North Carolina

Administration

1. Agency regulating oil and gas exploration/production: North Carolina Department of Environmental Quality (NCDEQ) ï NC Geological Survey ï Oil & Gas Program

2. Contact for regulatory updates: Walt Haven, Oil & Gas Program Supervisor

3. Docketing procedure: Yes, for the establishment or modification of drilling units.

    a. Emergency orders: If an emergency situation, as defined by the Department, arises under Chapter 113 Article 27 § 113-397, the Department may conduct a hearing to determine the appropriate course of action after giving any notice it considers practicable.

    b. Notice: Drilling unit applications must be submitted to the Oil & Gas Commission no fewer than 60 calendar days before the next regularly scheduled Commission meeting.

4. Agency regulating air emissions: NCDEQ Division of Air Quality

5. Agency regulating water quality: NCDEQ Division of Waste Management and Division of Water Resources

License

1. License required: The applicant or permittee, and all service companies who are conducting oil or gas exploration or development activities, shall either be incorporated under the laws of North Carolina or, if a foreign corporation, obtain a certificate of authority from the North Carolina Secretary of State in accordance with G.S. 55-15-01. If the applicant or permittee is a partnership or other person engaging in a business in this State under an assumed name, the applicant or permittee shall have filed a certificate of assumed name in the county where it is doing business.

2. Conditions of license: N/A

Bond/Surety

1. Purpose of surety: Plugging and abandonment, disturbed land, and environmental damage bonds.

2. Plugging and restoration:

Plugging and abandonment: $5000, plus $1per linear foot.

Disturbed land: the disturbed land bond amount is determined by calculating the costs for corrective actions(s) needed to return the land to the conditions set out in the approved Reclamation Plan and any other reclamation conditions included in the approved permit.

The Reclamation Cost Table includes the following:

(1) stone removal for access road and well pad in cubic yards;
(2) spreading stockpiles and berms to prepare for fine grading in cubic yards;
(3) filling of pits in cubic yards;
(4) fine grading per acre;
(5) seed and mulch, repair seeding, and fertilizing per acre;
(6) matting for soil cover per acre;
(7) matting permanent soil reinforcement per acre;
(8) drainage ditch excavation; and
(9) borrow excavation.

3. Compliance bond required: Environmental damage bond is set at a minimum of $1 million dollars and may be increased by the Oil & Gas Commission based on the location of the proposed well site in relation to environmentally sensitive areas.

4. Types of surety accepted: All forms of financial assurance must be submitted on forms provided by NCDEQ and include the following:

   Irrevocable Letter of Standby Credit
   Surety Bond
   Assignment of Savings Account
   Cash Deposit

5. Conditions of bond: The bond herein provided shall be continuous in nature and shall remain in force until cancelled by the surety. Cancellation by the surety shall be effectuated only after 60 days written notice thereof to the Department or surface owner and to the permittee.

   The bond shall be conditioned on the faithful performance of the requirements set forth in the rules of 15A NCAC 05H. After filing the bond with the Department, the permittee shall lose all right, title, and interest in the bond while the bond is held by the Department. Liability under the bond shall be maintained as long as reclamation is not completed in compliance with the approved Reclamation Plan or acceptance by the Department of a substitute bond. In no event shall the liability of the surety exceed the amount of the surety bond required by this Section.

   a. Amount per well: As described above.

b. Amount of blanket bond: N/A

Land Leasing Information

1. Leasing method: Chapter 113 Article 27 § 113-423 - Maximum duration. Any lease of oil or gas rights or any other conveyance of any kind separating rights to oil or gas from the freehold estate of surface property shall expire at the end of 10 years from the date the lease is executed, unless, at the end of the 10-year period, oil or gas is being produced for commercial purposes from the land to which the lease applies. If, at any time after the 10-year period, commercial production of oil or gas is terminated for a period of six months or more, all rights to the oil or gas shall revert to the surface owner of the property to which the lease pertains. No assignment or agreement to waive the provisions of this subsection shall be valid or enforceable. As used in this subsection, the term "production" includes the actual production of oil or gas by a lessee, or when activities are being conducted by the lessee for injection, withdrawal, storage, or disposal of water, gas, or other fluids, or when rentals or royalties are being paid by the lessee. No force majeure clause shall operate to extend a lease beyond the time frames set forth in this subsection.

2. Notice method: Chapter 113 Article 27 § 113-423 - Required information to be provided to potential lessors and surface owners. Prior to executing a lease for oil and gas rights or any other conveyance of any kind separating rights to oil or gas from the freehold estate of surface property, an oil or gas developer or operator, or any agent thereof, shall provide the lessor with a copy of this Part and a publication produced by the Consumer Protection Division of the North Carolina Department of Justice entitled "Oil & Gas Leases: Landowners' Rights." If the lessor is not the surface owner of the property, the oil or gas developer or operator shall also provide the surface owner with a copy of this Part and the publication prior to execution of a lease for oil and gas rights.

3. Minimum bidding $ (per acre): N/A

4. Qualification of the bidder: A person may not act, offer to act, or hold oneself out as a landman in this State unless the person is registered with NCDEQ in accordance with G.S. 113-425.

5. State statutes: North Carolina General Statutes ï Chapter 113 Subchapter V ï Oil and Gas Conservation - Article 27 - § 113-423 and § 113-425.

6. Maximum acres: N/A

7. Royalty rates: Royalty payment of not less than twelve and one-half percent (12.5%) of the proceeds of sale of all oil or gas produced from the lessor's just and equitable share of the oil and gas in the pool, which sum shall not be diminished by pre-production or post-production costs, fees, or other charges assessed by the oil or gas developer or operator against the property owner.

8. Agency in control of leasing: N/A

Setbacks

1. What rules/regulations/policies does your jurisdiction have in regard to well setbacks from private residences and/or other habitable structures for use by humans or animals?

   Each oil or gas well, production facility, tank, tank battery, or pit shall comply with the following setback distances as measured from the center of a wellhead and the edge of the pit, production facility equipment, tank, or tank battery closest to the features below:
   (1) occupied dwellings and high occupancy buildings: 650 feet;
   (2) edge of a public road, highway, utility or railroad track right-of-way, or other right-of-way: 100 feet;
   (3) a perennial stream, river, watercourse, pond, lake, or other natural and artificial bodies of water, including wetlands and trout stream: 200 feet;
   (4) intermittent stream: 100 feet; and
   (5) a public or private water well intended for human consumption or household purpose: 650 feet.

   The permittee shall ensure a minimum setback of 100 feet from the center of each oil or gas wellhead, and the closest edge of a tank, tank battery, or pit to the edge of the mapped 100-year floodplain and floodway.

   The permittee shall ensure a minimum setback of 1,500 feet downgrade from each oil or gas wellhead, tank, tank battery, pit, or production facility to the edge of any surface water impoundment that serves as a municipal drinking water supply or to the edge of any river having a drainage area greater than 140 square miles and upstream of a municipal drinking water supply point. For surface water impoundments, the edge shall be measured from the nearest point of the most landward limit of the normal water level or the rooted herbaceous vegetation. For any river upstream of a municipal drinking water supply point, the edge shall be measured from the nearest, most landward limit of the bank or the rooted herbaceous vegetation.

   The closest edge of a pit, tank, or tank battery shall be a minimum of 75 feet from the center of any wellhead.
   A tank edge shall be a minimum of five feet from another edge.
   A mechanical separator or compressor shall be located the minimum distance from any of the following:
   (1) the center of a wellhead: 50 feet; and
   (2) the closest edge of a tank: 75 feet.

   All production facilities, excluding gathering lines, whose contents may be heated shall be located a minimum distance of 75 feet from edge of a tank or the center of a wellhead.

2. Are there other sources of information on this matter that you could identify? An applicant or permittee may request a variance to reduce the setback distances for an oil or gas wellhead, a tank or tank battery, and a pit from an occupied dwelling.

Spacing

1. Spacing requirements: No, but spacing must be approved by the Oil and Gas Commission.

    a. Density: As proposed by the applicant or permittee and approved by the Oil and Gas Commission.

    b. Lineal: As proposed by the applicant or permittee and approved by the Oil and Gas Commission. However, setbacks from drilling unit boundaries are:

        - Unconventional reservoirs - no portion of the wellbore recovering hydrocarbons shall be less than 500 horizontal feet from the boundary of the drilling unit.

        - Conventional reservoirs - no portion of the wellbore shall be less than 200 horizontal feet from the boundary of the drilling unit.

2. Exceptions: Yes, a variance may be granted by the Commission to reduce the distance from the boundary of the drilling unit.

    a. Basis: Based on reservoir characteristics including permeability, porosity, performance, and surrounding production history to optimize production and minimize waste.

    b. Approval: If granted, shall provide equal or greater protection of public health, safety, and the environment.

Pooling

1. Authority to establish voluntary: Yes

2. Authority to establish compulsory: Yes

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: No

2. Minimum percentage of voluntary agreement before approval of compulsory unitization: N/A

    a. Working interest: N/A

b. Royalty interest: N/A

Drilling Permit

1. Permits required for:
    a. Drilling a producing or service well: Yes
    b. Seismic drilling: No for shot holes. However, boreholes drilled for geophone placement or other monitoring purposes will be considered by the NC Division of Water Resources as being ñmonitoring wellsò and subject to 15A NCAC 02C.
    c. Recompletion: Yes
    d. Plugging and abandoning: Yes
2. Permit fee:
    a. Drilling: $3,000 for the first well on each well pad and $1,500 for each subsequent well on the same well pad.
    b. Seismic drilling: N/A
    c. Recompletion: N/A
    d. Plugging and abandoning: N/A
3. Require filing report of work performed: Yes
4. Sundry notices used: No

Vertical Deviation

1. Regulation requirement:
    a. When is a directional survey necessary: Upon completion of drilling an oil or gas well.
    b. Filing of survey required: Yes, within 30 calendar days after drilling an oil or gas well.
    c. Format of filing: Paper copies submitted to the Department shall be made to: Oil & Gas Program, Division of Energy, Mineral, and Land Resources, 1612 Mail Service Center, Raleigh, NC 27699-1612 and a copy in .pdf form submitted to DEMLRoilandgas@ncdenr.gov.

Casing and Tubing

1. Minimum amount required:
    a. Surface casing: Surface casing shall be set into competent bedrock to a depth of at least 100 feet below the base of the deepest groundwaters but above any hydrocarbon strata containing fluids or gases that could negatively impact the quality of the cement or proper functioning of the oil or gas well.
    b. Production casing: No
2. Minimum amount of cement required:
    a. Conductor casing: Conductor casing shall be cemented from bottom to top, with return to surface.
    b. Surface casing: Surface casing shall be cemented from bottom to top, with return to the surface.
    c. Production casing: Production casing shall be installed and cemented from the bottom to 200 feet above the base of the previous casing string.
    d. Setting time: All cement shall reach a compressive strength of at least 500 pounds per square inch (psi).
3. Tubing requirements: Must meet API specifications.
    a. Oil wells: Must meet API specifications.
    b. Gas wells: Must meet API specifications.

Hydraulic Fracturing

1. Permitting:
    a. Before drilling: Yes
    b. Before fracing: Yes
    c. How long before: If well stimulation was not approved as part of the initial application, the permittee desiring to perform such operations shall submit for approval the information required by this Rule via email, fax or mail to the Department for review at least 30 calendar days prior to commencement of planned well stimulation operations.
2. Reporting requirements:

a. Where reported: To the Department using Form 18 ï Well Stimulation Report to the Department.

b. When reported: Within 30 calendar days after the conclusion of stimulation operations on an oil or gas well.

3. Source water requirements: Water management plan required at the time of permitting. Approved water sources could be surface water, groundwater, purchased water, and reuse.

4. Mechanical integrity:

   a. Cementing log required: Yes

   b. Pressure testing: Must withstand the maximum anticipated treating pressure of the proposed well stimulation operations. The maximum anticipated treating pressure shall not exceed 80 percent of the minimum internal yield pressure for such production casing.

   c. Pressure monitoring: Yes

   d. Blowout preventer required: Yes

5. Disposal of flowback fluids:

   a. Retaining pits: Yes

   b. Tanks: Yes

   c. Approved discharge to surface water: No

   d. Underground injection: No

6. Chemical disclosure requirement:

   a. Mandatory: Yes

   b. Where disclosed: NCDEQ ï DEMLR - Oil and Gas Program and FracFocus.org

   c. When disclosed (pre-fracing, post-fracing, both): Pre-fracing and post-fracing

   d. Time limit to disclose: 15 calendar days following conclusion of well stimulation operations.

   e. Information required to be disclosed: Form 19 ï Chemical Disclosure Report includes the following:

(1) the permittee's name, address, telephone number, fax number, and email address;
(2) the county and nearest city or town where the oil or gas well is located;
(3) the property street address, or nearest address to the ingress and egress point leading from a public road to the well pad;
(4) the API number, the lease name, and the oil or gas well name and number;
(5) the type of oil or gas well;
(6) the date well stimulation operations began;
(7) the date well stimulation operations ceased;
(8) the latitude and longitude of each wellhead reported to five decimal places of accuracy and precision using the North American Datum of 1983 (NAD83);
(9) a certified directional survey of the horizontal oil or gas well;
(10) the measured depth of the oil or gas well and the true vertical depth of the oil or gas well;
(11) the total volume of water used in the well stimulation operations including surface water, groundwater, produced water, reused water, reclaimed or recycled water, or the type and total volume of the base fluid used in the well stimulation operation, if a base substance other than water was used;
(12) the amount(s) and percent by volume of surface water or groundwater used in the well stimulation operations and the point(s) of withdrawal of that surface water or groundwater;
(13) the source amount(s) and location(s) of recycled water, along with percent by volume of recycled water that is used in well stimulation operations;
(14) the trade or common name and CAS registry number of each chemical used in the well stimulation operation;
(15) the trade or common name, supplier, and a brief description of the intended use or function of each additive in the well stimulation operation;
(16) identification and chemical classification of each chemical and additive that is subject to the Safety Data Sheet requirements of 29 CFR 1910.1200;
(17) the actual or maximum concentration of each chemical and additive listed pursuant to Subparagraphs (14) and (15) of this Paragraph expressed in percent by mass;
(18) the overall well stimulation mixture; and
(19) the chemical classification for each chemical and additive.

f. Trade secret protection: Yes

g. Required disclosure to health/emergency personnel: Yes

Underground Injection

1. Agencies that control the underground injection of fluid by well class: NCDEQ Division of Water Resources. Class II injections wells are prohibited in North Carolina.

Completion

1. Completion report required: Yes
    a. Time limit: 30 calendar days.
    b. Where submitted: NCDEQ ï NC Geological Survey ï Oil & Gas Program.
2. Well logs required to be filed: Yes
    a. Time limit: 30 calendar days.
    b. Where submitted: NCDEQ ï NC Geological Survey ï Oil & Gas Program.
    c. Confidential time period: Situationally dependent, based on application of general statutes and 15A NCAC 05H .0707.
    d. Available for public use: Yes
    e. Log catalog available: No
3. Multiple completion regulation: No
    a. Approval obtained: N/A
4. Commingling in well bore: Yes
    a. Approval obtained: Yes, via the drilling unit application

Oil Production

1. Definition of an oil well: Undefined
2. Potential tests required: N/A
    a. Time interval: N/A
    b. Witness required: N/A
3. Maximum gas-oil ratio: No
    a. Provision for limiting gas-oil ratio: N/A
    b. Exception to limiting gas-oil ratio: N/A

4. Bottom-hole pressure test reports required: No
    a. Periodical bottom-hole pressure surveys: N/A
5. Commingling oil in common facilities: N/A
6. Measurement involving meters: No
7. Production reports: Yes, monthly production data from all producing oil or gas wells, wells capable of producing oil or gas, and all fluids produced during any phase of operation of the oil or gas well to the Department in accordance with Rule .0201 on Form 28 ï Monthly Production Report within 60 calendar days from the end of each month.
    a. By lease: No
    b. By well: Yes
    c. Time limit: Yes

Gas Production

1. Definition of a gas well: Undefined
2. Pressure base __ N/A _____ psia @ __ N/A _____degrees F.
3. Initial potential tests: N/A
    a. Time interval: N/A
    b. Witness required: N/A
4. Bottom-hole pressure test reports required: No
    a. Periodical bottom-hole pressure surveys: N/A
5. Commingling of gas in common facilities: N/A
6. Measurement involving meters: Yes
7. Production reports: Yes, monthly production data from all producing oil or gas wells, wells capable of producing oil or gas, and all fluids produced during any phase of operation of the oil or gas well to the Department in accordance with Rule .0201 on Form 28 ï Monthly Production Report within 60 calendar days from the end of each month.
    a. By lease: No
    b. By well: Yes

c. Time limits: Yes