CHAPTER 1

AUTHORITY AND DEFINITIONS

Section 1. Authority. WYO. STAT. ANN. §§ 30-5-101 through 30-5-127, and WYO. STAT. ANN. §§ 30-5-401 through 30-5-410.

Section 2. Definitions.

(a) **Aquifer** shall mean a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

(b) **Abandoned Oil Field Equipment** means equipment and the contents thereof used in drilling or producing oil and gas wells and left on the lease where a dry hole or well is located. Abandonment may be shown by lack of production, disposal, injection, or other permitted activity for more than two (2) years, lack of equipment or infrastructure necessary for the production of oil or gas, or failure to report production or payment of conservation taxes.

(c) **Agent** means the person who has been designated by the Owner or Operator to act on the Owner's or Operator's behalf. The "Agent" has authority to fulfill the obligations of the Owner as noted in Chapter 3, Section 4 of these rules, but is not required to have a performance bond in place.

(d) **Authorized Agent** shall mean a representative of the Supervisor as authorized by the Commission.

(e) **Available Water Source** shall mean a water source for which the water well owner, owner of a spring, or land owner, as applicable, has given consent for sampling and testing and has consented to having the analytical results and spatial coordinates of the water source made available to the public unless the data is otherwise considered confidential under Wyoming statute.

(f) **Average Daily Production** means the qualified maximum total production of domestic crude petroleum and petroleum condensates, including natural gas liquids produced from a property or lease during the preceding calendar year divided by the number of calendar days in that year times the number of wells which produced and wells which injected substances for the recovery of crude petroleum and petroleum condensates, including natural gas liquids from that property or lease in that year. To qualify as maximum total production, each well must have been maintained at the maximum feasible rate of production in accordance with recognized conservation practices and not significantly curtailed by reason of mechanical failure or other disruption in production.

(g) **Barrel** shall mean 42 (US) gallons of liquid at 60° Fahrenheit at atmospheric pressure.

(h) **Casing Pressure** shall mean the pressure within the casing or between the casing and tubing at the wellhead.

(i) **Class II Well** shall mean any commercial or non-commercial well used to dispose of water and/or fluids directly associated with the production of oil and/or gas, any well used to inject fluids or gas for enhanced oil recovery, or any well used for the storage of liquid hydrocarbons. Non-hazardous gas plant wastes may be disposed of in a Class II well pending Environmental Protection Agency co-approval.

(j) **Client Company** means the entity on whose behalf and for whose benefit the geophysical/seismic company does its work or the entity who hires the geophysical/seismic company.

(k) **Closed System** includes, but is not limited to, the use of a combination of solids control equipment (e.g., shale shakers, flowline cleaners, desanders, desilters, mud cleaners, centrifuges, agitators, and necessary pumps and piping) incorporated in a series on the rig's steel mud tanks, or a self-contained unit that eliminates the need for a reserve pit for the purpose of dumping and dilution of drilling fluids for the removal of entrained drilling solids. A closed system for the purpose of the Commission's rules does not automatically include the use of a small pit, even to receive cuttings.

(l) **Collection Wells** means reservoir access holes drilled from underground shafts or tunnels from which oil or gas is produced.

(m) **Commercial Class II Disposal Well** ~~or **Commercial Water Retention Pit**~~. A commercial class II disposal well ~~or commercial water retention pit is one that is:~~ is one that is operated primarily for profit and/or where fluids disposed are produced, at least in part, from oil and gas wells not operated by one of the owners of said disposal well.

(n) **Commercial Water Retention Pit.** A commercial water retention pit is one that is:

(i) Operated primarily for profit from the disposal of produced water and/or deleterious substances for a fee; or,

(ii) A ~~disposal well or~~ pit for which none of its Owners is an Owner or Operator in any of the oil and gas wells which produce the water and/or other deleterious substances which will be disposed into said ~~disposal well or~~ pit.

(~~n~~o) **Commission** shall mean the Wyoming Oil and Gas Conservation Commission.

(~~o~~p) **Complete Application** or **Complaint** means a document or documents which:

(i) Identifies the applicant or complainant;

(ii) Identifies the subject matter of the application or complaint and the statutory or regulatory provisions under which relief is requested;

(iii) Contains a brief statement of the circumstances supporting the application or complaint; and,

(iv) Contains a plat map which identifies at a minimum:

(A) The well or wells that are the subject of or may be affected by the application or complaint; and,

(B) The governmental sections or portions thereof that are the subject of or may be affected by the application or complaint; and,

(C) Adjacent or surrounding secondary recovery units, federal exploratory units, and existing drilling units if pertinent to the application or complaint.

(~~p~~q) **Completion**. An oil well shall be considered completed when the first new oil is produced through wellhead equipment into lease tanks from the producing interval after the production string has been run. A gas well shall be considered completed when the well is capable of producing gas through wellhead equipment from the producing zone after the production string has been run. A dry hole shall be considered completed when all provisions of plugging are complied with as set out in these rules. A coalbed methane well shall be considered completed after the production casing has been run.

(~~q~~r) **Cubic Foot** of gas shall mean the volume of gas contained in one cubic foot of space at a standard pressure base and a standard temperature base. The standard temperature base shall be 60° Fahrenheit.

(~~r~~s) **Day** shall mean a period of twenty-four (24) consecutive hours.

(~~s~~t) **Directional Well** means a wellbore that is intentionally deviated from vertical with an intentional azimuth.

(~~t~~u) **Fresh Water** and **Potable Water** are defined as water currently being used as a drinking water source or having a total dissolved solids (TDS) concentration of less than 10,000 milligrams per liter (mg/l) and which:

(i) Can reasonably be expected to be used for domestic, agricultural, or livestock use; or,

(ii) Is suitable for fish or aquatic life.

(~~u~~v) **Gas** shall mean all natural gases and all hydrocarbons not defined herein as oil.

(~~v~~w) **Gas Well** shall mean a well the principal production of which, at the mouth of the well, is gas, as defined by the Wyoming Conservation Law.

(~~w~~x) **Geophysical/Seismic Company** means an entity that performs any geophysical operation to explore for oil, gas, or associated hydrocarbons. These operations include, but are not limited to, drilling seismic shot holes for placing or detonating explosives, vibroseis, or surface shots.

(~~x~~y) **Groundwater**, for purposes of these rules and consistent with Wyoming Department of Environmental Quality Chapter 8, as revised April 26, 2005, "Quality Standards for Wyoming Groundwaters", means groundwater will be protected except for Class VI Groundwater of the State that is unusable or unsuitable for use:

(i) Due to excessive concentrations of total dissolved solids or specific constituents; or,

(ii) Is so contaminated that it would be economically or technologically impractical to make water useable; or,

(iii) Is located in such a way, including depth below the surface, so as to make use economically and technologically impractical.

(~~y~~z) **Hearing** shall mean any matter heard before the Commission or its examiners.

(~~z~~aa) **Horizontal Well** shall mean a wellbore drilled laterally at an angle of at least eighty degrees (80°) to the vertical and with a horizontal projection exceeding one hundred feet (100') measured from the initial point of penetration into the productive formation through the terminus of the lateral in the same common source of hydrocarbon supply.

(~~aa~~bb) **Injection** or **Disposal Well** shall mean any well used for the injection of air, gas, water or other substance into any underground stratum.

(~~bb~~cc) **Legal Subdivision** shall mean any regularly surveyed governmental quarter-quarter section or lot of approximately 40 acres.

(~~cc~~dd) **Lien Holder** means those who have liens, on file with the Secretary of State and County Clerk of the county where the property is located, on the property of the Owner or Operator of a well, as reflected by the Commission records.

(~~dd~~ee) **Log** or **Well Log** shall mean the written record progressively describing the strata, water, oil or gas encountered in drilling a well with such additional information as to give volumes, pressures, rate of fill-up, water depths, caving strata, casing record, etc., as is usually recorded in the normal procedure of drilling; also to include electrical, radioactive, or other similar logs run, a lithologic description of all cores, and all drill stem tests, including depth tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

(~~ee~~ff) **Mineral Owner** means the owner of the mineral rights title under a piece of property, who will generally be the lessor who is able to convey a leasehold agreement (lease).

(i) **Mineral Leasehold Interest Owner** means the person or entity that holds a valid mineral lease as distinct from actual owner of the mineral rights title.

(~~ff~~gg) **Multiple Zone Completion** shall mean one in which two or more separate zones, mechanically segregated one from the other, are produced simultaneously from the same well.

(~~gg~~hh) **Occupied Structure** shall mean a building that was specifically constructed and approved for human occupancy such as a residence, school, office, or other place of work, or hospital. Occupied structure shall not mean outbuildings such as, but not limited to sheds, barns or garages.

(~~hh~~ii) **Oil** shall mean crude petroleum oil and any other hydrocarbons, regardless of gravities, which are produced at the well in liquid form by ordinary production methods, and which are not the result of condensation of gas before or after it leaves the reservoir.

(~~ii~~jj) **Oil and Gas Operations** means the surface disturbing activities associated with drilling, producing and transporting oil and gas, including the full range of development activity from exploration through production and reclamation of the disturbed surface.

(~~jj~~kk) **Oil Mining** shall mean operations associated with the production of oil or gas from reservoir access holes drilled from underground shafts or tunnels.

(~~kk~~ll) **Oil Well** shall mean a well the principal production of which, at the mouth of the well, is oil, as defined by the Wyoming Conservation Law.

(~~ll~~mm) **Operator** is duly authorized by the Owner as the person engaged in the business of drilling and producing wells for oil and gas or disposing produced water and/or other allowable fluids into a disposal well.

(~~mm~~nn)**Owner** means the person who has the right to drill into and produce from

a pool and to appropriate the oil or gas he produces therefrom either for himself or others or to dispose produced water and/or other allowable fluids into a disposal well.

(~~nn~~oo) **Permanently Abandoned Well** shall mean a well which is no longer considered active and has been permanently plugged and abandoned, as provided by these rules, in such a manner as to prevent migration of oil, gas, and water or other substances from the formation or horizon in which it originally occurred.

(~~oo~~pp) **Person** means and includes any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary or other representative of any kind, and includes any department, agency or instrumentality of the State or of any governmental subdivision thereof. The masculine gender, in referring to a person, includes the feminine and the neuter genders.

(~~pp~~qq) **Pits in Critical Areas.** Sites considered for the placement of all pits are critical areas if they meet any of the following criteria:

(i) Locations which are within one-quarter (1/4) mile of water supplies, residences, schools, hospitals, or other structures where people are known to congregate;

(ii) Areas when groundwater at the location is less than twenty feet (20') from the surface;

(iii) Locations which are within five hundred feet (500') of wetlands, ponds, lakes, perennial drainages or within a floodplain;

(iv) Areas where pit fluids are greater than ten thousand milligrams per liter (10,000 mg/l) total dissolved solids; or,

(v) Locations in pervious subsoils such as sands, scoria, river bottom gravel, loams, etc.

(~~qq~~rr) **Pool** shall mean an underground reservoir containing a common accumulation of oil or gas or both. Each zone of a general structure, which zone is completely separated from any other zone, is covered by the word "pool" as used herein.

(~~rr~~ss) **Producer** means the owner of a well or wells capable of producing oil or gas or both.

(~~ss~~tt) **Production Facilities** shall mean any building or equipment used for the purpose of producing, treating, or separating produced fluids and gas, including but not limited to pumps, pumping units, compressors, generators, gas flares, treaters, separators, storage tanks, and pits.

(~~tt~~uu) **Recompletion** means any downhole operation in an existing oil or gas well

that is conducted to establish production of oil or gas from any geological interval not currently completed or producing in said existing oil or gas well.

(~~uu~~vv) **Seismic Hole** is one which will be used for geophysical purposes only.

(~~vv~~ww)**Shut-In Well** shall mean a well not currently considered active in which the completion interval has not been isolated from the wellbore above and where the wellbore condition is such that its utility may be restored by opening valves or by energizing equipment involved in operating the well.

(~~ww~~xx)**Spacing Unit** shall mean a specified area of land and pool designated by the Commission for purposes of determining well density and location. A spacing unit provides a basis for pooling the interests therein as does a drilling unit. The well location requirement for vertical wells set out in Chapter 3, Section 2(a) and Chapter 3, Section 2(a)(iii) does not create a spacing unit as defined under this section. For purposes of these rules, a spacing unit, drilling unit, and drilling and spacing unit are interchangeable.

(~~xx~~yy) **Special Sodium Drilling Area – A (SSDA – A)** shall mean the designated area where trona mining operations are or will occur where special drilling rules apply to protect the Trona Mineral Resources and ensure miner safety which location is described as containing:

Township 21 North, Range 108 West, 6th P.M.
Section 16: All
Section 17: All
Sections 19 – 22 (inclusive): All
Sections 27 – 34 (inclusive): All

Township 21 North, Range 109 West, 6th P.M.
Sections 24 – 27 (inclusive): All
Sections 34 – 36 (inclusive): All

Township 20 North, Range 108 West, 6th P.M.
Sections 6 – 8 (inclusive): All
Sections 17 – 20 (inclusive): All
Sections 29 – 32 (inclusive): All

Township 20 North, Range 109 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 20 North, Range 110 West, 6th P.M.
Section 1: All
Section 8: All
Section 9: All
Section 12: All

Section 13: All
Sections 15 – 22 (inclusive): All
Sections 24 – 36 (inclusive): All

Township 20 North, Range 111 West, 6th P.M.
Section 13: All
Section 14: All
Section 21: E1/2
Sections 22 – 27 (inclusive): All
Section 28: E1/2
Sections 33 – 36 (inclusive): All

Township 19 North, Range 108 West, 6th P.M.
Section 5: All
Section 6: All

Township 19 North, Range 109 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 19 North, Range 110 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 19 North, Range 111 West, 6th P.M.
Sections 1 – 4 (inclusive): All
Sections 9 – 16 (inclusive): All
Sections 21 – 28 (inclusive): All
Sections 33 – 36 (inclusive): All

Township 18 North, Range 108 West, 6th P.M.
Section 6: All
Section 7: All
Sections 18 – 20 (inclusive): All
Sections 29 – 32 (inclusive): All

Township 18 North, Range 109 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 18 North, Range 110 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 18 North, Range 111 West, 6th P.M.
Sections 1 – 4 (inclusive): All
Section 5: E1/2
Section 8: E1/2
Sections 9 – 16 (inclusive): All

Section 17: E1/2
Section 20: E1/2
Sections 21 – 28 (inclusive): All
Section 29: E1/2
Section 32: E1/2
Sections 33 – 36 (inclusive): All

Township 17 North, Range 108 West, 6th P.M.
Sections 5 – 9 (inclusive): All
Sections 16 – 22 (inclusive): All
Sections 26 – 35 (inclusive): All

Township 17 North, Range 109 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 17 North, Range 110 West, 6th P.M.
Sections 1 – 6 (inclusive): All
Sections 8 – 17 (inclusive): All
Sections 22 – 27 (inclusive): All
Section 35: All
Section 36: All

Township 17 North, Range 111 West, 6th P.M.
Sections 1 – 3 (inclusive): All

Township 16 North, Range 108 West, 6th P.M.
Sections 3 – 10 (inclusive): All
Sections 15 – 22 (inclusive): All
Sections 26 – 35 (inclusive): All

Township 16 North, Range 109 West, 6th P.M.
Sections 1 – 30 (inclusive): All
Section 35: All
Section 36: All

Township 16 North, Range 110 West, 6th P.M.
Section 1: All
Section 2: All
Sections 11 – 15 (inclusive): All
Sections 22 – 27 (inclusive): All

Township 15 North, Range 108 West, 6th P.M.
Sections 2 – 10 (inclusive): All
Sections 15 – 22 (inclusive): All
Sections 27 – 34 (inclusive): All

Township 15 North, Range 109 West, 6th P.M.
Section 1: All
Section 2: All
Sections 11 – 14 (inclusive): All
Sections 23 – 25 (inclusive): All
Section 36: All

Township 14 North, Range 108 West, 6th P.M.
Sections 4 – 7 (inclusive): All
Section 18: All

Township 14 North, Range 109 West, 6th P.M.
Section 1: All
Section 12: All
Section 13: All

(~~yy~~zz) **Special Sodium Drilling Area – B (SSDA – B)** shall mean the designated area where Trona Mining Resources exist outside the SSDA – A and special drilling rules apply to protect the resource which location is described as containing:

Township 21 North, Range 109 West, 6th P.M.
Sections 28 – 33 (inclusive): All

Township 21 North, Range 110 West, 6th P.M.
Section 25: All
Sections 34 – 36 (inclusive): All

Township 20 North, Range 110 West, 6th P.M.
Sections 2 – 7 (inclusive): All
Section 10: All
Section 11: All
Section 14: All
Section 23: All

Township 20 North, Range 111 West, 6th P.M.
Section 1: All
Section 11: All
Section 12: All
Section 15: All

Township 19 North, Range 108 West, 6th P.M.
Section 7: All
Section 18: All

Section 19: All
Section 30: All
Sections 31 – 35 (inclusive): All

Township 18 North, Range 108 West, 6th P.M.
Sections 1 – 5 (inclusive): All
Sections 8 – 17 (inclusive): All
Section 21: All
Section 22: All
Section 27: All
Section 28: All
Section 33: All
Section 34: All

Township 17 North, Range 107 West, 6th P.M.
Sections 30 – 32 (inclusive): All

Township 17 North, Range 108 West, 6th P.M.
Section 3: All
Section 4: All
Section 10: All
Section 11: All
Sections 13 – 15 (inclusive): All
Sections 23 – 25 (inclusive): All
Section 36: All

Township 17 North, Range 110 West, 6th P.M.
Section 7: All
Sections 18 – 21 (inclusive): All
Sections 28 – 34 (inclusive): All

Township 17 North, Range 111 West, 6th P.M.
Section 4: All
Section 5: All
Sections 8 – 36 (inclusive): All

Township 17 North, Range 112 West, 6th P.M.
Section 13: All
Section 14: All
Sections 22 – 28 (inclusive): All
Sections 33 – 36 (inclusive): All

Township 16 North, Range 107 West, 6th P.M.
Section 6: All
Section 7: All

Section 18: All
Section 19: All
Section 30: All
Section 31: All

Township 16 North, Range 108 West, 6th P.M.
Section 1: All
Section 2: All
Sections 11 – 14 (inclusive): All
Sections 23 – 25 (inclusive): All
Section 36: All

Township 16 North, Range 109 West, 6th P.M.
Sections 31 – 34 (inclusive): All

Township 16 North, Range 110 West, 6th P.M.
Sections 3 – 10 (inclusive): All
Sections 16 – 21 (inclusive): All
Sections 28 – 36 (inclusive): All

Township 16 North, Range 111 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 16 North, Range 112 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 15 North, Range 107 West, 6th P.M.
Section 6: All
Section 7: All
Section 18: All
Section 19: All
Section 30: All
Section 31: All

Township 15 North, Range 108 West, 6th P.M.
Section 1: All
Sections 11 – 14 (inclusive): All
Sections 23 – 26 (inclusive): All
Section 35: All
Section 36: All

Township 15 North, Range 109 West, 6th P.M.
Sections 3 – 10 (inclusive): All
Sections 15 – 22 (inclusive): All
Sections 26 – 35 (inclusive): All

Township 15 North, Range 110 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 15 North, Range 111 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 15 North, Range 112 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 14 North, Range 108 West, 6th P.M.
Sections 1 – 3 (inclusive): All
Sections 8 – 17 (inclusive): All
Sections 19 – 36 (inclusive): All

Township 14 North, Range 109 West, 6th P.M.
Sections 2 – 11 (inclusive): All
Sections 14 – 36 (inclusive): All

Township 14 North, Range 110 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 14 North, Range 111 West, 6th P.M.
Sections 1 – 36 (inclusive): All

Township 14 North, Range 112 West, 6th P.M.
Sections 1 – 16 (inclusive): All
Sections 22 – 26 (inclusive): All

(~~zz~~aaa) **Spud** means the commencement of operations for the first boring of a hole for the drilling of an oil, gas or injection well, or observation/monitor well, and/or the commencement of operations for the re-entry of a previously plugged and abandoned well, and/or observation/monitor well. This includes setting conductor.

(~~aaa~~bbb)**Stratigraphic Test** or **Core Hole** shall mean any hole drilled for the sole purpose of obtaining geological information.

(~~bbb~~ccc)**Stripper Production** means a property or lease whose average daily production of crude petroleum and petroleum condensate, including natural gas liquids, did not exceed ten (10) barrels per day per well during the preceding calendar year.

(~~ccc~~ddd)**Sump** is a buried, or partially buried, vessel constructed of man-made material including, but not limited to, steel, fiberglass, and/or concrete, which is used for the temporary collection of fluids. A sump can be closed top or open top.

(~~ddd~~eee)**Supervisor** shall mean State Oil and Gas Supervisor.

(~~eee~~fff)**Surface Owner** means any person holding any recorded interest in the legal or equitable title, or both, to the land surface on which oil and gas operations occur, as filed of record with the county clerk of the county in which the land is located. Surface Owner does not include any person or governmental entity that owns all of the land surface and all of the underlying oil and gas estate, or any person or governmental entity that owns only an easement, right-of-way, license, mortgage, lien, mineral interest or nonpossessory interest in the land surface.

(~~fff~~ggg)**Temporarily Abandoned Well** shall mean a well in which the completion interval has been isolated from the wellbore above and the surface. The completion interval may be isolated by a retainer, bridge plug, cement plug, tubing and packer with tubing plug, or any combination thereof.

(~~ggg~~hhh)**Tertiary Production** means the crude oil recovered from a petroleum reservoir by means of a tertiary recovery project to which one (1) or more tertiary enhanced recovery techniques meeting the certification requirements of the Wyoming Oil and Gas Conservation Commission or the United States Government are being applied.

(~~hhh~~iii)**Trona Mineral Resource** shall mean a concentration or occurrence of trona mineral in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Trona Mineral Resource is known, estimated or interpreted from specific geological evidence and knowledge.

(~~iii~~jjj) **Trona Interval** shall mean that stratigraphic interval contained within the Special Sodium Drilling Area – A or – B (SSDA – A or – B), as defined in Chapter 1, Section 2(tt) or (uu) of these rules that lies between the base of the Laney member of the Green River Formation and the top of the main body of the Wasatch Formation.

(~~jjj~~kkk)**Underground Source of Drinking Water** (USDW) means an aquifer or its portion which:

(i) Supplies any public water system; or,

(ii) Contains a sufficient quantity of ground water to supply a public water system; and,

(A) Currently supplies drinking water for human consumption; or,

(B) Contains fewer than 10,000 mg/l total dissolved solids; and,

(iii) Is not an exempted aquifer.

(~~kkk~~lll)**Water Source** shall mean water wells or springs that are permitted or adjudicated through the Wyoming Engineer's Office for the beneficial use of water including domestic, stock, industrial, miscellaneous, municipal, irrigation, or any other beneficial use of water recognized and permitted by that office. This definition also includes any monitoring well permitted by the State Engineer's Office or the Department of Environmental Quality. For the purpose of this definition, coalbed methane wells (CBM) are not considered a water source.

(~~lll~~mmm)**Well**, when used alone in these rules and regulations shall refer to an oil or gas well, injection or disposal well, or observation/monitor well, or to a hole drilled for the purpose of producing oil or gas or both. It shall not include seismic, stratigraphic test, core or other exploratory holes drilled for the purpose of obtaining geologic information only.

(~~mmm~~nnn)**Wildcat Well** means any oil or gas well designated as a wildcat well by the Wyoming Oil and Gas Conservation Commission. Wildcat wells are wells outside known fields or new wells which are determined by the Commission to have discovered oil or gas in a pool not previously proven productive.

(~~nnn~~ooo)**Workover** means any downhole operation in an existing oil or gas well that is designed to sustain, restore or increase the production rate or ultimate recovery in a geologic interval currently completed or producing in said existing oil or gas well. Workover includes, but is not limited to, acidizing, reperforating, fracture treating, sand/paraffin removal, casing repair, squeeze cementing, or setting bridge plugs to isolate water productive zones from oil or gas productive zones, or any combination thereof. Workover does not mean the routine maintenance, repair, or replacement of downhole equipment such as rods, pumps, tubing, packers, or other mechanical devices.

(~~ooo~~ppp)**Wyoming Conservation Act** shall mean WYO. STAT. ANN. §§ 30-5-101 through 30-5-127.

(~~ppp~~qqq)**Wyoming Split Estates Act** shall mean WYO. STAT. ANN. §§ 30-5-401 through 30-5-410.

CHAPTER 3

OPERATIONAL RULES, DRILLING RULES

Section 1. Notices: General and Emergency.

(a) A written notice of intent to do work on an Application for Permit to Drill (APD, Form 1) and a drilling and completion plan (Chapter 3, Section 8(c)), or on a Sundry Notice (Form 4) to change plans previously approved on the original Form 1, must be filed with the Supervisor, unless otherwise directed, and must reach the Supervisor and receive his approval before the work is begun. Approval must be sought to acidize, cleanout, flush, fracture, or stimulate a well. The sundry notice must include depth to perforations or the openhole interval, the source of water and/or trade name of fluids, type of proppants, as well as estimated pump pressures. Routine activities that do not affect the integrity of the wellbore or the reservoir, such as pump replacements, do not require a sundry notice. The Supervisor may require additional information.

(b) In case of emergency, or a situation where operations might be unduly delayed, any written notice required by these Rules and Regulations to be given to the Supervisor may be given orally or by wire and, if approval is obtained, the transaction shall be confirmed in writing, as a matter of record.

(c) Chapter 5 of this volume provides rules of practice and procedure for matters which are set to be heard before the Commission and also for actions which can be taken by the Supervisor as he administers the Wyoming Conservation Act and these rules which have been adopted. The Supervisor, at his discretion, may set for hearing before the Commission any request for administrative approval of operations covered by these rules. The manner and time for giving notice is provided by the Wyoming Conservation Act and by these rules and regulations. Further, WYO. STAT. ANN. § 30-5-111(f), provides that in addition to the notice prescribed by these rules, such additional notice as is deemed necessary and proper may be required. The Commission maintains a mailing list for persons interested in receiving notice of the matters scheduled to be considered at its monthly hearings.

Section 2. Location of Wells/Drilling and Spacing Units (All Lands Except Tribal).

(a) Vertical Wells. In the absence of special orders of the Commission establishing drilling units or authorizing different well density or location patterns for particular pools or parts thereof, each vertical oil and gas well shall be located in the center of a forty (40) acre governmental quarter-quarter section, or lot or tract or combination of lots or tracts substantially equivalent thereto, as shown by the most recent governmental survey, with a tolerance of two hundred feet (200') in any direction from the center location (a "window" 400 feet square) provided:

(i) No oil or gas well shall be drilled less than nine hundred twenty feet (920') from any other well drilling to or capable of producing oil or gas from the same pool; and

(ii) No oil or gas well shall be completed in a known pool unless it is located more than nine hundred twenty feet (920') from any other well completed in and capable of producing oil or gas from the same pool.

(iii) Well Location – Southwest Wyoming. Gas wells drilled in the area described as Township 12 North through Township 28 North and Range 89 West through Range 121 West shall be located in the center of a one hundred sixty (160) acre subdivision, or lot or tract or combination of lots and tracts substantially equivalent thereto, not closer than one thousand, one hundred twenty feet (1,120') to the exterior boundaries of the quarter section or federal exploratory units or any uncommitted tracts within the unit.

(A) A maximum of two (2) gas wells per quarter section subdivision, or lot or tract, or combination of lots and tracts substantially equivalent thereto, shall be permitted in the following areas:

Township 13 North, Ranges 91 through 94 West
Township 14 North, Ranges 91 through 94 West
Township 15 North, Ranges 91 through 99 West
Township 16 North, Ranges 91 through 99 West
Township 17 North, Ranges 91 through 98 West
Township 18 North, Ranges 91 through 96 West
Township 18 North, Range 97 West
Sections 1 through 3
Sections 10 through 15
Sections 19 through 36
Township 19 North, Ranges 91 through 96 West
Township 20 North, Ranges 91 through 96 West
Township 21 North, Ranges 91 through 96 West
Township 22 North, Ranges 91 through 96 West
Township 23 North, Ranges 91 through 95 West

(B) Any gas well proposed to be drilled within the above described lands shall be located within a governmental quarter section of land, or a lot or tract, or combination of lots or tracts substantially equivalent thereto, not closer than four hundred sixty feet (460') to the exterior boundary of such quarter section, providing that a maximum of two gas wells from the same pool shall be permitted in any one such quarter section, or lot or tract, or combination of lots or tracts substantially equivalent thereto.

(iv) Spacing Rule – Powder River – Deep Wells. Any proposed well in the Powder River Basin projected to test the Frontier, Muddy, and/or Dakota Formations in excess of eleven thousand feet (11,000') total depth shall be granted a spacing unit of

six hundred forty (640) acres consisting of the governmental section in which the well is proposed. Said well may be located anywhere within the one hundred sixty (160) acre "window" (i.e., SE1/4 NW1/4, SW1/4 NE1/4, NE1/4 SW1/4, NW1/4 SE1/4) but not less than one thousand three hundred twenty feet (1,320') from the section line.

(v) Spacing Rule – Powder River – CBM Wells. Any proposed well in the Powder River Basin projected to test the gas potential of any coal member or pool within the Fort Union and/or Wasatch Formations shall be granted a vertical ("standup") drilling and spacing unit of eighty (80) acres consisting of one-half of a governmental one hundred sixty (160) acre quarter section, or lot or tract, or combination of lots or tracts substantially equivalent thereto, and the authorized well in such drilling and spacing unit shall be located in the center of the northeast quarter and the center of the southwest quarter of the governmental 160-acre quarter section, or lot or tract, or combination of lots and tracts substantially equivalent thereto, with a two hundred foot (200') tolerance in any direction from such center locations. Further, the following lands are exempt from this subsection (v) and are subject to the well location requirements under subsection (a):

Township 45 North, Ranges 71 and 72 West;
Township 46 North, Ranges 71 and 72 West;
Township 47 North, Ranges 71, 72 and 73 West;
Township 48 North, Ranges 71, 72 and 73 West;
Township 49 North, Ranges 71, 72, and 73 West;
Township 50 North, Ranges 72 and 73 West;
Township 51 North, Ranges 72 and 73 West;
Township 52 North, Ranges 72 and 73 West.

(b) Horizontal Wells. In the absence of special orders of the Commission establishing drilling units or authorizing different well density or location patterns for particular pools or parts thereof, the following conditions apply to any horizontal well, as defined in Chapter 1, Section 2(z), for all productive zones:

(i) A permanent six hundred forty (640) acre spacing unit, or lot or tract, or combination of lots or tracts substantially equivalent thereto, consisting of the governmental section in which the horizontal well is located, is established for the orderly development of the anticipated pool. Subject to surface setback rules, the surface location may be anywhere on the leased premises, or on lands adjacent to the spacing unit;

(ii) No portion of the completed interval of a horizontal lateral shall be closer than six hundred sixty feet (660') to a drilling or spacing unit boundary, federal unit boundary, or uncommitted tract within a unit.

(iii) Except for wells in federal exploratory units, secondary units or in API units, the completed interval shall be no closer than one thousand three hundred twenty feet (1,320') to any horizontal well or vertical well completed in the same formation;

(iv) Notice of intent to drill horizontal wells shall be provided as required by Chapter 3, Section 8(f);

(v) In addition to any other notice required by the statute or these Rules, notice of the Application for Permit to Drill (APD) a horizontal well shall be given by certified mail to all Owners within the boundaries of the designated spacing unit.

(c) Pattern Location. The Supervisor shall have the discretion to determine the pattern location of wells adjacent to an area spaced or exempted by the Commission, or under application for spacing, where:

(i) There is sufficient evidence to indicate that the pool or reservoir spaced or about to be spaced may extend beyond the boundary of the spacing order or application; and

(ii) The uniformity of spacing patterns and well location is necessary to ensure orderly development of the reservoir or pool.

(d) To the extent not previously exempted, this section is not applicable to federal exploratory and secondary units provided that no vertical well shall be drilled and completed closer than four hundred sixty feet (460') and no horizontal well shall be drilled and completed closer than six hundred sixty feet (660') from the exterior boundaries of any federal exploratory or secondary unit or any uncommitted tract within a federal exploratory or secondary unit. Upon contraction of a federal exploratory or secondary unit, lands deleted from the unit shall thereafter be subject to the requirements of this rule.

Section 3. Exceptions to Locations of Wells and Well Spacing Orders.

(a) Upon proper application therefore, the Supervisor may approve, as an administrative matter, an exception to Section 2 of this chapter, or any order of the Commission establishing well spacing for a pool. If for any reason the Supervisor shall fail or refuse to approve such an exception, the Commission may, after notice and hearing, grant the exception. If the Supervisor or the Commission approves the exception application, the approval will be valid for one year from the date it was granted.

(b) The application for an exception shall state fully the reasons why such an exception is necessary or desirable, and shall be accompanied by a plat showing:

(i) The location at which an oil or gas well could be drilled in compliance with Section 2 of this chapter or the applicable order;

(ii) The location at which the applicant requests permission to drill; and

(iii) The locations at which oil or gas wells have been drilled or could be drilled, in accordance with Section 2 of this chapter, or the applicable order, directly or diagonally offsetting the proposed exception.

(c) No exception shall prevent any Owner from drilling an oil or gas well on adjacent lands, directly or diagonally offsetting the exception, at locations permitted by Section 2 of this chapter, or any applicable order of the Commission establishing oil or gas well spacing units for the pool involved.

Section 4. Bonding Requirements (Forms 8, 8A, 8E and 8F)

(a) General.

(i) The purpose of a surety bond or other guaranty posted as security pursuant to the Commission's Rules is to insure that the principal or person posting same complies with the Wyoming Conservation Act, the Commission's Rules, and the orders of the Commission, the State Oil and Gas Supervisor, or his Authorized Agent, including, but not limited to, proper plugging of wells and seismic holes and reclamation of the area affected by same.

(ii) The Commission shall require from the Owner/Operator a good and sufficient bond running to the state of Wyoming to assure that each well and associated equipment shall be operated and maintained in such a manner as not to cause waste or damage the environment and upon permanent abandonment, each well shall be plugged in accordance with the Rules and Regulations of the Commission.

(iii) Site reclamation, including removal of equipment, shall be initiated within one (1) year of permanent abandonment of a well or last use of a pit, and shall be completed in as timely a manner as climatic conditions allow. For just cause, the Supervisor may grant an administrative variance providing for additional time.

(iv) Reclamation, including removal of equipment, shall be completed in accordance with the landowner’s reasonable requests, and/or resemble the original vegetation and contour of adjoining lands. Where practical, topsoil shall be stockpiled during construction for use in reclamation. All disturbed areas on state lands will be recontoured and reseeded as required by the Office of State Lands and Investments. Appendix F includes information on reseeding.

(v) TRANSFER OF WELLS. The Supervisor shall be advised by the Owner/Operator of all transfers of wells at least thirty (30) days before the closing date of the transfer and the Supervisor retains the right for an additional thirty (30) days to evaluate pending transfer of well(s). Notice of transfer of wells must be accompanied by a list of all wells to be transferred that includes the well name, API number, legal description and well status. The purpose of the notice is to provide the Supervisor with an opportunity to evaluate the status and number of wells that may be involved in the transfer and determine

the need for additional bonding by the new Owner/Operator. No later than thirty (30) days after notification, the Supervisor will notify the parties of his preliminary determination of additional bonding. The previous Owner/Operator's bond shall not be released until the new Owner/Operator provides bonding, including the additional bonding if requested. The Supervisor shall have the discretion to hold the prior bond for a period of six (6) months after the new bond has been posted to evaluate the performance and viability of the new operator. The Supervisor shall also provide thirty (30) days notice of the transfer of any well(s) to the county where the well(s) is located.

(vi) OTHER REQUIREMENTS. Nothing in this rule shall be construed to prevent the Supervisor, upon notice and for good cause, from requiring bonds in special cases in amounts greater than set out in this rule.

(b) Types of Bonds.

(i) WELL/BLANKET BONDS. The Commission shall require from the Owner/Operator a good and sufficient bond running to the state of Wyoming, except where a bond in satisfactory form has been filed by the Owner/Operator in accordance with state, federal or Tribal lease requirements. The minimum amount of bond or bonds required to be furnished shall be as follows:

(A) An individual well bond shall be set at ten dollars ($10.00) per foot of the well bore, and adjusted every three (3) years based on the Wyoming consumer price index or actual plugging costs.

(B) In the alternative, a blanket bond in the amount of one hundred thousand dollars ($100,000.00) covering all wells, regardless of depth or length.

(C) ~~All Owners/Operators are required to post additional bond amounts to comply with this subsection (b)(i) within one (1) year of the effective date of this rule.~~ This section reserved.

(ii) IDLE WELL BONDING.

(A) In the event an Owner/Operator has a blanket bond covering wells on fee or patented lands, the Commission will normally not ask for additional coverage if the wells are producing, monitoring, injecting, or disposing. Wells which are not producing, injecting, or disposing in an economic manner are deemed to be idle. The Supervisor may require an increased bond amount up to ten dollars ($10.00) per foot for each idle well taking into account the existing level of bond in place. As wells are removed from idle status, up to ten dollars ($10.00) per foot bonding requirements will be reduced accordingly.

(B) The bonding level of $10 per foot will be adjusted every three (3) years based on the actual Commission orphan well plugging cost or by the

percentage change in the Wyoming consumer price index. An Owner/Operator may request the Supervisor to set a different bonding level based on an evaluation of the specific well conditions and circumstances. The Owner/Operator shall submit a written cost estimate to provide plugging, abandonment and site remediation prepared by a Wyoming contractor with expertise in well plugging, abandonment and site remediation. At his discretion, the Supervisor may accept or reject the cost estimate when determining whether to adjust the bonding level.

(C) The idle well bond amount will be reviewed annually or upon request of the Owner/Operator. The Supervisor may accept a detailed plan of operation in lieu of additional bonding, which includes a time schedule to permanently plug and abandon idle wells or take such action as may be necessary to remove the well(s) from idle status. As part of the plan of operation, Owner/Operators shall commit to plug or return to active status a minimum of ten percent (10%) of the idle wells each calendar year. This plan and time schedule is subject to approval by the Supervisor, and shall not exceed one (1) year from the date of filing. Approved plans filed by an Owner/Operator are binding on purchasers in the event of a sale unless the Supervisor accepts an alternate plan.

(iii) COMMERCIAL CLASS II DISPOSAL WELL BONDS. The Owner/Operator of a commercial Class II disposal well shall post an individual well bond for each commercial Class II disposal well owned or operated. The commercial disposal well individual well bond amount shall be set at the same amount as the individual well bond in (b)(i)(A) in this section.

(~~iii~~iv) PIT BONDS. The Commission may require from the Owner/Operator a good and sufficient bond running to the state of Wyoming conditioned for or securing the performance that pits constructed to receive water or other wastes produced in association with hydrocarbons, or noncommercial, centralized pits located within a lease, unit, or communitized area used for field operations shall be operated and maintained in such a manner as to not damage the environment or to not cause undue harm to health and safety of employees and people residing in close proximity to the pit and that upon permanent abandonment of the project or last use of the pit, the pit shall be closed and the adjacent areas reclaimed in accordance with the Rules and Regulations of the Commission.

(A) Separate bonding amounts for these pits, if required by the Commission, shall be set by the Supervisor following evaluation of site-specific conditions and circumstances. The Owner/Operator shall, within a reasonable time after a request by the Supervisor or his duly Authorized Agents, provide a written cost estimate prepared by a Wyoming registered professional engineer with expertise in surface pit remediation for closure of the pit and remediation of the surface and access areas closely adjacent to the pit. The surface landowner shall receive a copy of said cost estimate from the Owner/Operator prior to construction.

(B) Because the construction of pits for the retention of water produced solely in association with the recovery of coalbed methane gas may be of benefit to the landowner, the Supervisor, in his sole discretion, may waive the bonding for such pits otherwise provided for by this subsection and allow such pits to remain open after the cessation of production operations if a notarized statement of acceptance signed by the landowner sufficient to meet the satisfaction of the Supervisor and including, at a minimum, the following items, accompanies the Form 14, Construction of Pits, when it is provided to the Commission:

(I) The surveyed location including latitude and longitude;

(II) The exact size and depth of the pit; and

(III) A statement accepting all future responsibility for the structure and its contents.

(C) Prior to the waiving of bonding for pit closure and prior to acceptance by the surface landowner, the Owner/Operator shall provide the surface landowner a current written cost estimate for pit closure prepared by a Wyoming registered professional engineer with expertise in surface pit remediation.

(~~iv~~v) SPLIT ESTATE BONDS.

(A) In the event that an Owner/Operator is required to post a bond or other surety with the Commission as required by WYO. STAT. ANN. § 30-5-402, said surety bond shall comply with the formatting requirements of the Commission. An Owner/Operator may post a cashier's check, certificate of deposit or letter of credit that complies with the requirements of this chapter.

(B) After attempted good faith negotiations with the surface owner, the Owner/Operator may submit a bond or other guaranty to cover all oil and gas operations on the surface owner's land as identified by an oil and gas operator in the written notice required under WYO. STAT. ANN. § 30-5-402(e). The amount of the bond shall be determined by the Supervisor. The minimum amount of bond shall be ten thousand dollars ($10,000.00) per well site. The Supervisor may require a separate blanket or surety bond to cover activities, such as but not limited to access roads, pipelines, and production facilities.

(C) Split estate bonds for the purpose of conducting seismic operations shall be set in an amount of not less than five thousand dollars ($5,000.00) for the first one thousand (1,000) acres or portion thereof, and not less than one thousand dollars ($1,000.00) for each additional one thousand (1,000) acres or portion thereof, for each surface owner over whose property access is sought. The Commission may pool parcels of land of different surface owners where no single parcel exceeds forty (40) acres.

(D) In determining the amount of bond to be posted, whether a single well site bond or blanket bond, the Supervisor shall consider the proposed plan of work and operations submitted by the Owner/Operator in its notice to the surface owner and may consider any other factors which would materially impact the bond amount needed to secure payment of damages including, but not limited to, the following:

(I) Loss of production and income;

(II) Loss of land value; and,

(III) Loss of value of improvements caused by oil and gas operations.

(E) Within seven (7) days of receipt of a per well site surety bond or other guaranty, or blanket bond or other guaranty, the Commission shall give written notice to the surface owner, by certified mail, return receipt requested. This notice shall be sent to the address provided to the Commission by the Owner/Operator and shall contain the following information:

(I) A description of the amount and type of bond or guaranty received;

(II) A copy of the statement (Form 1A) filed by the Owner/Operator with its Application for Permit to Drill (APD) or seismic permit pursuant to WYO. STAT. ANN. § 30-5-403(a); and

(III) A statement that the surface owner has thirty (30) days from receipt of this notice to file an objection with the Commission.

(F) If the surface owner files a written objection to the bond or guaranty amount within thirty (30) days of receipt of the notice, the matter shall be set before the Commission at its next regularly scheduled meeting. Each interested party will have an opportunity, subject to the applicable procedural Rules of the Commission, to present evidence in support of or in opposition to the bond amount. The Commission, in determining the accepted amount and type of surety bond or other guaranty shall consider all relevant evidence, including the following:

(I) The surety bond or guaranty objected to;

(II) Any supporting evidence submitted by the oil and gas Owner/Operator; and,

(III) The surface owner's objections and supporting documents.

(G) The Commission shall notify the parties of its decision in writing. The required surety shall be submitted within thirty (30) days of the Commission's final order.

(c) Types of Guarantees.

(i) SURETY BONDS. The Commission shall require from the Owner/Operator a good and sufficient bond issued by a Surety Company on the Commission's most current form. Bond forms include individual well Owner's Surety Bonds, Owner's Blanket Bonds, Owner's Blanket Bonds for Idle Well Bond, Owner's Surety Bonds for Pit Bond, Split Estate Bonds, Seismic Operator's Blanket Bonds, Seismic Surety Bonds, and Seismic Hole Plugger's Bond.

(ii) CASHIERS CHECK. A deposit of a cashier's check in lieu of a surety bond may be accepted subject to the following conditions:

(A) The check shall be drawn for an amount equal to or greater than the amount required by Section 4 of this chapter and Chapter 4, Section 6(h) for a surety bond;

(B) The check shall be payable to the order of "Wyoming Oil and Gas Conservation Commission";

(C) The date on which the check is issued shall be within ten (10) days before the date on which the deposit is received by the Commission;

(D) The Owner/Operator shall execute a valid, binding, first-priority pledge agreement as to the proceeds of the collected cashier's check, which agreement shall be on the current form approved by the Commission from time to time;

(E) The cashier's check and the original of the fully-executed pledge agreement shall be delivered to the Commission at the same time;

(F) By submitting a deposit under this subsection, the Operator authorizes and directs the Commission to deposit and collect the same upon receipt.

(G) Replacement. The Owner/Operator may deliver at any time to the Commission an acceptable surety bond or other guaranty to replace a Cashier's Check retained by the Commission under this section. Upon its receipt and acceptance of such replacement, the Commission will deliver to the Principal funds in an amount equal to the original deposit.

(H) No Interest on Deposits. Interest shall not accrue, nor be payable by the Commission, on any cashier's check received by the Commission under this section.

(iii) CERTIFICATE OF DEPOSIT.

(A) The deposit of a Certificate of Deposit (CD) in lieu of a surety bond shall satisfy the following conditions:

(I) The CD shall be drawn for an amount equal to or greater than the amount required by Section 4 of this chapter and Chapter 4, Section 6(h) of the Commission's Rules, for a surety bond;

(II) The CD shall be issued by an FDIC-insured bank with its main office or any branch located in Wyoming or on any other bank that is deemed acceptable to the Supervisor

(III) The CD shall be payable in current funds or such other manner as the Commission may determine at a bank located within the state of Wyoming;

(IV) The CD shall be on the current form of certificate of deposit approved by the Commission from time to time;

(V) The CD shall be issued for an initial term of not less than one (1) year and automatically renewable from year to year;

(VI) The Owner/Operator shall execute a valid, binding, first-priority pledge agreement as to the certificate of deposit, which agreement shall be on the current form approved by the Commission from time to time;

(VII) The originals of both the CD and the fully-executed pledge agreement shall be delivered to the Commission at the same time.

(VIII) The issue date of the CD and pledge agreement shall be within ten (10) days before the date deposit is received by the Commission.

(B) No Interest on Deposits. Interest shall not accrue, nor be payable by the Commission, on any deposit received by the Commission under this section. Interest that is payable under a CD shall be paid by the bank directly to the Owner/Operator.

(C) Replacement. The Owner/Operator may deliver at any time to the Commission an acceptable surety bond or other guaranty to replace a CD retained by the Commission under this section. Upon its receipt and acceptance of such

replacement, the Commission will deliver to the bank the original CD suitably endorsed for release.

(iv) LETTER OF CREDIT.

(A) The deposit with the Commission of a letter of credit (LOC) in lieu of a surety bond may be accepted subject to the following conditions:

(I) The LOC shall have a face amount equal to or greater than the amount required by Section 4 of this chapter and Chapter 4, Section 6(h) for a surety bond;

(II) The LOC shall be issued by an FDIC-insured bank with its main office or any branch located in Wyoming or on any other bank that is deemed acceptable to the Supervisor;

(III) The LOC shall be payable in current funds or such other manner as the Commission may determine at sight at the counters of an FDIC-insured bank located within the state of Wyoming;

(IV) The LOC shall be on the current form of letter of credit approved by the Commission from time to time;

(V) The LOC shall be issued with an initial expiration date of not less than one (1) year from the date of its issuance and automatically extended from year to year, not to exceed four (4) years;

(VI) The LOC shall be received by the Commission within ten (10) days of its issue date.

(B) Expiration of LOC without Replacement. If a LOC is accepted and retained by the Commission under this section, and if the Owner/Operator has not deposited any acceptable replacement surety bond or other guaranty within thirty (30) days before the LOC's final expiration date, then the Owner/Operator will be deemed to have authorized and directed the Commission to draw the entire face amount of the LOC and, upon receipt of the proceeds, retain the same as a deposit of the proceeds of a collected cashier's check under this chapter;

(C) No Interest. Interest shall not accrue, nor be payable by the Commission, on any LOC received by the Commission under this section.

(D) Replacement. The Owner/Operator may deliver at any time to the Commission an acceptable surety bond or other guaranty to replace a LOC retained by the Commission under this section. Upon its receipt and acceptance of such replacement, the Commission will deliver to the Bank the original LOC.

(d) Disposition of Guarantees.

(i) The bond or other guarantees required by these rules shall remain in full force and effect until:

(A) The permanent plugging and abandonment of the well or wells has been approved by the Supervisor;

(B) The well has been properly converted to a water well in a manner approved by the Supervisor, in conjunction with the State Engineer;

(C) The successor Owner/Operator or purchaser of the well or wells and/or the site(s) has provided a bond or other surety in an amount and form acceptable to the Commission; or

(D) The bond has been forfeited or otherwise been released by the Commission.

(ii) Return of surety bond or other guarantee**.**

(A) If the Commission determines the principal on the bond a letter of credit, or cashier check or certificate of deposit delivered pursuant to this chapter has complied with the Oil and Gas Conservation Act, the Rules of the Commission, and the orders of the Commission, the State Oil and Gas Supervisor, or their agents including, but not limited to, production facility removal, pit closure, proper plugging of wells and seismic holes and reclamation of the surrounding affected area, with respect to all operations secured thereby, then the Commission shall release the obligation of the bond or other guarantee.

(B) The Commission shall deliver to the surety company a copy of the bond endorsed for release, and/or the original LOC or CD to the bank. The Commission shall deliver to the depositor of a cashier's check
funds in an amount equal to the original deposit.

(iii) Forfeiture. The Oil and Gas Supervisor may forfeit the surety bond or other guarantee if the principal or person posting a surety bond or other guarantee fails to comply with the Oil and Gas Conservation Act, the Commission's Rules, or any orders of the Commission,

(A) Forfeiture shall be determined by the Commission after notice and hearing in accordance with these Rules and the Oil and Gas Conservation Act. Notice of the hearing shall be served on the principal and notice shall be sent by certified mail, return receipt requested, and addressed to their last known address listed with the

Wyoming Secretary of State. by mailing a copy of the notice of hearing and a copy of a complaint or other notice, stating the grounds for forfeiture or non-return to them.

(B) If the principal has a defense to, or otherwise wishes to contest the complaint of the Commission staff, he shall file a written statement or answer setting forth same with the Commission at least three (3) working days prior to the Commission hearing. Any defense or reason for contesting the complaint is waived if he fails to do so. The Commission may treat the failure to file such a defense or reason to contest the complaint or the failure to appear at the hearing on same as a default by the party. The proceeds of a surety bond or other guaranty become the property of the Commission and shall not be returned to the person posting same.

(e) Split Estate Bonds and Other Guarantees.

(i) Any Owner/Operator may request that its bond or other guaranty posted with the Commission pursuant to WYO. STAT. ANN. § 30-5-402(c) to secure the payment of damages to a surface owner be released upon the submission of a written request and a certified statement of the following:

(A) That compensation for damages has occurred;

(B) An agreement for release has been reached by all parties;

(C) Final resolution of the judicial appeal process for any action for damages has occurred and all damages have been paid;

(D) That the surface owner has failed to give written notice required under WYO. STAT. ANN. § 30-5-406(a); or,

(E) Has failed to bring an action for damages within the required time period.

(ii) Upon receipt of a request for release, the Commission shall notify the surface owner in writing, by certified mail, of the request. The Commission shall include a copy of the release request and supporting statement to the surface owner. The surface owner shall have fifteen (15) days from receipt of said notice to dispute the release request. If no dispute is received by the Commission, or it is satisfied that the oil and gas Owner/Operator has complied with the above requirements, the bond may be released. If the original request contains a verified statement from the surface owner that he is in accord with the request to release, the Commission may dispense with the waiting period and proceed to release the bond or other guaranty forthwith. The Supervisor may release any bond or other surety for just cause.

Section 5. Notice of Change of Owner (Form 7).

Any Owner, as listed on Form 7 (Notice of Change of Owner) who shall be bound under a performance bond and who shall convey his interest to another, shall submit written notice of transfer to the Supervisor at least thirty (30) days prior to the closing date of transfer. Change of Owner Form 7 shall be submitted to the Commission after the sale/transfer is finalized but will not be processed until all bonding is in place. Prior to approval of the transfer, the transferee shall also submit proof of compliance with the Split Estates Act by attaching Form 1A, Statement of Oil and Gas Operations, to the Form 7. Do not use Form 6, Designation of Agent or Operator, for this procedure.

Section 6. Notice of Designation of Operator (Form 6).

Any Owner as listed on Form 7 (Notice of Change of Owner) who does not operate well(s) owned shall submit a Designation of Operator Form 6 to the Commission authorizing another company to operate the well(s). Both Owner and Operator are each responsible to post bond. A Designation of Operator Form 6 will be accepted as authority of the Operator to fulfill the obligations of the Owner under these oil and gas operating regulations. This Designation does not release an Owner of liability or responsibility for the well site(s) or surrounding area(s). All changes of address and any termination of the Operator's authority shall be immediately reported in writing to the Supervisor and, in the latter case, the Designation of a new Operator shall be immediately made. If the designated Operator should at any time resign or become incapacitated for duty, the Owner shall immediately designate in writing a new Operator. If any Owner/Operator fails to fulfill their obligations or has any compliance issues, notices shall be made by delivering a United States Postal Service certified letter to both the Owner and Operator at the most recent address on file at the Commission.

Section 7. This section reserved.

Section 8. Application for Permit to Drill or Deepen a Well (Form 1).

(a) Before any owner or operator shall spud in anticipation of drilling any well on fee, patented, state, or federal lands, or deepen/re-enter any such well(s) by drilling to a lower formation, such owner or operator shall file an Application for Permit to Drill or Deepen (Form 1) with the Commission and pay a fee of five hundred dollars ($500.00) for a permit. No well pad construction activity shall commence until such application is approved and a permit to drill is issued by the Commission. For good cause, the Supervisor may approve pad construction after an application for permit to drill has been received.

(b) For wells drilled on fee, patented and state land, prior to construction of the drilling location, approval of Form 14B (Application to Construct a Reserve Pit) must be obtained. The Application for Permit to Drill will not be processed until this requirement is met.

(c) The Application for Permit to Drill or Deepen (Form 1) shall be accompanied by an accurate plat showing the location of the proposed well with reference to the nearest lines of an established public survey. Information to be included in such application and its addendums shall include:

(i) Proposed depth to which the well will be drilled;

(ii) Type of drilling tools to be used;

(iii) Identification of all water sources located within one-half mile of the surface location for proposed oil well, gas well (including coalbed methane wells), dedicated injection well or Commission approved monitoring well, and the depth(s) from which water is being appropriated;

(iv) Formation depth, geological and hydrological detail from public records, published or otherwise known information of useable groundwater underlying the drilling and spacing unit or the Commission approved drilling unit. Consistent with Wyoming Department of Environmental Quality Chapter 8, as revised April 26, 2005, "Quality Standards for Wyoming Groundwaters," and for purposes of these rules, groundwater will be protected, except for Class VI Groundwater of the State that is unusable or unsuitable for use:

(A) Due to excessive concentrations of total dissolved solids or specific constituents; or,

(B) Is so contaminated that it would be economically or technologically impractical to make water useable; or,

(C) Is located in such a way, including depth below the surface, so as to make use economically and technologically impractical.

(v) Estimated depth to the top of important geologic markers, including the estimated depth to the top of objective horizons;

(vi) Proposed casing program, including size, anticipated setting depths, API grade, weight per foot, burst pressure, tensile strength for both body and joint, yield pressure, if new or used casing is planned for the well, and other information required by the Supervisor. Note that prior approval of the Supervisor is required for use of non-API tubular.

(vii) Description, type and setting depths of isolation techniques if used in openhole and uncemented liner stimulations in high angle and horizontal wells,

(viii) Description of the cementing program, including API class of cement, additives to be used, slurry density to be mixed, estimated volumes to be used,

including percent of excess volume. For openhole completions, similar information is required for the cement program above the completed interval. The Supervisor must be notified of the intent and give prior approval for the use of non-API class cement and additives.

(ix) Description of the anticipated completion and stimulation program, including the base stimulation fluid and its source, the chemical additives and proposed concentrations to be mixed, identified by additive type as identified in Chapter 3, Section 45 of these rules. If this required data is not available at the time of submission of Form 1, then it must be submitted on a Sundry Notice (Form 4) and no stimulation of the well can occur without approval of the Supervisor.

(x) The Owner or Operator shall provide to the Supervisor, as an addendum to Application for Permit to Drill (Form 1), or as part of a comprehensive drilling/completion/recompletion plan, or on a Sundry Notice (Form 4), additional representative well drilling detail from adjacent or offset drilled wells that would inform and possibly influence drilling and cementing practices on the proposed well. Known information shall be provided regarding hole integrity, such as lost circulation zones by depth and barrels of fluid lost, zones of over or under pressure conditions, hole drift, key seats or tight hole if encountered, stuck pipe and depths experienced, water flows or kicks requiring an increase in mud weight beyond a predetermined amount to control, and depths experienced and as reported on Well Completion Report (Form 3). If any of this information or detail has already been presented to the Supervisor, identifying the wells is sufficient on subsequent wells for compliance with this subsection.

(xi) Where multiple Applications for Permit to Drill (Form 1) will be sought for several wells proposed to be drilled to the same zone within an area of geologic similarity, approval may be sought from the Supervisor to file a comprehensive drilling plan containing the information required above which will then be referenced on each Application for Permit To Drill (Form 1). No Application for Permit to Drill (Form 1) shall contain the exact well name as another permitted well in the same quarter quarter, section, township and range.

(d) The Application for Permit to Drill or Deepen (Form 1) shall also be accompanied by a statement of compliance with WYO. STAT. ANN. § 30-5-403(a) (Form 1A), if the application is not exempted from the Split Estates Act. Included in this statement shall be the surface owner's name, contact address, telephone number and any other relevant and necessary contact information. The statement shall certify that the Owner/Operator has done the following:

(i) Provided notice of proposed oil and gas operations to the surface owner;

(ii) Engaged in good faith negotiations to reach a surface use agreement with the surface owner; and,

(iii) Satisfied the conditions of WYO. STAT. ANN. § 30-5-402(c) and how they were satisfied.

The Owner/Operator shall not file a copy of any surface use agreement, nor will the terms of any such agreement be disclosed.

(e) The Commission has authority under WYO. STAT. ANN. § 30-5-104(d)(v)(B) to require that each Application for Permit to Drill or Deepen (Form 1) be accompanied by a sworn statement from the Owner/Operator, on a form approved by the Commission, that all underground electrical conductors outside of its facilities, fenced enclosures or posted areas, well site or facilities under control of the Owner or Operator:

(i) Comply with the National Electrical Code in effect for the year electrical conductors were installed and energized; and,

(ii) Comply with the Wyoming Department of Fire Prevention and Electrical Safety Act, WYO. STAT. ANN. §§ 35-9-106 and 35-9-123;

(iii) Owner or Operator shall provide the Commission at least twenty-four (24) hours notice prior to installation of underground electrical conductors outside of its facilities, fenced enclosures, or posted areas. With routine maintenance, emergency or repair work, the Operator shall provide the Commission notice within twenty-four (24) hours of completing the electrical work.

(f) In addition to any other required form or attachment to the Application for Permit to Drill, the following shall be submitted:

(i) For directional wells, a diagram clearly showing the proposed direction of the deviation and the proposed horizontal distance between the bottom of the hole and the surface location;

(ii) For horizontal wells, a diagram clearly showing the wellbore path to be permitted, as well as offset wellbore paths (vertical and horizontal wells to the same formation) that are permitted, drilled or completed within the spacing unit from the surface through the terminus of the lateral. A horizontal well's number shall be appended with an "H" suffix, denoting horizontal, in Block 8 of Form 1. If more than one lateral borehole extends from the same vertical wellbore, each such lateral must be permitted as an individual horizontal well with an "H" suffix. The surface location and the proposed footage locations of both the initial penetration into the productive formation and the terminus of the lateral shall be entered under “Location”. If the application is for a permit to drill a horizontal well, notice of the application shall be given by certified mail to all Owners within one-half (1/2) mile of any point on the entire length of the horizontal wellbore, from the surface location through the terminus of the lateral. In the absence of any special Commission order, notice is not required for horizontal wells in federally

supervised units or in API units provided that no portion of the horizontal interval is closer than six hundred sixty feet (660') from a drilling or spacing unit boundary or any uncommitted tract.

(g) After receipt by the Commission at the office of the Supervisor of a proper application from an interested party requesting the establishment of drilling units or the revision of existing drilling units for the spacing of wells within a certain designated area, or upon a decision by the Supervisor or the Commission to call a hearing for the establishment of drilling units or the revision of existing drilling units within a certain designated area, any Application for Permit to Drill within any such designated area will be held in abeyance by the Commission until such time as the matter has been fully heard and determined; except, however, a permit shall be issued by the Supervisor if an Owner files a sworn application and demonstrates therein to the Supervisor's satisfaction that on the date the application requesting such drilling units was filed:

(i) Owner has the right or obligation under the terms of an existing contract to drill said well; and,

(ii) Owner has a leasehold estate or right to acquire a leasehold estate under said contract which will be terminated unless he is permitted to commence the drilling of said well before the matter of spacing can be fully heard and determined by the Commission.

(h) If drilling is not commenced, the permit to drill shall not be valid after the expiration of a period of two (2) years from the date of the issuance thereof by the Commission or its Authorized Agents. A new application shall be submitted no more than two months prior to the expiration date of the permit to drill, along with a $500.00 extension fee, in order to request a two (2) year extension from such expiration date.

(i) All plats shall contain the following information:

(i) Section, township, range and county that the well is to be located within;

(ii) North arrow;

(iii) Scale of drawing, to include a bar graph and a ratio showing the scale of the map;

(iv) A description of all monuments found, set, reset or replaced and notation of all distances measured between the corners used in establishing the section boundary in which the well is located;

(v) Distances from the nearest established section boundary lines to the proposed well;

(vi) Ungraded ground elevation of the well;

(vii) Basis of elevations;

(viii) Basis of bearings;

(ix) Signed Wyoming Registered Land Surveyor Certificate or statement indicating that the well was actually staked by the surveyor or others under his direct supervision as exhibited on the plat.

(j) Latitude and longitude in degrees, with five (5) decimal places and the datum used, if not contained on the plat, is to be furnished within thirty (30) days of the completion of the well. Latitude and longitude values shall be accurate to within one hundred fifty feet (150').

(k) Within the Special Sodium Drilling Area –A or –B (SSDA –A or –B) as defined in Chapter 1, Section 2(ww) or (xx), a notice of the Application for Permit to Drill shall be given by certified mail to all trona producers holding current valid Department of Environmental Quality permits to mine trona.

(l) In a drilling and spacing unit (DSU) for horizontal wells, only APD(s) from the Owner/Operator of a spud or completed well may be submitted or extended. In the absence of spud or completed wells in the DSU, only APD(s) from the Owner/Operator of the oldest pending or approved APD may be submitted or extended. An APD submission or extension from any other Owner/Operator will be denied, except as provided for in Chapter 3, Section 8(m).

(m) An Owner/Operator whose APD cannot be submitted or extended under Section 8(l) may file a hearing application requesting approval of an APD(s). The Owner/Operator ("Applicant") shall file a notice of intent to file an application within fifteen (15) days and a complete application in accordance with Section 8(m)(i) within thirty (30) days of its receipt of a horizontal well application notice pursuant to Section 8(f)(ii), or within fifteen (15) days of each two (2) year anniversary of the most recent spud in the DSU.

(i) A hearing application filed under Section 8(m) shall include at a minimum:

(A) Copy of the submitted APD(s) requested for approval;

(B) A description of the technical ability and experience to drill and complete similar wells;

(C) Percentage of working interest ownership within the DSU

and any written support from other working interest owners in the DSU;

(D) Working interest ownership in the area;

(E) The number of operated wells producing or capable of production within the DSU;

(F) The number of wells operated in the surrounding lands;

(G) Status of any necessary Federal permitting;

(H) Contractual obligations, if any;

(I) If the well pad is on Fee surface, proof that negotiations have commenced between the Owner/Operator and surface owner;

(J) Proof of delivery of Authorization for Expenditure (AFE) and Joint Operating Agreement (JOA) to all other Owners/Operators and unleased mineral interest owners in the DSU.

(ii) Commission staff will review any APD(s) submitted in accordance with Section 8(m) prior to a hearing before the Commission.

(iii) The Owner/Operator of a completed well or the oldest pending or approved APD in a DSU may protest an application submitted under subsection 8(m) within thirty (30) days of receipt of notice of intent to file the 8(m) application. The Owner/Operator ("Protestant") shall include at a minimum the information listed in Section 8(m)(i).

(iv) In contested case proceedings under Section 8(m), the Commission shall consider the applications of the Applicants and Protestants and other relevant evidence. If all evidence evaluated by the Commission is deemed equal, the Commission shall approve the Application or Protest of the party who has secured the largest percentage of working interest ownership combined with working interest owners who have expressed written support to partner in the proposed well(s).

(v) The Commission shall issue an order in accordance with the following:

(A) If the Commission denies an Owner/Operator's 8(m) application, the Applicant's APD(s) shall be denied;

(B) If the Commission approves an Owner/Operator's 8(m) application relating to the initial APD in a DSU, the Protestant's APD(s) shall be denied; or

(C) If the Commission approves an Applicant's 8(m) application relating to an APD extension, the Protestant's APD(s) shall be denied. The Protestant shall have an exclusive right to file an APD within thirty (30) days of the expiration or withdrawal of all the Applicant's APD(s).

Section 9. Application for Permit to Drill Stratigraphic Test or Core Hole (Form 1).

A fifty dollar ($50.00) filing fee shall be required for the drilling of a stratigraphic test or core hole, and an Application for Permit to Drill shall be filed with the Supervisor and approved by him prior to the drilling of such test or hole.

Section 10. Notice of Intent to Change Plans (Form 4).

Where unexpected conditions necessitate any material change in the plans of proposed work already approved, complete details of the changes must be submitted to and approved by the Supervisor before the work is undertaken. If the change in the nature and scope of well stimulation plans previously disclosed is material, verbal notice to the Supervisor or Authorized Agent is required. Notice of Intent (Form 4) shall be submitted as soon as practical thereafter. Circumstances requiring verbal notice may be limited to those unforeseen material changes in previously approved activities, such as a change in the well stimulation service company, a change in fluid type or chemistry, or a major change in the drilling/completion/recompletion plan.

Section 11. Notice of Intent to Recomplete Well (Form 4).

Before commencing operations to recomplete a well in any pool other than the pool from which such well is then producing, a detailed written statement of the plan of work must be filed with and approved by the Supervisor before the work is started. The Owner or Operator shall provide all information required under Chapter 3, Sections 8(c), and 45(a) through 45(g) of these rules.

Section 12. Well Completion or Recompletion Report and Log (Form 3).

Unless approved by the Supervisor, a report on the operation will be submitted on Form 3 within thirty (30) days of ceasing drilling operations, or within thirty (30) days of completion or recompletion (as defined by Chapter 1, Section 2(p) and (tt), respectively) of a well, stratigraphic test or core hole, or within thirty (30) days of the completion of any remedial work such as plugging back or drilling deeper, acidizing, shooting, formation fracturing, squeezing operations, setting a liner, gun perforating, or other similar operations not specifically covered herein, a report on the operation shall be filed with the Supervisor. Such report shall present a detailed account of the work done and the manner in which such work was performed; the daily production of oil, gas, and water both prior to and after the operation; the size and depth of perforations; the quantity of sand, crude, chemical, or other materials employed in the operation and any other pertinent information of operations

which affect the original status of the well and are not specifically covered herein. If the producing interval(s) is not perforated or fully perforated within the above mentioned thirty (30) days, a Sundry Notice (Form 4) shall be filed within that thirty (30) days of completion, indicating the formation(s) perforated or to be perforated and estimated date of completion. A Completion Report (Form 3) shall be filed within thirty (30) days of the producing interval(s) being fully perforated. Data requirements of this section include data in Section 45(d), Section 45(h), Section 45(i) and Section 45(j) of this chapter.

Section 13. Operator's Monthly Report of Wells (Form 2 and Form 16).

(a) A report of all oil, water, and gas production, injection for enhanced recovery purposes, and sales shall be filed with the State Oil and Gas Supervisor on or before the last calendar day of the month succeeding the month covered by the report. Reports shall be submitted on Form 2 or electronic media as prescribed by the Commission for all wells located on fee or patented, state, federal, or Tribal lands regardless of status. Production, sales and injection volumes and pressure data shall be reported on an individual well-by-well basis and by reservoir if the well produces from multiple reservoirs.

(b) Operators of disposal wells shall file a monthly report on Form 16A unless the Supervisor has waived that requirement and approved their reporting on Form 2. Form 16B is an annual application for exclusion from filing the Operator's Monthly Disposal Well Report (Form 16A).

Section 14. This section reserved.

Section 15. Notice of Intent to Abandon Well (Form 4).

(a) Before beginning abandonment work on any well, stratigraphic test, core hole, dry hole, or other exploratory hole, a Notice of Intent to Abandon (Form 4) shall be filed with the Supervisor and approval obtained as to method of abandonment before the work is started. The notice must show the reason for abandonment, and must give a detailed statement of proposed work including such information as kind, location, and length of plugs (by depths), and plans for mudding, cementing, shooting, testing, and removing casing, as well as any other pertinent information. This approval shall be valid for a period of one (1) year. After that time, a new Notice of Intent to Abandon the well shall be submitted.

(b) When the well or other exploratory hole to be plugged may safely be used as a fresh water well, and such utilization is desired by the landowner, the well need not be filled above the required sealing plug set below fresh water provided that the Owner/Operator submits a written, notarized request for such use executed by the landowner which assumes the responsibility to plug the well upon its abandonment as a water well in accordance with applicable Rules and a copy of the Application for Permit to Appropriate Ground Water form for the well which has been approved by the Office of the State Engineer. Such written request, assumption of responsibility, and a copy of the State

Engineer's approved form attached to a sundry notice shall be filed with the Supervisor requesting that the well be released from the Owner/Operator's bond.

Section 16. Temporarily Abandoned or Shut-In Wells (Forms 2 and 4).

(a) A well may be maintained as temporarily abandoned or shut-in provided any change in the status of the well is reported to the Supervisor on Form 4 and every month subsequent to the reported change, the well is listed on Form 2.

(b) A well may not be maintained as temporarily abandoned or shut-in for more than twenty-four (24) consecutive months from the date the well was first reported as temporarily abandoned or shut-in on Form 4 unless the Operator of the well applies for and receives approval for an extension from the Supervisor. The Supervisor may prescribe forms or other information to be submitted with the extension request. Extensions may be granted for periods up to two (2) years.

(c) Prior to approving a request for extension, the Supervisor may, upon a finding of good cause, require mechanical integrity testing in accordance with provisions of Chapter 4, Section 5(d) of these rules, or other surveillance method approved by the Supervisor, be performed on a temporarily abandoned or shut-in well. A temporarily abandoned or shut-in well which successfully passes a mechanical integrity or surveillance test shall not be required to undergo another test for five (5) years unless the Supervisor finds upon good cause that circumstances have substantially changed to alter the condition of the well.

(d) The Supervisor may require any well which has been temporarily abandoned or shut-in for more than twenty-four (24) consecutive months or any temporarily abandoned or shut-in well which has not been mechanically integrity tested within the preceding five (5) year period to undergo a mechanical integrity or other surveillance test prior to change in operator. Mechanical integrity testing must be performed in a manner consistent with Underground Injection Control (UIC) Program pressure testing rules in Chapter 4.

(e) The manner in which the well is to be maintained must be reported to and approved by the Supervisor on Form 4. Bonding requirements, as provided in Sections 4, 5, and 6 of this chapter will be kept in force until such time as the well is permanently abandoned.

(f) The Commission may, in its sole discretion, approve the Supervisor's use of conservation funds collected in accordance with WYO. STAT. ANN. § 30-5-116(b), to plug wells and seismic holes and reclaim the surrounding area affected by them if the Commission is unable to enforce its Rules and Regulations and laws, up to and including legal action when appropriate, requiring the Owner, Operator, geophysical/seismic company, client company, or hole plugger to plug and reclaim and if there exists neither a plugging bond nor other security adequate to properly plug and abandon and rehabilitate

the surface. The Supervisor shall establish and maintain a well plugging schedule which prioritizes wells for plugging through an assessment of the well's potential to adversely impact public health, public safety, surface or ground waters, surface use or other mineral resources.

Section 17. Subsequent Report of Abandonment (SRA, Form 4).

(a) If a well, stratigraphic test or core hole is plugged and abandoned, a notarized Subsequent Report of Abandonment (Form 4, Sundry Notice) must be filed with the Supervisor within thirty (30) days of the date of the plugging. The reverse side of the SRA (Form 4, Affidavit of Plugging) must be notarized and signed by both the notary and the person appearing before the notary. The SRA shall give a detailed account of the manner in which the abandonment or plugging work was carried out, including the weight of mud and nature and quantities of materials used in plugging and the location and extent (by depths) of the plugs of different materials and accompanied by a job log or cement verification report from the plugging contractor specifying the type of fluid used to fill the wellbore, type of slurry volume of API Class cement used, date of work, and the depth of plugs placed. Records of any test or measurement made, and records of the amount, size and location (by depths) of casing must be included.

(b) Site reclamation must be initiated within one (1) year of permanent abandonment of a well or last use of a pit and shall be completed in as timely a manner as climatic conditions allow. For just cause, the Supervisor may grant an administrative variance providing for additional time. Reclamation must be completed in accordance with the landowner's reasonable requests, and/or resemble the original vegetation and contour of adjoining lands. Where practical, topsoil must be stockpiled during construction for use in reclamation. All disturbed areas on state lands will be recontoured and reseeded unless the Wyoming Office of State Lands and Investments approves otherwise. Appendix F of these rules includes information on reseeding.

(c) When rehabilitation of the surface is complete and the well is ready for inspection and bond release, the Operator or Owner shall so advise the Supervisor by submitting a Sundry Notice (Form 4) marking the area on the form advising such. Inspections for the purpose of bond release will not be made by the Commission staff until that request is provided by the Operator or Owner. The SRA will be approved only after the site has been inspected and recommended for bond release by a Commission staff member.

(d) The Commission accepts copies of reports prepared to satisfy the requirements of the Bureau of Land Management when that agency has jurisdiction over the subject well.

Section 18. Plugging of Wells, Stratigraphic Tests, Core, or Other Exploratory Holes (Form 4).

(a) It shall be the duty of any Owner, Operator, or person who assumes ownership, or contractor, drilling any well, seismic, stratigraphic test, core, or other exploratory hole, whether cased or uncased, regardless of diameter, to plug said hole in accordance with the requirements of the Supervisor or as set forth hereinafter and in a manner sufficient to properly protect all fresh water bearing formations and possible or probable oil or gas bearing formations.

(b) For wells as defined in Chapter 1, Section 2(lll) of these Rules and Regulations, and all stratigraphic test wells being abandoned, plugging must be accomplished by the following:

(i) All cement and additives shall consist of API class cement and additives, unless use of non-API cement and additives has prior approval from the Supervisor.

(ii) Wells without production casing must be plugged by placing cement plugs of at least one hundred foot (100') length consisting of approved cement and additives, mixed at a density approved by the Supervisor or his Authorized Agent over the following:

(A) Open hole porous and permeable formations;

(B) At least every two thousand five hundred feet (2,500') if porous and permeable formations are not encountered;

(C) In the base of the surface casing and at least one hundred feet (100’) inside the casing at the surface. If multiple casing strings are present, a minimum one hundred foot (100’) plug will be placed in the annulus between each casing string at the outside casing shoe and a minimum one hundred foot (100’) plug in each annulus at the surface;

(D) At any other depth as required by the Supervisor;

(E) The spacer between all cement plugs must be a fluid consistent with that which was used to drill the well or as approved by the Supervisor.

(iii) Wells with production casing must be plugged by placing cement plugs of at least one hundred foot (100’) length consisting of approved cement and additives, mixed at a density approved by the Supervisor or his Authorized Agent at least every two thousand five hundred feet (2,500’), in the base of the surface casing, and at least one hundred feet (100’) inside the casing at the surface. If multiple casing strings are present, a minimum one hundred foot (100’) plug must be placed in the annulus between each casing string at the outside casing shoe, and a minimum one hundred foot (100’) plug in each annulus at the surface.

(A) Prior to commencing plugging operations, all produced fluids must be circulated from the well using fresh water or other fluid as required to maintain an overbalance of the producing formation.

(B) All perforations must be isolated by squeeze cementing utilizing a mechanical cement retainer set no more than fifty feet (50') above the uppermost perforation, or by a method approved by the Supervisor. The volume of cement will be no less than the volume between the retainer and the deepest perforation plus fifty percent (50%) excess. A minimum one hundred foot (100') plug must also be placed on top of the cement retainer. If access to the perforated areas of the wellbore has been lost, alternative procedures may be proposed by the Owner/Operator. The Supervisor shall determine or approve which method and the quantity of cement that shall be used or the alternative method of plugging, if access to perforations is lost;

(C) The Owner/Operator may leave the production casing in place, provided that the Owner/Operator demonstrates that the casing exhibits mechanical integrity in a manner prescribed or approved by the Supervisor. If casing fails a mechanical integrity test, the casing leaks must be isolated and squeeze cemented utilizing a mechanical cement retainer, or by a method approved by the Supervisor.

(D) If it is determined that any formation containing fresh water and potable water, as defined under Chapter 1, Section 2(t) of these Rules and Regulations, was not sealed or separated when production casing was cemented, the casing must be perforated at the base of the fresh water and potable water zone and squeeze cemented utilizing a mechanical cement retainer, or by a method approved by the Supervisor, with a volume of cement sufficient to cover the formation. The Supervisor may also require the production casing to be perforated at a depth of the shoe of the surface casing and that cement be squeezed or circulated through the perforations through the uncemented zone; and,

(E) If an attempt is made to recover production casing after the retrievable part of the production casing has been removed, cement must be circulated to fill at least a one hundred foot (100') interval of which fifty feet (50') must be inside the casing stub. The remainder of the hole shall be plugged in the manner prescribed under subsection (b)(i) of this section.

(iv) Powder River Basin Coalbed Methane Wells.

(A) The minimum density requirement for cement slurry shall be 13.5 pounds per gallon (ppg) with no less than twenty-five percent (25%) of cement by weight with a yield not greater than 1.29 cubic feet per sack. The Supervisor may approve alternate cement blends submitted by the Operator.

(B) Each completed section of the well shall be isolated by filling the underreamed or perforated section of the hole with bentonite hole plug extending a minimum of twenty feet (20') above the completed section, or isolating the underreamed or perforated section with a mechanical bridge plug set no higher than thirty feet (30') above the underreamed or perforated section. The Supervisor may approve other material for the openhole portion in lieu of the bentonite hole plug.

(C) The bentonite plugs and/or mechanical bridge plugs shall be topped with a one hundred foot (100') cement plug, and one hundred foot (100') plugs will also be set every seven hundred fifty feet (750') along with a one hundred foot (100') plug at the surface.

(c) In plugging horizontal wells, a continuous cement plug shall be placed from at least one hundred feet (100') into the lateral back to one hundred feet (100') into the vertical portion of the wellbore, unless an alternate plugging program is approved by the Supervisor. The remaining portion of the vertical wellbore shall then be plugged in accordance with the preceding requirements.

(d) No substance of any nature or description other than those normally used in plugging operations shall be placed in any well at any time during plugging operations.

(e) Verbal approval to plug and abandon or approval of a Notice of Intent to Abandon (Form 4) must be obtained prior to commencing actual plugging operations. Under Chapter 4, Section 11 of these rules, special plugging orders or variances from normal practice may be obtained or set forth when conditions dictate to protect fresh water bearing formations.

(f) When the well has been plugged, a notarized Subsequent Report of Abandonment (Form 4) accompanied by a job log or cement verification report from the plugging contractor specifying the type of fluid used to fill the wellbore, type of slurry volume of API Class cement used, date of work, and depth of plugs placed must be submitted to the Supervisor. Copies of plugging reports or other pertinent information for wells drilled on federal lands must be filed with the Commission in a timely manner in order that field information for UIC area reviews is current.

(g) In addition to the requirements under subsection (b) of this section, all wells within the Special Sodium Drilling Area – A, as defined in Chapter 1, Section 2(ww), shall have a directional survey run from the base of the Trona Interval to surface if not previously

run. A cement bond log or other appropriate log shall be run from the base of the Trona Interval to top of cement to determine the integrity of the cement in casing annuluses.

(h) In addition to the requirements under subsection (b) of this section, all wells in the SSDA – A or – B shall be plugged by placing a continuous cement plug, at a minimum, through the Trona Interval in all open zones, open casing zones, and all open or inadequately cemented casing annuluses. Perforation and squeeze cementing shall be used where required by the Supervisor.

Section 19. Well Designations and Markers.

(a) The Owner/Operator shall mark each drilling, producing, or injection well in a conspicuous place with his name, name of lease, well number, and legal description of the location of the well. All signs shall be maintained in a legible condition. Signs for wells in multi-well pad locations shall be located near the multi-well pad or may be placed near the pad entrance and provisions shall be made on or near each wellhead to enable positive identification of each well.

(b) Plugged and abandoned wells shall be marked with a permanent monument on which shall be shown the operator, the lease, the well number, and location of the well. The monument shall consist of a piece of pipe not less than four inches (4") in diameter and not less than ten feet (10') in length of which four feet (4') shall be above the ground level, the remainder being securely embedded in cement. The top of the pipe must be permanently sealed.

(c) In order to lessen visual impact of a large number of dry hole markers, or for other reasonable cause, the Supervisor may waive the requirement to erect a dry hole marker. Requests for approval of this procedure shall be submitted on the Notice of Intent to Abandon or on a separate Sundry Notice (Form 4). If that option is desired, the well casing must be cut off at least three feet (3') below the recontoured surface and a plate with well designation as provided in subsection (b) of this section permanently welded onto the top of the casing stub. In the event a marker is not erected, the Owner/Operator must leave a temporary steel fence post marked with the well number and location adjacent to the well bore so the field inspectors can easily find the location.

Section 20. Well Records and Reports.

The Owner/Operator shall keep on the leased premises, or at his headquarters in the field, or otherwise conveniently available to the Supervisor, accurate and complete records of the drilling, redrilling, deepening, repairing, plugging, or abandoning of all wells, and of all other well operations, and of all alterations to casing. These records shall show all the formations penetrated, the content and quality of oil, gas, or water in each formation tested, and the kinds, weight, size, and landed depth of casing used in drilling each well on the leased premises, and any other information obtained in the course of the well operation.

Section 21. Filing of Well Logs.

(a) Within thirty (30) days after logs are run on any well or within thirty (30) days after the completion of any further operation on it, if such operations involve drilling deeper or redrilling any formation, the Owner/Operator shall submit to the Supervisor one (1) copy of the well log on the Commission's Form 3 as well as one (1) copy of the electrical, radioactive, or other similar conventional logs run, which must be submitted on continuous paper. If requested by the Owner/Operator, the Supervisor may grant an extension to the thirty (30) day reporting period for any well. The Owner/Operator shall submit logs in digital form in addition to those mentioned above. The format shall be LAS, Log ASCII standard or any other format approved by the Supervisor.

(b) In addition, Operators shall file one (1) copy of drill stem test charts, directional deviation surveys that portray the bottomhole location, formation water analyses, porosity, permeability or fluid saturations, core analyses, and lithologic log or sample descriptions and bottomhole pressure data subsequent to initial completion within thirty (30) days of being run or compiled by the Operator.

(c) As prescribed under Chapter 2, Section 6 and Chapter 3, Section 25 of these rules for horizontal wells, the directional deviation, and/or measurement-while-drilling (MWD) survey shall be filed within thirty (30) days of being run. Further, said directional deviation and/or MWD survey shall not be held confidential as provided hereinafter for other logs.

(d) The making and filing of reports, well logs, and directional surveys on exploratory or "wildcat" wells marked confidential shall be kept confidential for six (6) months after the filing due date as required by subsection (a) of this section unless the Owner gives written permission to release such information at an earlier date. When an Application for Permit to Drill is received marked "Confidential", the Commission will release only the first page of the Commission's Form 1 or the Bureau of Land Management's Form No. 3160-3 and the surveyor's plat to the public and news media. Permission to extend the confidential status for periods longer than the original six (6) month period must be obtained from the Supervisor, however, if a well has been completed and/or production is being reported on it, subsequent requests to keep it confidential shall be denied.

Section 22. General Drilling Rules.

(a) The following shall apply to the drilling of all wells unless altered, modified, or changed for a particular well, pool, unit, area or lands upon hearing before the Commission:

(i) Surface casing shall be run to reach a depth below all known or reasonably estimated utilizable groundwater (as defined in Chapter 3, Section 8(c)(iv)) to protect the Use Class category and to prevent blowouts or uncontrolled flows. Unless

otherwise approved by the Supervisor, surface casing shall be set at a minimum of three (3) joints or approximately one hundred (100) to one hundred twenty (120) feet below the depth of any Wyoming Office of State Engineer permitted water supply wells designated for domestic, stock water, irrigation or municipal use, within a minimum of one-quarter (1/4) mile radius and shall be cemented to surface. Any coalbed methane well receiving a Ground Water Appropriate Permit (Form UW 5) from the State Engineer's Office is exempt from this specific subsection. Fresh water flows detected during drilling, including seismic, core, or other exploratory holes, shall be recorded on Form 19 (Report of Fresh Water Flows) and reported to the Commission on the next business day. Information contained on the form shall describe the depth at which the sand was encountered, the thickness, and the rate of water flow, if known. In areas where pressures and formations are unknown, surface casing shall be of sufficient size to permit the use of an intermediate string or strings of casing. Surface casing shall be set in or through an impervious formation and shall be cemented by the pump and plug or displacement or other approved method with sufficient cement to fill the annulus to the top of the hole, all in accordance with reasonable requirements of the Supervisor. The Supervisor may require the Owner or Operator to pump a specified quantity of excess cement above the design volume if severe washed out hole conditions are known to exist on the surface hole portion of wells in the immediate vicinity of the well to be drilled. If cement is not circulated to the surface during the primary operation, the Owner/Operator shall perform supplemental cementing operations to assure that the annular space from the casing shoe to the surface is filled with cement. The Supervisor may require the Owner or Operator to provide cased hole bond logs to be run for casing strings to demonstrate isolation from the placement of cement across and above the productive intervals or above the last casing shoe in the well, if there is a demonstrated reason to believe an inadequate cement job was performed.

(ii) Unless otherwise provided by specific order of the Commission for a particular well or wells or for a particular pool or parts thereof, cemented casing string shall stand under pressure until the cement at the shoe has reached a compressive strength of five hundred pounds per square inch (500 lbs./sq. in.). In addition, the API free-water separation for all cement slurries used shall average no more than four (4) milliliters per two hundred fifty (250) milliliters of cement. All cements used shall achieve a minimum compressive strength of one hundred (100) psi in twenty-four (24) hours measured at eighty degrees Fahrenheit (80˚ F.). Testing for these properties shall be in accordance with accepted industry standards. The term "under pressure" as used herein shall be complied with if one float valve is used or if pressure is otherwise held;

(iii) There shall be installed and maintained on all wells blowout preventers and related equipment in accordance with Chapter 3, Section 23(i) of these rules;

(iv) Setting depths of all casing strings shall be determined by taking into account formation fracture gradients and the maximum anticipated pressure to be maintained within the wellbore;

(v) If and when it becomes necessary to run a production string, such string shall be cemented by the pump and plug method and shall be properly tested by the pressure method before cement plugs are drilled;

(vi) Natural gas, which may be encountered in a substantial quantity in any section of cable tool drilled hole above the ultimate objective, shall be shut off with reasonable diligence either by mudding, by casing, or other approved method, and confined to its original source to the satisfaction of the Supervisor. Any gas escaping from the well during drilling operations shall be, so far as practicable, conducted to a safe distance from the well site and burned.

(b) Before drilling commences, approval to construct proper and adequate reserve pits for the reception and confinement of mud and cuttings and to facilitate the drilling operation shall be applied for and received in accordance with Chapter 4, Section 1 of these rules. Special precautions including, but not limited to, an impermeable liner and/or membrane, monitoring systems, or closed systems, shall be taken, if necessary, to prevent contamination of streams and potable water and to provide additional protection to human health and safety in instances where drilling operations are conducted in close proximity to water supplies. Wells, pits, wellheads, pumping units, tanks, and treaters shall be located no closer than three hundred fifty feet (350') from any water supply. The Supervisor may grant a variance to increase or decrease this distance for good cause.

(c) Before drilling commences, the Owner/Operator shall notify the Commission of his intent to spud the well and an approximate time the BOP test will be run.

(d) For each well drilled within the Special Sodium Drilling Area – A or – B (SSDA – A or – B), as defined in Chapter 1, Section 2(ww) and (xx) of these rules, a complete proposed casing and cementing program shall be submitted on the Application for Permit to Drill (Form 1). For the life of the well each drilling and casing program, unless altered, modified, or changed for a particular well, pool, unit, area or lands upon hearing before the Commission, shall be designed to:

(i) Provide suitable and safe operating conditions for the total measured depth proposed;

(ii) Confine fluids to the wellbore;

(iii) Prevent migration of fluids from one stratum to another;

(iv) Assure control of well pressures encountered;

(v) Prevent contamination of freshwater;

(vi) Prevent significant damage to Trona Mineral Resources; and,

(vii) Provide well control until the next casing is set.

All pertinent factors for well control should be considered, including formation fracture gradients, formation pressures, casing setting depths, proposed total depth, and projected mining.

(e) In addition, the following requirements apply to all wells drilled within the Special Sodium Drilling Area – A (SSDA – A), as defined in Chapter 1, Section 2(ww) of these rules, unless altered, modified, or changed for a particular well, pool, unit, area or lands upon hearing before the Commission:

(i) Any oil or gas wells that will be drilled within the area of influence of underground trona mining shall be:

(A) Designed and installed to withstand the forces and potentially damaging influences from mining as certified by a Registered Professional Engineer registered in the state of Wyoming or

(B) Demonstrated to be located outside the mining influence area. Mining influence includes surface subsidence and underground formation collapse, faulting fracturing and related stresses that may provide avenues for communication with active or inactive underground mine works, open mine voids, and corrosive mine fluids that may cause well casing corrosion or failure as a result of mining.

(ii) Conductor casing must be set to a depth of at least forty feet (40') or into a competent stratum, whichever is greater. The casing must be cemented with a quantity of cement to fill the annular space up to the surface and topped off if not at the surface. Cement fill must be verified by observation of cement returns.

(iii) Centralized surface casing shall be set below the Trona Interval from the surface. Centralizers shall be spaced to ensure enough casing annulus is maintained on all sides of the casing to allow cement fill space throughout the cased interval. The casing shall be set into a competent stratum and cemented with sufficient cement in the annulus to circulate to the surface. If cement does not circulate to the surface, the open annulus must be cemented to the surface before drilling ahead. A cement bond log or cement evaluation tool must be run to verify adequate cement around surface casing. Remedial cementing may be required if it is determined that insufficient bonding occurred.

(iv) Prior to well completion, a directional survey shall be run from the base of the Trona Interval to surface to verify wellbore location relative to surface location. Results of the survey shall be submitted to the Supervisor pursuant to Chapter 3, Section 21 of these rules.

(v) Intermediate and/or production casings, if required to be cemented,

shall be cemented with a sufficient quantity of cement to provide annular fill up from the surface casing shoe to two hundred feet (200') above the Trona Interval. All casing annuluses reaching the production zones shall be cemented for two hundred feet (200') or more above the highest producing zone. All casings shall be centralized throughout their cemented annulus intervals. Before drilling ahead, all casings shall be tested in accordance with subsection (e)(vii) of this section.

(vi) Liners may be set and cemented as an extension of casings provided that the cemented liner has a minimum of two hundred feet (200') of cemented lap within the next larger casing. Before drilling ahead, a cemented liner and lap must test in accordance with subsection (e)(vii) of this section, to determine that a seal between the liner top and next larger casing has been achieved.

(vii) Before drilling out the liner after cementing, all casing, liners, and liner laps must be tested to a surface pressure of one thousand five hundred (1,500) psig, or 0.25 psi/ft multiplied by the true vertical depth of the casing shoe, whichever is greater; however, surface pressure must not subject the casing to a hoop stress that will exceed seventy percent (70%) of the minimum yield strength of the casing. Sufficient notice of pressure test must be given, so that a representative of the Commission may witness the test. A cement bond log or other appropriate log shall be obtained to evaluate cement integrity in each cemented zone for each cemented casing annulus and the results submitted to the Supervisor for approval, pursuant to Chapter 3, Section 21 of these rules. If there are indications of improper cementing, or the pressure declines more than ten percent (10%) in 30 minutes, corrective measures shall be taken.

(viii) Casing annuluses not cemented through the Trona Interval that extend to the surface shall be continually monitored for leaks by equipping the surface termination with a rupture disk (fail open) pressure relief valve with tattle-tale (or similar device) to detect, alarm, and relieve excess annular pressure buildup. The device shall be set to fail open at one hundred (100) psi. Blocking of this pressure relief valve in an open position shall be prohibited. In the event the monitored casing pressure exceeds one hundred (100) psi, the Supervisor and the trona producers holding valid Wyoming DEQ permits to mine trona shall be notified as soon as possible and remedial actions shall be implemented with the Supervisor's approval. The pressure relief device shall be tested every two (2) years to insure it is functioning properly. Tattle-tale monitoring units that cease to monitor or communicate shall be promptly repaired. Pressure devices shall be repaired or replaced immediately upon failing a pressure test or following a rupture.

(ix) If a well has not been tested for mechanical integrity within five (5) years and is shut-in for an extended period the casing strings capable of being tested shall be evaluated for mechanical integrity during the shut-in period.

(x) Cathodic protection or other equivalent corrosion prevention shall be applied to all casing strings.

(f) Within the Special Sodium Drilling Area – A or – B, as defined in Chapter 1, Section 2(ww) or (xx) of these rules, or all wells defined in Chapter 1, Section 2 of these rules unless altered, modified, or changed upon hearing before the Commission, or shown to contain no Trona Mineral Resources, shall only use stimulation methods that do not significantly damage the Trona Mineral Resources. A plan of work for any stimulation operation shall be submitted to the Supervisor and approved before the work is undertaken.

(i) Well stimulation operations within the Trona Interval shall include a post stimulation survey that identifies the extent of induced fractures. Results of the survey shall be submitted to the Supervisor for evaluation to determine if induced fractures have significantly intersected the Trona Mineral Resources and if corrective action is required.

(ii) Stimulation fluids shall be designed to prevent significant dissolution to the Trona Mineral Resources. The Supervisor shall require corrective action if it is determined that significant damage to the Trona Mineral Resources has, or is likely to occur.

(g) Within the boundaries of the Special Sodium Drilling Area – A or – B, as defined in Chapter 1, Section 2(ww) or (xx) of these rules, all wells defined in Chapter 1, Section 2 of these rules unless altered, modified, or changed upon hearing before the Commission, shall use drilling fluids that will not significantly dissolve the Trona Mineral Resource.

Section 23. Blowout Preventers.

(a) Blowout preventers (BOPs) and related equipment shall be installed and maintained during the drilling of all wells in accordance with the following rules unless altered, modified, or changed, for a particular pool or pools, upon hearing before the Commission:

(i) **General Rules.**

(A) The required working pressure rating of all blowout preventers and related equipment shall be based on known or anticipated subsurface pressure, geologic conditions, or accepted engineering practices, and shall equal or exceed the maximum anticipated pressure to be contained at the surface. In the absence of better data, the maximum anticipated surface pressure shall be determined by using a normal pressure gradient of 0.22 psi per foot and assuming a partially evacuated hole. A schematic diagram of the BOP and wellhead assembly shall be submitted to the Supervisor with the Application for Permit to Drill (APD; Form 1). The schematic diagram should indicate the minimum size and pressure rating of all components of the wellhead and blowout preventer assembly.

(B) The Supervisor, on a site specific basis, may require the use of blowout preventers or other methods of controlling shallow coalbed methane wells, at which time all current BOP rules shall be applicable.

(C) All blowout preventers, choke lines, and choke manifolds shall be installed above ground level. Casing heads and optional spools may be installed below ground level provided they are visible and accessible.

(D) Blowout preventer equipment and related casing heads and spools shall have a vertical bore no smaller than the inside diameter of the casing to which they are attached.

(E) Pressure tests on blowout preventers and related equipment shall be tested as outlined in this section, at least:

(I) Prior to spud or upon installation;

(II) After the disconnection or repair of any pressure containing seal in the BOP stack, choke and kill lines, or choke manifold, but limited to the affected component; and,

(III) Every 30 days after initial installation, or as determined by the Supervisor.

(F) The Supervisor may require an affidavit covering the initial pressure tests after installation signed by the Owner/Operator or contractor attesting to the satisfactory pressure tests. The Supervisor is to be advised at least twenty-four (24) hours in advance of all tests.

(G) Blowout prevention equipment used when reasonable expectations of encountering hydrogen sulfide or sour gas formations that could potentially result in the partial pressure of the hydrogen sulfide or sour gas exceeding 0.05 psia (00034 MPa) in the gas phase at the maximum anticipated pressure, shall be suitable for use in such areas.

(H) All ram BOPs shall be equipped with hydraulic locking devices or manual locking devices with hand wheels extending outside of the rig's substructure.

(I) Blowout prevention equipment installed on the well shall have a rated working pressure equal to, or higher than, the working pressure specified in the approved APD.

(J) In addition to the minimum BOP requirements outlined in this section, wells drilled while using tapered drill strings shall require either a variable

bore pipe ram preventer or additional ram type blowout preventers to provide a minimum of one set of pipe rams for each size of drill pipe in use, and one set of blind rams.

(ii) **Minimum requirements for 2,000 psi system:**

(A) BOP equipment shall consist of at least one double-gate preventer with pipe and blind rams or two single-ram type preventers; one equipped with pipe rams, and the other with blind rams. Ram preventers or a drilling spool must have side outlets with a minimum inside diameter of two inches to accommodate choke and kill lines. Outlets on the casing head may not be used to attach choke or kill lines. One annular BOP may be substituted for ram type BOPs, providing the annular BOP is pressure tested in the CSO (complete shut off) configuration.

(B) Additional BOP equipment shall include one upper kelly cock, and one drill pipe safety valve with subs to fit all drill string connections in use.

(C) Choke manifold and related equipment shall consist of one kill line valve, one choke line valve, choke line, two manual adjustable chokes each with one valve located upstream of the choke, one bleed line valve and one mud service pressure gauge with a valve upstream of the gauge. The arrangement of the valves shall be a functional equivalent of the arrangement outlined in Appendix G, Figure 3-1 or 3-1A, of these rules.

(D) All choke manifold valves, choke and kill line valves and the choke line shall be full bore. Choke line valves, choke line and bleed line valves shall have an inside diameter equal to or greater than the minimum requirement for the BOP or drilling spool outlet.

(E) The choke line should be as straight as possible, and any required turns shall be made with flow targets at bends and on block tees. Choke hoses with flanged connections designed for that purpose will be accepted in lieu of a steel choke line.

(F) The accumulator shall have sufficient capacity to operate the BOP equipment as outlined in this section, and have one independently powered pump system. BOP controls may be located at the accumulator or on the rig floor.

(iii) **Minimum requirements for 3,000 psi system:**

(A) BOP equipment shall consist of at least one annular BOP and one double-gate preventer with pipe and blind rams or two single-ram type preventers; one equipped with pipe rams and the other with blind rams. Ram preventers or a drilling spool must have side outlets with a minimum inside diameter of two inches on the kill side, and three inches on the choke side to accommodate choke and kill lines. Outlets on the casing head may not be used to attach choke or kill lines.

(B) Additional BOP equipment shall include one upper kelly cock, and one drill pipe safety valve with subs to fit all drill string connections in use.

(C) Choke manifold and related equipment shall consist of one kill line valve, one check valve, two choke line valves, choke line, two manual adjustable chokes each with one valve located upstream of the choke, one bleed line valve and one mud service pressure gauge with a valve upstream of the gauge. The arrangement of the valves shall be a functional equivalent of the arrangement outlined in Appendix G, Figure 3-2, of these rules.

(D) All choke manifold valves, choke and kill line valves and the choke line shall be full bore. Choke line valves, choke line and bleed line valves shall have an inside diameter equal to or greater than the minimum requirement for the BOP or drilling spool outlet.

(E) The choke line should be as straight as possible, and any required turns shall be made with flow targets at all bends and on block tees. All connections exposed to well bore pressure shall be welded, flanged or clamped. Choke hoses with flanged connections designed for that purpose will be accepted in lieu of a steel choke line.

(F) The accumulator shall have sufficient capacity to operate the BOP equipment as outlined in this section, and have two independently powered pump systems connected to start automatically after a 200 psi drop in accumulator pressure, or one independently powered pump system connected to start automatically after a 200 psi drop in accumulator pressure and an emergency nitrogen back-up system connected to the accumulator manifold. BOP controls may be located at the accumulator or on the rig floor.

(iv) **Minimum requirements for 5,000 psi system:**

(A) BOP equipment shall consist of at least one annular BOP and one double-gate preventer with pipe and blind rams or two single-ram type preventers; one equipped with pipe rams and the other with blind rams. Ram preventers or a drilling spool must have side outlets with a minimum inside diameter of two inches on the kill side, and three inches on the choke side to accommodate choke and kill lines. Outlets on the casing head may not be used to attach choke or kill lines.

(B) Additional BOP equipment shall include one upper kelly cock, lower kelly cock, one drill pipe safety valve and one inside BOP with subs to fit all drill string connections in use.

(C) Choke manifold and related equipment shall consist of two kill line valves, one check valve, one choke line valve, one remote controlled choke line valve, choke line, one manual adjustable choke and one remote controlled adjustable choke each with two valves located upstream of the choke, two bleed line valves and one mud service pressure gauge with a valve upstream of the gauge. The arrangement of the valves shall be a functional equivalent of the arrangement outlined in Appendix G, Figure 3-3, of these rules.

(D) All choke manifold valves, choke and kill line valves and the choke line shall be full bore. Choke line valves, choke line and bleed line valves shall have an inside diameter equal to or greater than the minimum requirement for the BOP or drilling spool outlet.

(E) The choke line should be as straight as possible, and any required turns shall be made with flow targets at all bends and on block tees. All connections exposed to well bore pressure shall be welded, flanged or clamped. Choke hoses with flanged connections designed for that purpose will be accepted in lieu of a steel choke line.

(F) The accumulator shall have sufficient capacity to operate the BOP equipment as outlined in this section, and have two independently powered pump systems connected to start automatically after a 200 psi drop in accumulator pressure, plus an emergency nitrogen back-up system connected to the accumulator manifold. BOP controls shall be located on the accumulator with additional remote controls located on the rig floor.

(v) **Minimum requirements for 10,000-15,000-20,000 psi systems:**

(A) BOP equipment shall consist of at least one annular BOP and one double-gate preventer with pipe and blind rams or two single-ram type preventers; one equipped with pipe rams and the other with blind rams located above a drilling spool. One drilling spool with side outlets with a minimum inside diameter of two inches on the kill side, and three inches on the choke side. One ram-type preventer with pipe rams, located below the drilling spool. Outlets on the casing head may not be used to attach choke or kill lines.

(B) Additional BOP equipment shall include an upper kelly cock, lower kelly cock, one drill pipe safety valve and one inside BOP with subs to fit all drill string connections in use.

(C) Choke manifold and related equipment shall consist of two kill line valves, one check valve, one choke line valve, one remote controlled choke line valve, choke line, two manual adjustable chokes and one remote controlled adjustable choke each with two valves located upstream of the choke, two bleed line valves and one mud service pressure gauge with a valve upstream of the gauge. The arrangement of the valves shall be a functional equivalent of the arrangement outlined in Appendix G, Figure 3-4, of these rules.

(D) All choke manifold valves, choke and kill line valves and the choke line shall be full bore. Choke line valves, choke line and bleed line valves shall have an inside diameter equal to or greater than the minimum requirement for the BOP or drilling spool outlet.

(E) The choke line shall be a steel line and be as straight as possible, and any required turns shall be made with flow targets at all bends and on block tees. All connections exposed to well bore pressure shall be welded, flanged, or clamped.

(F) The accumulator shall have sufficient capacity to operate the BOP equipment as outlined in this section, and have two independently powered pump systems connected to start automatically after a 200 psi drop in accumulator pressure, plus an emergency nitrogen back-up system connected to the accumulator manifold. BOP controls shall be located on the accumulator with additional remote controls located on the rig floor.

(vi) **Minimum requirements for diverter systems:**

(A) The diverter system shall consist of a low-pressure diverter or an annular blowout preventer with large diameter vent lines installed below the diverter and extending to a flare pit a safe distance from the well.

(B) The valves on the vent lines shall be full bore and full opening, and be hydraulically controlled in a manner to insure that at least one vent line valve is opened before the diverter packer closes.

(C) The diverter and all valves shall be function tested when installed and at appropriate times during the operation.

(vii) **Minimum requirements for BOP equipment testing:**

(A) All blowout preventers and related equipment that may be exposed to well pressure shall be tested first to a low pressure and then to a high pressure.

(I) A stable low of 200-300 psi shall be maintained for at least five (5) minutes prior to initiating the high-pressure test.

(II) When performing the low-pressure test, it is not acceptable to apply a higher pressure and bleed down to the low-test pressure. The higher pressure could initiate a seal that may continue to seal after the pressure is lowered and therefore misrepresent a low-pressure condition.

(III) The high-pressure test shall be to the rated working pressure of the ram type BOPs and related equipment, or to the rated working pressure of the wellhead on which the stack is installed, whichever is lower. A stable high-pressure test shall be maintained for ten (10) minutes.

(IV) Annular BOP shall be high pressure tested to fifty percent (50%) of the rated working pressure, and maintain a stable pressure for ten (10) minutes.

(V) Manual adjustable chokes not designed for complete shut off (CSO) shall be pressure tested only to the extent of determining the integrity of the internal seating components to maintain back pressure. Hydraulic chokes designed for CSO shall be pressure tested to fifty percent (50%) of the rated working pressure.

(B) All casing below the conductor pipe shall be pressure tested to 0.22 psi per foot or one thousand five hundred (1,500) psi, whichever is greater, but not to exceed seventy percent (70%) of the minimum internal yield strength of the casing. A stable pressure shall be maintained for thirty (30) minutes.

(C) During BOP pressure testing the casing shall be isolated with a test plug set in the wellhead, and the appropriate valve opened below the test plug to detect any leakage that may occur due to failure of the test plug.

(D) The choke and kill line valves, choke manifold valves, upper and lower kelly cocks, drill pipe safety valves and inside BOP shall be tested with pressure applied from the wellbore side. All valves, including check valves, located downstream of the valve being pressure tested, will be in the open position.

(E) All manually operated valves and chokes on the BOP stack, choke and kill lines, or choke manifold shall be equipped with a handle provided by the manufacturer, or a functionally equivalent fabricated handle, and be lubricated and maintained to permit operation of the valves without the use of additional wrenches or levers.

(F) Operators may install BOP equipment of a higher pressure rating than that specified in the approved APD. In that event the BOP equipment shall be pressure tested at the working pressure specified in the approved APD.

(G) All operational components of the BOP equipment shall be functioned at least once a week to verify the components' intended operations.

(H) The results of all BOP equipment pressure tests and function tests shall be recorded on the tour sheet and shall include the type of test, testing sequence, low and high pressures, duration of each test, and results of each test.

(viii) **Minimum requirements for accumulator system testing**:

(A) The precharge pressure on each accumulator bottle shall be checked prior to each BOP pressure test, and adjusted if necessary. The minimum precharge pressure for a 3,000-psi working pressure accumulator unit should be one thousand (1,000) psi. The minimum precharge pressure for a 2,000-psi working pressure accumulator unit should be one thousand (1,000) psi. The minimum precharge pressure for a 1,500-psi working pressure accumulator unit should be seven hundred fifty (750) psi. Only nitrogen gas shall be used for accumulator precharge. The precharge should be adjusted to within one hundred (100) psi of the selected pressure.

(B) Accumulator response time is the elapsed time between activation and the complete operation of a function. The accumulator system shall be capable of closing each ram BOP within thirty (30) seconds. Closing time shall not exceed thirty (30) seconds for annular BOPs smaller than eighteen and three-quarter inches (18-3/4") nominal bore, and forty-five (45) seconds for annular BOPs of eighteen and three-quarter inches (18-3/4") nominal bore and larger, when closed on the smallest diameter drill string component in use.

(C) BOP accumulator systems shall have sufficient usable hydraulic fluid volume (with pumps inoperative) to close one annular BOP, two ram BOPs from a full open position, open one hydraulic valve against zero wellbore pressure, and retain two hundred (200) psi or more above the minimum recommended precharge pressure.

(D) The accumulator pump system shall have sufficient quantity and sizes of pumps to satisfactorily perform the following: with the accumulator bottles isolated from service, the accumulator pump system shall be capable of closing the annular BOP on the minimum size drill pipe being used, or one ram-type BOP if the stack does not include an annular BOP, and open the hydraulic choke line valve within two (2) minutes.

Section 24. Vertical Drilling.

Unless otherwise ordered by the Commission upon hearing, all wells shall be so drilled that the horizontal distance between the bottom of the hole and the location at the top of the hole shall be at all times a practical minimum. Horizontal wells are exempt from this rule.

Section 25. Directional Drilling.

(a) Before beginning controlled directional drilling, other than whipstocking because of hole conditions, when the intent is to direct the bottom of the hole away from the vertical, notice of intention to do so shall be filed with the Supervisor and his approval obtained. The approval will be valid for one year from the date it was granted. Such notice shall state clearly:

(i) The depth;

(ii) Exact surface location of the wellbore;

(iii) Proposed direction of deviation; and,

(iv) Proposed horizontal distance between the bottom of the hole and surface location.

(b) If approval is obtained, the Owner/Operator shall file with the Supervisor within thirty (30) days after the completion of the work an accurate and complete copy of the survey made.

(c) Additional notice to directional drill shall not be required if the proposed bottomhole location will be drilled to an authorized location pursuant to Section 2 of this chapter, a drilling and spacing order, or any other special order of the Commission.

(d) Specification for Certification of Directional Surveys pursuant to Wyoming Oil and Gas Conservation Commission rules and regulations, Chapter 2 Section 6(a), and Chapter 3, Sections 21(c), 25(b) and 25(c). The Commission provides additional requirements for a complete Certified Directional Survey as follows:

(i) The accepted standard for directional survey calculation shall be the minimum curvature method with straight line extrapolation acceptable from last data point in survey to Total Measured Depth. If other methods are to be used they must be identified on the Application for Permit to Drill (APD, Form 1) when submitted for approval. If the APD is approved with another method, the other method must be duly noted by the Operator on the Operator's Certification Form and by the directional drilling contractor on the Directional Survey Certification Form.

(ii) Directional drilling contractor shall provide the Final Survey in electronic (ASCII) file format directly submitted to the Wyoming Oil and Gas Conservation Commission. Final Survey file must also include a Plan versus Actual plot with all dimensions and directions clearly marked. A copy of the Directional Survey Certification Form with the Plan versus Actual plot is acceptable in .pdf format, but must be complete and signed.

(iii) The directional survey or measurement while drilling (MWD) contractor is responsible for ensuring that all MWD tools are calibrated in accordance to their standard calibration procedures.

(iv) The Operator shall provide on the drilling well location a copy of the approved APD and provide the directional survey contractor(s) with a legible and reproducible copy of the certified surface location plat.

(A) Bottom hole location (BHL) shall be tied back to the well surface location utilizing the most recent governmental survey as required by the most recent required governmental survey, such as NAD 83.

(v) A change out of the directional survey tools is required if the Operator has to trip out of the hole during the build section or while steering the well in the event of failure of MWD itself or failure of direction survey tool; however, the Operator will be allowed to proceed as long as the surveys are replaced with MWD check shots or gyro survey.

(vi) For a Commission approved permitted Directional Well:

(A) In the vertical hole the Operator shall provide directional surveys at no greater than two hundred (200) foot intervals and at the terminus of the vertical section, or at the discretion of the Supervisor, to document the deviation of the upper hole.

(vii) A proper magnetic spacing must be maintained in order to ensure azimuth accuracy.

(viii) When deviation is less than five (5) degrees dogleg rate, directional survey shall be taken at intervals no greater than three hundred (300) feet.

(ix) When deviation is five (5) degrees dogleg rate or greater, a directional survey shall be taken at intervals no greater than one hundred (100) feet.

(x) Regardless of the directional survey tools in use, the Commission requires in the build section that directional surveys shall be taken at intervals no greater than one hundred (100) feet in the lateral portion of the wellbore while rotating. Should a survey be missed, the Owner or Operator must take a survey at the next possible

opportunity and an explanation of the reason for the missing survey shall be included on the Directional Survey Report.

(xi) The Operator shall provide on their Certification Form the method of bottom hole location (BHL) projection used from the last surveyed point to Total Measured Depth. The Operator Certification Form must be completed and signed. This form must be attached to the Completion Report (Form 3). The Operator must include with the Completion Report (Form 3) a printed copy of the final well directional survey.

(A) Certification forms are to be attached to the Completion Report (Form 3).

(xii) At the Supervisor's discretion and if the Commission well survey analysis compels the need, the Supervisor may require additional directional surveys, accuracy requirements and reported data.

(xiii) All wells must be depicted exactly as drilled. The original laterals and any sidetrack shall be kept separately, appropriately labeled as to what they depict (Leg 1, Leg Sidetrack 1, etc.) and filed in their entirety from the tie-in point to a projection to total measured depth of each leg or sidetrack.

(xiv) When additional laterals and/or sidetracks are surveyed, the tie-in point should be listed as the first survey. Do not include any surveys prior to the tie-in as they are required to be filed with the previous lateral or sidetrack. The survey point used for the tie-in should be the last survey run immediately above the sidetrack depth.

(xv) All surveys must be submitted and no portion of any survey should be deleted at any time. All surveys must be corrected to True North. In the event that a gyro survey is run after the well has been drilled with an MWD tool, all surveys must be submitted and the "master survey" will be considered the gyro survey.

(xvi) Additional requirements:

(A) On highly deviated and/or horizontal wells, the Commission may require check shot surveys at various depths, not repeats of mandatory survey shot depths as required in Section 25(d)(vi) through (d)(x). This requirement will be a stipulation on the approved Application for Permit to Drill (Form 1) on a case-by-case basis.

(e) Commission required Certification Forms:

(i) Directional Survey Certification Form shall be attached to the Final Report as a separate cover sheet, on the contractor's letterhead, and must contain, as a minimum, the following information:

(A) MWD/Directional Survey Company Name;

(B) MWD/Directional Survey Job Number and Job Type;

(C) Well Name and API Number;

(D) Operator/Client Name;

(E) Well Surface Location by Footage and Latitude/Longitude, and Datum 1/4 1/4 Section, Township and Range, and County;

(F) Final Report Date;

(G) MWD/Directional Survey Run Date;

(H) Surveyed from measured depth (MD) of A feet to B feet;

(I) Survey Tool Type and Relation to the Bit;

(J) Drilling Rig Contractor Name, Rig Number and Rig Kelley Bushing Height feet;

(K) MWD/Directional Surveyor's Name;

(L) The following certification statement:

"The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by [MWD/Directional Survey Company Name]. I am authorized and qualified to review the data, calculations and this report, and that the report represents a true and correct Directional Survey of this well based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using [minimum curvature or other] method."

(M) Well Planner Printed Name and Signature;

(N) Date Signed;

(O) Optional: Notarization of Signature.

(ii) Operator Certification Form shall be attached to the Completion Report (Form 3) with a copy of the Final Directional Survey, as a separate cover sheet on the Operator's letterhead, and must provide, as a minimum, the following information:

(A) Operator Company Name and Company Representative's Office Address;

(B) Well Name and API Number;

(C) Well Surface Location by Footage and Latitude/Longitude, and Datum 1/4 1/4 Section, Township and Range, and County;

(D) Producing Interval Top Location by Footage and Latitude/Longitude and Datum 1/4 1/4 Section, Township and Range, and County;

(E) Producing Interval Bottom Location by Footage and Latitude/Longitude and Datum 1/4 1/4 Section, Township and Range, and County (if different that Bottom Hole Location);

(F) Well Bottom Hole Location by Footage and Latitude/Longitude and Datum 1/4 1/4 Section, Township and Range, and County;

(G) The following certification statement:

"I am authorized and qualified to review the Final Directional Survey data for this well and by my signature certify that the above Bottom Hole Location represents a true and correct Bottom Hole Location of this well based on the Final Directional Survey Report corrected to True North as provided by [MWD/Directional Survey Company Name]; and that the Bottom Hole Location is in compliance with Wyoming Oil and Gas Conservation Commission rules and orders. The method of projection from the last directionally surveyed point to the Total Measured Depth as represented as the Bottom Hole Location is the [straight line or other] method."

(H) Operator Representative Printed Name and Signature;

(I) Date Signed;

(J) Optional: Notarization of Signature.

(f) The following definitions are provided:

(i) **Azimuth** means the deviation in the horizontal plane of a wellbore expressed in terms of compass degrees.

(ii) **Certified directional survey** means a survey conducted and reported pursuant Chapter 2, Section 6(b), and Chapter 3, Sections 21(c) and 25(b) and (c) of these rules.

(iii) **Directional drilling methods** include industry standard tools,

including gyro and electronic single shot, as used separately or in combination with Measurement While Drilling (MWD) or Logging While Drilling (LWD).

(iv) **Directional drilling survey** means the compiled report of the survey, providing as a minimum the following, represented as report columns: Survey Measured Depth (MD) as feet; Inclination as degrees; Azimuth as degrees; Course Length as feet; True Vertical Depth (TVD) as feet; Borehole Bearing Coordinates as degrees N/S and E/W; Closure as Distance in feet and as Azimuth in degrees; Dogleg Severity as degrees; and Horizontal Coordinates as feet N/S and E/W.

(v) **Directional well** means a wellbore that is intentionally deviated from vertical with an intentional azimuth.

(vi) **Dogleg severity** means a significant rate of change in azimuth as well as inclination in a short distance along the path of the well resulting in a crooked well profile and expressed as degrees per 100 feet.

(vii) **Drilling and Spacing Unit** (DSU) means Commission-approved boundary based upon rules and orders appropriate for the area and pools, within the lease boundary, property lines, unit lines, communitized area boundary, or participating areas boundary.

(viii) **Drill pipe stand** means drill pipe in triples, approximately 94-96 feet for each stand. If the drilling rig drill pipe is doubles (approximately 60-64 feet) or singles (approximately 30-32 feet), or if coiled tubing is used, then the footage requirements must be used for survey frequency.

(ix) **Horizontal Well** means a wellbore drilled laterally at an angle of at least eighty degrees (80°) to the vertical and with a horizontal projection exceeding one hundred feet (100') measured from the initial point of penetration into the productive formation through the terminus of the lateral in the same common source of hydrocarbon supply.

(x) **Inclination** means the deviation angle away from the vertical plane expressed as degrees.

(xi) **Kick-off Point** (KOP) means the point at which a directional well is intentionally deviated from vertical.

(xii) **Lateral hold section** or **tangent section** means a portion of the directional well past the point where the wellbore has been intentionally departed from the vertical with no intentional inclination or azimuth changes.

(xiii) **Penetration point** means the point where a directional well penetrates the top of the pool from which it is intended to produce.

(xiv) **Producing interval** means that portion of a directional well drilled inside a pool's vertical limits between its penetration point and to pool's terminus.

(xv) **Producing area** means the area in which the operator has an approved Drilling and Spacing Unit (DSU) from the Commission and in conformance with the setback requirements from the outer boundary of the approved DSU, or as per requirements set out in Chapter 3, Section 2 of these rules, for the applicable pool.

(xvi) **Vertical well** means a well that does not have an intentional departure or course deviation from vertical. A wellbore meeting this definition does not require submittal of the Operator's Bottom Hole Location Certification Form.

Section 26. Protection of Productive Strata.

The Owner/Operator shall not drill, deepen, complete, or recomplete an oil or gas well for the purpose of producing oil or gas from a lower or upper stratum until all productive strata are protected to the satisfaction of the Supervisor.

Section 27. Open Flows and Control of "Wild" Wells.

The Owner/Operator shall take reasonable precaution to prevent any oil, gas, or water well from blowing open or "wild" and shall take immediate steps and exercise due diligence to bring under control any such well or burning oil or gas well. Within the boundaries of the Special Sodium Drilling Area – A, as defined in Chapter 1, Section 2(ww) of these rules, the Supervisor and adjacent trona mine operators shall be notified as soon as possible upon detecting a leak at or below the surface. All leaks shall be corrected as quickly as possible or plugged by cementing methods outlined in Chapter 3, Section 18 of these rules.

Section 28. Use of Gas for Artificial Lifting.

Gas may be used for artificial lifting of oil where all such gas returned to the surface with the oil is used without waste. Where the returned gas is not to be so used, the use of gas for artificial lifting of oil is prohibited unless otherwise specifically authorized by the Supervisor.

Section 29. Classification of Gas Production.

Whenever in any pool the Commission after due notice and hearing, limits the total amount of gas which may be produced to an amount less than that which the pool could produce if no restriction was imposed, then, for the purpose of allocating and distributing the allowable production of such gas as required by WYO. STAT. ANN. § 30-5-102, each well in said pool the principal production of which at the mouth of the well is oil, which also unavoidably produces with said oil, gas in excess of the amount required for lease fuel

or other lease purposes, and in quantities found by the Commission, after due notice and hearing, to be sufficient to make it economically feasible for the producer to save or use all or any part of such gas shall be classified as a gas well under WYO. STAT. ANN. § 30-5-101(a)(vii), and as an oil well under WYO. STAT. ANN. § 30-5-101(a)(vii), as applicable, so that each producing property will have the opportunity to produce or to receive its just and equitable share of both oil and gas.

Section 30. Measurement of Oil.

(a) The volume of production of oil shall be computed in terms of barrels of clean oil on the basis of meter measurements or tank measurements of oil-level difference, made and recorded to the nearest one-quarter inch (1/4") of one hundred-percent-capacity tables, subject to the following corrections:

(i) Correction for Impurities: The percentage of impurities (water, sand, and other foreign substances, not constituting a natural component part of the oil) shall be determined to the satisfaction of the Supervisor, and the observed gross volume of oil shall be corrected to exclude the entire volume of such impurities;

(ii) Temperature Correction: The observed volume of oil corrected for impurities shall be further corrected to the standard volume of sixty degrees (60°) Fahrenheit in accordance with A.S.T.M. D-1250, Table 6 or Table 7, or any revisions thereof and any supplements thereto or any close approximation thereof approved by the Supervisor; and

(iii) Gravity Determination: The gravity of oil at sixty degrees (60°) Fahrenheit shall be determined in accordance with A.S.T.M. D-1250, Table 5, or any revisions thereof and any supplements thereto approved by the Supervisor.

Section 31. Measurement of Gas.

(a) Gas of all kinds shall be measured by meter unless otherwise authorized by the Supervisor. For computing the volume of gas to be reported to the Supervisor, the standard pressure base shall be 14.73 pounds per square inch absolute (psia), regardless of the atmospheric pressure at the point of measurement, and the standard temperature base shall be sixty degrees (60°) Fahrenheit. All volumes of gas to be reported to the Supervisor shall be adjusted by computation to these standards, regardless of pressures and temperatures at which the gas was actually measured, unless otherwise authorized by the Supervisor.

(b) Conversion from some common measurement bases is accomplished as follows:

Measured Volume At		Factor		Equals Volume At
14.4 psia	x	.9776	=	14.73 psia
14.65 psia	x	.9945	=	14.73 psia
14.73 psia	x	1.0000	=	14.73 psia
16.4 psia	x	1.1134	=	14.73 psia

Section 32. Report for Gasoline or Other Extraction Plants (Form 9, Sheets 1 and 2).

All Owners/Operators of gasoline or other extraction plants shall make monthly reports to the Commission on Form 9, Sheets 1 and 2. Such forms shall contain all information required therein and shall be filed with the Supervisor by the 20th day of the succeeding month.

Section 33. Vacuum Pumps.

The installation of vacuum pumps or other devices for the purpose of imposing a vacuum at the wellhead on any oil or gas well or any oil or gas bearing reservoir is permitted only upon order of the Commission, or upon approval of the Supervisor, obtained pursuant to an application therefore filed in accordance with the Rules of Practice and Procedure. The application shall set forth the names of all Owners within one-half (1/2) mile of the affected well or wells and shall be accompanied by a plat showing the location of all wells on an applicant's lease and all offset wells of interested parties which have been or may be capable of being completed in the same pool or pools.

Section 34. Surface Commingling of Production or Multiple Zone Completion or Commingling in One Wellbore.

(a) Except as provided in subsection (c) of this section, the multiple zone completion of a well and the production of oil or gas from more than one pool from one well without segregation of such production are permitted only upon order of the Commission, or approval of the Supervisor, pursuant to an application filed in accordance with the Rules of Practice and Procedure, Chapter 5.

(b) The application shall set forth:

(i) The manner and method of completion proposed, including a diagrammatic sketch of the mechanical installation for a multiple zone completion;

(ii) The names of all Owners within one-half (1/2) mile of the well or wells in which the multiple zone completion is to be attempted or in which the production is to be commingled; and,

(iii) A plat showing the location of all wells on the applicant's lease and all offset wells on direct and diagonally offsetting leases which have been or may be capable of being completed in the same pool or pools.

(c) Except as indicated below, the multiple zone completions and recompletions within wells producing gas and associated hydrocarbons from coal zones of the Fort Union Formation in the Powder River Basin shall be permitted at the discretion of the Supervisor without order of the Commission, upon the filing and approval of Form 4, Sundry Notice of Intent, after the well has been drilled, completed, or recompleted. Such Form 4 notice shall indicate the coal zones in which production is to be commingled. This subsection (c) shall not apply:

(i) When the coal zones to be commingled do not have common ownership both as to working interests and royalty interests;

(ii) When the well is not located on an eighty (80) acre drilling and spacing unit established by order or rule for the production of gas and associated hydrocarbons from the Fort Union Formation coal zones or on a federal exploratory unit in which Fort Union Formation coal zones are unitized.

The sundry notice shall identify the eighty (80) acre drilling and spacing unit, including the order or rule under which it was established or shall identify the federal exploratory unit, as applicable.

(d) The Supervisor may require such tests as deemed necessary to determine the effectiveness of the segregation of the different productive zones in a multiple zone completion.

(e) The production from each well must be measured by meters, gauge or by some other method the Commission has approved after notice and opportunity for hearing. An Owner/Operator may not, prior to metering or measurement as required under Chapter 3, Section 13(a), 30(a) or 31(a), commingle production from two or more oil or gas wells with diverse working interest or royalty interest ownership, specifically excluding overriding royalty interests, without prior approval of the Commission after notice and opportunity for hearing. Notice must be provided to working interest and royalty interest owners.

(f) If commingled wells have common working interest and royalty interest ownership, specifically excluding overriding royalty interests, the production from each well need not be measured at the wellhead if the Owner/Operator of the wells demonstrates to the Supervisor that the production from each well can be accurately determined at reasonable intervals by other means.

Section 35. Production Test and Gas-Oil Ratio Report. (Forms 10 through 13).

(a) Gas-oil ratio reports can be required by the Supervisor on certain wells if it is deemed necessary to obtain information of this nature.

(b) An initial gas well test can be required by the Supervisor when such test is deemed necessary; the initial tests shall be multipoint back-pressure tests (stabilized multipoint or constant time multipoint or isochronal multipoint) or acceptable one-point back-pressure tests. The results shall be furnished to the Supervisor on acceptable forms. The methods prescribed in the Interstate Oil and Gas Compact Commission's "Manual of Gas Well Testing" or an alternate method approved by the Supervisor shall be used.

(c) As a guideline for multipoint tests, each flow rate duration shall be set at a minimum of thirty (30) minutes and a maximum of two (2) hours depending on stabilization. The shut-in period shall be a minimum of seventy-two (72) hours.

(d) On one-point tests, the flow rate shall be a minimum of twenty-four (24) hours, and the shut-in period shall be a minimum of seventy-two (72) hours.

(e) Gas-oil ratio reports for horizontal wells shall be filed upon initial completion and annually thereafter on Form 10.

Section 36. Remedy in Case of Rule or Order Violations.

The Supervisor or the Authorized Agent with the approval and order of the Commission has authority to shut down any operation and place under seal any property or equipment for failure to comply with these oil and gas operating regulations or orders issued hereunder.

Section 37. This section reserved.

Section 38. Oil Mining Requirements.

Before beginning oil mining operations, the Owner/Operator shall first apply for and obtain a permit to do so from the Commission or Supervisor, and shall furnish the Commission with a bond or other security approved under the Commission's Rules. The application for a permit may be denied or the permit revoked by the Supervisor if he finds the oil mining operation will violate or has violated the Rules and orders of the Commission, the orders of the Supervisor, or the Commission or their agents, or the Oil and Gas Conservation Act. If denied or revoked, the oil mining owner has the right to a hearing before the Commission, which may deny or revoke the permit on the same grounds as noted above for denial or revocation by the Supervisor. The conditions of the bond or other security shall be in compliance with the Wyoming Conservation Act, the Commission's Rules and orders. The bond or other security may be forfeited or released

under the procedure specified under Section 7 of this chapter. Before changing an oil mining operation as approved by the Commission or Supervisor under the permit, the oil mining owner shall notify the Commission by Sundry Notice (Form 4). Oil mining operations shall comply with the Commission's Rules and Regulations, except where compliance is waived in writing by the Supervisor. The Commission shall regulate oil mining for the purpose of conservation of oil, gas, and environmental resources and to protect correlative rights.

Section 39. Authorization for Flaring and Venting of Gas.

(a) The Commission encourages the Owner or Operator to employ practical technologies that minimize the venting and flaring of gas, and shall be conducted in compliance with Wyoming Department of Environmental Quality Air Quality Rules. Flaring or venting authorized under this section shall be reported monthly on a form prescribed by the Supervisor, describing the following:

(i) Duration and total estimated volume of gas;

(ii) Circumstances that resulted in flared or vented gas;

(iii) Identification of whether gas was vented or flared;

(iv) Identification of whether the gas volume is based on metered flow, Gas/Oil Ratio (GOR) from a collected sample, or other measurement method approved by the Supervisor. If the GOR method is used, a crude oil analysis at reservoir conditions must be completed and submitted to the Commission, unless flared gas is from a known field and production horizon. The crude oil analysis shall be submitted within six (6) months, and every five (5) years thereafter.

(v) Owners/Operators with wells venting or flaring shall submit a compositional analysis of the gas (including hydrogen sulfide):

(A) Within six (6) months and every five (5) years thereafter for existing and new wells venting or flaring under section (b)(iv);

(B) Within three (3) months of authorization for wells flaring under section (c).

(b) Venting or flaring under the following circumstances does not constitute waste and is authorized by the Commission:

(i) Emergencies or upset conditions, and for safety purposes during necessary maintenance or upgrades. During temporary emergency situations, such as compressor or other equipment failures, relief of abnormal system pressures, or other

conditions which result in the unavoidable short-term venting or flaring of gas at a lease, gas plant or other facility;

(ii) Well purging and evaluation tests: During the unloading or cleaning up of a well during routine purging or drill stem, producing, or evaluation tests;

(iii) Production tests: During initial or recompletion evaluation tests not exceeding a period of fifteen (15) days, unless a longer test period is authorized by the Supervisor;

(iv) Low rate casing head gas. Unless it is determined by the Supervisor or the Commission that waste is occurring:

(A) Up to sixty (60) MCF of gas per day is authorized to be flared from individual oil wells.

(B) Venting of casing head gas can occur when the rate is below twenty (20) MCF of gas per day.

(C) Venting or flaring is authorized either at the well or at a lease facility which serves several wells. Venting cannot exceed twenty (20) MCF per day at lease facility.

(c) Application (Authority) to Flare. Unless flaring is authorized under subsection (b) of this section, an Owner/Operator shall apply for authority to flare. Flaring approved under this section does not constitute waste and is authorized by the Commission.

(i) The Supervisor may administratively grant authorization to flare for periods beyond the 15 day production test up to 180 days for volumes up to an average of 250 MCF/d (on a monthly average) not to exceed a total of 45 MMCF. Commission approval is required for authorization to flare in excess of 45 MMCF or 180 days.

(ii) An application to flare shall contain the following information:

(A) A statement of reason for flaring;

(B) The estimated duration of flaring;

(C) The estimated daily volume of gas in thousands of standard cubic feet per day (MCF/d);

(D) The estimated daily volume and type of associated produced fluids, gas or plant products in barrels, MCFs, gallons or tons per day, as applicable;

(E) A legal description of the well(s), plant or facility and distance to the nearest potential sales point or pipeline(s);

(F) A description of applicable safety factors and plans such as use of a constant flare igniter, facility pressure release, or emergency protection practices.

(G) For wells subject to Chapter 3, Section 47 (setbacks), a plan to address authorized flaring in the approved mitigation plan.

(H) A gas capture plan that includes:

(I) A description and map of offsetting wells, gas gathering, transportation and treatment facilities that are present in the area;

(II) The name of the gas gatherer(s) providing gas take-away capacity;

(III) Information on the gas gathering line to which an Operator proposes to connect to including:

(1.) Anticipated date of availability of the gas gathering line;

(2.) Design capacity and capacity demand at the time of application;

(3.) Downstream gas processing plant capacity and capacity demand at time application;

(4.) Alternatives to flaring for period between first sales and connection to gas gathering line.

(iii) Upon completion of flaring authorized by the Supervisor and/or Commission, the operator shall submit a final report detailing total volumes, duration, and average daily volume flared to the Supervisor.

(d) All operations shall be conducted in a safe and workmanlike manner. If the gas stream is sour or venting would present a safety hazard, a constant flare igniter system or other Commission approved method to safely manage sour gas may be required.

(e) Venting of gas containing a hydrogen sulfide content in excess of 50 PPM is not allowed. Venting does not include emissions associated with fugitive losses from valves, fittings, surface piping, pneumatic devices, and other production equipment, including the wellhead. However, the Commission believes these should be operating safely, effectively and efficiently. Supervisor approval is required for venting of gas

containing a hydrogen sulfide content in excess of 50 PPM for specific job tasks in controlled environments, such as well repairs, pipeline purging, well failures, decommissioning of facilities, etc., or where necessary as a safety measure where flaring would be dangerous due to the introduction of an ignition source at the work site or when the operation is conducted under the authority and regulations of the Department of Environmental Quality.

Section 40. Tertiary Certification.

(a) Certification of tertiary projects and determination of base level production for projects qualifying for the tertiary oil tax exemption shall be accomplished in the following manner:

(i) In order for tertiary production to qualify for the severance tax exemption provided under WYO. STAT. ANN. § 39-14-205(c), the applicant shall present evidence demonstrating that the recovery technique or techniques utilized in the project area qualify for a tertiary determination and the Commission must certify the project as a tertiary project.

(ii) For tertiary projects certified by the Commission after March 31, 2003, and before March 31, 2008:

(A) As part of the process of certifying tertiary projects which qualify for the severance tax exemption under WYO. STAT. ANN. § 39-14-205(c), the applicant shall furnish the Commission an extrapolation of expected non-tertiary oil production from the project. The extrapolation shall be for not less than seventy-two (72) months commencing with the first month after the month in which the application for tertiary certification is made. The extrapolation shall be based on production history, reservoir and production characteristics and the application of generally accepted petroleum engineering practices. The extrapolated production volumes approved by the Commission shall serve as the base level production for purposes of determining the tertiary oil production which qualifies for the tax exemption; and,

(B) The applicant shall provide a statement as to all assumptions made in preparing the extrapolation and any other information concerning the project that the Commission may reasonably require in order to evaluate the applicant's extrapolation.

(iii) An application for tertiary certification may be approved administratively by the Supervisor. The Supervisor shall review the material within fifteen (15) days after receipt of the application and advise the applicant of the decision. If the Owner/Operator disagrees with the Supervisor's decision, they may request a hearing before the full Commission. The Supervisor, on his own motion, may also refer the matter to the Commission if the proper decision is in doubt.

Section 41. Payment of Conservation Tax (Form OG-001).

(a) Purchasers and producers of oil and gas who are responsible for payment of conservation tax shall notify the Commission in order to receive reporting forms from the Commission's staff. Reporting forms will be available on the Commission's website. Forms will be mailed to the Owner/Operator only upon written request of the producer or purchaser. Producers whose tax liability is thirty dollars ($30.00) or less per month may make semi-annual reports with payments due the periods ending June 30th and December 31st of each year.

(b) The form of the tax return shall be prescribed by the Commission. The gross amount of sales of oil and gas shall be the total of the monthly amounts reported on the Commission's Form 2 (Operator's Monthly Report of Wells). The fair cash market value of sales for conservation mill tax calculations shall be the same as used by an Owner/Operator in making its calculation for severance tax purposes to the Wyoming Department of Revenue and Taxation for return for tax assessment to the State Board of Equalization of Wyoming, Ad Valorem Tax Division, pursuant to WYO. STAT. ANN. § 39-14-201, *et seq*.

(c) Payments and corresponding forms must be submitted on or before the 25th day of the second month following the month in which the production occurs. Any tax not paid within the time herein specified shall bear interest at a rate of one percent (1%) per month from the date of delinquency until paid. This tax, together with the interest, is a lien upon the oil or gas against which it is levied and assessed. A tax due of less than one dollar ($1.00) does not need to be remitted.

(i) Checks submitted for payment of taxes should include and identify the taxpayer's name, address, and phone number. Cash or coin is not an acceptable method of payment of the tax.

(ii) Tax returns must be signed prior to submission to the Commission.

(d) Purchasers have the option of paying the tax for producers, but doing so does not reduce the producer's liability for full payment of the tax. Purchasers and producers shall make arrangements between themselves to ensure that there will be no duplication of taxes paid. If the purchaser pays the tax, the producer shall still submit a return showing volumes, values, and name of the company paying the tax.

(e) Operators are responsible for making settlements with the non-operators in leases or units according to their customary joint interest accounting.

Section 42. Unit Operations.

Any person desiring to obtain the benefits of WYO. STAT. ANN. § 30-5-110, insofar as the same relates to any method of unit or cooperative development or operation of a field or pool or a part of either, shall file an application with the Supervisor for approval of such

agreement which shall have attached a copy of such agreement.

Section 43. Carbon Sequestration Unitization Process.

(a) The purpose of WYO. STAT. ANN. §§ 35-11-313 through 35-11-318 is the protection of corresponding rights, compliance with environmental requirements and to facilitate the use and production of Wyoming energy resources.

(i) "Corresponding rights" is defined as the right of all pore space owners in a unit area who will be affected by the unit operations, either now or in the future, to concurrently share in the economic benefits generated by using the pore space in the unit area.

(b) Any interested person may file an application with the Wyoming Oil and Gas Conservation Commission Supervisor requesting an order providing for the operation and organization of a unit of one (1) or more parts as a geologic sequestration site and for the pooling of interests in pore space in the proposed unit area for the purpose of conducting the unit operation. The application shall contain those items set out in WYO. STAT. ANN. § 35-11-315(a). An application checklist is provided to ensure all requirements for a complete application have been met.

(c) Upon receipt of an application, the Wyoming Oil and Gas Conservation Commission shall promptly set the matter for hearing. In addition to any notice otherwise required by law or the Commission's Rules, the applicant shall give notice of the hearing, specifying the time and place of hearing, and describing briefly its purpose and the land and pore space affected, to be mailed by certified mail at least thirty (30) days prior to the hearing to all persons whose names and addresses are required to be listed in the application. A copy of the notice and mailing matrix shall be filed with the Commission.

(d) After considering the application and hearing the evidence offered in connection therewith, the Wyoming Oil and Gas Conservation Commission shall enter an order setting forth the following findings as set out in WYO. STAT. ANN. § 35-11-316(b) and approving the proposed plan of unitization and proposed operating plan, if any, if the commission finds that:

(i) The material allegations of the application are substantially true;

(ii) The purposes specified in WYO. STAT. ANN. § 35-11-314 will be served by granting the application;

(iii) The application outlines operations that will comply with environmental requirements;

(iv) Granting the application will facilitate the use and production of Wyoming energy resources;

(v) The applicant must provide the method used to determine the quantity of pore space storage capacity to be allocated to each separately owned tract within the permit area. This allocation represents, so far as can be practically determined, each tract's actual share of the pore space to be used in the sequestration permit area;

(A) Ratification of pore space storage capacity within the unit area shall address the following possible pore space use scenarios:

(I) Carbon dioxide injected into the pore space for permanent carbon storage and sequestration only and excluding carbon dioxide injected for enhanced recovery purposes;

(II) Water withdrawal from the pore space for permanent carbon storage and sequestration only and excluding water withdrawal associated with the production of hydrocarbons; and,

(III) A combination of carbon dioxide injected into the pore space and excluding carbon dioxide injected for enhanced recovery purposes or water withdrawal associated with the production of hydrocarbons.

(vi) The method by which the allocation of economic benefits generated from use of pore space within the unit area between pore space owners; and between pore space owners and the unit operator or others is fair and reasonable, taking into consideration the costs required to capture, transport and sequester the carbon dioxide;

(vii) The method of generating economic benefits from the use of pore space in the unit area is fair and equitable and is reasonably designed to maximize the value of such use. (Economics related to the sequestration of carbon are currently unknown. However, economic drivers will be in place in the future to value the carbon being sequestered; generation of electricity, methane from coal gasification, cap and trade credits, as examples.).

(e) No order of the Wyoming Oil and Gas Conservation Commission authorizing the commencement of unit operations shall become effective until the plan of unitization has been signed or in writing ratified or approved by those persons who own at least eighty percent (80%) of the pore space storage capacity within the unit area.

(f) The Commission may hold supplemental hearings and make findings as may be required to determine when and if the consent will be obtained. Notice shall be given as required by statute.

(g) If the required percentages of consent have not been obtained within a period of six (6) months from and after the date on which the order of approval is made,

the order shall be ineffective and revoked by the Commission, unless, for good cause shown, the Commission extends that time.

(h) Any interested person may file an application with the Wyoming Oil and Gas Conservation Commission requesting an order applicable only to the proposed unit area described in the application which shall provide for the percentage of approval or ratification to be reduced from eighty percent (80%) to seventy-five percent (75%). The application shall contain the information required by WYO. STAT. ANN. § 35-11-315(a) and any order of the Commission entered pursuant to the application shall comply with WYO. STAT. ANN. § 35-11-316(b). Notice of the hearing on the application shall be given in the same manner and to the same persons as required by WYO. STAT. ANN. § 35-11-316(a).

(i) An order entered by the Wyoming Oil and Gas Conservation Commission under this section may be amended as provided by WYO. STAT. ANN. § 35-11-316(e).

(j) The Wyoming Oil and Gas Conservation Commission, upon its own motion or upon application, and with notice and hearing, may modify its order regarding the operation, size or other characteristic of the unit area in order to prevent or assist in preventing a substantial inequity resulting from operation of the unit, provided that no such modification may amend any permit issued under WYO. STAT. ANN. §§ 35-11-313 and 35-11-316(d).

(k) Any owner of pore space within a geologic sequestration site who has not been included within a unitization application or order authorizing a unit under this section, may petition for inclusion in the unit area, as provided by WYO. STAT. ANN. § 35-11-316(g).

Section 44. Change of Address.

Any Owner/Operator of a well shall, at all times, keep the Commission apprised of their current mailing and physical address. This may be done on a Sundry Notice (Form 4) or in the form of a letter.

Section 45. Well Stimulation.

(a) An approved Application for Permit to Drill (APD, Form 1) or an approved Sundry Notice (Form 4) is required prior to the initiation of any well stimulation activity. Additional stimulation fluid information shall be provided to the Commission as an addendum to the APD (Form 1), or as part of a comprehensive drilling/completion/recompletion plan, or on a Sundry Notice (Form 4). A federal fieldwide development document or similar document may be accepted by the Supervisor. The Supervisor may require, prior to the well stimulation, the Owner or Operator to perform a suitable mechanical integrity test of the casing or of the casing-tubing annulus or other mechanical integrity test methods using procedures set forth in Chapter 2, Section 6 and Chapter 4, Section 7(e)(i).

(b) Where multiple stimulation activities will be undertaken for several wells proposed to be drilled to the same zone(s) within an area of geologic similarity, approval may be sought from the Supervisor to accept a comprehensive master drilling/completion/recompletion plan containing the information required. The approved master drilling/completion/recompletion plan will then be referenced on each individual well's Application for Permit to Drill (Form 1).

(c) The Owner or Operator shall provide geological names, geological description and depth of the formation into which well stimulation fluids are to be injected.

(d) The Owner or Operator shall provide detailed information to the Supervisor as to the base stimulation fluid source. The Owner or Operator or service company shall provide to the Supervisor, for each stage of the well stimulation program, the chemical additives, compounds and concentrations or rates proposed to be mixed and injected, including:

(i) Stimulation fluid identified by additive type (such as but not limited to acid, biocide, breaker, brine, corrosion inhibitor, crosslinker, demulsifier, friction reducer, gel, iron control, oxygen scavenger, pH adjusting agent, proppant, scale inhibitor, surfactant);

(ii) The chemical compound name and Chemical Abstracts Service (CAS) number shall be identified (such as the additive biocide is glutaraldehyde, or the additive breaker is aluminum persulfate, or the proppant is silica or quartz sand, and so on for each additive used);

(iii) The proposed rate or concentration for each additive shall be provided (such as gel as pounds per thousand gallons, or biocide at gallons per thousand gallons, or proppant at pounds per gallon, or expressed as percent by weight or percent by volume, or parts per million, or parts per billion);

(iv) The Owner or Operator or service company may also provide a copy of the contractor's proposed well stimulation program design including the above detail;

(v) The Supervisor may request additional information under this subsection prior to the approval of the Application for Permit to Drill (Form 1) or of the Sundry Notice (Form 4);

(vi) The Supervisor retains discretion to request from the Owner or Operator and/or the service company, the formulary disclosure for the chemical compounds used in the well stimulation(s).

(e) The Owner or Operator shall provide a detailed description of the proposed well stimulation design, which shall include:

(i) The anticipated surface treating pressure range;

(ii) The maximum injection treating pressure;

(iii) The estimated or calculated fracture length and fracture height.

(f) Upon prior request via Application for Permit to Drill (Form 1), and/or a comprehensive drilling/completion/recompletion plan, or by Well Completion Report (Form 3), or by Sundry Notice (Form 4), and/or by written letter to the Supervisor justifying and documenting the nature and extent of the proprietary information, confidentiality protection shall be provided consistent with WYO. STAT. ANN. § 16-4-203(d)(v) of the Wyoming Public Records Act for the following records: "trade secrets, privileged information and confidential commercial, financial, geological or geophysical data furnished by or obtained from any person."

(g) The injection of volatile organic compounds, such as benzene, toluene, ethylbenzene and xylene, also known as BTEX compounds or any petroleum distillates, into groundwater is prohibited. The proposed use of volatile organic compounds, such as benzene, toluene, ethylbenzene and xylene, also known as BTEX compounds or any petroleum distillates for well stimulation into hydrocarbon bearing zones is authorized with prior approval of the Supervisor. It is accepted practice to use produced water that may contain small amounts of naturally occurring petroleum distillates as well stimulation fluid in hydrocarbon bearing zones.

(h) The Owner or Operator or service company shall provide the Supervisor, on a Well Completion or Recompletion Log (Form 3), or on a Sundry Notice (Form 4) for an existing well, the following post well stimulation detail:

(i) The actual total well stimulation treatment volume pumped;

(ii) Detail as to each fluid stage pumped, including actual volume by fluid stage, proppant rate or concentration, actual chemical additive name, type, concentration or rate, and amounts;

(iii) The actual surface pressure and rate at the end of each fluid stage and the actual flush volume, rate and final pump pressure;

(iv) The instantaneous shut-in pressure, and the actual 15-minute and 30-minute shut-in pressures when these pressure measurements are available;

(v) In lieu of (i) through (iv) above, Owner or Operator shall submit the actual well stimulation service contractor's job log, without any cost/pricing data from the field ticket, or an Owner or Operator representative's well treatment job log or any report providing the above required information. If information on the actual field ticket

describes the Owner's or Operator's proprietary completion design and/or well stimulation design, confidentiality may be afforded per subsection (f) above.

(i) During the well stimulation operation, the Owner or Operator shall monitor and record the annulus pressure at the bradenhead. If intermediate casing has been set on the well being stimulated, the pressure in the annulus between the intermediate casing and the production casing shall also be monitored and recorded. A continuous record of the annulus pressure during the well stimulation shall be submitted on Well Completion or Recompletion Log (Form 3) or on a Sundry Notice (Form 4).

(i) If during the stimulation, the annulus pressure increases by more than five hundred (500) pounds per square inch gauge (psig) as compared to the pressure immediately preceding the stimulation, the Owner or Operator shall verbally notify the Supervisor as soon as practicable but no later than twenty-four (24) hours following the incident. The Owner or Operator shall include a report containing all details pertaining to the incident, including corrective actions taken, as an attachment to the Well Completion Report (Form 3).

(j) The Owner or Operator shall provide information to the Supervisor on Well Completion Report (Form 3) or on Sundry Notice (Form 4) as to the amounts, handling, and if necessary, disposal at an identified appropriate disposal facility, or reuse of the well stimulation fluid load recovered during flow back, swabbing, and/or recovery from production facility vessels. Storage of such fluid shall be protective of groundwater as demonstrated by the use of either tanks or lined pits. If lined pits are utilized to store fluid for use in well stimulation, or for reconditioning, for reuse, or to hold for appropriate disposal, then the requirements of Chapter 4, Section 1 of these rules shall be met to protect wildlife and migratory birds.

Section 46. Groundwater Baseline Sampling, Analysis and Monitoring

Note: Effective date of Chapter 3, Section 46 is March 1, 2014.

(a) All operators are required to submit a groundwater baseline sampling, analysis and monitoring plan with an Application for Permit to Drill or Deepen a Well (Form 1). The groundwater monitoring program will consist of initial baseline water sampling and testing followed by a series of subsequent sampling and testing after setting the production casing or liner. This Rule will not apply to an existing oil or gas well that is converted to an injection well for enhanced recovery or disposal purposes.

(b) If four (4) or fewer available water sources are present within a one-half (1/2) mile radius of the location of a proposed oil well, gas well (including coalbed methane wells), dedicated injection well, or Commission approved monitoring well, the operator shall collect a sample from each available water source.

(c) If more than four (4) available water sources are present within the one-half

(1/2) mile radius, the operator shall submit a plan for approval to the Supervisor for selecting the available water sources based on all of the following criteria:

(i) Available water sources closest to the location of the proposed oil well, gas well (including coalbed methane wells), dedicated injection well, Commission approved monitoring well or multi-well pad are preferred.

(ii) Sample locations shall be chosen in a radial pattern around the permitted location.

(iii) Where available water sources are completed in different aquifers, a sample shall be collected from each aquifer. Where multiple available water sources are present in a single aquifer, an operator shall give adequate consideration to vertical separation and aquifer zones in selecting available water sources for sampling.

(iv) If groundwater flow direction is known or reasonably can be inferred, samples from both up-gradient and down-gradient available water sources are required, if available.

(d) An operator may request a variance from the requirements of this Rule, by filing a Sundry Notice (Form 4), along with necessary supporting documentation. The Supervisor may approve a variance based on the following criteria:

(i) No water sources are located within a one-half (1/2) mile radius of a proposed oil well, gas well (including coalbed methane wells), dedicated injection well, Commission approved monitoring well or multi-well pad; or

(ii) Available water sources are determined to be improperly maintained, non-operational, or other issues exist that would not allow the operator to obtain a representative sample. An operator seeking a variance on these grounds shall document the condition of the water source it considers unsuitable for sampling and provide that information to the Supervisor and owner of the water source; or

(iii) The owner of a water source declines to grant access or requires payment for access, despite an operator's reasonable efforts to obtain consent to conduct sampling. For purposes of this section, reasonable efforts shall mean notice to an owner of a water source eligible for sampling and testing under this program. If the operator's attempts to obtain access fail, the operator shall provide final notice by certified mail. If the owner of a water source does not respond within 30 days, the operator shall be considered to have made a reasonable effort. Any operator seeking a variance on these grounds shall document the efforts used to obtain access to the water source from the owner.

(e) The initial sampling and testing shall be conducted within the twelve (12) month period prior to spudding the well or the first well on a multi-well pad. The first round

of subsequent sampling and testing shall be conducted between twelve (12) and twenty-four (24) months after setting the production casing or liner. A second subsequent sampling and testing shall be conducted between thirty-six (36) and forty-eight (48) months after setting the production casing or liner. The second subsequent sampling shall be conducted at least twenty- four (24) months after the first subsequent sampling. An operator shall make a reasonable attempt to conduct all sampling during the same month of the year. An operator may request in writing approval from the Supervisor to deviate from the subsequent sampling and testing timeframes in its Application for Permit to Drill or Deepen a Well (Form 1) based on site specific geologic and hydrologic conditions (e.g., flow rate and direction). Previously sampled water sources, including samples obtained by other operators, may be used if collection of the sample or samples meet all of the requirements of this rule and are approved by the Supervisor by Sundry Notice (Form 4). If additional development requiring an Application for Permit to Drill or Deepen a Well (Form 1)occurs on a well pad or multi-well pad after all subsequent sampling and testing has been completed, an operator shall be required to comply with all provisions of Chapter 3, Section 46, Groundwater Baseline Sampling, Analysis and Monitoring.

(f) All sampling, analysis, evaluation, and reporting shall be conducted pursuant to the requirements and protocols of the sampling and analysis procedures contained in Appendix K, unless the operator receives approval from the Supervisor to deviate from such requirements and protocols after submitting a request in writing citing the circumstances that render compliance with the sampling and analysis procedures technically infeasible or demonstrating that a deviation would meet or exceed the sampling and analysis procedures contained in Appendix K. Appendix K shall be updated periodically to remain current with evolving industry, government, and scientific standards.

(g) Copies of all final laboratory analytical results developed per the sampling and analysis procedures contained in Appendix K and spatial coordinates of the available water source shall be provided by the operator or its representative to the Commission and water source owner within three (3) months of sample collection. All analytical results and spatial coordinates of the available water source will be made available to the public unless the data is otherwise considered confidential under Wyoming statute.

(h) The initial and subsequent sampling and testing described in this section shall at a minimum include temperature, pH, oxidation-reduction potential, specific conductance, turbidity, dissolved oxygen, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO3), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime forming), total petroleum hydrocarbons (TPH), BTEX compounds (benzene, toluene, ethylbenzene and xylenes), and naphthalene. Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be documented.

(i) If free gas or a dissolved methane concentration greater than 5.0 milligrams per liter (mg/L) is detected in a water sample, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen – 12C, 13C, 1H and 2H) shall be performed to determine gas type.

(j) The operator shall provide verbal and send written notification to the Supervisor, the Director of the Department of Environmental Quality, and water source owner within twenty-four (24) hours if test results indicate:

(i) The presence of thermogenic or a mixture of thermogenic and biogenic gas;

(ii) The dissolved methane concentration increases by more than 5.0 mg/L between sampling periods;

(iii) The dissolved methane concentration is detected at or above 10.0 mg/L; or

(iv) BTEX compounds or TPH is detected at or above Department of Environmental Quality action levels in the water sample as noted in Appendix K.

(k) Nothing in this Rule is intended, and shall not be construed, to preclude or limit the Supervisor from requiring other sampling or monitoring consistent with Commission rules, regulations and statutes.

(l) The operator may submit a master groundwater baseline sampling, analysis and monitoring plan for a geographic area of development. The Supervisor may approve the operator's plan if the Supervisor determines that the plan meets or exceeds the requirements of Chapter 3, Section 46, Groundwater Baseline Sampling, Analysis and Monitoring.

(m) The sampling results obtained to satisfy the requirements of this Rule, including any changes in the constituents or concentrations of constituents present in the samples, shall not create a presumption of or against liability, fault, or causation against the owner or operator of a well or multi-well pad who conducted the sampling, or on whose behalf sampling was conducted by a third-party. The admissibility and probative value of any such sampling that results in an administrative or judicial proceeding shall be determined by the presiding body according to applicable administrative, civil, or evidentiary rules.

Section 47. Surface Setbacks.

(a) A well, as measured to the center of the wellhead, and Production Facilities, as measured to the nearest edge, corner or perimeter, shall be located no closer than five hundred feet (500') to an existing Occupied Structure(s) as measured from the closest

exterior wall or corner of the Occupied Structure(s). It is preferable that Production Facilities are located at a greater distance from Occupied Structure(s) where technically feasible.

(b) The Supervisor may approve a variance to decrease the setback requirements if:

(i) The owner(s) of an Occupied Structure(s), as identified on county assessor tax records, waives this requirement, in writing, on a form approved by the Commission.

(ii) Good cause is shown. If for any reason the Supervisor shall grant or deny a variance, the owner(s) of an Occupied Structure(s) or the Owner or Operator may request the Commission, after notice and hearing, consider the variance.

(c) The Supervisor may approve a variance to increase the setback requirements for good cause. If, for any reason, the Supervisor shall grant a variance, the Owner or Operator may request the Commission, after notice and hearing, consider the variance.

(d) If a well is not spud, a variance granted by the Supervisor or the Commission under subsection (b) or (c) shall expire one (1) year from the date the variance is granted.

(e) Where a Well(s), as measured to the center of the wellhead, or Production Facilities, as measured to the nearest edge, corner or perimeter, are proposed for location within one thousand feet (1,000') of an existing Occupied Structure(s), as measured from the closest exterior wall or corner of an Occupied Structure(s), the Owner or Operator shall:

(i) Inform the owner(s) of an Occupied Structure(s), as identified on county assessor tax records, no more than one hundred and eighty (180) days nor less than thirty (30) days prior to the construction of a drilling pad or site for Production Facilities, in writing, of:

(A) The Owner or Operator name and contact information;

(B) Its plan to drill a new Well(s) and the estimated construction, drilling and completion timeline;

(C) The legal location of the Well(s), including Quarter-Quarter, Section, Township, Range, County;

(D) The name and API Number of the new Well(s); and

(E) A description of the best management practices and site specific measures the Owner or Operator plans to undertake to mitigate reasonably foreseeable impacts to the owner(s) of Occupied Structure(s). At a minimum, the Owner or Operator shall consider noise, light, dust, orientation of the drilling pad, and traffic in developing its plans.

(ii) Provide for the Supervisor's review and consideration, fifteen (15) days prior to construction of a drilling pad or site for Production Facilities, a report which details the actions taken by the Owner or Operator to communicate with the owner(s) of an Occupied Structure(s) in accordance with subsection (e)(i) and any comments received from the owners(s) of an Occupied Structure(s) regarding the best management practices and mitigation measure to be undertaken at the location. The report shall include the best management practices and site specific measures the Owner or Operator will undertake to mitigate foreseeable impacts. Nothing in this subsection is intended, and shall not be construed, to compel or to preclude the Supervisor from requiring other site specific measures to mitigate foreseeable impacts. The Supervisor may waive this requirement for an Owner or Operator if the owner(s) of all Occupied Structure(s) within this zone waive this requirement, in writing, on a form approved by the Commission.

(f) The Owner or Operator, in consultation with the Supervisor, shall schedule meetings to facilitate necessary information sharing with owners of Occupied Structures in an area in which an Owner or Operator has an approved Application for Permit to Drill or Deepen a Well (Form 1) located within one thousand feet (1,000') of an existing Occupied Structure(s), as measured from the closest exterior wall or corner of the Occupied Structure(s) to the center of the wellhead or nearest edge, corner or perimeter of Production Facilities within the existing corporate limits of an incorporated municipality or within the boundary of an existing platted subdivision established in compliance with all applicable state and county laws and regulations. The Owner or Operator shall notify the appropriate county commission, by and through the county clerk's office, of any meetings scheduled pursuant to this subsection. The Supervisor may waive this requirement for an Owner or Operator if the owner(s) of all Occupied Structures within this zone waive this requirement, in writing, on a form approved by the Commission.

(g) If additional development requiring an Application for Permit to Drill or Deepen a Well (Form 1) occurs at an existing well location, an Owner or Operator shall be required to comply with all provisions of Chapter 3, Section 47. Surface Setbacks. (e).