent abrasion of the pumps. It may be operated mechanically or by a fast-moving stream of fluid inside a special cone-shaped vessel, in which case it is sometimes called a hydrocyclone.
Detritus:	Fine particulate organic debris.
Devonian Period:	Period of geologic time which ranges from 415 to 360 million years ago.
Dip:	Angle of inclination from the horizontal.
Dipole Sonic Log:	A type of acoustic log that displays traveltime of P-waves versus depth.
Dipper:	A localized, somewhat archaic term for a person who salvages floating oil from surface waters.
Disconformity:	A surface of erosion between parallel rock strata or a point of contact between two discordant structures (e.g., a dike).
Disposal Well:	A well into which waste fluids can be injected deep underground for safe disposal. Disposal wells are subject to regulatory requirements to prevent contamination of aquifers.
DMN:	Division of Mineral Resources in the NYS Department of Environmental Conservation.
DMR:	Division of Marine Resources in the NYS Department of Environmental Conservation.
Doghhouse	A small enclosure on the rig floor used as an office and/or as a storehouse for small objects. Also, any small building used as an office or for storage.
DOH:	(New York State) Department of Health
Dolostone:	A sedimentary rock composed of fragmental, concretionary, or precipitated dolomite $[CaMg(CO_3)_2]$.
Dome:	A roughly symmetrical upward convex fold.
Double Hot Wedge Seam:	A thermal welding technique that works by melting the two geomembrane surfaces being joined.
DOW:	Division of Water in the NYS Department of Environmental Conservation
DMV:	(New York State) Department of Motor Vehicles
DPS:	(New York State) Department of Public Service
DRA:	Division of Regulatory Affairs in the NYS Department of Environmental Conservation.
DRBC	Delaware River Basin Commission
Drag Fold:	Minor folding of strata along the walls of a fault in which the "drag" of displacement has produced flexures in the beds on either side.
Drilling Fluid:	Mud, water, or air pumped down the drill string which acts as a lubricant for the bit and is used to carry rock cuttings back up the wellbore. It is also used for pressure control in the wellbore.
Drive Pipe:	See definition for "Conductor Casing"
Dry Hole:	Any well that does not produce oil or gas in commercial quantities. A dry hole may flow water, gas, or even oil, but not in amounts large enough to justify production.
DSHM:	Division of Solid and Hazardous Materials in the NYS Department of Environmental Conservation
E & P:	Exploration and Production
EAF:	Environmental Assessment Form.
ECL:	Environmental Conservation Law
Ecosystem:	The system composed of interacting organisms and their environments.

EDR:	Electrodialysis Reversal
Effective Porosity:	Property of rock or soil containing intercommunicating pore space, expressed as a percent volume of total bulk volume.
Effluent:	Something that flows out, in particular a waste material such as an industrial discharge.
EIS:	Environmental Impact Statement
Electrical Leak Location:	This is a type of quality assurance test that uses electrical resistivity to locate any defects that might be present in a geomembrane.
EM&CP:	Environmental Management and Construction Plan
EM&CS&P:	Environmental Management and Construction Standards and Practices
Eminent Domain:	A right of government to take private property for public use.
Entrainment:	The condition of being drawn into something and transported with it, for example, gas bubbles in cement.
E&P:	Exploration and Production
EPA:	(U.S.) Environmental Protection Agency
EPCRA:	Emergency Planning and Community Right to Know Act of 1986
Evaporite:	Sediment deposited from ancient seas as a result of extensive or total evaporation.
Exploratory Well:	A well drilled outside a proven productive area or horizon.
FAA:	(U.S.) Federal Aviation Administration
Falloff Test:	The measurement and analysis of pressure data taken after an injection well is shut in.
Fault:	A fracture or fracture zone along which there has been displacement of the sides relative to each other.
Fetkovich Decline Curve Analysis:	See definition for "Decline or Type Curve Analysis"
Field:	The area encompassing a group of producing oil and/or gas wells.
Filter Cloth:	Material used to underlay fill and other material which allows water to pass through it, but not sediment, thus preventing settling and unwanted siltation.
Flare:	The burning of unwanted gas through a pipe (also called a flare). Flaring is a means of disposal used when there is no way to transport the gas to market and the operator cannot use the gas for another purpose. Flaring generally is not allowed because of the high value of gas and environmental concerns
Flocculant:	A chemical added to a fluid to cause unwanted particles, such as clay, to clump together for easier removal.
Floodplain:	Level land built up by stream deposition (past floods) that may be subject to future flooding.
Flowback:	Return of fluids, used in the stimulation process, to the surface.
Flowmeter:	An instrument that measures fluid flow rates.
Flue Gas:	An exhaust gas coming out of a pipe or stack.
Fluid Saturation:	Percent volume of effective porosity occupied by a fluid.
FMCSA:	Federal Motor Carrier Safety Administration
Foaming Agents:	An additive used to make foam in a drilling fluid. Drilling foam is water containing air or gas bubbles, much like shaving foam, and it must withstand high salinity, hard water, solids, entrained oil, and high temperature. Foaming agents are usually nonionic surfactants and contain polymeric materials.
Fold:	A bend in rock strata.

Footwall:	The mass of rock beneath a fault plane.
Formation matrix:	A rock body distinguishable from other rock bodies and useful for mapping or description. Formations may be combined into groups or subdivided into members.
Fossils:	The remains or traces of plants or animals which have been preserved by natural causes.
Fracing (pronounced "fracking"):	See the definition for "Hydraulic Fracturing"
Freeboard:	The height above the recorded high-water mark of a structure associated with the water. In the case of pits, the extra depth left unused to prevent any
Friction Reducers:	An additive, generally in slurry or liquid form, used to reduce the friction forces experienced by tools and tubulars in the wellbore. Friction reducers are routinely used in horizontal and highly deviated wellbores where the friction forces limit the passage of tools along the wellbore.
Fry:	Recently hatched fish.
Gamma Ray Log:	Log that records natural gamma radiation of the formations. Shales can be identified because of their high natural gamma radiation content.
Gas Cap Drive:	Type of primary reservoir energy where free, compressed gas exists above an accumulation of saturated oil and exerts pressure on the oil causing it to move toward the wellbore.
Gas Saturation:	Percent of effective porosity occupied by gas.
Gas-Water Separator:	A device used to separate undesirable water from gas produced from a well.
GEIS:	Generic Environmental Impact Statement
Gelling Agents:	Polymers used to thicken fluid so that it can carry a significant amount of proppants into the formation.
Geocomposite Drainage System:	This refers to a geosynthetic (man-made) drainage system meant to perform the same drainage function as soil or stone. They are carefully designed to have a specific transmissivity tailored to the project.
Geomembrane:	Man-made polymeric membrane (flexible membrane) that is manufactured to be essentially impermeable and is used to build containment pits.
Geosynthetic Clay Liner:	A layer of processed clay bonded or fixed between two sheets of geotextile.
Geothermal Gradient:	The rate at which the earth's temperature increases with depth. The general average is 1°F/100'.
Geothermal Well:	A well drilled to explore for or produce natural heat found in underground hydrothermal, geopressured, or hot dry rock reservoirs.
GHG:	Greenhouse gas
GPD:	Gallons per day
GRI:	Gas Research Institute
Gravity Drive:	A type of primary reservoir energy where the force of gravity is sufficient to cause oil and gas to flow to the wellbore.
Graywacke:	A coarse sandstone or fine-grained conglomerate, usually dark gray, composed of subangular to rounded fragments of quartz, feldspars, etc.
Grenville Province:	Eastern margin of the vast Canadian Shield. It includes the Precambrian rocks exposed in the Adirondack Mountains
Groundwater:	Water in the subsurface below the water table. Groundwater is held in the pores of rocks, and can be connate, from meteoric sources, or associated with igneous intrusions.
Grout:	A concrete mixture that can be placed into a well annulus from the surface. Also a verb.
GWP:	Global warming potential

GWPC:	Ground Water Protection Council
Hanging Wall:	Mass of rock above a fault plane.
HAPS:	Hazardous Air Pollutants as defined under the Clean Air Act
Hardpan:	A hard impervious layer of soil composed chiefly of clay cemented by relatively insoluble materials.
HDPE:	High-density polyethylene. This plastic is resistant to most chemicals, insoluble in organic solvents, and has high impact and tensile strength.
Henry's Law Constant:	Ratio of a chemical's vapor pressure in the atmosphere to its solubility in water.
Heterogeneity:	Formation with rock properties changing with location in the reservoir. Some naturally fractured reservoirs are heterogeneous formations.
HMTA:	Hazardous Material Transportation Act
HMTUSA:	Hazardous Materials Transportation Uniform Safety Act
Horizontal Drilling:	Deviation of the borehole from vertical so that the borehole penetrates a productive formation in a manner parallel to the formation.
Horizontal Leg:	The part of the wellbore that deviates significantly from the vertical; it may or may not be exactly horizontal.
Hydraulic Fracturing:	Injection of fluids under pressure into a well in order to induce fractures in the target formation. Proppant injected with the fluid holds the fractures open when the fluid is withdrawn. The procedure increases permeability of the rock near the wellbore and improves production.
Hydrocarbons:	Organic compounds of hydrogen and carbon whose densities, boiling points, and freezing points increase as their molecular weights increase. Although composed of only two elements, hydrocarbons exist in a variety of compounds, because of the strong affinity of the carbon atom for other atoms and for itself. The smallest molecules of hydrocarbons are gaseous; the largest are solids. Petroleum is a mixture of many different hydrocarbons.
Hydrogen Sulfide or H ₂ S:	A malodorous, toxic gas with the characteristic odor of rotten eggs.
Hypalon:	Commercial name for a synthetic plastic-like material used to line pits.
ICF:	ICF International, a consulting firm
Idle Well:	A well which is unplugged and that has been inactive longer than two years.
Igneous Rocks:	Rock formed by solidification from a molten or partially molten state.
Indigenous:	Having originated in and being produced, growing, living, or occurring naturally in a particular region or environment.
Inert Chemical:	Lacking a usual or anticipated chemical or biological action.
Inert Gas:	Group of gases that exhibit great stability and extremely low reaction rates.
Infill Drilling:	Drilling between known producing wells to better exploit the reservoir.
Infill Wells	Wells drilled between known producing wells to better exploit the reservoir.
Infrastructure:	The system of public works of a country, state, or region. It can also refer to the resources (as personnel, buildings, or equipment) required for an activity.
Injectate:	Injectate is any substance injected down a well.
Injection Well:	A well through which fluids are injected into an underground stratum to increase reservoir pressure and to displace oil. Also called an input well.
Injection Zone:	A geological formation, group of formations, or part of a formation that receives fluids through a well.

Intermediate Casing or String:	Casing set below the surface casing in deep holes where added support or control of the wellbore is needed. It goes between the surface casing and the conductor casing. In very deep wells, more than one string of intermediate casing may be used.
Interstitial:	Relating to, or situated in, the interstices, spaces or cracks between things.
IOGA:	Independent Oil and Gas Association
Iron Inhibitors:	Chemicals used to bind the metal ions and prevent a number of different types of problems that the metal can cause (for example, scaling problems in pipe).
IOGCC:	Interstate Oil and Gas Compact Commission
Joule-Thompson Effect:	Referring to the change in temperature observed when a gas expands while flowing through a restriction without any heat entering or leaving the system. The change may be positive or negative. The Joule-Thomson effect often causes a temperature decrease as gas flows through pores of a reservoir to the wellbore.
Kill Fluid:	A heavy fluid which exerts a hydrostatic pressure equal to the bottomhole pressure (pressure at bottom of well). It is put into a well to get the well back under control if there has been a kick or a blowout.
Landlocked:	Enclosed or nearly enclosed by land.
Lanyards:	Broadly; a chord or line to hold something.
Leakoff:	The magnitude of pressure exerted on a formation that causes fluid to be forced into the formation. The fluid may be flowing into the pore spaces of the rock or into cracks opened and propagated into the formation by the fluid pressure. This term is normally associated with a test to determine the strength of the rock, commonly called a pressure integrity test (PIT) or a leakoff test (LOT).
Lease Gas:	Gaseous hydrocarbons produced at the well or on the lease.
Lifelines:	Broadly; a line to which a person may cling, attach, or use to save or protect their life.
Limestone:	A bedded sedimentary deposit consisting chiefly of calcium carbonate (CaCO_3).
Lingula:	An ancient genus of brachiopods (shelled marine animals).
Lithologic:	Referring to the physical characteristics of rocks or sediment that can be determined with the human eye.
Log:	A systematic recording of data, such as a driller's log, mud log, electrical well log, or radioactivity log. Many different logs are run in wells to discern various characteristics of rock formations that the wellbore passes through.
Lost Circulation:	The quantities of drilling fluid lost to a formation, usually in cavernous, pressured, or coarsely permeable beds. Evidenced by the complete or partial failure of the mud to return to the surface as it is being circulated in the hole.
Lost Circulation Material:	Material put into fluids to block off the permeability of a lost circulation zone.
Lost Circulation Zone:	Rock formation that is so permeable or soluble that it diverts the flow of fluids from the well.
LPG:	Liquified Petroleum Gas
LWRP:	Local Waterfront Revitalization Program.
Macaroni String:	Small diameter tubing used for cleaning out or cementing into confined spaces such as the well tubing or annulus.
Manifold:	An arrangement of piping or valves designed to control, distribute and often monitor fluid flow. Manifolds are often configured for specific functions, such as a choke manifold used in well-control operations and a squeeze manifold used in squeeze-cementing work. In each case, the functional requirements of the operation have been addressed in the configuration of the manifold and the degree of control and instrumentation required.

Marine:	Of, belonging to, or caused by the sea.
Marker Bed:	A bed which is distinctive and traceable in outcrop or which accounts for a characteristic signature on a geophysical log or seismic time-distance curve.
MCF or Mcf:	Thousand cubic feet.
MCL or MCLG	Maximum Contaminant Level (Goal)
Metamorphism:	Chemical and/or physical change in a rock as a result of heat and/or pressure.
Methane:	Methane (CH ₄) is a greenhouse gas that remains in the atmosphere for approximately 9-15 years. Methane is also a primary constituent of natural gas and an important energy source.
Microseismic mapping:	Data are acquired by monitoring perforating jobs, string-shot tests, or other seismic sources in the treatment well or in another nearby well in order to determine the actual dimensions of the fracture and where it is located.
Microseisms (or microseismic events):	Small bursts of seismic energy generated by shear slippages along planes of weakness in the reservoir and surrounding layers which are induced by changes in stress and pore pressure around the hydraulic fracture. These microseisms are extremely small, and sensitive receiver systems are required. Microseisms do not map out exactly where individual hydraulic fracture planes are located, but rather form an ellipsoid around the fracture, outlining the length, height, and azimuth of the fracture.
Micro-annulus (plural is micro-annuli):	A small gap that can form between the casing or liner and the surrounding cement sheath, most commonly formed by variations in temperature or pressure during or after the cementing process. Such variations cause small movement of the steel casing, breaking the cement bond and creating a microannulus that is typically partial. However, in severe cases the microannulus may encircle the entire casing circumference. A microannulus can jeopardize the hydraulic efficiency of a primary cementing operation, allowing communication between zones if it is severe and connected.
mg/l:	milligrams per liter
Mineral Rights:	The ownership of the minerals under a given surface, with the right to enter and remove them. It may be separated from the surface ownership.
MMCF or MMcf:	Million cubic feet.
Mousehole:	A short hole drilled to the side of a wellbore to hold the next joint of drill pipe.
MSDS:	Material Safety Data Sheet
MSGP:	Multi-Sector General Permit
Mudboils:	Silty mounds formed under certain very unusual geologic conditions as groundwater erupts at the surface.
Mudlogging (Unit):	Trailer located at the wellsite housing equipment and personnel to progressively analyze wellbore cuttings washed up from the borehole. A portion of the mud is diverted through a gas-detecting device.
NAAQS and AAQS:	National or State Ambient Air Quality Standards for criteria pollutants
Native Gas:	Gas originally in place in an underground formation. Term is usually associated with gas storage.
NGPA:	Natural Gas Policy Act of 1978.
NOI:	Notice of Intent
Noise Log:	A log that picks up sound vibrations in the wellbore caused by flowing liquid or gas. Used to determine fluid entry points or flow behind casing.

Non-Darcy Flow:	Fluid flow that deviates from Darcy's law, which assumes laminar flow in the formation. Non-Darcy flow is typically observed in high-rate gas wells when the flow converging to the wellbore reaches flow velocities exceeding the Reynolds number for laminar or Darcy flow, and results in turbulent flow. Since most of the turbulent flow takes place near the wellbore in producing formations, the effect of non-Darcy flow is a rate-dependent skin effect.
Nonwetting Phase:	The pore space fluid which is not attached to the reservoir rock and thus has the greatest mobility.
N ₂ O:	Nitrous Oxide
NO ₂ :	Nitrogen Dioxide
NORM – Naturally Occurring Radioactive Materials	Low-level radioactivity that can exist naturally in native materials, like some shales and may be present in drill cuttings and other wastes from a well. Oil and gas production and processing operations sometimes cause NORM to accumulate at elevated concentrations in by-product waste streams. The primary radionuclides of concern are isotopes of radium that originate from the decay of uranium and thorium naturally present in the subsurface formations from which oil and gas are produced. The production wastes most likely to be contaminated by elevated radium include produced water, scale, and sludge.
Normalized Pressure Integral Curve Analysis:	This is another type of Decline or Type Curve Analysis. See that definition.
NPDES:	National Pollution Discharge Elimination System
NWS:	National Weather Service
NYCDEP:	New York City Department of Environmental Protection
NYCRR:	New York Codes of Rules and Regulations
NYSDOH	New York State Department of Health
NYSDOT:	New York State Department of Transportation.
NYSERDA:	New York State Energy Research and Development Authority
Offset Well:	An existing wellbore close to a proposed well that provides information for planning the proposed well. In planning development wells, there are usually numerous offsets, so a great deal is known about the subsurface geology and pressure regimes. In contrast, rank wildcats have no close offsets, and planning is based on interpretations of seismic data, distant offsets and prior experience. High-quality offset data are coveted by competent well planners to optimize well designs. When lacking offset data, the well planner must be more conservative in designing wells and include more contingencies.
Oil Wet:	The condition in the pore space of the rock where oil coats the grains of the rock and is the more immobile phase.
Operator:	Any person or organization in charge of the development of a lease or drilling and operation of a producing well.
OPRHP:	(NY State) Office of Parks, Recreation and Historic Preservation.
Ordovician Period:	Period of geologic time ranging from 520 to 465 million years ago.
Overburden:	Material of any type that overlies the rock deposit of interest and must be removed before the desirable product can be excavated.
Paleozoic Era:	A period of geologic time ranging from 570 to 225 million years ago, the beginning of which is marked by the appearance of abundant fossils.
Parameter	A characteristic of a model of a reservoir that may or may not vary with respect to position or with time. Porosity is a petrophysical parameter (or characteristic) that varies with position.

Passby Flow Requirement	A prescribed quantity of flow that must be allowed to pass an intake when withdrawal is occurring. Passby requirements also specify low- flow conditions during which no water can be withdrawn
Pathogens:	A specific causative agent (as a virus or bacterium).
Pay:	Zone of oil or gas in commercial quantities.
PBS	Petroleum Bulk Storage
Pennsylvanian Epoch:	Period of geologic time ranging from 310 to 280 million years ago.
Percolation Test:	Test to determine at what rate fluids will pass through soil.
Perforate:	To make holes through the casing to allow the oil or gas to flow into the well or to squeeze cement behind the casing.
Permeability:	1. a measure of the ease with which a fluid flows through the connecting pore spaces of a formation or cement. The unit of measurement is the millidarcy. 2. fluid conductivity of a porous medium. 3. ability of a fluid to flow within the interconnected pore network of a porous medium.
Permeable:	Having pores or openings that allow liquids to pass through.
Petroleum:	In the broadest sense the term embraces the full spectrum of hydrocarbons (gaseous, liquid, and solid).
PHMSA	Pipeline and Hazardous Materials Safety Administration
PID:	Perforation Inflow Diagnostic
Piezometer:	A nonpumping well, generally of small diameter, for measuring the elevation of a water table.
Pipe Racks	Horizontal supports for storing tubular goods.
Plat:	A map of land plots; a drafted map of the site location.
Plug Back	To place cement in or near the bottom of a well to exclude bottom water, to sidetrack, or to produce from a formation higher in the well. Plugging back can also be accomplished with a mechanical plug set by wireline, tubing, or drill pipe.
Plugged and Abandoned	(plug and abandon) To place cement plugs into a dry hole and abandon it.
Plugged and Abandoned	(plug and abandon) To prepare a well to be closed permanently, usually after either logs determine there is insufficient hydrocarbon potential to complete the well, or after production operations have drained the reservoir.
Plugging:	To place cement and other fluids in a well at appropriate intervals in order to prevent migration of fluids from or within the well.
Pluton:	A body of igneous rock that has formed beneath the surface of the earth.
PM10 and PM2.5	Particulate matter with sizes of less than 10 and 2.5 microns, respectively.
Pneumatic:	Run by or using compressed air.
Poisson's ratio	An elastic constant that is a measure of the compressibility of material perpendicular to applied stress, or the ratio of latitudinal to longitudinal strain. This elastic constant is named for Simeon Poisson (1781 to 1840), a French mathematician.
Polymer:	Chemical compound of unusually high molecular weight composed of numerous repeated, linked molecular units.
Polymerization:	A chemical reaction in which two or more molecules combine to form larger molecules that contain repeating structural units.

Pool:	An underground reservoir or trap containing oil and/or gas. Pool is also the term for a single separate reservoir with its own pressure system.
Porosity:	Volume of pore space expressed as a percent of the total bulk volume of the rock.
Potable:	Suitable for drinking by humans.
POTW:	Publicly Owned Treatment Works
ppm:	parts per million
Precambrian Era:	A period of time ranging from 4,500 to 570 million years ago.
Pressure Buildup Test:	An analysis of data obtained from measurements of the bottomhole pressure in a well that is shut-in after a flow period. The profile created on a plot of pressure against time is used with mathematical reservoir models to assess the extent and characteristics of the reservoir and the near-wellbore area.
Primary Aquifer	In order to enhance regulatory protection in areas where groundwater resources are most productive and most vulnerable, the NYS Department of Health, in 1980, identified eighteen Primary Water Supply Aquifers (also referred to simply as Primary Aquifers) across the state. These are defined in the Division of Water Technical & Operational Guidance Series (TOGS) 2.1.3 as "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems".
Primary Production:	Production of a reservoir by natural energy in the reservoir.
Primary Reservoir Energy:	The naturally occurring condition or mechanism which exists in a reservoir that aids the migrations of fluids to the wellbore.
Principal Aquifer:	The NYS Department of Health, in 1980, identified a category of groundwater resources listed in TOGS 2.1.3 as Principal Aquifers. These are "aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time".
Production Casing:	Casing set above or through the producing zone through which the well produces.
Production Water:	Water produced from oil and gas wells.
Proppant or Propping Agent:	A granular substance (sand grains, aluminum pellets, or other material) that is carried in suspension by the fracturing fluid and that serves to keep the cracks open when fracturing fluid is withdrawn after a fracture treatment.
PSC:	Public Service Commission.
PSD:	Prevention of Significant Deterioration defined in the Clean Air Act
PSI:	Pounds per square inch.
PSIG:	Pounds per Square Inch Gauge
PSL:	Public Service Law
Pump and Plug Method:	A technique for placing cement plugs at appropriate intervals.
PVC:	Polyvinylchloride; a durable petroleum derived plastic.
Quartz:	A mineral, SiO ₂ .
Radioactive Tracer:	A component of a production-logging tool that carries a radioactive solution (often carnotite) that can be selectively released into a flow stream. When the radioactive solution is released into an injected fluid, the movement of the mixture can be traced by gamma ray detectors located in the tool.

Radioactive Tracer Surveys (RATS):	A survey in which a radioactive isotope is released in a well and followed with a detector which is used to detect fluid movement and rate. It can also be used to recognize channels behind casing, tubing or casing leaks, and determine the flow direction of injected fluids.
Rat-hole:	A short slanted hole drilled near the wellbore to hold the kelly joint when not in use.
Real Property:	Includes mineral claims, surface and water rights.
REC	Reduced Emissions Completion
Reclaimed	(Reclamation) Rehabilitation of a disturbed area to make it acceptable for designated uses. This normally involves regrading, replacement of topsoil, re-vegetation, and other work necessary to restore it.
Reeving:	Hoisting from the derrick floor to the crown block.
Reserve pit:	A mud pit in which a supply of drilling fluid has been stored. Also, a waste pit, usually an excavated, earthen-walled pit. It may be lined with plastic to prevent soil contamination.
Reservoir	A subsurface, porous, permeable or naturally fractured rock body in which oil or gas are stored. Most reservoir rocks are limestones, dolomites, sandstones, or a combination of these. The four basic types of hydrocarbon reservoirs are oil, volatile oil, dry gas, and gas condensate. An oil reservoir generally contains three fluids—gas, oil, and water—with oil the dominant product. In the typical oil reservoir, these fluids become vertically segregated because of their different densities. Gas, the lightest, occupies the upper part of the reservoir rocks; water, the lower part; and oil, the intermediate section. In addition to its occurrence as a cap or in solution, gas may accumulate independently of the oil; if so, the reservoir is called a gas reservoir. Associated with the gas, in most instances, are salt water and some oil. Volatile oil reservoirs are exceptional in that during early production they are mostly productive of light oil plus gas, but, as depletion occurs, production can become almost totally completely gas. Volatile oils are usually good candidates for pressure maintenance, which can result in increased reserves. In the typical dry gas reservoir natural gas exists only as a gas and production is only gas plus fresh
Reservoir Rock:	A permeable rock that may contain oil or gas in appreciable quantity and through which petroleum may migrate.
Reworked:	Sediment that has been moved after preliminary deposition, commonly resulting in transportation and sorting.
Rework	To restore production from an existing formation when it has fallen off substantially or ceased altogether.
Riprap:	Erosion control device. Heavy irregular rocks or concrete used to form a wall or foundation that must resist the forces of waves, tides, or strong currents.
RO:	Reverse Osmosis
Rollovers:	Convex upward folds on the hanging wall of a thrust fault.
Rotary Rig:	A derrick equipped with rotary equipment where a well is drilled using rotational movement.
Royalties:	The landowner's share of the value of oil and gas produced.
Run-Off:	The portion of precipitation on land that ultimately reaches streams sometimes with dissolved or suspended material.
Sacrificial Anode:	Cathodic protection provided by galvanic coupling of an anode (a substance which easily loses electrons or corrodes) to a well casing, tank or pipeline needing protection. The sacrificial anode is consumed during protection of the steel object.
Sandstone:	A variously colored sedimentary rock composed chiefly of sandlike quartz grains cemented by lime, silica or other materials.

Scale Inhibitor:	A chemical substance which prevents the accumulation of a mineral deposit (for example, calcium carbonate) that precipitates out of water and adheres to the inside of pipes, heaters, and other equipment.
Schist Arenite:	Metamorphosed graywacke.
Scolithus:	Trace fossil, vertical tube left by a burrowing organism.
Secondary Recovery:	The extraction of oil from a field beyond what can be recovered by normal methods of flowing or pumping.
Secondary Silica Cement:	Silica (SiO ₂) precipitated in the pore space of a rock after deposition.
Sedimentary:	Rocks formed from sediment transported from their source and deposited in water.
Sedimentation Control	(sedimentation) The process of separation of the components of a cement slurry during which the solids settle. Sedimentation is one of the characterizations used to define slurry stability.
Seep:	Natural leakage of gas or oil at the earth's surface.
Seismic:	Related to earth vibrations produced naturally or artificially.
Separator:	Tank used to physically separate the oil, gas, and water produced simultaneously from a well.
SEQR:	Reference to the regulatory program or type of review done under SEQRA.
SEQRA:	State Environmental Quality Review Act.
Sequestering Agent:	A chemical additive that reduces chemical reactions.
Setback:	Minimum distance required between a well operation and other zones, boundaries, or objects such as highways, wetlands, streams, or houses.
Scrim:	This is a filament used as reinforcement in geomembrane.
SGC/AGC:	Short-term Guideline Concentration and Annual Guideline Concentrations defined in DAR-1 (Air Guide 1) procedures.
SGEIS:	Supplemental Generic Environmental Impact Statement
Shale:	Laminated sedimentary rock in which the constituent particles are predominantly of clay size.
Shale Shaker:	A series of trays with sieves or screens that vibrate to remove cuttings from circulating fluid in rotary drilling operations. The size of the openings in the sieve is selected to match the size of the solids in the drilling fluid and the anticipated size of cuttings. Also called a shaker.
Shear Wave (S-wave):	Elastic body wave in which particles oscillate perpendicular to the direction in which the wave propagates. S-waves, or shear waves, travel more slowly than P-waves and cannot travel through fluids. Interpretation of S-waves can help determine rock properties
Short Ton:	20 short hundred weight, 2,000 pounds.
Show:	Small quantity of oil or gas, not enough for commercial production.
Shut In (Verb):	To close the valves at the wellhead to keep the well from flowing or to stop producing a well.
Shut-In (Adjective):	The state of a well which has been shut-in.
Significant Habitats:	Areas which provide one or more of the key factors required for survival, variety or abundance of wildlife, and/or for human recreation associated with such wildlife.
Siliceous:	Of, relating to, or derived from silica.
Sill:	Sill is the term for a submerged horizontal ridge embedded in stream bottom usually at relatively shallow depth. It can also be intruded body of igneous rock that is parallel to bedding.
SILs:	Significant Impact Levels for criteria pollutants

Siltation:	The build-up of silt in a stream or lake as a result of activity that disturbs the streambed, bank, or surrounding land.
Siltstone:	Sediment in which the constituent particles are predominantly silt size.
Silurian Period:	Period of time ranging from 405 to 415 million years ago.
Skin Effects:	The loss in amplitude and change in phase of an electromagnetic field as it penetrates into a conductive medium. In an induction log, the skin effect causes a reduction of the R-signal (in-phase) and an increase in the X-signal (out-of-phase) at the receiver. It has a significant effect on the 6FF40 array, particularly below 1 ohm-m. Since the magnitude of the reduction depends on the conductivity, the skin effect can be corrected for by using a fixed function of the measured conductivity. A much improved method is to estimate the correction from the X-signal measured in balanced arrays. 2. [Well Testing] An increase or decrease in the pressure drop predicted with Darcy's law using the value of permeability thickness, kh, determined from a buildup or drawdown test. The difference is assumed to be caused by the "skin." Skin effect can be either positive or negative. The skin effect is termed positive if there is an increase in pressure drop, and negative when there is a decrease, as compared with the predicted Darcy pressure drop. A positive skin effect indicates extra flow resistance near the wellbore, and a negative skin effect indicates flow enhancement near the wellbore. The terms skin effect and skin factor are
Slick-Water Fracturing:	Water combined with a friction-reducing chemical additive which allows the water to be pumped faster into the formation. Water fracs don't use any polymers to thicken and the amount of proppant used is significantly less than that of gels. Slick water fracs work very well in low-permeability reservoirs, and they have been the primary instrument that has opened up unconventional plays like the Texas Barnett Shale. In addition to the cost advantage, water fracs require less cleanup and provide longer fractures. In shale formations, brine water is used because the salt content inhibits the formation from swelling. Freshwater is used in other formations where swelling of the clays is not a problem.
Sliding Scale:	A flexible scale that can be adjusted to variables (e.g., income, time).
Slippage:	The phenomenon in multiphase flow when one phase flows faster than another phase, in other words slips past it. Because of this phenomenon, there is a difference between the holdups and cuts of the phases.
Sloughing:	Cave-in of soil or soft rock such as shales from the side of the wellbore.
SO ₂ :	Sulfur Dioxide
Solution Gas Drive:	Type of primary reservoir energy where the major mechanism of energy is a result of gas coming out of solution with decreased reservoir pressure.
Sonic Log:	See "Dipole Sonic Log"
Source Bed:	Rocks in which oil or gas are generated.
Spacing Unit:	An area allotted to a well by regulations or field rules issued by a governmental authority having jurisdiction for the drilling and production of a well.
Spacing:	Distance separating wells in a field to optimize recovery of oil and gas.
SPDES:	State Pollutant Discharge Elimination System.
Spinner Survey:	Generic name for logs that use spinner type velocimeters to monitor fluid velocities. Used to identify leaks in casing or tubing, to analyze stimulation results, and to establish injection or production profiles and flow rates.
Spring:	A place where groundwater naturally flows from a rock or soil onto land or into a body of surface water.
Spudding:	The breaking of the earth's surface in the initial stage of drilling a well.

Squeeze:	Technique where cement is forced under pressure into the annular space between casing and the wellbore, between two strings of pipe, or into the casing-hole annulus.
SRBC	Susquehanna River Basin Commission
Standpipe:	A vertical pipe rising along the side of the derrick or mast. It joins the discharge line leading from the mud pump to the rotary hose and through which mud is pumped going into the hole.
Step Out:	To move the minimum spacing unit outside an existing area.
Step-Rate Pressure Test:	Pressure test where a succession of equal pressure steps (usually increasing) are sustained for a constant time duration.
Stimulation:	The act of increasing a well's productivity by artificial means such as hydraulic fracturing, acidizing, shooting, etc.
Strand Plain:	The shoreline, a beach.
Stratigraphic Test Well:	A hole drilled to gather engineering, geologic or hydrological information including but not limited to lithology, structural, porosity, permeability and geophysical data.
Stratigraphic Trap:	Accumulation of hydrocarbons entrapped as a result of variation in rock type, usually caused by a change in the environment of deposition.
Stratigraphy:	The study of the history, composition, relative ages and distribution of strata, and the interpretation of strata to elucidate Earth history.
Stratum (plural strata):	Layers of sedimentary rock that form beds.
Stream's Designated Best Use:	Each waterbody in NYS has been assigned a classification, which reflects the designated "best uses" of the waterbody. These best uses typically include the ability to support fish and aquatic wildlife, recreational uses (fishing, boating) and, for some waters, public bathing, drinking water use or shellfishing. Water quality is considered to be good if the waters support their best uses.
Strippers:	Wells producing less than 10 (BOPD) barrels of oil per day or 60 thousand cubic feet of gas per day.
Stromatolite:	Laminated calcareous rocks formed from fossil algae.
Structural Trap:	Accumulation of hydrocarbons entrapped as a result of faulting or folding.
Substructure	A vertical pipe rising along the side of the derrick or mast. It joins the discharge line leading from the mud pump to the rotary hose and through which mud is pumped going into the hole.
Surface Casing:	Casing extending from the surface to below the deepest fresh water aquifer. It is inside the conductor pipe and also acts as an anchor for well control equipment.
Surface Impoundment:	A liquid containment facility that can be installed in a natural topographical depression, excavation, or bermed area formed primarily of earthen materials, then lined with a geomembrane or or a combination of other geosynthetic materials.
Surface Rights:	Ownership of the surface of land only with no right to the mineral resources underneath.
Surfactants:	Chemical additives that reduce surface tension; or a surface active substance. Detergent is a surfactant.
Swab:	To clean out the borehole of a well with a special tool on a wireline which evacuates fluids and reduces the hydrostatic head to encourage flow.
SWPPP:	Stormwater Pollution Prevention Plan
Synclorium:	A broad regional syncline on which minor folds are superimposed.

Taconic Orogeny:	Mountain building episode in the latter part of the Ordovician Period, named for the Taconic Range of eastern New York.
Tag:	To check the presence and location of something, usually in reference to cement plugs in a wellbore. Plugs may be tagged using the drill stem, tubing string or other equipment.
Tank Battery:	A group of tanks used for storage of oil and other produced fluids from a well or wells.
Target Formation	The formation that the driller is trying to reach when drilling the well.
TD:	Total depth
TDS:	Total Dissolved Solids.
TDS:	The dry weight of dissolved material, organic and inorganic, contained in water and usually expressed in parts per million.
TENORM:	Technologically Enhanced Naturally Occurring Radioactive Material. The radioactive wastes from extraction and processing are sometimes called 'Technologically Enhanced Naturally Occurring Radioactive Material' (TENORM) because human activity has concentrated the radioactivity or increased the likelihood of exposure by making the radioactive material more accessible to human contact.
Tensile Strength:	The force per unit cross-sectional area required to pull a substance apart.
Thrust Fault:	A low angle reverse fault; the hanging wall moves up in relation to the foot wall.
Tight Formation:	Formation with very low permeabilities.
Tile Drainage:	Man-made drainage system utilizing open-ended ceramic pipes in areas of poor drainage.
TMD	Total measured depth.
Total Kjeldahl Nitrogen	The sum of organic nitrogen; ammonium NH ₃ and ammonia NH ₄ ⁺ in water and soil analyses
Tote:	Tote tanks are generally small (1,100 gallons or less) and owned by the product supplier. The supplier fills a tank with a product and delivers the filled tank to the facility or user. The facility places the tote tank near the area where it will be needed and may move the tank to supply more than one piece of equipment. When the tote tank is empty, the supplier replaces the empty tank rather than refilling it on site. The same tank does not stay at a given facility for any longer than it takes to use the product in the tank. It may take anywhere from a few days to a few months to use the product in the tank.
Transfer Coefficient:	Overall amount of mass transfer of a chemical from a liquid container to the atmosphere.
Trap:	A body of porous and permeable, hydrocarbon bearing rock which is sealed by impervious rock. 2. A geologic structure which retards the free migration of hydrocarbons.
TVD:	Total vertical depth.
Turbidity:	Amount of suspended solids in a liquid.
UIC – Underground Injection Control:	A program administered by the Environmental Protection Agency, primacy state, or Indian tribe under the Safe Drinking Water Act to ensure that subsurface emplacement of fluids does not endanger underground sources of drinking water.
UN:	United Nations
Unit Operation:	Joint operation of separately owned producing leases in a field, pool or reservoir.
USCG:	United States Coast Guard

USDOT:	United States Department of Transportation
USDW – Underground Source of Drinking Water	An aquifer or portion of an aquifer that supplies any public water system or that contains a sufficient quantity of ground water to supply a public water system, and currently supplies drinking water for human consumption, or that contains fewer than 10,000 mg/l total dissolved solids and is not an exempted aquifer.
USEPA:	United States Environmental Protection Agency
Viscosity:	A measure of the degree to which a fluid resists flow under an applied force.
Vitrinite Reflectance:	A measurement of the maturity of organic matter with respect to whether it has generated hydrocarbons or could be an effective source rock. The reflectivity of at least 30 individual grains of vitrinite from a rock sample is measured under a microscope. The measurement is given in units of reflectance, % R _o , with typical values ranging from 0% R _o to 3% R _o . Strictly speaking, the plant material that forms vitrinite did not occur prior to Ordovician time, although geochemists have established a scale of equivalent vitrinite reflectance for rocks older than Ordovician.
VMT:	Vehicle Miles Traveled
VOC:	Voaltile Organic Compounds
Water Drive:	Type of primary reservoir energy where the energy is provided by the influx of water from the sides, edge, or below the oil accumulation.
Watershed:	Drainage area of a stream, lake, or aquifer.
Water-wet:	The condition in the pore space of a rock where water coats the grains of the rock and is the more immobile phase.
Weathered:	Endured the action of the atmosphere.
Well Location Plat:	A plan, map, or chart of a piece of land with actual or proposed features (as lots) ; <i>a/so</i> : the land represented.
Well Pad:	A temporary drilling site, usually constructed of local materials such as sand and gravel. After the drilling operation is over, most of the pad is usually removed or plowed back into the ground. As required by DEC the land must be graded properly, mulched and seeded to reclaim the land.
Wellbore:	A borehole; the hole drilled by the bit. A wellbore may have casing in it or it may be open (uncased); or part of it may be cased, and part of it may be open. Also called a borehole or hole.
Wellhead:	The equipment installed at the surface of the wellbore. A wellhead includes such equipment as the casinghead and tubing head. adj: pertaining to the wellhead.
Wildcat:	Well drilled in area where oil and gas has not yet been found
Wireline:	A general term used to describe well-intervention operations conducted using single-strand or multistrand wire or cable for intervention in oil or gas wells. Although applied inconsistently, the term commonly is used in association with electric logging and cables incorporating electrical conductors.
Wireline gamma-logging:	A continuous measurement of formation properties with electrically powered instruments to infer properties and make decisions about drilling and production operations. The record of the measurements, typically a long strip of paper, is also called a log.
WOC Time:	"Waiting on cement" time. Pertaining to the time when drilling or completion operations are suspended so that the cement in a well can harden sufficiently.
Working Gas:	In regard to underground gas storage, gas recovered from storage for sale to customers.
Workover:	Repair operations on a producing well to restore or increase production

WRCRA:	Waterfront Revitalization and Coastal Resources Act
Young's Modulus:	An elastic constant named after British physicist Thomas Young (1773 to 1829) that is the ratio of longitudinal stress to longitudinal strain and is symbolized by E.
Zonal Isolation:	Zonal isolation means there are barriers preventing material of any type from leaving or entering the zone. In the case of a well, zones downhole are isolated by appropriate use of casing, cement, plugs and packers.
Zone:	A slab of reservoir rock bounded above and below by impermeable rock.