

## **CHAPTER 3 - DRILLING, DEVELOPMENT, PRODUCING AND ABANDONMENT**

### **001 RECORDS, REPORTS, NOTICES ---- GENERAL**

Any required written notice of intention to do work or to change plans previously approved must be filed with the Director and must reach the Director or authorized deputies and receive approval before the work is begun; or such approval may be given orally, and if so given, shall thereafter be confirmed by the Director or authorized deputies in writing.

In the case of emergency, or any situation where the operations might be unduly delayed, any written notice required by these rules and regulations to be given the Director or authorized deputies may be given orally or electronically; and, if approval is obtained, the transaction shall be promptly confirmed by the operator in writing as a matter of record.

The owner shall keep and make conveniently available to the Director or deputies accurate and complete records of the drilling, re-drilling, deepening, plugging or abandoning of all wells, all other well operations and of all alterations to casing. These records shall show all formations penetrated, the quantity and quality of oil, gas or water in each formation tested, the grade, weight, size and landed depth of casing used in drilling each well on the lease premises and any other information obtained in the course of well operation. Such information shall be kept confidential for a period of one year from the date the geophysical logs are run if so requested.

Whenever a person has been designated as an operator by an owner or owners of a lease or well, such an operator may submit the reports as herein required by the Commission. If a producing well is sold by one company or person to another company or person, the Director shall be notified immediately of the change in ownership. Any and all reports submitted shall be submitted in writing or electronically.

### **002 FORM 1 - ORGANIZATION REPORT**

Any person conducting operations subject to the jurisdiction of the Commission shall, upon demand by the Director, file an "Organization Report" with the Director in the manner and form approved by the Commission.

The designated Agent named by this form shall be a resident of Nebraska and shall be authorized to accept and be served with notices from the Commission.

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Any changes in organization or changes of address of the Agent or termination of the Agent's authority shall be reported immediately by filing amended copies of Form 1 with the Commission.

### **003 FORM 2 - NOTICE OF INTENTION TO DRILL OR RE-ENTER**

Before any person shall commence operations for the drilling of any well, such person shall file with the Director a notice of such intent on Form 2 and must secure the approval of the Director or authorized deputy before proceeding with such operations. A copy of the approved Form 2 must be posted in a conspicuous place on the drilling rig.

The Director or authorized deputy must be notified at least twenty-four (24) hours in advance of the commencement of drilling activities.

Unless operations are commenced within one hundred eighty (180) days after date of approval, the approval to drill will become null and void.

If it is desired to revise an approved notice of intention to drill, an amended Form 2 must be filed with the Director for approval.

A fee, paid in advance, of two hundred dollars (\$200) per well and payable to the Nebraska Oil and Gas Conservation Commission must be remitted with Form 2. If it should become necessary for the Commission to contract for the plugging of an abandoned well through failure of the owner or operator to plug it satisfactorily, the costs of these plugging operations may be assessed against the operator or owner.

No permit fee is required for an injection well.

If for any reason an approved location is not drilled, the permit fee is nonrefundable but may be transferred to another location provided that the permit has not expired or has not been revoked.

The Commission shall have the authority to revoke a permit if the Commission finds that any fraud, deceit or misrepresentation was made to obtain the approval of said permit.

The Notice of Intention to Drill or Re-Enter shall be accompanied by an accurate plat showing the following information:

- Township, range, and section in which the well is to be located.
- North arrow.
- Scale of drawing expressed as a ratio.

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- 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 to be located.
- Distances from the nearest established section boundary lines to the proposed well.
- Ungraded ground elevation of the proposed well.
- Basis of elevations.
- Basis of bearings.

### **004 FORM 3A – BOND**

Prior to commencement of dirt work preceding drilling, or assuming operation of any well, the person, firm or corporation commencing said drilling or operation shall make, or cause to be made, and file with the Commission a good and sufficient bond in the sum of not less than ten thousand dollars (\$10,000) for each well or hole and payable to the State of Nebraska, conditioned for the performance of the duty to comply with all the provisions of the laws of the State of Nebraska and the rules, regulations and orders of the Commission. Said bond shall remain in force and effect until plugging of said well or hole is approved by the Director or authorized deputy, a new bond is filed by a successor in interest or the bond is released by the Director. It is provided, however, that any owner in lieu of such bond may file with the Director a good and sufficient blanket bond in the principal sum of not less than one hundred thousand dollars (\$100,000) covering all wells or holes drilling or to be drilled in the State of Nebraska by the principal in said bond; and upon acceptance and approval by the Director of such blanket bond, said bond shall be considered as compliance with the foregoing provisions requiring an individual well or hole bond.

The Director may refuse to accept a bond or add wells to a blanket bond if the operator or surety company has failed in the past to comply with statutes, rules or orders relating to the operation of wells; or for other good cause.

Any person required to file a surety bond pursuant to this rule may post cash or certificate of deposit in the amount required subject to the following conditions:

If a person posts cash, it may be in the form of a cashier's check, certified check or legal tender of the United States of America delivered to the Commission.

A certificate of deposit shall comply with the following:

- The certificate of deposit shall be in the name of the Nebraska Oil and Gas Conservation Commission and only the signature of the

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Commission's authorized representative shall be on the withdrawal card as the authorized signature to withdraw the deposit.

- The certificate of deposit shall be in a bank or financial institution insured by the Federal Deposit Insurance Corporation and located in the State of Nebraska.
- The Commission may reject any certificate of deposit, when, combined with other certificates of deposit on that bank or financial institution, exceeds the limits of Federal Deposit Insurance Corporation insurance coverage.
- The certificate of deposit shall be in the custody of the Commission.
- The certificate of deposit shall be automatically renewable.
- Interest earned on the certificate of deposit is the property of the person who provided the money for it. The certificate of deposit and the money it represents is the property of the Commission until released by the Director.

Any person, other than the operator or owner of the well, engaged in pulling casing from abandoned oil or gas wells and wells used in connection therewith, or who purchases such wells for the purpose of salvaging material from the same, shall file with the Commission a ten thousand dollar (\$10,000) blanket bond to guarantee the ultimate plugging of these wells conformable with the rules, regulations or orders of the Commission.

The State Board of Educational Lands and Funds shall be contacted for bonding requirements on State Land, and the U. S. Bureau of Land Management should be contacted for additional bonding requirements on Federal Land.

### **005 FORM 4 - SUNDRY NOTICES**

Notice must be given to the Director or his authorized deputy and approval obtained in advance of the time when the owner or operator expects to re-complete or abandon a well with the casing in the hole or to change previously approved plans. Within thirty (30) days after re-completion, abandonment, or change of plans, a detailed report of the work done and the results obtained shall be submitted on Form 5 or Form 6, whichever is appropriate.

### **006 FORM 5 - WELL COMPLETION OR RE-COMPLETION REPORT**

Within thirty (30) days after completion or re-completion of an oil or gas producing well, injection or disposal well or a well temporarily abandoned with casing in the hole, the owner or operator shall transmit to the Director the well completion or re-completion report, Form 5. Upon written request geological information will be kept confidential for twelve (12) months after the filing

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thereof unless written permission to release the information at an earlier date is obtained from the operator.

### **007 FORM 6 - PLUGGING RECORD**

If any well is plugged or abandoned, a record of work done must be filed on Form 6 with the Director within thirty (30) days after the work is completed. The report shall give a detailed account of the manner in which the abandonment or plugging work is carried out, including the nature and quantities of materials used in plugging and the location and extent (by depths) of the plugs of different materials; records of the amount, size and location (by depths) of casing and junk left in the well, and a detailed statement of the volume and weight of mud fluid used. Upon written request, geological information will be kept confidential for twelve (12) months after the filing thereof unless written permission to release the information at an earlier date is obtained from the operator.

### **008 FORM 7A - WELL STATUS AND MONTHLY PRODUCTION REPORT**

Each producer or operator of an oil or gas well shall file, with the Director on or before the twenty-fifth (25th) day of each month succeeding the month in which the production occurs, a report on Form 7A, containing all information required by the form including disposition of the oil and gas produced.

### **009 FORM 8 - PRODUCTION TEST AND GAS-OIL RATIO REPORT**

Gas-oil ratio tests, as required by the Commission under Rule 3-027, shall be reported on Form 8 within twenty (20) days after the test is made.

### **010 FORM 9A - RESERVOIR PRESSURE TEST REPORT**

Sub-surface pressure tests, as may be required by the Commission, shall be reported on Form 9A within twenty (20) days after completion of tests.

### **011 MILL LEVY RETURN**

Remitters of the State severance tax shall be responsible for the payment of the mill levy. The total mill levy remittance shall be determined by applying the then current mill levy rate to the total value of oil and gas.

### **012 GENERAL DRILLING RULES**

Unless altered, modified or changed for a particular pool or pools, upon hearing before the Commission, the following shall apply to the drilling of all wells:

012.01 When drilling where high pressures are likely to exist, the operator shall take all reasonable precautions for keeping the well under control at all times and shall provide at the time the well is started proper high pressure fittings and equipment. Under such conditions,

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the conductor string of casing must be cemented throughout its length, unless other procedure is authorized by the Director or authorized agent, and all strings of casing must be securely anchored.

- 012.02 In areas where pressures and formations are unknown, sufficient surface casing shall be run to reach a depth below the base of formations generally contributing water supplies for domestic, agricultural and municipal use as well as water bearing formations reasonably expected to be utilized for domestic, agricultural and municipal use if not presently utilized. The amount of surface casing run shall be approved by the Director or authorized agent and sufficient to prevent blowouts and uncontrolled flows at reasonable depths and of sufficient size to permit the use of an intermediate string or strings of casing where necessary to control deeper blowout or uncontrolled flow sources. Surface casing shall be set in a relatively impervious formation and shall be cemented by the plug or displacement or other approved method with sufficient cement to fill the annulus to the top of the hole except in cases where unusually long strings of surface casing are required and approval is secured from the Director or his authorized agent to use other adequate methods of cementation.
- 012.03 In wells drilled in areas where subsurface conditions are known through drilling experience, surface casing shall be set at a depth approved by the Director or authorized agent and cemented to the surface by the pump and plug or displacement or other approved methods at a depth sufficient to protect all domestic, agricultural or municipal water supplies and to insure against blowouts or uncontrolled flows.
- 012.04 Cement shall be allowed to stand under pressure until the cement has reached a compressive strength of five hundred (500) pounds per square inch before drilling the plug. The term "under pressure" as used herein, will be complied with if one float valve is used or if pressure is otherwise held. All cement and cement additives used shall have been tested in accordance with API RP 10B-2 (R2010), "Recommended Practices for Testing Oil-Well Cements and Cement Additives," and the results reported to the Director prior to use.
- 012.05 In all proven areas, the use of blowout equipment shall be in accordance with the established practice in the area.
- 012.06 In areas where high pressures may be reasonably anticipated, all drilling wells shall be equipped with a master-gate or its equivalent,

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an adequate blowout preventer, together with choke and kill line or lines of the proper size and working pressure. The entire control equipment shall be in good working condition at all times.

012.07 If a well is deepened for the purpose of producing oil and gas from the lower stratum, such deepening to and completion in the lower stratum shall be conducted in such a manner as to protect all upper productive strata.

012.08 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 at a practical minimum.

012.09 If and when it becomes necessary to run a production string, such production string shall be cemented by the pump and plug method.

012.10 By approved reasonable methods, the operator shall shut off and exclude all alien water from any oil or gas bearing stratum; and to determine the effectiveness of such operations, the operator shall make a casing test before suspending drilling operations or drilling into the oil or gas bearing stratum and completing the well.

012.11 Before commencing to drill, proper and adequate pits shall be constructed for the reception and confinement of mud and cuttings. Reserve pits used in the drilling and completion of oil and gas wells shall be designed and constructed to protect the surface and the waters of the state from pollution.

For all reserve pits the minimum criteria shall be as follows:

- Minimum of two (2) foot freeboard is required.
- All topsoil shall be stockpiled on or adjacent to the location and be used for reclamation after drilling operations have been completed when practical.
- Reserve pits shall not contain, at anytime, any non-exempt E&P waste.

The Commission may administratively approve field-wide or area-wide applications covering drilling reserve pit design and construction.

012.12 For those reserve pits located within one-half (1/2) mile of surface waters of the state, the operator shall meet the requirements set forth in Section 012.11. Additionally, an application filed with Form 2 shall include:

- Drilling location layout plan.

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- Pit size.
- Type of mud program.
- Anticipated time pit will be in use.
- Scaled topographic map showing the surface drainage and distance to any lakes, rivers, streams or springs.

### 012.13

If salt based or oil based muds are used during the drilling program or if a salt section of sufficient thickness to affect the mud quality is anticipated, then the reserve pit design and construction shall meet the requirements of this rule and an application shall be submitted along with Form 2 for approval. Minimum design criteria shall be as follows:

- Steel working tanks will be required on the drilling rig circulating system.
- Reserve pits shall be designed to accommodate those fluids while protecting the lands and waters of the state.
- Soil mixture liners, recompacted clay liners and manufactured liners must be compatible with the wastes contained.
- The application shall include the type and specifications of the liner to be used. All liners constructed of manufactured materials must meet or exceed the specifications set forth by the Commission.
- Synthetic liners must be installed over smooth fill sub-grade which is free of pockets, loose rocks, or other materials which could damage the liner. Sand, sifted dirt, or bentonite are suggested as cushion material if needed.
- The application shall contain a plan for disposal of liquids and solids.
- Liner edges must be secured to prevent wind damage.

The Director or authorized agent may authorize alternative methods upon review of the application.

### 012.14

All pits shall be backfilled within one year after completion of drilling operations.

The disposal of drilling fluids, stimulation fluids or any oil field waste into any well shall be prohibited unless approved by the Director prior to disposal.

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Within thirty (30) days after cessation of drilling operations, non-exempt E&P waste materials including but not limited to crankcase oil shall be contained in non-leaking containers and disposed of in accordance with DEQ or any applicable federal regulations.

In those areas where acceptable, and upon application and approval, land farming or land spreading of fresh water based drilling mud may be allowed on the lease with the written permission obtained from the landowner and submitted to the Director.

- 012.15 After the reserve pits have been properly backfilled, a biodegradable mulch may be required if soil erosion or the establishment of vegetation is determined to be a problem by the Director or authorized agent.

### **013 LOCATION OF WELLS**

- 013.01 No well drilled for oil or gas in or adjacent to presently producing pools shall be drilled at a location within a legal subdivision which varies substantially from the established locations within legal subdivisions of a majority of the wells in the pool or which will result in a spacing unit for such wells substantially different from that attributable to the established wells in the pool.

- 013.02 All wells drilled to sources of supply at estimated depths in excess of two thousand five hundred (2500) feet for which no spacing pattern has been established by existing wells shall be drilled on 40-acre legal subdivisions or equivalent lots and not less than five hundred (500) feet from the boundaries of said legal subdivisions. The Director or authorized agent may administratively approve an exception to the requirements hereof where topographical conditions, irregular sections or geological conditions make the drilling of a well at the regular location impractical, provided that the owners, as defined in the Act, within a distance of five hundred (500) feet from the proposed well file with the Director or authorized agent a waiver of objection, or consent in writing, agreeing to said exception; provided further, that a well drilled under the terms of such waiver, or consent, shall be subject to such production limitations as may be necessary to protect correlative rights.

- 013.03 All wells drilled to sources of supply at estimated depths of two thousand five hundred (2500) feet or less for which no spacing pattern has been established by existing wells shall not be drilled closer than three hundred (300) feet from the boundaries of a 40-acre legal subdivision or equivalent lot.

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013.04 Upon the receipt, by the Commission, of an application from any person requesting the establishment of special field rules for spacing of wells within a designated area, all or a portion of which is not then subject to special field rules, or upon decision by the Commission to call a hearing for the establishment of such special field rules, application for permits to drill within such area will be held in abeyance by the Commission until such time as the matter has been fully heard and determined; and no further permits to drill within the area designated in the application shall be issued until such determination has been made. Notwithstanding the provisions above, a permit shall be issued if an owner demonstrates to the satisfaction of the Director that a loss of his leasehold will result or that significant drainage may occur if approval of drilling is withheld. However, in event a permit is issued, the permit to drill shall authorize a location for the proposed well which conforms as nearly as practicable to the pattern proposed in each application or petition then on file with the Commission for spacing within the designated area.

013.05 The foregoing spacing restrictions shall not apply to approved unit operations or authorized secondary recovery projects or to any field where the Commission, after notice and hearing, ordered a different spacing pattern in special field rules.

### **014 DIRECTIONAL DRILLING**

When the intent is to direct the bottom of the hole away from vertical, other than whipstocking necessitated by hole conditions, and the spacing pattern is not altered thereby, notice of intention to do so shall be filed with the Director or authorized agent and approval obtained before beginning controlled directional drilling operations. Such notice shall state clearly the depth, exact surface location of the well bore, proposed direction deviation and proposed horizontal distance between the proposed bottom of the hole and the surface location. If approval is obtained, the operator shall file with the Commission within thirty (30) days after the completion of the work an accurate and complete copy of the directional survey made.

### **015 RE-DRILLING OR DRILLING DEEPER**

When a well is re-drilled or drilled deeper by the original operator, the operator shall advise the Director or authorized agent of their intentions by filing Form 4 and stating thereon the proposed work to be done and the anticipated results of the work.

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If the re-drilling or drilling deeper is to be done by anyone other than the original operator, they shall file Form 2 and the two hundred dollar (\$200) permit fee and state on the form that this well is to be re-drilled or drilled deeper.

Upon completion of the work Form 5 shall be filed if the well is an oil or gas producer, injection or disposal well, or shut-in with casing in the hole. If the well is a dry hole, Form 6 shall be filed. Copies of any logs and tests made should accompany these forms.

### **016 COMMINGLING IN ONE WELL BORE**

The production of oil and gas, or either of them, from more than one pool from one well without segregation of such production as to pool is hereby prohibited unless otherwise authorized or permitted by order of the Commission pursuant to appropriate hearing.

### **017 MULTIPLE ZONE COMPLETIONS**

The initial multiple zone completion of a well in a given field may be permitted by submitting an application therefore to the Commission and securing its order of approval thereof pursuant to an appropriate hearing. The application shall be accompanied by an exhibit showing the location of all wells on adjacent premises and all offset wells on adjoining lands and shall set forth all material facts involved and the manner and method of completion proposed. Thereafter, similar multiple zone completions in said field may be approved by the Director, if so authorized by the Commission, upon request therefore. Such requests shall also be accompanied by an affidavit showing that notice of intention to file such request has been given to the owners, as defined in the Act, of all tracts located within a radius of one-half (1/2) mile of the well in which the multiple zone completion is to be attempted. The Director may require such tests as he deems necessary to determine the effectiveness of the segregation of the different pools.

### **018 MEASUREMENT OF OIL**

The volume of production of oil shall be computed in terms of barrels of clean oil on the basis of properly calibrated meter measurements or tank measurement of oil level differences made and recorded to the nearest quarter inch, using one hundred (100) percent tank capacity tables, subject to the following corrections:

**018.01** 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 Director, and the observed gross volume of oil shall be corrected to exclude the entire volume of such impurities.

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018.02 Temperature Correction - The observed volume of oil corrected for impurities shall be further corrected to the standard volume at 60° F. in accordance with A.S.T.M. D-1250 Table 6, dated 1956, reapproved 1973.

018.03 Gravity Determination - The gravity of oil at 60° F. shall be determined in accordance with A.S.T.M. D-1250 Table 5, dated 1956, reapproved 1973.

### **019 MEASUREMENT OF GAS**

Production of gas of all kinds, with the exception of gas used on the lease and small amounts of gas produced with oil, as excepted by the Director, shall be measured by orifice type meter or other type meter approved by the Director. The standard of pressure shall be 14.73 pounds per square inch absolute and the standard of temperature shall be 60° F., regardless of the atmospheric pressure and temperature at the point of measurement. All volumes of gas to be reported to the Commission shall be adjusted by computation to these standards unless otherwise authorized by the Director.

### **020 CONTROL OF "WILD" WELLS**

The operator shall take reasonable precautions 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.

### **021 DISPOSAL OF GAS**

Gas produced in connection with the production of oil shall be flared and burned where there is no market at the well or use on the lease for such gas. The operators of gasoline plants operated for the extraction of liquid hydrocarbons from the gas shall burn the residue gas in flares where no market exists at such plant for the residue gas or when the gas is not returned to an oil pool or field for pressure maintenance or repressuring of the oil pool or field.

### **022 POLLUTION AND SURFACE DRAINAGE**

Operators shall take all reasonable precaution to avoid polluting streams, underground water and land surface and soils. No oil, salt water, brackish water or other water unfit for domestic, livestock, irrigation or other general use shall be allowed to flow over the surface or into any stream or underground fresh water zone.

022.01 Spill Reporting Requirements

Any person operating any well, flow lines, receiving tanks, storage tanks, or receiving and storage receptacles into which crude

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oil or salt water is produced, received, or stored or through which oil or produced water is piped or transported shall notify the Director within two (2) business days of any oil and/or produced water spill, leak, or release in excess of twenty (20) barrels. The notice shall be followed within seven (7) working days by a written report. All such reports of breaks, leaks, and spills shall identify the location of the well, tank, receptacle or flow line by section, township, range, and property name so that the exact location may be readily located. Such report shall specify what steps have been taken or are in progress to remedy the situation reported and shall estimate the quantity of oil and/or produced water lost, or permitted to escape.

The operator shall immediately notify the appropriate State and Federal agencies of any oil or produced water spill, leak, or release which enters any surface or ground water or flows off the lease or unit lands.

### 022.02 Cleanup Standards for Crude Oil Spills

Cleanup standards set forth in this section apply to only exempt E&P spills that do not: escape off the lease or enter any surface or ground water. For all other spills operators shall notify all appropriate State and Federal agencies.

### 022.03 Requirements for Cleanup

Removal of Free Oil - To prevent waste and to minimize the depth of oil penetration, all free oil must be removed immediately for reclamation.

Excavation - All soil containing over one (1) percent by weight total petroleum hydrocarbons must be remediated or disposed of at an authorized disposal site.

Prevention of Stormwater Contamination - To prevent stormwater contamination soil excavated from the spill site containing over five (5) percent by weight total petroleum hydrocarbons must be:

- Mixed with clean soil to a mixture of less than five (5) percent, or
- Removed to an authorized disposal site, or
- Contained on secure location for future remediation.

The operator may select any technically sound method for remediation of soil.

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### 022.04 Final Cleanup Level

The Commission shall have final authority to determine if remediation has achieved a cleanup level of less than one (1) percent by weight total petroleum hydrocarbons. Cleanup shall be completed as soon as technically feasible.

### 022.05 Remediation Reporting Requirements

For each spill exceeding twenty (20) barrels of crude oil, the operator must submit on a Form 4 a report to the Commission which shall give the following information:

- A detailed description of the disposal or remediation method used.
- The estimated date of completion of the site cleanup.
- Area, maximum depth and volume in cubic yards of soil affected by crude oil.
- A statement signed by the operator stating that all affected soils have been treated and the surface landowner has been notified.

### 022.06 Crude Oil Spills of Twenty (20) Barrels or Less

Spills into the soil of twenty (20) barrels or less of crude oil must be remediated to these standards, but are not required to be reported to the Commission.

### 022.07 Cleanup Standards for Produced Water Spills

Cleanup standards set forth in this section apply to only exempt E&P spills that do not:

- escape off the lease, or
- enter any surface or groundwater.

For all other spills operators shall notify the appropriate State and Federal agencies.

### 022.08 Standards set forth in this section do not include those produced waters released under the terms of a valid National Pollutant Discharge Elimination System (NPDES) permit.

### 022.09 Requirements for Cleanup

Removal of Free Water - To minimize the depth of produced water penetration, all free water must be removed for disposal.

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Establish Containment Systems - To minimize the extent of the affected area, temporary dikes, pits, or tanks should be used.

The operator may select any technically sound method for remediation of affected soil.

### 022.10 Final Cleanup Level

The Commission shall have final authority to determine if the effected land has been restored to its prior beneficial use. Cleanup shall be completed as soon as technically feasible.

### 022.11 Remediation Reporting Requirements

For each spill exceeding twenty (20) barrels of produced water, in which the water spilled exceeds ten thousand (10,000) parts per million total dissolved solids, or a spill exceeding two hundred (200) barrels of produced water, in which the water spilled contains less than 10,000 parts per million total dissolved solids, the operator must submit on a Form 4 a report to the Commission which shall give the following information:

- A detailed description of the disposal or remediation method used.
- The estimated date of completion of the site cleanup.
- Area, maximum depth and volume in cubic yards of soil affected by produced water.
- A statement signed by the operator stating that all affected soils have been treated and the surface landowner has been notified.

### 022.12 Produced Water Pits

No person shall construct or operate a pit or pond to retain produced water without first filing an application for a permit on Form 15, RETAINING PIT PERMIT, and obtaining approval from the Director. Permit numbers shall be displayed on a weatherproof sign along with the name of the operator and lease at the pit site. Pits or ponds used to evaporate or retain water which were in existence prior to the effective date of this rule must be re-permitted within one year after the effective date of this rule.

If inspection indicates that the facility no longer meets the requirements of this rule, the use of the facility shall cease.

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Upon application, an exception to the construction and operational requirements of Section 022.12 may be granted by the Director upon showing that the pit design, in consideration of geologic and hydrodynamic conditions, will protect water, soils, wildlife, and migratory birds.

- 022.12A All pits or ponds used to retain produced water shall:
- Be constructed in cut material or at least fifty (50) percent below original ground level.
  - Be lined with a material compatible with the waste contained.
  - Not be located in a natural drainage and shall be constructed above the seasonal high water table.
  - Be bermed or diked and shall have at least two (2) feet of freeboard between the normal operating level of the water in the pit and the top of the banks, dikes or berms.
  - Be fenced, screened, or netted to prevent access by livestock, wildlife and migratory birds if free oil is likely to be discharged to the pits.
  - Not be used for the dumping of any wastes other than produced water.
  - Approved monitoring systems may be required if a pit is located in an area that the Commission can reasonably define as environmentally sensitive.

022.12B Unlined evaporation pits shall be allowed for produced waters containing less than ten thousand (10,000) milligrams per liter total dissolved solids. Unlined evaporation pits that receive less than five (5) barrels per day on a monthly average shall be allowed when it can be shown that the pit will not impact water, soils, wildlife and migratory birds.

022.12C Pit Lining Requirements

The application for a lined pit submitted on Form 15 shall include the type and specifications of the liner to be used. All liners constructed of manufactured materials must meet or exceed the specifications set forth by the Commission.

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Soil mixture liners, recompacted clay liners and manufactured liners must be compatible with the waste contained. The operator must provide evidence of the chemical resistance of the liner selected for use.

Manufactured liners must be installed over smooth fill subgrade which is free of pockets, loose rocks, or other materials which could damage the liner. Sand, sifted dirt, or bentonite are suggested as cushion materials if needed. At no time shall any organic material, except synthetic cushion fabric designed for that purpose, be used for a liner cushion.

Liner edges must be secured to prevent wind damage.

If a lined pit does not have an approved monitoring system, then it shall be drained, cleaned and inspected for leaks or holes each year.

The Director may grant an exception to this pit lining requirement where, the operator shows that due to the surface or subsurface geology, the uses of the known sources of groundwater, the permeability of the surrounding soils, or similar consideration, the known sources of underlying groundwater will not be adversely impacted.

022.12D

All retaining pits shall be kept free of surface accumulations of oil and other hydrocarbon substances and shall be cleaned within ten (10) days after the discovery of the accumulation by the operator or notice from the Commission, unless weather conditions or other conditions, as approved by the Commission, do not allow such removal within the time frame specified. In the event such removal is delayed by weather or other factors, the operator will notify the Commission on Form 4 within ten (10) working days of the operator noticing said accumulation, or of Commission notification. The notification will include an estimated time table during which the problem can be practically corrected, in an approved manner.

022.12E

This rule shall not apply to pits used in conjunction with drilling or reworking operations under a valid permit to

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drill unless such pit is used after the cessation of the drilling or reworking operations.

022.12F Produced water may be discharged into pits, onto land, or into other water sources if the operator has a valid discharge permit issued under the National Pollutant Discharge Elimination System (NPDES). The operator shall file a copy of the NPDES permit with the Commission.

022.01 Temporary Emergency Pits and Flare Pits - Operators must file a Form 15 for approval of these facilities. These pits shall be exempt from the construction and monitoring requirements of this section.

Production fluid may not be retained for more than seventy-two (72) hours in any unlined pit prior to disposal.

022.02 Pit closure must be done in accordance with a preapproved plan which must be submitted on a Form 4.

Verbal notice twenty-four (24) hours prior to closure is required to provide the Commission the opportunity to witness the closure procedure.

If closure plans or treatment procedures have changed from the original proposal, then a Form 4 must be resubmitted. Any wastes disposed of off-lease must be transported to an authorized disposal site.

Pit solids showing high concentrations of salt (exchangeable sodium percentage above fifteen (15) by weight) must be encapsulated or chemically or mechanically treated or removed and disposed of in an authorized disposal site.

Oil that may be present must be removed and recycled by commercially available utilized conventional means as soon as the weather permits or disposed of in an authorized disposal site or mixed with soil to less than one (1) percent oil content by weight when road spread, or land farmed.

Dispersants, wetting agents, surface reduction agents, surfactants or other chemicals that destroy, remove or reduce the fluid seal of a pit and allow the fluids therein to seep, drain or percolate into the soil underlying the pit are prohibited.

Pits cannot be used for disposal of refuse, equipment parts or unused chemicals. Proper closure of the pit is compromised by the

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inappropriate use of the pit for trash disposal and may result in the revocation of the permit.

022.03 After the pits have been properly backfilled, a biodegradable mulch may be required if soil erosion or the establishment of vegetation is determined to be a problem by the Director.

022.04 No water produced in association with oil or gas production shall be transported from the lease of origin for disposal or used for road building without authorization of the Director.

022.16A Every person that transports water produced in association with the production of oil or gas shall possess a run ticket or equivalent documents containing the following:

022.16A1 The name and address of the transporter.

022.16A2 The name of the operator of the lease of origin.

022.16A3 The location of the lease tank battery by section, township, range and county.

022.16A4 The location of the destination by section, township, range and county.

022.16A5 The date and time the fluids were loaded for transportation and unloaded at the destination.

022.16A6 The estimated volume of fluids, or the opening and closing tank gauges or meter readings.

022.16A7 The signature of the driver.

022.16B One copy of the documentation shall be left at the facility from which the water was loaded for transportation.

022.16C One copy of the documentation shall be carried in the vehicle during transportation and shall be produced for examination and inspection by any agent of the Commission or any authorized law officer upon request.

022.16D All persons that store, possess, or dispose of water produced in association with the production of oil or gas shall retain a record reflecting a complete inventory,

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including detail of the acceptance and disposition of the fluids for a period of at least five (5) years.

**023 BURN-OFF PITS**

To prevent fire hazards from waste oil, the same shall be collected in burn-off pits which shall be located a safe distance from oil storage tanks, buildings, or other structures and shall be burned as often as necessary to prevent overflowing. Such pits shall be constructed to prevent the escape of oil therefrom and shall have a continuous wall completely surrounding the pit of sufficient height to prevent surface water from running into the pit. Earthen pits will be permitted at locations where the soil is heavy and tight, but shall be prohibited in locations where the soil is porous and closely underlain by either sand or gravel strata, unless effectively sealed to the satisfaction of the Director.

**024 LEASE TANK RESERVOIRS AND FIRE HAZARDS**

All oil storage and lease tanks must be surrounded by an earthen dike which shall provide a capacity of one and one-tenth (1-1/10) times the capacity of the largest tank it surrounds.

All well and tank locations shall be kept free of dead grass, brush, weeds and other inflammable material and so maintained at all times.

**025 OPEN PIT STORAGE OF OIL**

The operator shall not, except during an emergency or except by special permission of the Director, permit oil to be temporarily stored or retained in earthen reservoirs or in any other receptacle that may introduce an accident or fire hazard.

**026 SUB-SURFACE PRESSURE TESTS**

The Director may require sub-surface pressure measurements on a sufficient number of wells in any pool to provide adequate data for establishing maximum efficient rates of production (M. E. R.). Whenever a sub-surface pressure measurement is to be made in a well, such well shall remain completely shut-in for at least twenty-four (24) hours prior to the test. Tests may be witnessed by representatives of the offset operators.

**027 GAS-OIL RATIO TESTS**

Within thirty (30) days following the completion or re-completion of each well producing oil and gas and thereafter as the Director may require the operator of such well shall make a gas-oil ratio test of such well; and the results of such test shall be reported to the Commission within twenty (20) days after the test is made. Certain wells may be excepted from this rule by the Director upon written request.

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**028 PLUGGING**

The requirements for plugging a well shall be as follows:

- 028.01 A dry or abandoned well must be plugged in such a manner that oil, gas, water or other substance shall be confined to the reservoir in which it originally occurred. The material used in plugging, whether mud-laden fluid, cement, mechanical plug or some other suitable material, must be placed in the well in a manner to permanently prevent migration of oil, gas, water or other substance from the formation or horizon in which it originally occurred.
- 028.02 The operator shall have the option as to the method of placing cement in the hole by (1) dump bailer, (2) pumping through tubing or drill pipe, (3) pump and plug or (4) other method approved by the Director or authorized deputy.
- 028.03 No substance of any nature or description other than that normally used in plugging operations shall be placed in any well at any time during plugging operations.
- 028.04 In order to protect the fresh water strata, no surface casing shall be pulled from any well unless authorized by the Director.
- 028.05 Before a dry hole is plugged, the operator shall notify the office of the Director or his authorized deputy.
- 028.06 Before a producing well, or any well with production casing in the hole, is plugged, the operator shall notify the office of the Director by submitting Form 4, "Sundry Notices." Operator shall fully describe the proposed plugging and abandonment procedure on said form and shall set out the volume and position of each plug to be placed in the hole and the manner in which said plug will be positioned. A fee, paid in advance, of one hundred dollars (\$100) and payable to the Nebraska Oil and Gas Conservation Commission must be remitted with each Form 4 which gives notice of operator's intention to abandon a well with production casing in the hole.
- 028.07 Operations must commence to plug and abandon each well with-in one year of the date of the Director's approved Form 4 or the operator must reapply. Any well that is not plugged and abandoned with-in one year will be considered to have a status of shut-in.
- 028.08 Following abandonment, working pits, reserve pits and/or burn pits shall be backfilled, pads leveled, debris removed or buried and land restored to the reasonable satisfaction of the Director.

**029 PLUGGING OF SEISMIC AND STRATIGRAPHIC TESTS**

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It shall be the duty of any person, operator or contractor drilling a seismic or stratigraphic test hole, regardless of diameter or depth, whether cased or uncased, to plug said hole in a manner sufficient to properly protect all fresh water bearing and possible or probable oil or gas bearing formations.

### **030 LIABILITY**

The person who drilled or caused to be drilled any well for oil or gas or any seismic, core or other exploratory hole, whether cased or uncased, shall be liable and responsible for the plugging thereof in accordance with the rules and regulations of the Commission.

### **031 WELL LOGS AND SAMPLES**

All wells drilled for oil and/or gas shall be adequately logged with appropriate mechanical, electrical, or radiation survey devices unless excepted by the Director. If adverse down hole conditions exist which makes the running of adequate survey devices impractical or hazardous, or in the case of open hole completions, twin wells, or other good cause shown, the Director may waive such required survey upon request by the operator.

Logs shall be submitted as one unmarked paper copy, one digital PDF or TIFF (Tagged Image File Format) or digital LAS, or a format approved by the Director of the mechanical, electrical, or radiation survey log, clearly indicating the position of the shoe of the surface casing and including the entire logged interval below the shoe of the surface casing, shall be submitted to the office of the Director within thirty (30) days after such log is run. If an extension of thirty (30) days is needed for filing survey logs, the Director may grant such extension for good cause shown.

Upon written request by the operator, logs of a confidential nature will be held confidential for a period of not more than twelve (12) months. The Director may release such confidential data to health care professionals, emergency responders and public health regulators if the Director deems it is necessary to protect the public's health, safety and welfare.

A driller's log is to be submitted for wells drilled with cable tools. Drill stem tests, copies of other surveys and tests such as core analysis, water analysis, and mud logs, if taken, and the information there from will be submitted on all wells drilled. Any survey or tests conducted by the operator shall be maintained in his files for a period of at least two (2) years. Drilling contractors and well service companies shall maintain a file of surveys and tests conducted for a period of not less than five (5) years for all work performed on any well drilled under the rules and regulations of the Commission.

By agreement with the State Geologist, the Commission will notify operators when samples of a well are requested by the Nebraska Geological

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Survey. When indicated on Form 2, a systematic interval of sample cuttings shall be saved and submitted to the Nebraska Geological Survey in accordance with their request within ninety (90) days following completion or deepening of a well. When requested in writing, samples shall be kept confidential by the Nebraska Geological Survey for a period of not more than twelve (12) months. Samples submitted may be sent through a recognized sample cutting agency or sent directly to the Nebraska Geological Survey, Conservation and Survey Division, School of Natural Resources, University of Nebraska, Lincoln, Nebraska.

### **032 SEISMIC AND STRATIGRAPHIC TESTS**

Before any person shall commence operations for the drilling of any seismic hole, such person shall file with the Director an accurate plat of all such holes, the proposed depths and the date such operations are expected to commence. The Director or authorized agent shall approve the method used to plug such holes. No permit fee shall be required.

Wells drilled as stratigraphic type test holes shall come under these rules and regulations with the following exceptions: No fee shall be required for the drilling of a stratigraphic test hole, but Form 2, "Notification of Intent to Drill or Re-Enter," shall be filed with the Director and approved by him prior to the drilling of each test or hole. Locations may be approved within three hundred thirty (330) feet of legal subdivision lines, but estimated total depths do not have to be included in notifications. Records, plugging affidavits and logs do not have to be filed with the Commission except within a period of six (6) months after completion of drilling. In the case of a series of wells drilled as a part of a single investigational program, records, plugging affidavits and logs may be filed with the Commission within six (6) months after completion of the last test hole drilled providing that the Director is informed of the approximate number of tests to be included in the program and that the period of not more than thirty (30) days separate the completion of one test and the commencement of the next test. Special permission for time extension between drilling of successive test holes may be granted by the Director or his authorized deputy for justifiable reasons.

Upon written request by the operator, all records, plugging affidavits, logs, plats and geologic information will be held confidential for a period not to exceed one (1) year.

The operator or drilling contractor shall maintain an accurate map or plat of all shallow exploratory, stratigraphic or seismic holes for a period of at least five (5) years after completion of a program, and all holes shall be satisfactorily plugged.

### **033 LIMITATION OF PRODUCTION**

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Whenever the Commission, after notice and hearing, finds that waste as defined in the Act, is occurring in any oil or gas field or pool and that the production of oil or gas from such field or pool should be limited to prevent waste, then the Commission shall issue an order limiting production from such field or pool and specify rules applicable thereto for the allocation or distribution of allowable production therefrom as provided for in the Act.

### **034 MAXIMUM EFFICIENT RATE HEARINGS**

The Commission, on its own motion may, or at the request of any interested party shall call hearings to determine the maximum efficient rate at which any pool in the State can produce oil and gas without waste.

### **035 SPACING UNITS**

The Commission may upon its own motion or upon the motion of any interested party and after notice and hearing establish spacing units of a specified and approximate uniform size and shape for each pool within this State.

### **036 FORM 11 - REPORT OF INJECTION PROJECT**

Operators of pressure maintenance, secondary recovery projects or produced water disposal wells shall file a report on Form 11 on or before the twenty-fifth (25th) day of each month succeeding the month in which the injection occurs.

### **037 FORM 12 - REPORT OF PACKER LEAKAGE TEST**

Operators of wells which are completed to produce oil and/or gas from two or more reservoirs through a common well bore, while segregating the production from each respective reservoir with a packer set in the well bore, shall conduct packer leakage tests immediately following the multiple completion of such wells and thereafter as the Director may require. The results of packer leakage tests shall be reported on Commission Form 12 within twenty (20) days following completion of the test.

### **038 FORM 13 – RELEASE**

Operators may utilize Form 13 in securing a release of further plugging responsibility when a well thought capable of producing water for agricultural, domestic, industrial, or municipal use is disposed of as authorized by Rule 2-007.

### **039 FORM 14 - AUTHORIZATION TO TRANSPORT OIL AND/OR GAS FROM LEASE**

Before any oil and/or gas may be sold, removed or transported from any unit or lease by any person, the owner shall file with the Director Form 14 - AUTHORIZATION TO TRANSPORT OIL AND/OR GAS FROM LEASE - and must secure the Director's approval before proceeding with the sale, removal or

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transporting of any oil and/or gas which authority shall be effective until further notice or until revoked by the Director. No purchaser shall buy, remove or transport any oil and/or gas from any unit or lease until he has received an approved copy of Form 14. The Director shall revoke said authority if it is found that any fraud, deceit or misrepresentation was made to obtain the approval of said authority, or if any operator is in violation of any rule, regulation or order of the Commission. Said operator may apply for a new permit at any time said operator is in compliance with Sections 57-901 through 57-921, Revised Statutes Nebraska, 1943, and all rules and regulations and orders of the Commission. A new well is exempt from this rule for a period of thirty (30) days following completion.

### **040 INACTIVE WELLS**

Whenever operations cease for a period of sixty (60) days on any well, the operator shall give notice to the Commission of the change to inactive status.

040.01 If it is deemed necessary to prevent migration of oil, gas, water or other substances from the formation or horizon in which it originally occurred, the well shall be plugged or repaired. If the operations on any such inactive well are not resumed within a period of one (1) year after the notice has been given, the operator of the well shall plug and abandon the well in the manner prescribed by the Director. However, upon application prior to the expiration of the one (1) year period, and for good cause shown, the Director may extend the period for one (1) year, provided that the static fluid level is established and maintained at least one hundred fifty (150) feet below the lowest fresh water zone, or the casing is pressure tested to at least three hundred (300) pounds per square inch as measured at surface to prove mechanical integrity.

040.02 Application for inactive well status must be submitted on a Form 4 and contain the following information:

- The type of well.
- The bottom hole assembly.
- Pressures as measured by gauge for:
  - Tubing.
  - Production casing annulus.
  - Surface casing annulus.
- Static fluid level as measured from ground level.
  - Method used to determine static fluid level.

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- o Date data was obtained.
- Information stating if any formations with reservoir pressures high enough to initiate flow into the lowermost freshwater aquifer exist.

040.03 An additional one (1) year extension(s) may be granted in the same manner.

040.04 FEE FOR INACTIVE WELL  
A yearly fee will be collected for each well that is inactive for two or more consecutive years. The operator will submit a fee for each well requested for inactive status. The fee structure is as follows:

<u>Inactive Period, Year(s)</u>	<u>Fee</u>
0 to 2	\$ 0/Year
2 or more	\$200/Year

The funds shall be used at the discretion of the Commission and the collection of fees may be reduced to five dollars (\$5.00) per well at the discretion of the Director if previously collected funds prove sufficient to carry out the purposes of the Well Plugging and Abandonment Trust Fund.

**Statute: 57-905; 57-906; 57-907; 57-908; 57-919; 57-923**

**041 WELL STIMULATION ACTIVITIES COVERED BY DRILLING PERMITS**

Well completions which include hydraulic fracturing, acidizing, or other chemical stimulations done to complete a well are considered permitted under the drilling permit for that well.

**042 HYDRAULIC FRACTURING**

New and existing wells which will be stimulated by hydraulic fracturing must demonstrate suitable and safe mechanical configuration for the stimulation treatment proposed.

042.01 Prior to the initiation of fracture stimulation, the operator must evaluate the well. If the operator proposes stimulation through production casing or through intermediate casing, the casing must be tested to the maximum anticipated treating pressure. If the casing fails the pressure test, it must be repaired or the operator must use a temporary casing/tubing fracturing string.

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- 042.02 If the operator proposes fracturing through a temporary casing/tubing string it must be stung into a liner or run on a packer set not less than one hundred (100) feet below the cement top of the production or intermediate casing and must be tested to not less than maximum anticipated treating pressure.
- 042.03 Casing/tubing pressure test will be considered successful if the pressure applied has been held for ten (10) minutes with no more than a ten percent pressure loss.
- 042.04 Maximum treating pressure shall not exceed the test pressure determined above.
- 042.05 The surface casing valve must remain open while hydraulic fracturing operations are in progress. The annular space between the fracturing string and production casing must be monitored and may be pressurized to a pressure not to exceed the pressure rating of the lowest rated component that would be exposed to pressure should the fracturing string fail.

### **043 DISCLOSURE OF WELL STIMULATION FLUIDS**

Within sixty (60) days of the hydraulic fracture stimulation is performed, the operator shall post on the FracFocus Chemical Disclosure Registry (FracFocus.org) all the elements made viewable by the FracFocus website.

#### **Statute 57-905(4)(b)**

### **044 PROPRIETARY CHEMICALS AND TRADE SECRETS**

Where the formula, pattern, compilation, program, device, method, technique, process or composite of a chemical product is proprietary to the owner or operator, or service company and would if disclosed reveal methods or processes entitled to protection as trade secrets, such as a chemical, need not be disclosed to the Director or staff unless:

- 044.01 If necessary to respond to a spill or release of a trade secret product, the operator or service company must provide to the Director upon request a list of the chemical constituents contained in a trade secret product. The Director may request information be provided orally directly to a laboratory or other third party performing analysis for the Commission. Commission staff and any third parties receiving trade secret information on behalf of the Commission may be required to execute a nondisclosure agreement.
- 044.02 The operator or service company must provide the chemical constituents of a trade secret to a health professional who provides a

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written statement that knowledge of the chemical constituents of such product is needed for purposes of diagnosis or treatment of the individual being diagnosed or treated may have been exposed to the chemical concerned. The health professional may not use the information for purposes other than the health needs asserted in the statement of need and may be required to execute a nondisclosure agreement.

044.03 Where a health professional determines that a medical emergency exists and the chemical constituents of a trade secret product are necessary for emergency treatment, the operator or service company shall immediately disclose the chemical constituents to a product to that health professional upon verbal acknowledgement by the health professional that such information shall not be used for purposes other than health needs asserted and that the health professional shall otherwise maintain the information as confidential.

**Statute 57-905(4)(b)**

**Statute: 57-905; 57-906; 57-907; 57-908; 57-919**