Colorado

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Administration

1. Agency regulating oil and gas exploration/production: Oil and Gas Conservation Commission, 1120 Lincoln St., Suite 801, Denver, CO 80203. Phone: (303) 894-2100. Statutory Authority: Oil and Gas Conservation Act, § 34-60-101 *et. seq.*, C.R.S. ("Act"). Rules: 2 CCR 404-1 ("Rule" or "Rules")

2. Contact for regulatory updates: Hearings and Regulatory Affairs Manager: Julie M. Murphy, julie.murphy@state.co.us, (303) 894-2100, ext. 5152.

3. Docketing procedure: The Commission may initiate a proceeding on its own motion (Rule 502.a.) or in response to an application (Rule 503.a.)

   When a proceeding is initiated, the Secretary of the Commission assigns a new docket number which is entered on a separate page of a docket, along with the date of the filing of the application or the date of the entry of the Commission Order initiating the proceeding. All subsequent pleadings are assigned the same docket number and noted with the date of filing upon the docket page or continued docket page. (Rule 504.).

   a. *Emergency orders:*

      The Commission can issue an emergency order without notice of hearing. The emergency order is effective upon issuance and remains effective for no more than 15 days. Notice of the emergency order must be given as soon as possible after issuance. (Rule 502.a.).

   b. *Notice:*

      For applications for hearing, the Commission must give notice at least 20 days in advance of a Commission hearing at which the matter will be heard. (Rule 507.a.). Notice requirements for specific types of applications are in Rule 507.b. Generally, notice must adhere to the requirements of § 34-60-108(4), C.R.S.:

      i. Mailing to the last known mailing address of the person to be given notice or by personal service.

      ii. Publication at least 10 days prior to the hearing in a newspaper of general circulation in the city and county of Denver and in a newspaper of general circulation in the county where the land affected, or some part thereof, is situated.

iii. Contents of the notice: the time and place at which the hearing will be held, the time within which protests to the granting of a petition shall be filed if a petition has been filed, and the purpose of the proceeding. The notice must also be signed by the Secretary of the Commission.

4. Agency regulating air emissions: Colorado Department of Public Health and the Environment (CDPHE), Air Pollution Control Division, Air Quality Control Commission.

5. Agency regulating water quality: Colorado Department of Public Health and the Environment (CDPHE), Water Quality Control Division, Water Quality Control Commission.

License

1. License required: Colorado does not require licensing of operators. Instead, all producers, operators, transporters, refiners, gasoline or other extraction plant operators, and initial purchasers must register via a Form 1 Registration for Oil and Gas Operations. (Rule 302.a.). All operators must maintain general liability insurance in the minimum amount of $1,000,000 per occurrence, with the Commission as a "certificate holder." (Rule 708)

2. Conditions of license: N/A

Bond/Surety

1. Purpose of surety: The purpose of financial assurance is to ensure the performance of an operator's obligations under the Act and Rules.

2. Plugging and restoration: Soil protection and plugging and abandonment financial assurance requirements are found in Rule 706. Final reclamation threshold for release of financial assurance is in Rule 1004.c.

3. Compliance bond required: Prior to oil and gas operations, an operator shall be properly bonded in accordance with the 700 Series Rules.

4. Types of surety accepted: COGCC accepts the following: 1) cashier's checks payable to COGCC, 2) fully executed surety bonds, or 3) CDs set up as public fund accounts from an eligible public depository bank.

5. Conditions of bond: Release of bond contingent upon operator's compliance with all rules and regulations of the Commission.

   a. Amount per well: Rule 706.a. requires a $10,000 bond for wells less than 3,000 feet in total measured depth and $20,000 for wells greater than or equal to 3,000 feet in total measured depth.

Rule 703 financial assurance for surface owner protection also applies for a permit to drill, deepen, re-enter, or recomplete: $2,000 bond is required for non-irrigated lands, or $5,000 bond is required for irrigated lands. An approved surface use agreement may be accepted in lieu of bonds.

Rule 712 requires operators of Class II Commercial Underground Injection Control (UIC) wells to provide a $50,000 financial assurance for each facility.

Other COGCC specific bonding requirements are set forth in Rule 704 for Centralized E&P Waste Management Facilities and Rule 705 for Seismic Operations.

b. Amount of blanket bond: Rule 706.b. requires a $60,000 bond for the drilling and operation of greater than 4 wells (and up to 99 wells) and a $100,000 bond for 100 or more wells.

Rule 703 allows a statewide $25,000 blanket surface bond for a permit to drill, deepen, re-enter or recomplete a well, regardless if the surface is irrigated or non-irrigated land.

Land Leasing Information

**Note: COGCC is not involved in mineral leases. Operators submit descriptions of leased lands along with the Form 2, Application for Permit to Drill, but not details of the lease. The State Board of Land Commissioners manages state lands and minerals and has provided responses to the questions below.

1. Leasing method: Leasing is by competitive bid and is accomplished via oral and online auctions.

2. Notice method: Notices are posted on the State Board of Land Commissioners website and at regional offices. Additional notices are distributed through industry publications and an industry mailing list.

3. Minimum bidding $ (per acre): $2.50 per acre is the minimum bid.

4. Qualification of the bidder: Bidders must have a “Certificate of Good Standing” issued by the Secretary of State, and Articles of Incorporation including a list of entities that have authority to bind the company.

5. State statutes: § 36-1, C.R.S., Natural Resources, Public Lands and Rivers, State Board of Land Commissioners.

6. Maximum acres: There is no maximum acreage that can be leased by an entity.

7. Royalty rates: The standard royalty rate is 16.67%.

8. Agency in control of leasing: State Board of Land Commissioners, 1127 Sherman Street, #300, Denver, CO 80203. Phone: (303) 866-3454

Setbacks

Four categories of rules: 100 Series: Definitions; 300 Series: Drilling, Development, Producing and Abandonment; 600 Series: Safety; and 800 Series: Aesthetic and Noise Control.

The 100 Series- Definitions:

- Designated Setback Location – includes any Oil and Gas Location within, or proposed to be constructed within, a Buffer Zone Setback (1,000 feet), Exception Zone Setback (500 feet), within 1,000 feet of a High Occupancy Building Unit, or within 350 feet of a Designated Outside Activity Area, as referenced in Rule 604.
- Designated Outside Activity Area – Outdoor venue or recreation area designated for special consideration by the Commission at a public hearing.
- Building Unit – includes Residential Building Units, 5,000 sq. ft. commercial areas, and 15,000 sq. ft. warehouses.
- Residential Building Unit – Designed for use as a place of residency.
- High Occupancy Building Unit – Facilities as defined by Colorado Revised Statutes: schools, nursing facility, hospitals, life care institutions and correctional facilities serving 50, or an operating child care center serving 6 or more.
- Urban Mitigation Area – 22 Building Units within a 1,000 foot radius of proposed location, or 11 Building Units within semi-circle of 1,000 foot radius.

The 300 Series- Drilling, Development, Producing and Abandonment. (Rules 305, 306):

Notification to neighbors and local governments are required when wells are proposed to be less than 1,000 feet from an occupied building. Neighbors and local governments are encouraged to meet with operators to discuss plans and options and may also provide input into the permitting process regarding potential additional mitigation measures.

The 600 Series- Safety and Nuisance:

- 150 foot setback required from a surface property line. (Rule 603.a(2)).
- 200 foot setback required from buildings of any kind, public roads, major above-ground utility lines, or railroads. (Rule 603.a(1)).
- 350 foot setback required from the boundary of a Designated Outside Activity Area. (Rule 604.a(4)).
- 500 foot Exception Zone setback is required from a Building Unit. Additional mitigation requirements for Urban Mitigation Areas. (Rule 604.a(1)).
- 1,000 foot Buffer Zone setback from a Building Unit. (Rule 604.b(2)).

- 1,000 foot High Occupancy Building setback from High Occupancy Building Units. (Rule 604.b(3)).

These setbacks are in addition to those required for spacing as set forth in Rule 318. An operator may only locate a well or production facility less than these setbacks if the following requirements are met:

- Within an Exception Zone setback within an Urban Mitigation Area: The operator must: (1) submit a waiver from each Building Unit owner within 500 feet from the proposed location or obtain a variance pursuant to Rule 502; (2) certify it has complied with the consultation requirements in Rules 305.a., 305.c., and 306.e.; and (3) have a Form 2 or 2A that contains mitigation measures as conditions of approval. Or the location must be approved as part of a Comprehensive Drilling Plan. (Rule 604.a(1)A).
- With an Exception Zone setback outside of an Urban Mitigation Area or the Buffer Zone setback: The operator must (1) certify it has complied with the consultation requirements in Rules 305.a., 305.c., and 306.e.; and (2) have a Form 2 or 2A that contains mitigation measures as conditions of approval. (Rules 604.a(1)B and 604.a(2)).
- Within a High Occupancy Building setback: The operator must: (1) receive Commission approval upon an application and a hearing and (2) implement Exception Zone mitigation measures. (Rule 604.a.(3)).
- Within a Designated Outside Activity Area setback: The operator must: (1) receive Commission approval based on the totality of the circumstances and (2) implement the Buffer Zone mitigation measures. (Rule 604.a(4)).
- Within any type of setback: The operator applies for and is granted a variance under Rule 502.b. or one of the exceptions in Rule 604.b. applies.

Spacing

1. Spacing requirements:

   a. Density: Well density requirements vary by Basin and are also affected by Commission orders. Generally, there can be approximately one well within each 40 acre quarter-quarter, as a result of the lineal spacing requirements (Rule 318.a. and Rule 318.b.). Rule 318A details special rules for the Greater Wattenberg Area; Rule 318B for Yuma and Phillips County.

   b. Lineal:

      i. Wells 2,500 feet or greater in depth: Must be located no less than 600 feet from any lease line, and not less than 1,200 feet from any other producible or drilling oil or gas well when drilling to the same source of supply. (Rule 318.a.).

      ii. Wells less than 2,500 in depth: Must be located not less than 200 feet from any lease line, and not less than 300 feet from any other producible oil or gas well, or drilling well when drilling to the same source of supply. (Rule 318.b.).

2. Exceptions:

    a. Basis:

    An exception may be granted for geologic, environmental, topographic, or archaeological conditions, irregular sections, a surface owner request, or for other good cause shown. (Rule 318.c.).

    b. Approval:

    An exception can be approved in the following ways: (1) a waiver is signed by the lease owner toward whom the well location is proposed to move or other impacted party; (2) a waiver cannot be obtained from all parties, no party objects to the location, and the operator applies for a variance under Rule 502.b. to be granted by the Director; or (3) if parties object to a location, the operator may apply for a Commission hearing on the exception location and the Commission may grant the exception. (Rule 318.c.).

Pooling

1. Authority to establish voluntary: To prevent or to assist in preventing waste, to avoid the drilling of unnecessary wells, or to protect correlative rights, the Commission, upon its own motion or on a proper application of an interested party, but after notice and hearing, has the power to establish drilling units of specified and approximately uniform size and shape covering any pool. (§ 34-60-116(1), C.R.S.).

2. Authority to establish compulsory: If pooling cannot be accomplished voluntarily, the Commission, upon the application of any interested person, may enter an order pooling all interests in the drilling unit. (§ 34-60-116(6), C.R.S.).

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: The COGCC can consider the application of any interested person to hold a hearing to consider the need for the operation as a unit of one or more pools. It will enter a unitization order if it finds that (1) such operation is necessary to increase the ultimate recovery of oil or gas, and (2) the value of the estimated recovery of oil or gas exceeds the estimated additional cost incident to conducting such operations. (§ 34-60-118(2)-(3), C.R.S. and Rule 530).

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

a. Working interest: 80%. § 34-60-118(5), C.R.S.

b. Royalty interest: 80%. § 34-60-118(5), C.R.S.

Drilling Permit

1. Permits required for:

   a. Drilling a producing or service well: A Form 2 Application for Permit to Drill (Rule 303.a.) and Form 2A Location Assessment (Rule 303.b.) are required before drilling or re-entering a well. In general, Form 2 specifies downhole conditions; Form 2A relates to surface conditions. Every well requires a Form 2; a Form 2A may cover a multi-well pad or a facility such as a tank battery that does not include a well.

   b. Seismic drilling: Form 20 Notice of Intent to Conduct Seismic Operations does not result in a "permit", but proposed work must be approved prior to commencement of shothole drilling or recording operations. (Rule 333.a.).

   c. Recompletion: Recompletions are not considered separately from other drilling permits under the Rules. (Rule 303.a.). A Form 2A may be required depending on the need to expand the presently approved area of disturbance. (Rule 303.b.).

   d. Plugging and abandoning: Form 6 Well Abandonment Report is not a "permit", but COGCC must approve planned abandonment procedures prior to initiation of work. A Form 6 Subsequent Report of Abandonment must be filed to report work performed and approved by COGCC prior to release of any applicable bonds. (Rule 311, 319).

2. Permit fee:

**Note: COGCC does not require permit fees. Staff costs are covered by the Oil and Gas Conservation levy ("mill levy") and other funding mechanisms. (Rule 310, § 34-60-122(1)(a), C.R.S.). However, the Act allows COGCC to impose a permit fee of less than $200. (§ 34-60-106(1)f, C.R.S.). Rule 303.a(4) references a fee schedule shown in Appendix III to the Rules, but the fee amount shown in Appendix III is $0.

   a. Drilling: N/A

   b. Seismic drilling: N/A

   c. Recompletion: N/A

   d. Plugging and abandoning: N/A

3. Require filing report of work performed:

- Form 5 Drilling Completion Report is required within 60 days of rig release after drilling, sidetracking, or deepening a well to total depth. This Form documents basic information about the wellbore, including physical surface location, total depth, spud date, casing and cement, and perforated intervals. Directional surveys, logs, and other test reports are required to be submitted with this form. (Rule 308A.b(1)).

- Form 5A Completed Interval Report is required within 30 days after a formation is completed; temporarily or permanently abandoned; recompleted, reperforated, or restimulated; or commingled. (Rule 308B). Fracture stimulations must also be reported to Fracfocus.org. (Rule 205A.b(2)A).

- Form 6 Well Abandonment Report is required within 30 days after a well has been plugged and abandoned. This report includes description of material left in the hole, materials used for plugging and independent verification of plugging. (Rule 311).

- Form 20A Completion Report for Seismic Operations is required within 60 days after completion of the project. A map is required to identify receiver lines, energy source lines, and shotholes. Documentation of the plugging of shotholes is also required. (Rule 333.d.).

- Form 4 Sundry is used at the direction of staff in situations where no other form applies.

4. Sundry notices used:

   - Form 4 Sundry is used for general, technical and environmental sundry information. (Rule 307, Appendix I). COGCC has a number of other forms for transmitting specific information that might be classified as "sundry" in other jurisdictions. (See Appendix I to the Rules for descriptions; COGCC's website cogcc.state.co.us, "Regulation" page under "Forms", for electronic versions of the Forms). Some of the operations for which a Form 4 is required include:

     - Changes to location, well status, objective formation, or casing and cementing program after permit is issued. (Rules 303.d., 707.b.).

     - Notice of intent or data related to various technical and environmental projects such as flaring, bradenhead monitoring, and E&P waste management. (Rules 341, 405, 907.a(3), 911, 912).

     - Notice that interim and final reclamation is complete. (Rule 1003, 1004).

     - Request for site specific exceptions to ground water sampling. (Rules 609.c., 318A.e(4)).

- Request for confidential status. (Rule 308C).

- Form 42 Field Operations Notice is also used by operators to notify COGCC of commencement or completion of a number of activities. Rule 316C lists all of the activities that require a Form 42:

    - Notice of Intent to Conduct Hydraulic Fracturing Treatment
    - Notice of Spud
    - Notice of Construction or Major Change
    - Notice to Run and Cement Casing
    - Notice of Formation Integrity Test
    - Notice of Mechanical Integrity Test
    - Notice of Bradenhead Test
    - Notice of Blow Out Preventer Test
    - Notice of Site Ready for Reclamation Inspection
    - Notice of Pit Liner Installation
    - Notice of Significant Lost Circulation
    - Notice of High Bradenhead Pressure During Stimulation
    - Notice of Completion of Form 2/2A Permit Conditions
    - Notice of Inspection Corrective Actions Performed

Vertical Deviation

1. Regulation requirement: A.A.C. R12-7-115. (Notice and hearing required).

    a. A directional survey is necessary when: Anytime a wellbore is planned to deviate from vertical, a proposed Deviated Drilling Plan is required with the Form 2. (Rule 321). Anytime a Directional Survey has been run, it must be submitted with the Form 5 Final Drilling Completion Report. (Rule 308A.b.).

    b. Filing of survey required: A proposed Deviated Drilling Plan and Directional Data template are required with the Form 2. The actual Directional Survey and Directional Data template are required with the Form 5. The required data for both of these forms includes offset coordinate listings for corresponding depths and wellbore deviation plots, both plan and side view. (Rule 321, 308A.b.).

c. Format of filing: The Deviated Drilling Plan and Directional Survey are submitted as a document file through COGCC's eForm application. The Directional Data template for both is a Microsoft Excel spreadsheet formatted for direct input in to COGCC's database and GIS mapping software. The result is a map view of projected and actual wellbore paths. (See cogcc.state.co.us, "Regulation" page, under "Policies," "COGCC Policy for Electronic Submittal of Directional Surveys and Plans" (1/01/2012)).

Casing and Tubing

1. Minimum amount required:

    a. Surface casing:

        i. *Surface casing where subsurface conditions are unknown:* Must be run to reach a depth below all known or reasonably estimated utilizable domestic fresh water levels and to prevent blowouts or uncontrolled flows, and shall be of sufficient size to permit the use of a string or strings of casings. It also must be set in or through an impervious formation and cemented by pump and plug or displacement or other approved method with sufficient cement to fill the annulus to the top of the hole. (Rule 317.f.).

        ii. *Surface casing where subsurface conditions are known:* Must be set and cemented to the surface by the pump and plug or displacement or other approved method at a depth and in a manner sufficient to protect all known fresh water and to ensure against blowouts or uncontrolled flows. (Rule 317.g.).

    b. Production casing: The casing program adopted for each well must be so planned and maintained as to protect any potential oil or gas bearing horizons penetrated during drilling from infiltration of injurious waters from other sources, and to prevent the migration of oil, gas or water from one horizon to another, that may result in the degradation of ground water. A Sundry Notice, Form 4, including a detailed work plan and a wellbore diagram, are required prior to any routine or planned casing repair operations. During well operations, prior verbal approval for unforeseen casing repairs followed by the filing of a Sundry Notice, Form 4, after completion of operations is acceptable. (Rule 317.e.).

2. Minimum amount of cement required:

    a. Surface casing: Cement must be of adequate quality to achieve a minimum compressive strength of at least 300 psi after 24 hours and 800 psi after 72 hours measured at 95°F and 800 psi. The cement must be pumped behind the production casing 200 feet above the top of the shallowest known producing horizon. All surface casing shall be cemented with a continuous column from the bottom of the casing to the surface. The cement must also be pumped behind the intermediate casing to at least 200 feet above the top of the shallowest known production horizon. (Rule 317.i.).

b. Production casing: Cement must be of adequate quality to achieve a minimum compressive strength of at least 300 psi after 24 hours and 800 psi after 72 hours measure at 95°F and 800 psi. The cement must be pumped behind the production casing 200 feet above the top of the shallowest known producing horizon. All fresh water aquifers that are exposed must be cemented behind the production casing. (Rule 317.j.).

c. Setting time:

   i. Surface and intermediate casing: Cement is required to set a minimum of 8 hours, or until 300 psi calculated compressive strength is developed, whichever occurs first, prior to commencing drilling operations. (Rule 317.i.).

   ii. Production casing: Cement is required to set 72 hours or until 800 psi calculated compressive strength is developed, whichever occurs first, prior to commencing drilling operations. (Rule 317.j.).

3. Tubing requirements

   a. Oil wells: All tubing is required to have working pressure rating suitable for the maximum anticipated surface pressure and in good working condition according to generally accepted industry standards. (Rule 603.e(5)).

   b. Gas wells: All tubing is required to have working pressure rating suitable for the maximum anticipated surface pressure and in good working condition according to generally accepted industry standards. (Rule 603.e(5)).

Hydraulic Fracturing

1. Permitting: The COGCC does not have permit requirements specific to hydraulic fracturing. Wells undergoing hydraulic fracturing treatment are subject to the same permitting requirements outlined above, in addition to subsequent reporting requirements outlined in (2).

   a. Before drilling: N/A

   b. Before fracking: N/A

    c. How long before: N/A

2. Reporting requirements: Details regarding any type of well stimulation must be reported on Form 5A Interval Completion Report. Hydraulic fracturing chemical disclosure is reported on Fracfocus.org. (Rule 205A). Operators must provide a Form 42 Notice of Intent to Conduct Hydraulic Fracturing Treatment at least 48 hours prior to the treatment. (Rule 316C.a.).

3. Source water requirements: Form 5A Interval Completion Report, requests information on the volume of water used, the volume of water recovered, and whether the water used was fresh or recycled. (See cogcc.state.co.us, "Regulation" page under "Forms"). The operator is responsible for verifying that the water source is under a valid water right or permit allowing for industrial use approved by the Colorado Division of Water Resources.

4. Mechanical integrity:

    a. Cementing log required: Operators are required to run a cement bond log on all production casing or, in the case of a production liner, the intermediate casing, when these casing strings are run. These logs are submitted with the Form 5 Final Drilling Completion Report. (Rule 317.p.).

    b. Pressure testing:

        i. Injection Wells: A pressure test with liquid or gas at a pressure of not less than 300 psi or the maximum injection pressure, whichever is greater, and not more than the maximum injection pressure. (Rule 326.a.1(A)).

        ii. Shut-in and Temporarily Abandoned Wells: A pressure test with isolation of the wellbore with a bridge plug or similar approved isolating devise set 100 feet or less above the highest perforations and a pressure test of not less than 300 psi surface pressure. (Rule 326.b.(3) and 326.c.(3)).

    c. Pressure monitoring:

        i. Injection Wells: As option to performing a Mechanical Integrity Test (MIT) on an injection well the casing-tubing annulus pressure may be monitored and reported to the Director on a monthly basis for 60 months after the initial pressure test. (Rule 326.a.1(B)).

        ii. Shut-in Wells: A MIT is required to be performed on each well within 2 years of the well becoming shut-in and within 5 years of the initial MIT. (Rule 326.b.).

   iii. Temporarily Abandoned Wells: An MIT is required 30 days after the well is temporarily abandoned and within 5 years of an initial MIT (Rule 326.c.).

d. Blowout preventer required: An operator must take all necessary precautions to keep a well under control while being drilled or deepened. The working pressure of any Blowout Prevention Equipment (BOPE) must exceed the anticipated surface pressure to which it may be subjected, assuming a partially evacuated hole with a pressure gradient of 0.22 psi/ft. The Director has the authority to designate specific areas as requiring a specific BOPE or condition any permit as requiring a specific BOPE. (Rule 317.a.).

5. Disposal of flowback fluids:

**Note: Produced water is regulated by COGCC as an Exploration & Production waste. (100-Series Rules, Rule 907.c.). Neither "produced water" nor "flowback" are defined in COGCC rules.

a. Retaining pits: Flowback pits are included in the definition of Drilling Pits (100 Series). Flowback fluids are not allowed in fresh water storage pits (Rule 604.c.(2)B(iv)).

b. Tanks: COGCC tank requirements are found in the Rules under the appropriate topic such as containment (Rules 603, 604), marking (Rule 210), painting (804) and odor (805).

c. Approved discharge to surface water: Colorado Department of Public Health and Environment (CDPHE) has the authority to regulate discharges in Colorado under the Water Quality Control Act. Any discharge of liquid wastes to waters of the state would be under permit from CDPHE. COGCC Rule 907.c(2)E refers to these permits.

d. Underground injection: Produced water may be disposed of in Class II injection wells per Rule 325. Commercial disposal wells must also satisfy financial assurance (Rule 704) and Centralized E&P Waste Management Facility (Rule 908) criteria.

6. Chemical disclosure requirement:

a. Mandatory: Yes, subject to limited exceptions. A vendor, service provider, or operator is not required to disclose chemicals that: qualify as trade secrets (Rule 205A.d.), or chemicals that are: 1) not disclosed to the vendor, service provider, or operator; 2) not intentionally added to the hydraulic fracturing fluid; or 3) incidentally occurring or unintentionally present in trace amounts. (Rule 205A.c.).

b. Where disclosed: Chemical disclosure registry (Fracfocus.org).

c. When disclosed (pre-fracking, post-fracking, both): Post-fracturing (Rule 205A.b.).

d. Time limit to disclose:

  i. For vendors and service providers: Within 30 days following the conclusion of the hydraulic fracturing treatment and in no case later than 90 days after the commencement of the treatment. (Rule 205A.b(1)).

  ii. For operators: Within 60 days following the conclusion of the hydraulic fracturing treatment and in no case later than 120 days after the commencement of the fracturing (Rule 205A.b(2)).

e. Information required to be disclosed: Voluntary to FracFocus.org.

  i. The operator's name and date of the hydraulic fracturing treatment.

  ii. Well Information: The county in which the well is located, the API number for the well, the well name and number, the longitude and latitude of the wellhead, and the true vertical depth of the well.

  iii. The total volume of water used in the treatment and total volume of base fluid if something other than water.

  iv. Additives: Each hydraulic fracturing additive used in the fluid and the trade name, vendor, and brief descriptor of the intended use of function of each hydraulic fracturing additive in the hydraulic fracturing fluid.

  v. Chemical Information: Each chemical intentionally added to the base fluid; the maximum concentration, in percent by mass, of each chemical intentionally added to the base fluid; and the chemical abstract service number for each chemical intentionally added to base fluid, if applicable.

f. Trade secret protection:

  i. Operators, service providers, and vendors are not required to disclose trade secrets to the chemical disclosure registry. (Rule 205A.d.).

  ii. If an operator, service provider, or vendor claims that the identity of a chemical and/or the concentration of the chemical are trade secrets, they must file a Form 41 claim of entitlement to withhold the information. (Rule 205A.b(2)B).

g. Required disclosure to health/emergency personnel: Operators, service providers, and vendors must identify the identity and concentration of chemicals claimed to be subject to trade secret protection to: 1) any health professional who requests such information in writing and executes a confidentiality agreement (Form 35) (Rule 205A.b(5)), or 2) to the Director upon receipt from the Director stating that such information is necessary to responds to a spill or release. The Director may then disclose this information to any Commissioner, the relevant county public health director, or to CDPHE's Chief Medical Officer upon request from that individual. (Rule 205A.d(2)).

Underground Injection

1. Agencies that control the underground injection of fluid by well class:

   a. *Class II UIC Wells:*

      COGCC was granted primacy for Class II Oil and Gas Related injection wells in a Memorandum of Agreement with U.S. EPA Region 8 on August 31, 1989. (See cogcc.state.co.us, "Government" page, "Federal", "MOUs with Federal Agencies" for a copy of this agreement).

      Disposal wells are regulated under Rule 325. They require a Form 31 Underground Injection Formation Permit Application, a Form 33 Injection Well Permit Application, and a Form 26 Source of Produced Water for Disposal. In addition, the permit review process is defined by Rule 303 Permit to Drill, Rule 324B Exempt Aquifers, Rule 326 Mechanical Integrity Testing, and Rules 706, 707, and 712, which identify Financial Assurance requirements.

      Enhanced recovery injection wells are a part of the COGCC Class II program and are further regulated by the 400 Series Rules.

   b. *Class I, III, IV, and VI Wells:*

      The Environmental Protection Agency Region 8 has jurisdiction over Class I, III, IV, V, and VI wells in Colorado.

Completion

1. Completion report required:

   a. Time limit: A Form 5 Preliminary Drilling Completion Report is due within 10 days if drilling is suspended prior to reaching total depth and does not recommence within 90 days. (Rule 308A.a.(1)). A Form 5 Final Drilling Completion Report is required within 60 days of rig release after drilling, sidetracking, or deepening a well to total depth. (Rule 308A.b.(1)).

b. Where submitted: The preferred method is to file through COGCC electronic forms management system, eForm, available on the COGCC website cogcc.state.co.us, “Regulation” page under “Forms”. The form may also be submitted as a document via mail or email to the COGCC Denver office.

2. Well logs required to be filed:

**Note: Rule 317.p. requires each well to have at least two logs: (1) a resistivity log with gamma-ray or other logs to describe the stratigraphy of the wellbore, and (2) a cement bond log. Although Rule 308A requires operators to submit all logs in paper and digital form, the paper format was removed by policy. (See cogcc.state.co.us, “Regulations” page under “Policies”, “Log Submittal Policy (12/23/2012)).

a. Time limit: Well logs must be submitted within 30 days of setting production casing, plugging a dry hole, or changing wellbore configuration.

b. Where submitted: Any paper copies should be mailed to COGCC Denver office; electronic submittals should follow requirements outlined in the Log Submittal Policy.

c. Confidential time period: If an operator submits a request for confidentiality via a Form 4 Sundry Notice, then the logs, Drilling Completion Reports, and Completed Interval Reports will be confidential for six months after the date of completion. (Rule 308C).

d. Available for public use: All logs and other documents associated with a particular well are linked by API number and are available in digital format on the COGCC’s website cogcc.state.co.us, “Data” page. Paper copies are now stored in an off-site facility and require advance request for retrieval.

e. Log catalog available: No separate log catalog is available. COGCC’s database is searchable by API number, location, operator name, well name, and other parameters. The database is also linked to COGCC’s interactive map, under the “Maps” page on the COGCC website.

3. Multiple completion regulation:

COGCC does not have a rule that specifically addresses multiple completions. Issuance of the Permit to Drill is approval to produce from the formation(s) listed in the Form 2 Application. All formations shown on the Form 5A, Completed Interval Report, must have been approved on the Permit prior to drilling and completing the well.

4. Commingling in well bore:

Commingling in the wellbore is encouraged and may be conducted at the discretion of an operator, unless excluded by a Commission Order. These orders may be specific to well, geologic formation, geographic areas, or field. (Rule 322). There are several formations that are commonly comingled which have been defined as common sources by policy. (See cogcc.state.co.us, "Regulation", "Policy", "APDs in Areas with Designated Sources of Supply (3/9/2004)").

Oil Production

**Note: Oil is defined in the Act, § 34-60.103(6.5), C.R.S., as "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." Rule 328 contains requirements for oil measurement.

Gas is defined in the Act, § 34-60.103(5), C.R.S., as "all natural gases and all hydrocarbons not defined in this section as oil." Rule 329 contains requirements for gas measurement.

Using these definitions, wells are classified based on the initial gas/oil ratio reported on the Form 5A Completed Interval Report.

1. Definition of an oil well: A gas/oil ratio less than 15,000 measured as cubic feet per barrel.

2. Potential tests required: No test methods are specified but the test method must be reported. The time interval of the test is required on the Form 5A Completed Interval Report, as is a 24-hour calculation based on that result.

    a. Time interval: N/A

    b. Witness required: N/A

3. Maximum gas-oil ratio:

    COGCC does not have a rule limiting gas-oil ratios. Some field orders include specific ratios based on reservoir characteristics.

    a. Provision for limiting gas-oil ratio: No

    b. Exception to limiting gas-oil ratio: No

4. Bottom-hole pressure test reports required: Bottom-hole pressure tests are not required for oil wells.

    a. Periodical bottom-hole pressure surveys: No

5. Commingling oil in common facilities: Volume of oil shall be measured and recorded prior to removal from the lease or production unit (Rule 328). There is no rule regarding commingling oil at the surface.

6. Measurement involving meters: Requirements for calibration, accuracy and acceptable corrections are found in Rule 328.

7. Production reports:

   Form 7 Operator's Monthly Report of Operations is required by Rule 309.

   a. By lease: No.

   b. By well: The Form 7 requires reporting by well and by formation within the well in the case of multiple completions or comingling.

   c. Time limit: The first report must be filed within 45 days after the month in which production occurs, and reporting continued until the month after a well has been plugged. Because this is a Report of Operations, the report is required all months prior to plugging, including those for which the status is shut-in or temporarily abandoned. (Rule 309, Rule 707).

Gas Production

1. Definition of a gas well: A gas/oil ratio greater than 15,000 is measured as cubic feet per barrel.

2. Pressure base: 14.7 psia @ 60 degrees F.

3. Initial potential tests: No test methods are specified but the test method must be reported. The time interval of the test is required on the Form 5A Completed Interval Report, as is a 24-hour calculation based on that result.

   a. Time interval: N/A

   b. Witness required: N/A

4. Bottom-hole pressure test reports required: Bottom-hole pressure tests are required for certain coal bed methane wells per Rule 608.d.

   a. Periodical bottom-hole pressure surveys: N/A

5. Commingling of gas in common facilities: Volume of gas shall be measured and recorded prior to removal from the lease or production unit. (Rule 329). There is no rule regarding commingling gas at the surface.

6. Measurement involving meters: Requirements for installation, calibration, accuracy, and gas quality are found in Rule 329.

7. Production reports:

   a. By lease: No.

   b. By well: The Form 7 requires reporting by well and by formation within the well in the case of multiple completions or comingling.

   c. Time limits: The first report must be filed within 45 days after the month in which production occurs, and reporting continued until the month after a well has been plugged. Because this is a Report of Operations, the report is required all months prior to plugging, including those for which the status was shut-in or temporarily abandoned. (Rule 309, Rule 707).