

2007

**Summary of State Statutes
and Regulations
for Oil and Gas Production**

INTERSTATE OIL AND GAS COMPACT COMMISSION

**SUMMARY OF STATE STATUTES AND REGULATIONS
FOR OIL AND GAS PRODUCTION**

2007

THIS UPDATE REPLACES ALL PAGES PREVIOUSLY INSERTED.

PLEASE RETAIN THE STATE DIVIDERS FOR FUTURE USE

ALABAMA

Administration

1. State agency: State Oil and Gas Board, 420 Hackberry Lane, P.O. Box 869999, Tuscaloosa, AL 35486-6999. Phone (205) 349-2852; Fax (205) 349-2861. Our URL is <http://www.ogb.state.al.us>. Staff e-mail addresses are: *@ogb.state.al.us (*Insert staff person's first initial and last name or insert "info" for general information).
2. Docketing procedure: Regular Board hearings are generally held every 4 to 6 weeks. For a hearing schedule check our Web site. Meetings are held in the Board Room of the State Oil and Gas Board building located on the campus of the University of Alabama in Tuscaloosa, unless otherwise specified in the Board's Notice of Meeting. The petitioner shall file a proposed notice for publication with the Board accompanied by a written request for approval to publish the notice for hearing on a specific scheduled hearing date of the Board not less than twenty three (23) days prior to the meeting at which the petition shall be heard. The Supervisor will review the notice and provide petitioner an approved notice for publication including the newspaper(s) in which the notice should be published. Petitioner shall publish the notice in the newspaper at least 10 days prior to the hearing. When a petition pertains to specific land, notice of such petition shall be published once in the newspaper with the largest circulation in the county or counties where the affected land lies. When a petition pertains to a matter or statewide application, notice of such petition shall be published in the newspaper with the largest circulation in Jefferson and Mobile Counties. Upon filing a notice petitioner shall submit a \$150 filing fee. Five copies of all exhibits to be presented as evidence must be submitted to the Board at least 14 days prior to the hearing. Affidavits and petitions must be filed at least 14 days prior to the hearing. One filing fee may be submitted for all notices filed by the same petitioner that relate to the same subject matter.
 - (a) Emergency orders: Emergency action may be taken by the Board without a public hearing. The emergency order will remain in force until relief is granted after notice and hearing, except that such emergency order will not remain in force longer than 45 days.
 - (b) Notice: Additionally, the petitioner must give notice by first class mail when the petition involves an exceptional location, establishing a drilling or production unit, amending or reforming an established drilling or production unit, establishing or amending allowables, force pooling, or compulsory unitization, or when the Board determines that notice to certain parties is necessary because of the particular petition filed. The notice of the hearing is posted on the Web site of the Office of the Alabama Secretary of State.

Bond

1. Compliance bond required: Rule 400-1-2-.03 (onshore), Rule 400-2-2-.03 (offshore), 400-3-2-.03 (coalbed), and 400-6-3-.01 (underground storage facility for a solution-mined cavity and storage well).
2. Conditions of bond: Compliance with the Rules and Regulations, proper plugging, and restoration of location.
 - (a) Amount per well:

<u>Onshore</u>	<u>Depth (ft.)</u>	<u>Amount</u>	<u>Depth (ft.)</u>	<u>Amount</u>
&	0 - 5,000	\$ 5,000	15,001-20,000	\$30,000
<u>Coalbed-</u>	5,001 -10,000	\$10,000	Greater than 20,000	\$50,000
	10,001 -15,000	\$15,000		
<u>Offshore -</u>	<u>Depth (ft.)</u>	<u>Amount</u>		
	0 - 6,000	\$100,000		
	Greater than 6,000	\$500,000		

There is a \$100,000 bond for an underground storage facility for a solution-mined cavity and storage well.

- (b) Amount of blanket bond: Onshore & Coalbed - \$100,000.
Offshore - \$1,000,000.

- (c) The Board after notice and hearing may require a different amount of bond.

Spacing

1. Spacing requirements: Rule 400-1-2-.02 (onshore); Rule 400-2-2-.02 (offshore) Rule 400-3-2-.02 (coalbed methane).

- (a) Density:

Onshore

<u>Oil wells-</u>	40-acre units 160-acre units (Supervisor may require written justification)
<u>Gas wells-</u>	40-acre units. 160-acre units (Supervisor may require written justification) 320-acre units (Fayette, Lamar, Pickens and Tuscaloosa Counties only) 640-acre units (Baldwin, Mobile, Escambia and Washington Counties only) (Supervisor may require written justification)

All well units shall consist of governmental sections or divisions; however, upon receipt of written justification units consisting of 40, 160, 320, and 640 contiguous acres other than a governmental section or division may be approved by the Supervisor or may be referred to the Board for notice and hearing.

Offshore (for offshore wells in an offshore tract)

<u>Deeper than 6,000 feet-</u>	Entire offshore tract, $\frac{3}{4}$ tract, or $\frac{1}{2}$ tract (where operator owns or controls 100% of working interest in entire offshore tract)
<u>Deeper than 6,000 feet-</u>	Up to 1,400 acres (<u>irregular offshore tracts</u>)
<u>6,000 feet or shallower-</u>	$\frac{1}{2}$ offshore tract or $\frac{1}{4}$ tract (where operator owns or controls 100% of working interest in entire offshore tract)
<u>6,000 feet or shallower-</u>	Quarter Quarter tract for regular tract and up to 360 acres for irregular tracts
<u>For offshore wells not in an offshore tract-</u>	40-acre units 160-acre units (Supervisor may require written justification) 640-acre units (Baldwin and Mobile Counties, only) (Supervisor may require written justification)

All well units shall consist of governmental sections or divisions; however, upon receipt of written justification units consisting of 40, 160, and 640 contiguous acres other than a governmental section or division may be approved by the Supervisor or may be referred to the Board for notice and hearing.

Coalbed gas- 40 acres

- (b) Lineal:

Onshore- 40 acre units - 330 feet from every exterior boundary
& 160 and 320 acre units - 660 feet from every exterior boundary
Coalbed 640 acre units - 1,320 feet from every exterior boundary

Offshore Wells deeper than 6,000 feet – 1,320 feet from every exterior boundary and 500 feet from the State/Federal boundary

Wells shallower than 6,000 feet – 660 feet from every exterior boundary and 500 feet

- from the State/Federal boundary
2. Exceptions: Rule 400-1-2-.02 (2) (g) (onshore), 400-2-2-.02(4) (offshore), 400-3-2-.02(2) (d) coalbed.
 - (a) Basis: If the well would be nonproductive or if topographical or other conditions make the drilling in compliance with the spacing requirements unduly burdensome. See Section 9-17-12(c) of the Code of Alabama (1975).
 - (b) Approval: After notice and hearing.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: No.
 - (c) Recompletion: No, unless well has been plugged and abandoned.
 - (d) Plugging and abandoning: No.
2. Permit fee:
 - (a) Drilling: \$300 (for a coalbed methane gas well an operator must file an additional \$150 to be deposited in the Alabama Coalbed Methane Gas Well Plugging Fund).
 - (b) Seismic drilling: No.
 - (c) Recompletion: No, unless well has been plugged and abandoned.
 - (d) Plugging and abandoning: No.
3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Rule 400-1-4-.04 (onshore), 400-2-4-.04 (offshore), and Rule 400-3-4-.04 (coalbed).
 - (a) When is directional survey necessary?

Onshore-

(1) when a well is directionally drilled, (2) when a well is drilled to a measured depth of 6,000 feet or greater, (3) when a well is expected to penetrate pore pressure gradients greater than 67 psi per hundred feet in depth, (4) when a well is expected to penetrate intervals containing hydrogen sulfide, and (5) when a well is an exceptional location and a directional survey is ordered by the Board.

Offshore-

All wells.

Coalbed-

(1) When a well is directionally drilled and (2) when a well is an exceptional location and a directional survey is ordered by the Board.

- (b) Filing of survey required? Yes, one copy filed by the operator with the Supervisor within 30 days after completion of the well.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Varies depending on proposed total depth. See Rule 400-1-4-.09 (onshore), Rule 400-2-4-.09 (offshore), and Rule 400-1-4-.09 (coalbed).
 - (b) Production casing: Sufficient depth to adequately protect the oil and/or gas bearing stratum.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulate to surface.
 - (b) Production casing: At least 500 feet above the top of the producing interval for an onshore or offshore well. For a coalbed methane gas well, at least 200 feet above the top of the producing interval.
 - (c) Setting time:

<u>Onshore-</u>	12 hours for surface, intermediate or protective, and production casing.
<u>Offshore-</u>	8 hours for conductor casing and 12 hours for all other strings of casing.
<u>Coalbed-</u>	12 hours for surface and production casing.
3. Tubing requirements:
 - (a) Oil wells:

Onshore & Offshore- All flowing wells must be produced through tubing anchored by a packer and equipped with a master valve and adequate chokes or beans to properly control the flow.

Coalbed- None.
 - (b) Gas wells: Same as (a) above.

Completion

1. Completion report required: Yes. For Onshore see Rules 400-1-4-.03, 400-1-4-.08, 400-1-4-.15, and 400-1-5-.03. For Offshore see Rules 400-2-4-.03, 400-2-4-.08, 400-2-4-.12, and 400-2-5-.03. For Coalbed see Rules 400-3-4-.03, 400-3-4-.08, 400-3-4-.15, 400-3-5-.05. Reports are submitted on Forms OGB-6, OGB-7, OGB-8, OGB-9, and OGB-11.
 - (a) Time limit: File within thirty days except for Form OGB 9 related to well test which is fifteen days.
 - (b) Where submitted: To the State Oil and Gas Board, 420 Hackberry Lane, P.O. Box 869999, Tuscaloosa, AL 35486-6999.
2. Well logs required to be filed: One copy of all logs.
 - (a) Time limit: Within 30 days after completion of the well.
 - (b) Where submitted: Same as (b) in question 1 above.
 - (c) Confidential time period: Six months from completion of well.

- (d) Available for public use: All logs are available for public use after the six months confidential period, if such logs were requested to be held confidential; otherwise, available immediately.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Rule 400-1-6-.05 (onshore) and Rule 400-2-6-.05 (offshore). None for Coalbed.
 - (a) Approval obtained: For Onshore and Offshore Supervisor approval required. For Coalbed no approval required.
 4. Commingling in well bore: Rule 400-1-6-.02 (onshore), 400-2-6-.02 (offshore), 400-3-6-.04 (coalbed).
 - (a) Approval obtained: For Onshore and Offshore approval of the Board after notice and hearing. No approval required for Coalbed.

Oil Production

1. Definition of an oil well: Oil well shall mean a well capable of producing oil from an oil pool or oil pools.
2. Potential tests required: Yes, Rule 400-1-5-.03 (Onshore), 400-2-5-.03 (Offshore), and 400-3-5-.05 (Coalbed).
 - (a) Time interval: Verbal report to the Supervisor immediately, written report on Form OGB-9 within 15 days after completion of the test.
 - (b) Witness required: At the discretion of the Supervisor.
3. Statewide allowable: No.
 - (a) Pool allowable: Yes, the allowable for each pool or field is established after notice and hearing and is specified in special field rules for each field.
 - (b) Well allowable: Until special field rules are established allowables are determined pursuant to Rule 400-1-5-.04 (Onshore) and 400-2-5-.05 (Offshore).
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: Yes.
 - (a) Provision for limiting gas-oil ratio: Rule 400-1-5-.08 (Onshore), Rule 400-2-5-.08 (Offshore), maximum gas limit of 2,000 cubic feet per barrel of oil allowable determined by the allocation formula.
 - (b) Exception to limiting gas-oil ratio: Subject to Board action after notice and hearing.
5. Bottom-hole pressure test reports required: Yes, initially pursuant to Rule 400-1-6-.03 (Onshore) and 400-2-6-.03 (Offshore). Special field rules contain provisions for submission of subsequent bottom-hole pressure tests.
 - (a) Periodical bottom-hole pressure surveys: As specified in special field rules.
6. Commingling oil in common facilities: The Board will consider commingling of production after notice and hearing.
7. Measurement involving meters: For Onshore Rule 400-1-5-.05 and 400-1-5-.06 and for Offshore Rule 400-2-5-.05 and 400-2-5-.06. In addition, certain special field rules contain rules pertaining to metering of production.
8. Production reports:
 - (a) By lease: No.

- (b) By well: Monthly production reports.
- (c) Time limit: By the 28th of the month following the month for which the production report covers.

Gas Production

1. Definition of a gas well: Gas well shall mean a well capable of producing gas from a gas pool or gas pools.
2. Pressure base 14.65 psia @ 60 degrees F.
3. Initial potential tests: Yes, Rule 400-1-5-.03 (Onshore), 400-2-5-.03 (Offshore), and 400-3-5-.05 (Coalbed).
 - (a) Time interval: Verbal report to the Supervisor immediately, written report on Form OGB-9 within 15 days after completion of the test. For initial capacity test, unless exempted by special field rules, multi-point back pressure test with results reported on Form OGB-10 within 15 days after a test has been completed. For annual capacity tests, unless otherwise exempted by special field rules, one-point back pressure with results reported on Form OGB-10A within 15 days after a test has been completed.
 - (b) Witness required: At the discretion of the supervisor.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes, for Onshore and Offshore the allowable for each pool or field is established after notice and hearing and is specified in special field rules for each field. For Coalbed, none.
 - (b) Well allowable: Until special field rules are established allowables are determined pursuant to Rule 400-1-5-.04 (Onshore) and 400-2-5-.05 (Offshore). For (Coalbed) the gas allowable is 100% of the wells capacity to produce pursuant to Rule 400-3-5-.06.
 - (c) Exempt allowable: No, except for (Coalbed) the gas allowable is 100% of the wells capacity to produce pursuant to Rule 400-3-5-.06.
5. Bottom-hole pressure test reports required: Yes, initially pursuant to Rule 400-1-6-.03 (Onshore) and 400-2-6-.03 (Offshore). Special field rules contain provisions for submission of subsequent bottom-hole pressure tests.
 - (a) Periodical bottom-hole pressure surveys: As required by special field rules.
6. Commingling of gas in common facilities: The Board will consider commingling of production after notice and hearing.
7. Measurement involving meters: For Onshore Rule 400-1-5-.07, for Offshore Rule 400-2-5-.07, and for Coalbed Rule 400-3-5-.07. In addition, certain special field rules contain rules pertaining to metering of production.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Monthly production reports.
 - (c) Time limits: By the 28th day of the month following the month for which the production report covers.

Underground Injection

1. State agencies that control the underground injection of fluids: The State Oil and Gas Board regulates all Class II injection operations in Alabama in accordance with Rule 400-4-1-.01 et seq. All other types of underground injection operations are regulated by the Alabama Department of Environmental Management.

Unitization

1. Compulsory unitization of all or part of a pool or common sources of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 66 2/3%.
 - (b) Royalty interest: 66 2/3%.

Taxation

Gas severance tax = 10.0% (2.0% production tax and 8.0% privilege tax)

Gas ad valorem tax = 0.0%

Total gas tax burden = 10.0%

Oil severance tax = 10.0% (2.0% production tax and 8.0% privilege tax)

Oil ad valorem tax = 0.0%

Total oil tax burden = 10.0%

1. Tax collecting agency: The severance tax laws are administered by the Severance Tax Section, Sales, Use & Business Tax Division of the Alabama Department of Revenue, 202 Administrative Building, Montgomery, AL 36130.
2. How tax is computed: The current tax rate of 10 percent (8 percent privilege and 2 percent production) was enacted in 1979 with the passage of Act No. 79-434. Both privilege and production taxes are computed on the gross value of hydrocarbons at the point of production. Since 1979, numerous exceptions have been granted to the 8 percent privilege tax rate. The reductions were enacted by Acts 80-708, 83-39, 83-889, 84-328, 84-660, 84-661, 84-672, 85-911, 88-601, 96-877. The Privilege Tax is set forth in the *Code of Alabama* (1975) under Title 40, Chapter 20, and the Production Tax is codified as Title 9, Chapter 17, Sections 25 through 31. The current severance tax rates and exemptions are listed below.
3. Exemptions or exceptions:
 - (a) Incremental oil or gas production from an approved enhanced recovery project on or after January 1, 1985, will be taxed at a rate of 6% (a 4% privilege tax and 2% production tax) of the gross value of said incremental oil or gas production. The State Oil and Gas Board of Alabama shall approve the qualified enhanced recovery project and the determination of the projected oil or gas production that could have otherwise been produced without the benefit of the initiation of said qualified enhanced recovery project at a hearing held pursuant to Section 9-17-7 of the *Code of Alabama* (1975), as amended, and shall notify the Alabama Department of Revenue thereof.
 - (b) All wells producing 200,000 cubic feet or less of gas per day or 25 barrels or less of oil per day will be taxed at a rate of 6% (a 4% privilege tax and 2% production tax).
 - (c) All oil and gas produced from onshore discovery wells, all oil and gas produced from onshore development wells on which drilling commenced within four (4) years of the completion date of the discovery well and producing from a depth of 6,000 feet or greater, and oil and gas produced from onshore development wells on which drilling commenced within two (2) years of the completion date of the discovery well and producing from a depth less than 6,000 feet will be taxed at a rate of 8 % (a 6 % privilege tax and 2 % production tax) of the gross value of said oil and gas at the point of production for a period of five (5) years from the date production begins from said discovery and development wells, provided, that all production to receive an 8% tax rate, which is produced from discovery wells, must be from discovery wells permitted by the State Oil and Gas Board after July 1, 1984, and that all production to receive an 8% tax rate from development wells on which drilling commenced within the required time of completion of a discovery well, which was permitted after July 1, 1984, and said development well must also have been permitted after July 1, 1984. Also, the 8% severance tax rate applicable to a discovery well or development well will be applicable to any replacement well drilled to replace the discovery well or the development well during the 8%, 5-year tax rate period for only the remainder of the said tax rate period.

- (d) All oil and gas produced by offshore production at depths greater than 18,000 feet below mean sea level will be taxed at a rate of 8% (a 6% privilege tax and 2% production tax).
 - (e) Any well which begins commercial production of occluded natural gas from coal seams after June 7, 1984, will be taxed at a rate of 4% (a 2% privilege tax and 2% production tax) of the gross value of said occluded natural gas at the point of production for a period of five years after such well begins production. (Expired June 7, 1994)
 - (f) For any well which the initial permit was issued by the State Oil and Gas Board after July 1, 1988, except a replacement well for a well for which the initial permit issued by the State Oil and Gas Board is dated before July 1, 1988, the rates for all onshore wells, unless otherwise exempted, and offshore wells greater than 18,000 feet in depth shall be taxed at a rate of 2% lower than the rate otherwise indicated (onshore: a 6% privilege tax and 2% production tax; offshore: a 4% privilege tax and 2% production tax).
 - (g) Natural gas injected for cycling, repressuring, pressure maintenance, lifting of oil, or vented or flared in connection with the production of oil shall be exempt from the 2% production tax and the 8% privilege tax. However, if any gas so injected is sold, then the gas shall not be exempt from the production or privilege tax.
 - (h) Any well for the initial permit issued by the Oil and Gas Board is dated on or after July 1, 1996, and before July 1, 2002, the applicable rate shall be reduced by 50 percent for a period of five years commencing with commercial production.
 - (i) All oil and gas produced, all leases in production, and all oil and gas under the ground on producing properties within the State of Alabama is exempt from all ad valorem taxes now levied or hereafter levied by the State of Alabama, or by any county or municipality. No additional assessment is added to the surface value of such lands by the presence of oil or gas thereunder or its production therefrom.
4. Name of tax: Severance.
 5. Statutory citation: Production Tax - Section 9-17-25 Code of Alabama (1975); Privilege Tax - Section 40-20-2 Code of Alabama (1975); Exemption from ad valorem tax - Section 40-20-12 Code of Alabama (1975).

Land Leasing Information

1. Leasing Method: Sealed competitive bids.
2. Notice Method: Advertisement-Montgomery Advertiser and in a newspaper in the county in which the land is located - at least 25 days before the final date for submitting bids.
3. Minimum bidding \$ (per acre): The minimum bid per acre depends on several criteria with no set formula. Within the past few years - No less than \$125.
4. Qualification of the bidder: No pre-qualifying of bidders.
5. State Statutes: AL ST
 §9-17-60
 §9-17-65
 §9-17-66
 §9-17-67
6. Maximum acres: One tract, 5,165 acres.
7. Contact: Jim Griggs
 Alabama Department of Conservation and Natural Resources
 Phone: (334) 242-3484
 Fax: (334) 242-0999
 E-mail: jgriggs@dcnr.state.al.us

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: State Board of Health, Department of Public Health, P.O. Box 303017, Montgomery, AL 36130-3017. Phone: (334) 206-5391, Fax: (334) 206-5387.
2. Relevant Statute/Regulations: Alabama Rules for Control of Radiation, 420-3-26.
3. Scope: These rules apply to all persons who receive, possess, use, transfer, own or acquire any source of radiation.
4. Licensing: No person shall receive, possess, use, transfer, own, or acquire radioactive material except as authorized in a specific or general license or provided otherwise - 420-3-26-.02 (2).
5. Cleaning Equipment: Cleaning equipment that is contaminated is a licensed activity subject to requirements of Rules 420-3-26-.02, 420-3-26-.03, and 420-3-26-.10.
6. Disposal of Waste: Rules for disposal of radioactive waste are listed in Rule 420-3-26-.03.
7. Subsequent Use of Equipment: Contaminated equipment is restricted in use to controlled activities.
8. Subsequent Use of Materials: Depending upon levels of contamination; unrestricted use to transfer only to someone licensed to receive said materials.
9. Release/Sale of NORM-Contaminated Land: 5 pCi/gm or less without restrictions; use otherwise restricted.
10. Projected Volume of stored NORM in the State: No estimate available.
11. Respondent: Kirksey Whatley

ALASKA

Administration

1. State agency: Alaska Oil and Gas Conservation Commission, 333 W. 7th Ave., Anchorage, AK 99501. Phone (907) 279-1433. Fax: (907) 276-7542.
2. Docketing procedure and notice: On its own motion, or upon the petition of an interested person, the Commission will fix a date for the hearing and publish notice in an appropriate newspaper. The notice will provide the essential details of the matter and set out the place for the public hearing, the date, and the time for the public hearing. The Commission will set a hearing date that is at least 30 days after the date of publication.

For an order affecting a single well or a single field, the Commission will publish notice in an appropriate newspaper that:

- sets out the essential details of the requested order,
- provides an opportunity for public comment,
- tentatively specifies a place, time, and date for a public hearing, and
- provides a telephone number that the public may use to learn if the commission will hold the tentative hearing.

A person may submit a written protest or written comments during that 30-day period. In addition, a person may request that the tentatively scheduled hearing be held by filing a written request with the Commission within 15 days after the publication date of the notice. If the Commission receives a timely request for hearing, or if the Commission desires to hold a hearing, the Commission will hold a hearing on the date and time specified in the notice. If a request for hearing is not timely filed, the Commission will, in its discretion, issue an order without a hearing.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: The bond must be; 1) a surety bond by an insurer authorized to do business in Alaska, 2) a personal bond of the operator accompanied by either a certificate of deposit or an irrevocable letter of credit issued in sole favor of the Alaska Oil and Gas Conservation Commission from a bank authorized to do business in Alaska. A personal bond may also be accompanied by other forms of security the commission determines to be adequate to ensure payment. The bond must remain in effect until the abandonment of all wells covered by the bond and final clearance of well sites are approved by the Commission.
 - (a) Amount per well: Not less than \$100,000, unless the operator demonstrates to the commission's satisfaction in the application for a Permit to Drill that the cost of abandonment and location clearance is less than \$100,000. The bond amount will then be adjusted to the cost of abandonment and location clearance.
 - (b) Amount of blanket bond: Not less than \$200,000.

Spacing

1. Spacing requirements: Yes, in the absence of an order by the Commission establishing drilling units or prescribing a spacing pattern for a pool, the following statewide spacing requirements apply:
 - (a) Density: Governmental quarter section for an oil well; governmental section for a gas well.
 - (b) Lineal: An oil well may be open to test or regular production within 500 feet of a property line only if the owner is the same and the landowner is the same on both sides of the line, 1,000' minimum separation from any well drilling to, or capable of producing from, the same pool.

A gas well may be open to test or regular production within 1,500 feet of a property line only if the owner is the same and the landowner is the same on both sides of the line; 3,000' minimum separation from any well drilling

to, or capable of producing from, the same pool.

2. Exceptions: Yes.

- (a) Basis: Prevention of waste and protection of the correlative rights of lessees in a pool based on operating and technical data.
- (b) Approval: Applicant must file for exception. The Alaska Oil and Gas Conservation Commission must publish notice and hold a hearing if protest is received.

Pooling

- 1. Authority to establish voluntarily: Yes. Owners of oil and/or gas properties may voluntarily pool their separate interests to form a drilling unit.
- 2. Authority to establish compulsory: Yes, discretionary. If one or more persons owning oil and gas rights fail to voluntarily pool their interests, the Commission upon petition or its own motion and after notice and public hearing will, in its discretion, issue an order pooling the owners' interest for the development of their land as a drilling unit.

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well: Yes, before drilling, redrilling, re-entering or deepening of exploratory, development, service or stratigraphic test wells, or re-entering abandoned wells.
 - (b) Seismic drilling: No. However, a Miscellaneous Land Use Permit is required from the Department of Natural Resources, Division of Oil and Gas.
 - (c) Recompletion: Yes, if recompletion requires a drilling operation or re-entry of an abandoned portion of a wellbore. Other recompletion operations including re-entry of a suspended well require sundry approval.
 - (d) Plugging and abandoning: Yes, by Sundry Approval.
- 2. Permit fee:
 - (a) Drilling: \$100.
 - (b) Seismic drilling: N/A.
 - (c) Recompletion: \$100, if drilled deeper or to new bottom hole location.
 - (d) Plugging and abandoning: No.
- 3. Require filing report of work performed: Yes.

Vertical Deviation

- 1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? When any portion of the well path is less than 500 feet of a property line where ownership is not identical on both sides of the line, or when any portion of the well path is less than 200 feet from any other vertical or deviated well. The survey must be taken at intervals not more than 100 feet apart, beginning within 100 feet of the surface. When a well is intentionally deviated and the above conditions do not apply, the well must be directionally surveyed at intervals not more than 500 feet apart on straight or tangent

sections and at intervals not exceeding 100 feet in portions of the hole where intentional angle changes are performed.

- (b) Filing of survey required: Yes.

Casing and Tubing

1. Minimum amount required depends upon stratigraphic or performance criteria.
 - (a) Surface casing: Required. Surface casing must be set below the base of all strata known or reasonably expected to serve as a source of drinking water for human consumption and at a depth sufficient to provide a competent anchor for blow out prevention equipment.
 - (b) Production casing: Required. Production casing must be set and cemented through, into, or just above the production interval. If the production string is a liner, a minimum of 100 feet overlap is required.
2. Minimum amount of cement required:
 - (a) Surface casing: Fill annular space to the surface.
 - (b) Production casing: Fill annular space from the casing shoe to a minimum of 500 feet above the shoe, overpressured zones or significant hydrocarbon zones, whichever is higher. If the production string is a liner, the interval of overlap must be made pressure competent unless otherwise specifically approved, such as an open hole completion. All freshwater sands encountered below the shoe of the surface casing must be cemented in a manner that will ensure no movement of fluids into sources of freshwater.
 - (c) Setting time: No specific regulation.
3. Tubing requirements:
 - (a) Oil wells: Yes. Waivers with justification.
 - (b) Gas wells: Yes. Waivers with justification.

Completion

1. Completion report required: Yes.
 - (a) Time limit: Thirty (30) days after well completion, suspension or abandonment.
 - (b) Where submitted: Alaska Oil and Gas Conservation Commission, 333 W. 7th Ave., Anchorage, AK 99501-3192.
2. Well logs required to be filed: Yes.
 - (a) Time limit: Thirty (30) days after well completion, suspension or abandonment.
 - (b) Where submitted: Alaska Oil and Gas Conservation Commission, 333 W. 7th Ave., Anchorage, AK 99501-3192.
 - (c) Confidential time period: Yes, twenty-four (24) months following the 30-day filing period.
 - (d) Available for public use: Yes, after confidential time period has elapsed.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes.
 - (a) Approval obtained: From Alaska Oil and Gas Conservation Commission upon submittal of evidence of complete

separation of flowstreams from separate pools.

4. Commingling in well bore: Yes.
 - (a) Approval obtained: From Alaska Oil and Gas Conservation Commission following application and opportunity for public hearing.

Oil Production

1. Definition of an oil well: "Oil well" means a well that produces predominantly oil at a gas-oil ratio of 100,000 scf/stb or lower, unless on a pool-by-pool basis the Commission establishes another ratio.
2. Potential tests required: No. Operator shall obtain fluid samples from each new pool at the time of discovery or before regular production and determine crude composition assay, pressure, volume and temperature properties of the crude oil, and solution or non-associated gas composition assay. Sampling and determinations must be conducted and reported in accordance with accepted industry practice. Reports must be submitted to the Commission within 45 days following completion of determinations.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
3. Statewide allowable: No.
 - (a) Pool allowable: Yes, for rate-sensitive reservoirs.
 - (b) Well allowable: If appropriate for rate-sensitive reservoirs.
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: Two times the original solution gas-oil ratio.
 - (a) Provision for lifting gas-oil ratio: An oil well may not be allowed to produce with a gas-oil ratio in excess of two times the original solution gas-oil ratio.
 - (b) Exception to limiting gas-oil ratio: Upon application to the Commission, the above limitation may be waived for approved additional recovery projects, re-injection of produced gas, or an acquisition of pool performance data needed to optimize reservoir management. Other conditions require hearing.
5. Bottom-hole pressure test reports required: Yes, on discovery wells, before significant production.
 - (a) Periodical bottom-hole pressure surveys: Yes, as designated by pool rules.
6. Commingling oil in common facilities: Yes, if individual well production is accurately determined monthly from each well.
7. Measurement involving meters: Yes, per API and Manual of Petroleum Measurement Standards.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Monthly production reports must be submitted to the Alaska Oil and Gas Conservation Commission indicating the oil, gas and water production from each well.

(c) Time limit: Monthly.

9. Gas Disposition at Production Facilities: Monthly gas disposition reports for each production facility must be submitted to the Alaska Oil and Gas Conservation Commission indicating the volumes of gas which were (1) sold, (2) reinjected, (3) flared or vented for less than 1 hour, (4) flared or vented for more than 1 hour, (5) pilot or purge, (6) used for lease operations, (7) NGL gas equivalent produced, (8) purchased, (9) transferred, or (10) used for other purposes.

Gas Production

1. Definition of a gas well: "Gas well" means a well that produces predominantly gas at a gas-oil ratio over 100,000 scf/stb, unless on a pool-by-pool basis the commission establishes another ratio.
2. Pressure base 14.65 psia @ 60 degrees F.
3. Initial potential tests: Yes, multi-point back pressure test.
 - (a) Time interval: Before significant production begins.
 - (b) Witness required: By Commission option.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes, on discovery wells, before significant production.
 - (a) Periodical bottom-hole pressure surveys: Yes, by field rules.
6. Commingling of gas in common facilities: Yes, if the production from each well is accurately determined at least once each month.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Monthly production reports must be submitted to the Alaska Oil and Gas Conservation Commission indicating the oil, gas and water production from each well.
 - (c) Time limit: Monthly.
9. Gas Disposition at Production Facilities: Monthly gas disposition reports for each production facility must be submitted to the Alaska Oil and Gas Conservation Commission indicating the volumes of gas which were (1) sold, (2) reinjected, (3) flared or vented, for less than 1 hour (4) flared or vented for more than 1 hour, (5) pilot or purge, (6) used for lease operations, (7) NGL gas equivalent produced, (8) purchased, (9) transferred, or (10) used for other purposes.

Gas Detection

1. Drilling and work over rigs must meet the following minimum requirements for methane and hydrogen sulfide gas detection:

- a. the methane detection system must have a minimum of three sensing points; one sensing point must be under the substructure near the cellar, one must be over the shale shaker, and one must be above the drill rig floor near the driller's station or above the drilling platform; if the mud pits are remote from the shale shaker and enclosed, a fourth sensor must be located over the mud pits;
 - b. methane sensors must be placed to detect a "lighter-than-air" gas;
 - c. the hydrogen sulfide detection system must have a minimum of three sensing points; one sensing point must be under the substructure near the cellar, one must be near the shale shaker, and one must be above the drill rig floor near the driller's station or above the drilling platform; the commission will require additional sensors as the commission considers necessary for safety, such as at the entrance to living quarters if they are adjacent to the drill rig, or over the mud pits if they are remote from the shaker and enclosed;
 - d. hydrogen sulfide sensors must be placed to detect a "heavier-than-air" gas;
 - e. sensors must be automatic, acting independently and in parallel, and with one-minute minimum sampling intervals;
 - f. each detection system must include separate and distinct visual and audible alarms; the visual alarm must signal the low level gas alarm and the audible alarm the high level gas alarm; an audible alarm may have an "acknowledge" button;
 - g. the methane low level gas alarm must be set at not over 20 percent LEL; the high level alarm must be set at not over 40 percent LEL;
 - h. the hydrogen sulfide low level gas alarm must be set at 10 ppm; the high level alarm must be set at not over 20 ppm;
 - i. each alarm must be automatic and must be visible and audible from the driller's or operator's station; the hydrogen sulfide alarm must be audible throughout the drilling location, including the camp buildings.
2. A gas detection system that continuously performs self-checking or diagnostics must be function-tested when a BOP stack is initially installed after a drill rig is set up when a commission-witnessed BOP test occurs, and no less frequently than once every six months. If a BOP stack is not required, a gas detection system that continuously performs self-checking or diagnostics must be function-tested when drilling or workover operations begin, when a commission-witnessed BOP test occurs, and no less frequently than once every six months. Other gas detection systems must be calibrated and tested when a BOP stack is initially installed after a drill rig is set up when a commission-witnessed BOP test occurs, and no less frequently than once every 30 days. If a BOP stack is not required, other gas detection systems must be calibrated and tested when drilling or workover operations begins when a commission-witnessed BOP test occurs, and no less frequently than once every 30 days. The operator shall maintain at the drill rig an accessible record of gas detection system tests and calibrations.
 3. A failure in a gas detection system must be reported to the commission within 24 hours after the failure. The commission will, in its discretion, require well operations to be discontinued if a gas detection system fails.
 4. Upon request of the operator, the commission may:
 - (1) waive the methane detection requirements of this section, if the commission determines that the configuration of the drilling or workover rig and any associated equipment and structures eliminates the potential for methane to accumulate;
 - (2) allow the use of a single hydrogen sulfide sensor on site in place of the three sensing points required under (a)(3) of this section, if the commission determines that the configuration of the drilling or workover rig and any associated equipment and structures eliminates the potential for hydrogen sulfide to accumulate; or

- (3) approve a variance from the requirements of this section if the variance provides at least an equally effective means of gas detection.

History - Eff. 11/7/99, Register 152; am 7/18/03, Register 167, October 2003

Authority - AS 31.05.030

20 AAC 25.066

Water and Drilling Waste Disposal

1. State agencies that control disposal of produced salt water and drilling wastes: Alaska Oil and Gas Conservation Commission and Alaska Department of Environmental Conservation. The Alaska Oil and Gas Conservation Commission regulates the U.I.C. Class II well Underground Injection Program in Alaska and the annular disposal of drilling waste.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: No minimum required.
 - (b) Royalty interest: No minimum required.

Taxation

(Note: Alaska's oil and gas severance taxes are actually titled as oil and gas production taxes - i.e., taxes on the activity of producing the oil and gas, which includes mechanical separation and other handling at the surface in the course of rendering the oil and gas marketable after severance from the ground.)

A comprehensive summary of Alaska's Oil and Gas severance taxes can be found on the internet at the following address: <http://www.tax.state.ak.us/programs/oil/programs/ogproduction/index.asp> and www.tax.state.ak.us/sources/index.asp.

Gas severance tax rates vary according to field average well productivity (Nominal rate multiplied by Economic Limit Factor (ELF) for gas). There is also a minimum tax of \$0.064/mcf that is also subject to the ELF.

Nominal rate = 10%

Gas severance tax rate = 0.0% to 10.0%

Oil severance tax rates vary according to a combination of field average well productivity and production rate (Nominal rate multiplied by the ELF for oil).

Nominal rate = 12.25% for fields in production less than 5 years and 15% for fields in production for more than 5 years.

There is also a minimum tax of \$0.80/barrel that is subject to the ELF.

Oil severance tax rate = 0.0% to 15.0%

Average effective rate statewide FY 2000 = 9.9% of taxable value. State and federal royalties are exempt from the tax.

1. Tax collecting agency: State of Alaska, Tax Division, Department of Revenue, 550 West Seventh Avenue, Suite 500, Anchorage, AK 99501.
2. How tax is computed:
 - (a) Valuation of production - The value of oil and gas for most tax purposes is computed using a net-back method. The delivery price has transportation charges subtracted from it to arrive at the field price on which the tax is

based.

- (b) Nominal production tax rates - The gas tax nominal rate is 10% of the gross value at the point of production. The oil tax nominal rate is 12.25% of the gross value at the point of production for fields in production less than 5 years and 15% of gross value at the point of production for fields in production for more than 5 years.
 - (c) Minimum production tax rates - The amount of severance tax due the state is computed by taking the greater of the cents per unit volume minimum tax (\$0.064/mcf for gas and \$0.80/barrel for oil) or the percentage of value basis. Both the percent of value and the cents per barrel (or cents per mcf) tax are subject to the ELF.
 - (d) ELF adjustments to production tax rates - The nominal tax rates are subject to reduction determined by the ELF, which is calculated separately for oil and gas for each field. The ELF is an adjustment to the nominal tax rate specific to each producing property to account for well productivity - oil fields averaging 300 barrels/day per well or less have ELFs of zero and pay no production tax, nor do gas fields averaging 3000 mcf/day per well or less. As average well productivity rises above these threshold rates, the ELF increases and so does the tax rate. The oil ELF is also dependent on the size of the field, with higher ELFs and tax rates as field size increases. Conversely, very small oil fields pay little or no tax.
 - (e) Oil production surcharge - Alaska collects two production surcharges on taxable oil, one of two cents a barrel and the other three cents. The three cent surcharge is always in effect, but the two cent one is suspended when there is \$50 million or more in the Oil and Hazardous Substance Release Prevention and Response Fund. Neither surcharge is reduced by the ELF.
 - (f) Property taxes - Alaska imposes an oil and gas property tax (ad valorem tax at a rate of 20 mills, or two percent of the assessed value, on all petroleum exploration, production and pipeline transportation property located in Alaska. The Property Tax Group at the Department of Revenue is responsible for determining the assessed values each year for all taxable property. A municipality may levy and collect a local property tax on state assessed property within its municipal boundaries, at the same rate of tax that it applies to other property that it taxes.
 - (g) Property taxes imposed by municipalities can be credited against the state property tax.
3. Exemptions or exceptions: The State of Alaska receives a royalty share of oil and gas production from state lands, which is exempt from the production tax and the oil surcharges. Federal royalty on production from federal lands in Alaska is likewise exempt from the tax and oil surcharges.
 4. Name of tax: Oil Production Tax; Gas Production Tax; Corporation Income Tax; Property Tax; Conservation Surcharge.
 5. Statutory citation: Oil production tax - AS 43.55.011; Gas production tax - AS 43.55.016; Oil and gas ELFs - AS 43.55.013; Oil production surcharges - AS 43.55.201 (two cents), AS 43.55.301 (three cents); State property tax - AS 43.56.010; Municipal property taxes on petroleum property - AS 29.45.080.

Land Leasing Information

1. Leasing Method:
 - Conventional lease sales: Competitive; several leasing options - combinations of fixed and variable bonus bids, royalty shares and net profit shares. Generally, a cash bonus bid with a fixed royalty share.
 - Oil and gas exploration licensing: competitive bids upon an obligation to perform a specified work commitment expressed in dollars of direct exploration expenditures.
2. Notice Method: Advertisement - Alaska Administrative Journal, State of Alaska Online Public Notice website, DO&G website, mailing list, newspapers.
3. Minimum bidding \$ (per acre)
 - Conventional lease sales: Generally \$5 to \$10 per acre bonus bid plus annual rental increasing from \$1 to \$3 per

acre over 5 years.

Oil and gas exploration licensing: competitive bid plus licensee's payment to the state of a non-refundable oil and gas exploration license fee of \$1 for each acre of land or fraction of each acre that is subject to the exploration license.

4. Qualification of the bidder: Every individual, association or partnership, corporation, LLC or person who is authorized to act on behalf of another party must qualify with the Division of Oil and Gas prior to bidding for lease tracts. Qualification must also be obtained prior to applying for, obtaining, or transferring interest in a permit or lease issued under AS 38.05.135 - 38.05.184.
5. State Statutes: AS 38.05.180 Oil and Gas Leasing
AS 38.05.131 Oil and Gas Exploration Licenses

Alaska Administrative Code: Title 11. Chapter 82. Mineral Leasing Procedures.

6. Maximum acres:

Oil and Gas Leasing: an oil and gas lease may not exceed 5,760 acres. One lessee may not hold oil and gas leases totaling more than 750,000 acres onshore (500,000 north of the Umiat baseline) and 500,000 acres offshore at any one time.

Oil and gas exploration licensing: one exploration license may cover an area of not less than 10,000 acres and not more than 500,000 acres that must be reasonably compact and contiguous; licensee may not hold more than 2,000,000 acres at any one time.

Shallow natural gas leasing: any one area to be leased may not exceed 5,760 acres; a lessee may not hold more than 46,080 acres of land leased in this manner.

7. Contact: Bruce Anders
E-mail: bruce.anders@alaska.gov
Website Reference: State of Alaska Department of Natural Resources, Division of Oil and Gas "Five-Year Oil and Gas Leasing Program, January 2007" posted on <http://www.dog.dnr.state.ak.us/>

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Oil and Gas Conservation Commission, 333 W. 7th Ave., AK 99501-3192. Phone: (907) 279-1433, Fax: (907) 276-7542.
2. Relevant Statute/Regulations: Alaska does not have NORM regulations. NORM is not much of a problem in Alaska. What little we have has a low count. NORM waste is either injected as a Class II fluid or incorporated in cement slurry. Some contaminated pipe has been shipped to approved disposal facilities outside of the State of Alaska.
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:

10. Projected Volume of stored NORM in the State:

11. Respondent: John K. Norman

ARIZONA

Administration

1. State agency: Oil & Gas Program Administrator, Arizona Geological Survey, 416 W. Congress, Suite 100, Tucson, AZ 85701. Phone (520) 770-3500.
2. Docketing procedure: The Arizona Oil and Gas Conservation Commission meets approximately every few months. Formal hearings as requested by any interested person, or on motion by the Commission. ARS 27-517.
 - (a) Emergency orders: Yes. The emergency order shall remain in force not to exceed 30 days from its effective date. ARS 27-516.
 - (b) Notice: Ten days prior to hearing by the Chairman of the Commission. ARS 27-516.

Bond

1. Compliance bond required: Yes. Rule R12-7-103.
2. Conditions of bond: Release of bond contingent upon operator's compliance with all rules and regulations of the Commission.
 - (a) Amount per well: \$10,000 for well depth less than 10,000 feet, and \$20,000 for depth greater than 10,000.
 - (b) Amount of blanket bond:
 \$25,000 for 10 or fewer wells;
 \$50,000 for more than 10 but fewer than 50 wells; or
 \$250,000 for 50 or more wells.

Spacing

1. Spacing requirements: Yes. Rule R12-7-107.
 - (a) Density: Minimum acreage for an oil well is 80 acres. Minimum acreage for a gas well is 640 acres.
 - (b) Lineal: No oil well shall be located closer than 330 feet from the boundary of drilling unit, nor closer than 330 feet to the shortest center line of drilling unit. Gas well no closer than 1,660 feet from section line.
2. Exceptions: Only after approval by Commission following notice and hearing. Rule R12-7-107(F).
 - (a) Basis: Topographical or geological conditions, and in order to prevent waste.
 - (b) Approval: Request public hearing to present evidence of necessity, and to give all interested parties a chance to be heard.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes. Rule R12-7-107(G), ARS 27-505.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Rule R12-7-104.

- (b) Seismic drilling: No permit is required, but holes must be plugged in an approved manner and a report filed with the Commission. Rule R12-7-127(J).
 - (c) Recompletion: Yes. Rule R12-7-122.
 - (d) Plugging and abandoning: Yes. Rule R12-7-126.
2. Permit fee:
- (a) Drilling: \$25.
 - (b) Seismic drilling: No
 - (c) Recompletion: No fee except re-entry of well previously plugged. Rule R12-7-122.
 - (d) Plugging and abandoning: No.
3. Require filing report of work performed: Yes. Rule R12-7-121 (A), R12-7-122(D), R12-7-127(I) and (J).

Vertical Deviation

1. Regulation requirement: Rule R12-7-115. (Notice and hearing required)
- (a) When is directional survey necessary? When a well is intentionally deviated from its normal course. Rule R12-7-115.
 - (b) Filing of survey required: Within 30 days of completion of the directionally drilled well. Rule R12-7-115(E).

Casing and Tubing

1. Minimum amount required:
- (a) Surface casing: Below all known and reasonably estimated fresh water. Rule R12-7-110(A).
 - (b) Production casing: Yes. Rule R12-7-111.
2. Minimum amount of cement required:
- (a) Surface casing: Circulate. Rule R12-7-110(A).
 - (b) Production casing: Yes. Rule R12-7-111.
 - (c) Setting time: Yes. Twelve hours minimum. Rules R12-7-110 and R12-7-111.
3. Tubing requirements:
- (a) Oil Wells: Yes. Rule R12-7-111.
 - (b) Gas Wells: Yes. Rule R12-7-111.

Tubing set as close to bottom as practical and tubing perforations not more than 250 feet above top of pay. Wells may be completed with small diameter casing in lieu of tubing. Rule R12-7-111.

Completion

1. Completion report required: Yes. Rule R12-7-121.
 - (a) Time limit: 30 days following completion. Rule R12-7-121.
 - (b) Where submitted: Oil & Gas Program Administrator, Arizona Geological Survey, 416 W. Congress, Suite 100, Tucson, AZ 85701.
2. Well logs required to be filed: Yes. Rule R12-7-121.
 - (a) Time limit: 30 days following completion. Rule R12-7-121.
 - (b) Where submitted: Same as (b) in question 1 above.
 - (c) Confidential time period: Yes. Rule R12-7-121(D). One year.
 - (d) Available for public use: Yes, after confidentiality period.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. Rule R12-7-116.
 - (a) Approval obtained: Yes, after notice and hearing. Commission may administratively approve subsequent applications for multiple completions of same zones or reservoirs in a field. Rule 12-7-116(C).
4. Commingling in well bore: May be authorized by Commission upon application and hearing. Rule R12-7-137.

Oil Production

1. Definition of an oil well: Any well producing hydrocarbons in a liquid state that is not the result of condensation of gas, with a gas-oil ratio below 50,000 to 1, or any well classed as an oil well by the Commission.
2. Potential tests required: Yes. Rule R12-7-135(C).
 - (a) Time interval: Within 30 days following completion of well.
 - (b) Witnesses required: In some instances.
3. Statewide allowable: No. The Commission may prorate production to prevent waste or to protect correlative rights. ARS 27-516(13).
 - (a) Pool allowable: No
 - (b) Well allowable: No
 - (c) Exempt allowable:
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes, in order to prevent waste. ARS 27-516(A)(5).
 - (b) Exception to limiting gas-oil ratio: Yes, by establishing GOR limits. ARS 27-516(A)(5).
5. Bottom-hole pressure test reports required: Yes. Rule R12-7-136.
 - (a) Periodical bottom-hole pressure surveys: When required by Commission.

6. Commingling oil in common facilities: Yes. Only when leases have same royalty owners with identical percentage values and oil produced from same reservoir.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No
 - (b) By well: Yes. Rule R12-7-161.
 - (c) Time limit: 25 days following the month of production.

Gas Production

1. Definition of a gas well: Gas well means any well which produces a GOR in excess of 50,000 to 1, or any well classed as a gas well by the Commission.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes. Rule R12-7-150.
 - (a) Time interval: Within 30 days after completion.
 - (b) Witness required: In some instances.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowables:
5. Bottom-hole pressure test reports required: Yes. Rule R12-7-136.
 - (a) Periodical bottom-hole pressure surveys: As required by Commission.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: Yes. Rule R12-7-151.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Rule R12-7-161.
 - (c) Time limits: 25 days following the month of production.

Water Disposal

1. State agencies that control disposal of produced salt water: Arizona Oil and Gas Conservation Commission, in class-II injection wells, and Arizona Department of Environmental Quality.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. ARS 27-531.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 63% exclusive of royalty interest owned by lessees or subsidiaries of lessees.
 - (b) Royalty interest: 63% exclusive of royalty interest owned by lessees or subsidiaries of lessees.

Taxation

There is a Transaction Privilege Tax on gross income from oil and gas production. ARS 42-5072.
Transaction Privilege Tax rate for 2005 was 3.437%.

There is an Ad Valorem tax assessed on 25% of gross income from oil and gas production. ARS 42-15001.
Ad Valorem Tax rate for 2005 was 5.5748%.

Total average tax burden for 2005 was 9.0118%.

Land Leasing Information

1. Leasing Method: Noncompetitive lease sale.
2. Notice Method: No notice is required for noncompetitive leasing sale under ARS 27-555. Notice is required if the Land Department designates a known geologic structure of producing oil or gas under ARS 27-554. Leasing is by sealed bids under ARS 27-556 within the designated area and notice must be published twice in a newspaper in the state not less than 15 days prior to the date fixed for opening the bids.
3. Minimum bidding \$ (per acre): Rental payment for the first year - the leases shall provide for the payment in advance of an annual rental of \$1.00/acre for each year of the primary term of the lease. All leases shall provide for a minimum rental of \$40.00 per year.
4. Qualification of the bidder: Individuals must be at least 21 years of age.
5. State Statutes: §27-554
§27-555
6. Maximum acres: Generally not more than 2,560 acres of land confined to an area of six miles square shall be in any one lease.
7. Contact: Steve Rauzi
steve.rauzi@azgs.az.gov
Phone: (520) 770-3500

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Arizona Radiation Regulatory Agency, 4814 S. 40th St., Phoenix, AZ 85048, Phone: (602) 255-4845, ext. 222.
2. Relevant Statute/Regulations: R12-1-416(F) - Individuals may apply to other exempt levels.
3. Scope: All radioactive materials.
4. Licensing: It is required for possession in excess of limits.
5. Cleaning Equipment:

6. Disposal of Waste: Unless exempt must have approved disposal.
7. Subsequent use of Equipment: Depending on levels, controls may apply.
8. Subsequent use of Materials: Depending on levels, controls may apply.
9. Release/sale of NORM-Contaminated Land: Depending on levels.
10. Projected Volume of stored NORM in the State:
11. Respondent: Aubrey Godwin

ARKANSAS

Administration

1. State agency: Arkansas Oil and Gas Commission, 301 Natural Resources Drive, Little Rock, AR 72205. Phone (501) 683-5814.
2. Docketing procedure: Applications for hearings are required to be filed no less than 20 days prior to the date of the hearing. Hearings are scheduled for the fourth Tuesday of each month. Filing fee is \$500.00 as of 1/1/01.
 - (a) Emergency orders: The Commission can issue an emergency order without a hearing. Said order remains in force no more than 10 days.
 - (b) Notice: Ten Days. Applicant supplies names and addresses of interested parties. Applicant mails notice to interested parties and provides to the Commission an affidavit of notice and a proof of publication in a newspaper of general circulation in the county(ies) containing the subject property or units. .

Bond

1. Compliance bond required: Yes. (Or Irrevocable Letter of Credit).
2. Conditions of bond:
 - (a) Amount per well: Minimum of \$3,000 per well, maximum of \$25,000.
 - (b) Amount of blanket bond:

<u>No. of Wells</u>	<u>Principal Sum</u>
1-25	25,000.00
26-100	50,000.00
over 100	100,000.00
 - (c) Seismic: \$50,000, not to exceed \$250,000.

Spacing

1. Spacing requirements:
 - (a) Density: No minimum for oil or gas wells in uncontrolled areas. Gas units are normally 640 acre governmental sections with exceptions.
 - (b) Lineal: A minimum of 280' from a governmental division line or lease line or property line for oil or gas wells. (For wildcat wells and wells drilled in fields not covered by field rules.) Oil spacing varies while gas is normally 1320 feet from the unit line with exceptions.
2. Exceptions: Yes.
 - (a) Basis: If a well drilled at a different location is likely to prevent waste or protect correlative rights of owners within the unit, or both.
 - (b) Approval: A public hearing must be held and ruling granted by the Commission. Administrative exceptional locations can also be granted, with a notice given to the parties having the right to drill in the unit being encroached, if no objections are filed within 15 days of publication of notice in certain circumstances

Pooling

1. Authority to establish voluntary: Yes.

2. Authority to establish compulsory: Yes, Act 536 of 1963. A.C.A. 15-72-303.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes.
 - (b) Seismic drilling? Yes.
 - (c) Recompletion? No.
 - (d) Plugging and abandoning? No.
2. Permit fee:
 - (a) Drilling: \$300
 - (b) Seismic drilling: minimum \$250, maximum \$500.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? When a wellbore is thought to have deviated in excess of 3 degrees from the vertical.
 - (b) Filing of survey required? (a) in all cases where the operator has proposed to deliberately drill a directional well from an exceptional surface location and/or to an exceptional bottom hole location; (b) prior to a permit being issued, if an off-set operator requests a directional survey and agrees in writing to pay all costs and expenses of such survey and to assume liability for all risks associated with the survey and further posts a bond in sufficient sum as determined by the Commission as security against all costs and risks associated with the survey or, (c) at any time, by order of the Commission, if the Commission is first presented with substantial evidence that it is likely that the well was drilled other than at the location permitted or that the well has deviated in the direction of a unit boundary to a bottom location which would necessitate an increased penalty upon the well's production allowable.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes.
 - (b) Production casing: Yes.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes.

- (b) Production casing: Yes.
- (c) Setting time: Yes, minimum 24 hours unless accelerators are used.
- 3. Tubing requirements:
 - (a) Oil wells: Yes.
 - (b) Gas wells: No.

Completion

- 1. Completion report required: Yes.
 - (a) Time limit: Within 30 days of completion date and prior to commencement of production.
 - (b) Where submitted: Appropriate Arkansas Oil and Gas Commission Regional Office.
- 2. Well logs required to be filed: Yes.
 - (a) Time limit: Within 30 days of completion date and prior to commencement of production.
 - (b) Where submitted: Appropriate Arkansas Oil and Gas Commission Regional Office.
 - (c) Confidential time period: Yes, maximum of 90 days from completion date.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
- 3. Multiple completion regulation: Yes.
 - (a) Approval obtained: Wells may be completed as a multiple completion if the Commission staff is assured that the zones are separated in the wellbore by approved methods.
- 4. Commingling in well bore: Yes.
 - (a) Approval obtained: Gas wells – commingling authorized in certain circumstances by Rule. Oil wells -A fieldwide hearing is held to consider the feasibility of commingling marginal zones. If it appears feasible, the Commission staff is authorized to review and approve or disapprove application for commingling on an individual well basis.

Oil Production

- 1. Definition of an oil well: any well capable of producing oil in paying quantities not a gas well. An oil well is considered to be a well completed in a reservoir containing liquid hydrocarbons at original reservoir conditions (pressure, temperature, etc.)
- 2. Potential tests required: Yes.
 - (a) Time interval: At commencement of production.
 - (b) Witness required: Initial tests are witnessed on high gas-oil ratio wells.
- 3. Statewide allowable: No.
 - (a) Pool allowable: Yes. Each well within a defined pool is assigned an allowable deemed to be the most efficient

rate of production for a well completed in that type pool.

- (b) Well allowable: Yes. See above.
 - (c) Exempt allowable: Yes. Some wells may be exempt from allowable restrictions if approved by the Commission after having received supporting evidence at a public hearing, or if the wells produce from pools discovered prior to January 1, 1937.
4. Maximum gas-oil ratio: Yes. The standard gas-oil ratio is 2000/1.
- (a) Provision for limiting gas-oil ratio: Yes. Wells are penalized if the GOR exceeds the 2000/1 GOR limit (or the limiting GOR as set out in a specific Field Rule Order). The allowable is

$$\text{Bbbls/day} = \frac{\text{Bbbls (Normal Oil Allowable)} \times 2000 \text{ (or limit in Field Rule Order)}}{\text{Actual Producing GOR}}$$
 - (b) Exception to limiting gas-oil ratio: Yes. The Commission may approve a higher GOR limit for a pool after public hearing.
5. Bottom-hole pressure test reports required: The initial BHP is listed on the Completion Report.
- (a) Periodical bottom-hole pressure surveys: Only in pools that have volumetric formulas used in allowable computations.
6. Commingling oil in common facilities: Yes. Upon proof that production is produced from wells having common ownerships, unless specifically prohibited by Field Rule Order.
7. Measurement involving meters: Yes. Measurement of oil by meters must be approved by the Commission after a public hearing.
8. Production reports:
- (a) By lease: Yes. Purchase reports uncontrolled production by lease on a monthly basis.
 - (b) By well: Yes. Operator reports controlled production by well on a monthly basis with the exception of unitized pools.
 - (c) Time limit: On or before the 15th of the next succeeding month.

Gas Production

1. Definition of a gas well: (1) a well which produces natural gas only; (2) any well capable of producing gas in commercial quantities and also producing oil from the same common source of supply but not in commercial quantities; (3) any well classed as a gas well by the Arkansas Oil and Gas Commission for any reason; or (4) a well that contains no liquid hydrocarbons in the reservoir. A gas well is considered to be a well completed in a reservoir containing hydrocarbons in a gaseous state at original reservoir conditions.
2. Pressure base 14.65 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: Within 10 days after a new well has commenced production.
 - (b) Witness required: Yes.
4. Statewide allowable: No.

- (a) Pool allowable: Yes. By Quarterly and Annual Production Permissive.
 - (b) Well allowable: Yes. See explanation above.
 - (c) Exempt allowable: Yes. Some wells may be exempt from allowable restrictions if approved by the Commission after having received supporting evidence at a public hearing, or if the wells produce from pools discovered prior to January 1, 1937.
5. Bottom-hole test reports required: No, however, annual back pressure test is required.
- (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: Yes, with AOGC approval.
7. Measurement involving meters: Yes.
8. Production reports: Yes.
- (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Within 45 days following month of production.

Water Disposal

1. State agencies that control disposal of produced salt water: Oil and Gas Commission and Department of Environmental Quality work together. Oil and Gas Commission handles the underground disposal and Department of Environmental Quality handles surface disposal.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
- (a) Working interest: 75%.
 - (b) Royalty interest: 75% of royalty and overriding interests.

Taxation

Gas severance tax = 0.3 of 1 cent per MCF
 Gas ad valorem tax = variable by county
 Gas conservation assessment = 9 mills per MCF
 Total gas tax burden = 0.3 of 1 cent per MCF + county ad valorem tax

Oil severance tax = 4.0% to 5.0%, depending on production levels
 Oil ad valorem tax = variably by county
 Oil conservation assessment = 43 mills per bbl
 Total oil tax burden = 4.0% to 5.0% + county ad valorem tax

1. Tax collecting agencies: Severance Tax - Department of Finance and Administration, Revenue Division, Miscellaneous Tax Section, Box 1272, Little Rock, AR 72203. Conservation Tax - Arkansas Oil and Gas Commission, P. O. Box 1472, El Dorado, AR 71731-1472.

2. How tax is computed:
 Gas severance tax – 0.3 of 1 cent per MCF
 Gas conservation assessment – 9 mills per MCF of produced gas

 Oil severance tax – 5.0% if greater than 10 barrels of oil per day; 4.0% if less than 10 barrels of oil per day
 Oil conservation assessment – 43 mills per bbl
3. Exemptions or exceptions: Severance Tax - Yes, for discovery well, and re-establishment of production from an idle well. Conservation Assessment - none.
4. Name of tax: Severance Tax and Conservation Assessment.
5. Statutory citation: Act 136 - Amended; ACT 105-1939.

Land Leasing Information

1. Leasing Method: Sealed bids.
2. Notice Method: In a newspaper of general circulation in this state for no fewer than 3 consecutive days and in a newspaper of general circulation in the county in which the property is located for not less than 1 day, a notice that an application has been filed.
3. Minimum bidding \$ (per acre): No statutory or set minimum bid amount. State looks at each application on a case by case basis and takes recommendations from the State Oil and Gas Commission staff.
4. Qualification of the bidder: Any person, firm, company, corporation or association.
5. State Statutes: §22-5-805
 §22-5-806
 §22-5-808
6. Maximum acres: 1,500 acres.
7. Contact: Commissioner of State Lands Offices
 109 State Capitol
 Little Rock, AR 72201
 Main Number: 501-324-9222

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Health, Division of Radiation Control and Emergency Management, 4815 W. Markham Street, Little Rock, AR 72205-3867. Phone: (501) 661-2108.
2. Relevant Statute/Regulations: Section 7 "Naturally Occurring Radioactive Material (NORM)" of the Arkansas State Board of Health Rules and Regulations for Control of Sources of Ionizing Radiation.
3. Scope: Radiation protection standards for possession, use, transfer, and disposal of NORM. These regulations address NORM into products in which neither the NORM nor the emitted radiation is considered to be beneficial to the products. Regulations address waste management and disposal standards.
4. Licensing: General licenses are issued to mine, extract, receive, possess, own, use, process and dispose NORM. (RH-6010). Specific license for manufacturing and distribution of any NORM product for activities involving the remediation of equipment and/or facilities contaminated with NORM and the disposal of NORM waste. (RH-6020).
5. Cleaning Equipment: Equipment contaminated with NORM in excess of levels listed in Appendix A, Section 7 and

having maximum radiation exposure levels greater than 50 microR per hour including background shall NOT be released for unrestricted use. (RH-6010.b.).

6. Disposal of Waste: RH-6013 to a licensed disposal facility or in accordance with an alternate method approved by the Department.
7. Subsequent Use of Equipment: Equipment contaminated with NORM is exempt if the maximum radiation exposure level does not exceed 50 microR including background or radioactive contamination levels do not exceed requirements of Appendix A of Section 7 (RH-6010.d.).
8. Subsequent Use of Materials: RH-6023 requires that during the normal use and disposal that the radiation dose in any one year or the dose committed from intake of NORM will not exceed the doses of Column I of RH-6024.
9. Release/Sale of NORM-Contaminated Land: Requires that an annotation of the deed records to indicate the presence and quantity of NORM (RH-6010.f.1.B.).
10. Projected Volume of stored NORM in the State: Unknown.
11. Respondent: Jared Thompson
12. Regulating Agency: Arkansas Oil and Gas Commission, 301 Natural Resources Drive, Little Rock, AR 72205. Phone (501) 683-5814. Fax: (501) 683-5818.
13. Relevant Statute/Regulations: The Oil and Gas Commission does not have regulations concerning NORM whether it be found in pipe and scale or soil and sediment.
14. Scope: The Oil and Gas Commission may become involved with NORM disposal if an operator desires to dispose of the waste by well injection.
15. Licensing: Not applicable - see ADH
16. Cleaning Equipment: Not applicable - see ADH
17. Disposal of Waste: May work jointly with ADH if applicant desires to use injection or down hole disposal.
18. Subsequent Use of Equipment: Not applicable.
19. Subsequent Use of Material: Not applicable.
20. Release/Sale of NORM-Contaminated Land: Not applicable.
21. Projected Volume of stored NORM in the State: Unknown.
22. Respondent: Gary Looney

CALIFORNIA

Administration

1. State agency: California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, 801 K Street, MS 20, Sacramento, CA 95814-3530. Phone (916) 445-9686.
2. Docketing procedure: Hearings as needed. Notice of hearing sent to all concerned and interested parties and published in at least one newspaper of general circulation.
 - (a) Emergency orders: Yes. When the State Oil and Gas Supervisor determines that an emergency exists. (Section 3226).
 - (b) Notice: 20 days (may be as many as 30 days, depending on type of hearing). The Director of Conservation or the State Oil and Gas Supervisor is responsible to give notice, depending upon the type of order.

Bond

1. Compliance bond required: Yes. (Sections 3204-3209).
2. Conditions of bond: Required when an operator is about to drill, redrill, deepen or permanently alter a well; operate a commercial Class II disposal well; acquire an idle well; or maintain an idle well - (Idle is defined as five or more years.)
 - (a) Amount per well: Onshore - less than 5,000 feet, \$15,000; 5,000 feet but less than 10,000 feet, \$20,000; 10,000 feet or greater depth, \$30,000. Individual coverage for offshore well is not acceptable.
 - (b) Amount of onshore blanket bond:
 - (1) \$100,000 for 50 or fewer wells (does not include the bond or fee required for idle wells).
 - (2) \$250,000 for more than 50 wells (does not include the bond or fee required for idle wells).
 - (3) \$1 million bond to cover all oil and gas operations, including idle wells.
 - (c) All newly acquired idle wells are to be covered by individual or blanket indemnity bonds.
 - (d) With State Oil and Gas Supervisor approval, a provision for cash deposit in lieu of an indemnity bond for wells is provided. (Section 3205.5)
 - (e) Any idle well not covered by an individual or \$1,000,000 blanket bond shall:
 - (1) Pay an annual fee for each idle well, based on the length of time a well has been idle -- \$100 for each well idle less than 10 years, \$250 for each well idle between 10 and 15 years, or \$500 for each well idle 15 years or longer; or
 - (2) Establish an escrow account equivalent to \$5,000 for each idle well, with the required deposit funded completely within ten years; or
 - (3) File a \$5,000 indemnity bond for each idle well; or
 - (4) Establish an idle-well management plan that requires an operator to eliminate a certain percentage of long-term idle wells (those idle 10 years or longer) annually.
 - (f) Amount of offshore blanket bond; \$250,000 (no individual bonds are permitted for offshore wells).

- (g) Amount for commercial Class II disposal well: \$50,000 or a blanket bond pursuant to Section 3205(a) or (c).

Spacing

1. Spacing requirements: Yes. (Sections 3600-3609).
 - (a) Density: One well per acre for fields producing after August 14, 1931, or as approved or ordered by the Supervisor for pools discovered after Jan. 1, 1974.
 - (b) Lineal: See Sections 3600-3606.1 does not apply to fields producing on August 14, 1931. Applies to both oil and gas wells.
2. Exceptions: Yes.
 - (a) Basis: For drilling islands and developing heavy hydrocarbons that necessitate closer well spacing. (Section 3602.1).
 - (b) Approval: Through appeal to the State Oil and Gas Supervisor.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Under certain conditions (following petition to adopt a well-spacing plan other than that stated in Sections 3600-3608.1).

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes. (Section 3203).
 - (b) Seismic drilling? No. (Permitting may be required by local agencies.)
 - (c) Recompletion? Yes. (Section 3203).
 - (d) Plugging and abandoning? Yes. (Section 3229).
2. Permit fee: None required.
 - (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: Yes. (Sections 3215 & 3232).

Vertical Deviation

1. Regulation requirement: Yes. (Section 3606).
 - (a) When is directional survey necessary? For all wells drilled directionally.
 - (b) Filing of survey required? Yes. (Section 3215).

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes. (See California Code of Regulations).
 - (b) Production casing: Yes, when required. (Barefoot completions are still permitted.)
2. Minimum amount of cement required:
 - (a) Surface casing: Yes. Fill annular space from shoe to the surface.
 - (b) Production casing: Yes. At least 500 feet fill above oil and gas zones and anomalous pressure intervals, and to at least 100 feet above the base of freshwater zone.
 - (c) Setting time: No.
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.
 - (c) Injection wells: Yes. (Exemptions are allowed.)

Completion

1. Completion report required: Yes. (Section 3215).
 - (a) Time limit: Within 60 days after such completion.
 - (b) Where submitted: To the appropriate district office of the Division of Oil, Gas, and Geothermal Resources.
2. Well logs required to be filed: Yes. (Section 3215).
 - (a) Time limit: Within 60 days after completion.
 - (b) Where submitted: To the appropriate district office of the Division of Oil, Gas, and Geothermal Resources.
 - (c) Confidential time period: If requested. (Section 3234). Not to exceed two years for onshore exploratory wells and not to exceed five years for offshore exploratory wells. Period may be extended for exploratory and offshore wells upon a showing of extenuating circumstances. Development wells may be granted confidential status if the Supervisor determines there are extenuating circumstances.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: No.
 - (a) Approval obtained: N/A.
4. Commingling in well bore: Yes.
 - (a) Approval obtained: Commingled production could be stopped if it is proven that such practices are detrimental to

the pools.

Oil Production

1. Definition of an oil well: "Well" means any oil or gas well or well for the discovery of oil or gas; any well on lands producing or reasonably presumed to contain oil or gas; any well drilled for the purpose of injecting fluids or gas for stimulating oil or gas recovery, repressuring or pressure maintenance of oil or gas reservoirs, or disposing of waste fluids from an oil or gas field; any well used to inject or withdraw gas from an underground storage facility; or any well drilled within or adjacent to an oil or gas pool for the purpose of obtaining water to be used in production stimulation or repressuring operations.

Definition of a prospect well or exploratory well: "Prospect well" or "exploratory well" means any well drilled to extend a field or explore a new, potentially productive reservoir.

Definition of active observation well: "Active observation well" means a well being used for the sole purpose of gathering reservoir data, such as pressure or temperature in a reservoir being currently produced or injected by the operator, and the data is gathered at least once every three years.

Definition of idle well: "Idle well" means any well that has not produced oil or natural gas or has not been used for injection for six consecutive months of continuous operation during the last five or more years. An idle well does not include an active observation well.

Definition of long-term idle well: "Long-term idle well" means any well that has not produced oil or natural gas or has not been used for injection for six consecutive months of continuous operation during the last 10 or more years. Long-term idle well does not include an active observation well.

2. Potential tests required: No.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
3. Statewide Allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: N/A.
4. Maximum gas-oil ratio: Yes. Field rules are established.
 - (a) Provision for limiting gas-oil ratio: Yes. (Section 3307). Such production that may be considered unreasonable waste of natural gas. (Sections 3300-3314).
 - (b) Exception to limiting gas-oil ratio: Yes, unusual circumstances.
5. Bottom-hole pressure test reports required: Yes, if BHP recordings are made.
 - (a) Periodic bottom-hole pressure surveys: Same as above.
6. Commingling oil in common facilities: Yes.
7. Measurement involving meters: Yes.
8. Production reports:

- (a) By lease: No.
- (b) By well: Yes. (Section 3227).
- (c) Time limit: Within 30 days of end of reporting month.

Gas Production

1. Definition of a gas well: A well producing nonassociated gas.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: No.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: N/A.
5. Bottom-hole pressure test reports required: Yes, if BHP recordings are made.
 - (a) Periodic bottom-hole pressure surveys: Same as above.
6. Commingling of gas in common facilities: Yes.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. (Section 3227).
 - (c) Time limit: Within 30 days of end of reporting month.

Water Disposal

1. State agencies that control disposal of produced salt water: The Division of Oil, Gas, and Geothermal Resources is the lead agency for the regulation of Class II injection wells. The U.S. Environmental Protection Agency delegated federal authority to the Division in 1983. The State's Regional Water Quality Control Boards regulate surface disposal.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes, provisions as described in Sections 3630-3659. (For areas located in fields that have been producing for more than 20 years only.)

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

- (a) Working interest: 75%.
- (b) Royalty interest: 75%.

Taxation

Gas assessment tax = \$0.061889 per 10,000 cubic feet of gas
 Gas ad valorem tax = 0.0%
 Total gas tax burden = \$0.061889 per 10,000 cubic feet of gas

Oil assessment tax = \$0.061889 per barrel of oil
 Oil ad valorem tax = 0.0%
 Total oil tax burden = \$0.061889 per barrel of oil

1. Tax collecting agency: State Controller, Tax Collection and Refund Section, 3301 C Street, Room 300, Sacramento, CA 95816.
2. How tax is computed: Oil and gas tax is computed at a variable rate. The 2005-2006 rate is \$0.0538953 per barrel of oil or 10,000 cubic feet of gas. The rate is adjusted yearly to raise funds for the support of the Division of Oil, Gas, and Geothermal Resources.
3. Exemptions or exceptions: Gas used in pressure-maintenance or other producing operations is exempt from assessment.
4. Name of tax: Oil and Gas Assessment.
5. Statutory citation: Article 7, Chapter 1, Division 3, California Public Resources Code (Sections 3400-3433).

Land Leasing Information

1. Leasing Method: Sealed competitive bids.
2. Notice Method: At least once in a newspaper in the City of LA, SF, or Sacramento.
3. Minimum bidding \$ (per acre): No less than \$1.
4. Qualification of the bidder:
5. State Statutes: §1905, §1909, §2249, §6827, §6874.
6. Maximum acres:
7. Contact: Paul B. Mount
 Phone: (310) 590-5201
 E-mail: mountp@slc.ca.gov

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Health Services, Radiological Health Branch, P.O. Box 942732, Sacramento, CA 94234-7320. Phone: (916) 322-3482, Fax: (916) 324-3610.
2. Relevant Statute/Regulations: California Health and Safety Code, Sections 114705-115270.
 California Code of Regulations, Title 17, Sections 30100-30543.

3. Scope: Addresses all radioactive materials but is not specific to NORM and NORM issues in oil and gas production.
4. Licensing: At the present time no decontamination, handling or disposal licenses specific to oil and gas industries and the associated NORM have been issued.
5. Cleaning Equipment: Not presently licensed. No inventory or companies involved.
6. Disposal of Waste: No regulations specific to oil and gas NORM disposal; however, NORM may be injected into a Class II disposal well. If NORM sets off alarms at disposal sites or recycle facilities (including steel mills) then waste is treated as radioactive waste.
7. Subsequent Use of Equipment: No specific regulations or restrictions at the present time.
8. Subsequent Use of Materials: No specific regulations or restrictions at the present time.
9. Release/Sale of NORM-Contaminated Land: No specific regulations or restrictions at the present time.
10. Projected Volume of stored NORM in the State: Unknown, but large due to geothermal pipelines.
11. Respondent: Steve Hsu

COLORADO

Administration

1. State agency: Oil and Gas Conservation Commission, 1120 Lincoln St., Suite 801, Denver, CO 80203. Phone (303) 894-2100. Fax (303) 894-2109.
2. Docketing procedure: Upon the filing of an application, a hearing will be scheduled in accordance with Rule 503. Hearings are normally set for every 5 weeks. No application fee. No protestor or intervenor fee.
 - (a) Emergency orders: Rule 502. The Commission may issue an emergency order without notice, but it shall remain effective for no more than 15 days.
 - (b) Notice: Rule 507. Minimum of 20 days by the Commission.

Bond

1. Compliance bond required: Yes. Rule 304 and Rules 702-711.
2. Conditions of bond: Compliance with laws and rules and regulations with reference to properly plugging wells. Separate surface restoration bond when landowner is not party to oil or gas leasing agreement.
 - (a) Amount per well: Plugging - \$5,000; Surface damage - \$2,000 on land not irrigated, \$5,000 on irrigated land.
 - (b) Amount of blanket bond: Plugging - \$30,000 for less than 100 wells; \$100,000 for 100 wells or more; Surface damage - \$25,000.
3. Seismic operations bond. \$25,000 blanket.

Spacing

1. Spacing requirements: Minimum density not specific.
 - (a) Density: Not specific.
 - (b) Lineal: Rule 318. Less than 2,500 feet in depth - 200 feet from lease line, 300 feet between wells with only one well allowed in each governmental quarter-quarter section. Greater than 2,500 feet - 600 feet from lease lines, 1,200 feet between wells for both oil and gas wells.
2. Exceptions: Yes.
 - (a) Basis: Geologic, environmental, topographic or archeologic conditions, irregular sections or surface conditions.
 - (b) Approval: Administratively if no objection or receipt of waivers from offset lease owners. (Rule 318.c.) Where lease owner of offset lease is the same as owner of proposed well, waiver must be obtained from offset mineral owners; however, waiver must be reasonable. If waivers cannot be obtained from all parties and no party objects, the operation may apply for a Director variance. (Rule 502.b.) If parties object, hearing before Commission.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes. Rule 530.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes. Rule 303.
 - (b) Seismic drilling? Yes. Rule 333.
 - (c) Recompletion? Yes. Rule 303.b.
 - (d) Plugging and abandoning? Yes. Rule 311.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes. Rule 307, Rule 308A, Rule 308B, Rule 311.
4. Local Government Entities. In June 1992, various rules became effective concerning notice of planned drilling activities to be furnished to those local governments (counties, towns, districts, etc.) that have advised the Commission of their interest. These rules include certain rules within the 100 series, Rule 214 and Rule 303. Subsequent rules were adopted to allow local governments to file for a commission hearing prior to issuance of a permit to drill based on a potential for significant impacts on public health, safety and welfare, including the environment. Rule 508 was effective July 30, 1998 allowing local governments to request a local public forum on applications that would result in more than one well site or multi-well site per 40 acres. In addition, Rules 801 through 804 were adopted concerning Aesthetics and Noise Control Regulation.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? Rule 321, when a directional hole is drilled other than whipstocking due to hole conditions; this includes highly deviated as well as horizontal boreholes.
 - (b) Filing of survey required? Yes, within 30 days.

Casing and Tubing

1. Minimum amount required: Rule 317 and Rule 317A.
 - (a) Surface casing: Yes.
 - (b) Production casing: No.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulated to surface.
 - (b) Production casing: Yes. Set 200 feet above the top of the most shallow known producing formation.
 - (c) Setting time: Yes. Eight hours.

3. Tubing requirements:

- (a) Oil wells: No.
- (b) Gas wells: No.

Completion

1. Completion report required: Yes. Rule 308A and 308B.

- (a) Time limit: 30 days after completion.
- (b) Where submitted: Oil and Gas Conservation Commission, 1120 Lincoln St., Suite 801, Denver, CO 80203.

2. Well logs required to be filed: Yes.

- (a) Time limit: 30 days after completion.
- (b) Where submitted: Oil and Gas Conservation Commission.
- (c) Confidential time period: If requested, for six months after date of completion.
- (d) Available for public use: Yes.
- (e) Log catalog available: Yes.

3. Multiple completion regulation: No.

4. Commingling in well bore: Yes. Rule 322.

- (a) Approval not required unless the Commission has issued an order or promulgated a rule excluding specific wells, geologic formation, geographic areas, or field from commingling in response to an application filed by a directly and adversely affected or aggrieved party or on the Commission's own motion.

Oil Production

1. Definition of an oil well: 100 Series of rules. Oil well shall mean a well, the principal production of which at the mouth of the well is oil, as defined by the Act. The word "oil" shall mean crude petroleum oil and any other hydrocarbons, regardless of gravities, which are produced at the well in liquid form by ordinary production methods, and which are not the result of condensation of gas before or after it leaves the reservoir.

2. Potential tests required: Yes.

- (a) Time interval: Prior to sales.
- (b) Witness required: Only as may be required by Commission orders.

3. Statewide allowable: No.

- (a) Pool allowable: No.
- (b) Well allowable: Yes. In cases where a well is an exception to a spacing order, or after a finding of waste, the Commission can limit production and set well allowables.
- (c) Exempt allowable: No.

4. Maximum gas-oil ratio: No.

- (a) Provision for limiting gas-oil ratio: Yes. The statute provides the Commission with the authority to establish efficient ratios and limit production from wells with inefficient ratios.
- (b) Exception to limiting gas-oil ratio: Yes. Only as specified by Commission order.
- 5. Bottom-hole pressure test reports required: Usually not.
 - (a) Periodical bottom-hole pressure surveys: Only as directed by Commission.
- 6. Commingling oil in common facilities is allowed. Production must be reported by allocation.
- 7. Measurement involving meters: Rule 328. Use properly calibrated meter or tank measurements.
- 8. Production reports: Rule 309.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 45 days from the end of the month for which production is reported.

Gas Production

- 1. Definition of a gas well: 100 Series of the rules. Gas well shall mean a well, the principal production of which at the mouth of the well is gas, as defined by the Act. The word "gas" shall mean all natural gases and all hydrocarbons not defined herein as oil.
- 2. Pressure base 14.73 psia @ 60 degrees F.
- 3. Initial potential tests: Yes.
 - (a) Time interval: Prior to sales.
 - (b) Witness required: Maybe.
- 4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: Only by ratable-take provisions.
 - (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: Usually not.
 - (a) Periodical bottom-hole pressure surveys: Only as directed by the Commission.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: Yes.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 45 days from the end of the month for which production is reported.

Water Disposal

State agencies that control disposal of produced salt water: Rule 324B, 325, 326, and 330. Oil and Gas Conservation Commission. Commission has primacy from EPA for all Class II injection and disposal wells except those on Indian lands.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 80%.
 - (b) Royalty interest: 80%.

Taxation

Gas severance tax = 2.0% to 5.0%; depending on amount of gross income
 Gas ad valorem tax = 4.0% to 10.0%; depending on county
 Total gas tax burden = 5.0% to 10.0%

Oil severance tax = 2.0% to 5.0%; depending on amount of income
 Oil ad valorem tax = 4.0% to 10.0%; depending on county
 Total oil tax burden = 5.0% to 10.0%

1. Tax collecting agency: State Department of Revenue, Capitol Annex Building, 1375 Sherman Street, Denver, CO 80261.
2. How tax is computed:

Severance tax on oil and gas:

Gross Oil and Gas Income	Colorado Severance Tax Rate
Under \$25,000	2% of gross income
\$25,000 and under \$100,000	\$500 plus 3% of the excess over \$24,999
\$100,000 and under \$300,000	\$2,750 plus 4% of the excess over \$99,999
\$300,000 and over	\$10,750 plus 5% of the excess over \$299,999

Ad valorem rates vary from county to county ranging from 4% to 10%. Ad valorem taxes are paid by the producer to the local governments (cities and counties).

87.5% of ad valorem taxes are allowed as a credit against severance tax. Depending on the applicable severance and ad valorem tax rates, working or royalty interest owners can receive a full refund of severance taxes. As a result, the total production taxes paid can be limited to the ad valorem tax rate.

Ad valorem taxes paid on production from stripper wells (on which no severance tax was withheld) are not included in the deduction.

Note: Anytime 7/8ths of the ad valorem tax equals or exceeds the 5% severance tax, it cancels out the severance tax. If the ad valorem tax is less than the 5% severance tax, the severance tax is displaced.

3. Exemptions or exceptions:
 - (a) Any oil produced from wells that produce fifteen barrels per day or less for the average of all producing days during the taxable year shall be exempt from the tax.

- (b) Wells that produce ninety thousand cubic feet or less of gas per day for the average of all producing days for such production during the taxable year shall be exempt from the tax.

4. Name of tax: Severance.
5. Statutory citation: 39-29-105 Colorado Revised Statutes (1973, as amended).

Land Leasing Information

1. Leasing Method: Oral bid auction; the leases are issued to the highest bidder at quarterly auctions. The leases cannot be taken over the counter after the auction. They must be nominated again if not taken at the auction.
2. Notice Method: The auction announcement is mailed approximately one month prior to the auction, and is available on the Web site at www.trustlands.state.co.us.
3. Minimum bidding \$ (per acre): The first year's rental (\$1.50/per year) plus the statutory fee of \$20.00.
4. Qualification of the bidder: the bidder's residency does not matter, but the successful bidder must be authorized by the Secretary of State's office to do business in the State of Colorado. If residency is in a foreign country, lessee must have an agent in the United States.
5. State Statutes: CO ST
 - §22-32-112
 - §36-1-113
 - §36-1-118
 - §36-1-124
6. Maximum acres: no maximum
7. Contact: Timothy Kelly
Phone: (303) 866-3934
E-mail: timothy.kelly@state.co.us

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Public Health and Environment (CDPHE), 4300 Cherry Creek Drive, South, Denver, CO 80246-1530. Phone: (303) 692-3300, Fax: (303) 759-5355.
2. Relevant Statute/Regulations: The Radiation Control Regulations, Parts 1, 3, 4, 10, 12 and 17; C.K.S. 25-11-101 and 25-11-102 and TENORM Disposal Policy of February 2007.
3. Scope: The state has broad authority to control radioactive material. NORM is evaluated on a case by case basis. Colorado has had very few instances of NORM issues in the oil and gas industry. Most of our NORM is in the sedimentary rocks associated with uranium "roll fronts" and drinking water residuals.
4. Licensing: Case by case evaluation in accordance with the TENORM Policy if >25 mrem/yr or source material concentrations.
5. Cleaning Equipment: ALARA, Part 4, TENORM Policy reference ANSI N13.12.
6. Disposal of Waste: Soils on a case-by-case basis. Colorado is part of the Rocky Mountain Low Level Waste Compact and discrete radium must be disposed through the compact. Compact Rule 6 updated for TENROM in Rocky Mountain Compact. Policy has graded approach for disposal of TENORM as solid waste in some cases.
7. Subsequent Use of Equipment: Risk assessment of residual radioactivity
8. Subsequent Use of Materials: Risk assessment of residual radioactivity. . Policy addresses release/reuse.
9. Release/Sale or NORM-Contaminated Land: There have been no restrictions on the sale or release of land, but there are

institutional controls per the Environment Covenant Act for identified sites. <25 mrem/yr in accordance with Part 4.

10. Projected Volume of stored NORM in the State: Unknown.
11. Respondent: Phil Egidi for CDPHE. 222 South 6th Street, Room 232, Grand Junction, CO 81501 Phone: (970) 248-7162, Fax: (970) 248-7198, Cell (970) 209-2885.
12. Regulating Agency: Colorado Oil and Gas Conservation Commission, 1120 Lincoln St., Ste. 801, Denver, CO 80203. Phone: (303) 894-2100, Ext. 111, Fax: (303) 894-2109.
13. Relevant Statute/Regulations: None existing or proposed. TENORM Policy and Guidance February 2007.
14. Scope: COGCC has authority over E&P wastes but CDPHE has authority over disposal of low-level radioactive material.
15. Licensing: Can license.
16. Cleaning Equipment: See Policy.
17. Disposal of Waste: See Policy.
18. Subsequent Use of Equipment: See Policy.
19. Subsequent Use of Materials: See Policy.
20. Release/Sale of NORM-Contaminated Land: Unknown.
21. Projected Volume of stored NORM in the State: Unknown.
22. Respondent: Tricia Beaver

FLORIDA

Administration

1. State agency: Department of Environmental Protection, Division of Resource Assessment and Management, Florida Geological Survey, 903 W. Tennessee St., Tallahassee, FL 32304-7700. Phone (904) 488-4191/487-2219.
2. Docketing procedure: Hearings held on Department initiative by petition of a party of interest and after notice and publication (at least three weeks). Hearings held in office of Department unless otherwise designated. (F.S. 377.31)
 - (a) Emergency orders: Yes, in event the Division finds an emergency exists. Order effective for 90 days only or until public hearing on the issue.
 - (b) Notice: Division of Resource Assessment and Management must give minimum of three weeks public notice.

Bond

1. Compliance Surety required: Yes.
2. Conditions of bond: Restoration of drill site, compliance with rules and regulations be fulfilled, well be plugged and abandoned.
 - (a) Amount per well:

Well depth	Per well	For Producer
0-9,000	\$ 50,000	\$100,000
9,001-or more	100,000	200,000
 - (b) Amount of blanket bond: \$1,000,000 (10 well limit).

Spacing

1. Spacing requirements: Yes.
 - (a) Density: 40 and 160 acres for oil well and 640 for gas well.
 - (b) Lineal: Longest diagonal (of other than a square unit) may not exceed length of diagonal of a square of same size unit by more than 25% for both oil and gas wells.
2. Exceptions: Yes.
 - (a) Basis: - 10% of size of unit designated.
 - (b) Approval: Secretary of the Department of Environmental Protection.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:

- (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: Yes.
 - (c) Recompletion: No, provided bhl meets original condition of permit.
 - (d) Plugging and abandoning: Yes, prior authorization is required. No written DEP permit is issued.
2. Permit fee:
- (a) Drilling: \$2,000.
 - (b) Seismic Prospecting: \$500.
 - (c) Recompletion: None, provided bbl meets permit requirements. Drilling a new BHL outside of original drilling unit would require a new permit.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: yes.

Vertical Deviation

1. Regulation requirement: Yes, if well was drilled as an exceptional location, H₂S is expected.
- (a) When is directional survey necessary? Intentional deviations in well or if sum of vertical surveys suggests a non-routine location (see 62c-26.004), or if H₂S is expected.
 - (b) Filing of survey required: Yes.

Casing and Tubing

1. Minimum amount required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes.
2. Minimum amount of cement required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes.
 - (c) Setting time: 24 hours. 12 hours under pressure.
3. Tubing requirements:
- (a) Oil wells: Yes. New or like new pipe. Size and weight and A.P.I. specifications of type used.
 - (b) Gas wells: Same as above.

Completion

1. Completion report required: Yes.
- (a) Time Limit: 30 days. Form 8, Well Record, required within 30 days after reaching T.D. Form 9, Well Completion Report, required within 5 days after well test is completed.

- (b) Where submitted: Florida Geological Survey, Tallahassee, FL.
- 2. Well logs required to be filed: Yes.
 - (a) Time limit: 30 days.
 - (b) Where submitted: Florida Geological Survey, Tallahassee, FL.
 - (c) Confidential time period: Yes, one year.
 - (d) Available for public use: Yes, after one year.
 - (e) Log catalog available: No.
- 3. Multiple completion regulation: No.
- 4. Commingling in well bore: No.
 - (a) Approval obtained:

Oil Production

- 1. Definition of an oil well: None.
- 2. Potential tests required: Yes.
 - (a) Time interval: Five days.
 - (b) Witness required: They may be witnessed.
- 3. Statewide allowable: No.
 - (a) Pool allowable: Yes, M.E.R.
 - (b) Well allowable: Yes, M.E.R.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: 2,000 cubic feet of gas to 1 Bbl of oil.
 - (a) Provision for limiting gas-oil ratio: Yes. Any well producing more than 2,000 GOR reduced to daily oil allowable x 2,000 divided by GOR.
 - (b) Exception to limiting gas-oil ratio: No.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Yes.
- 6. Commingling oil in common facilities: Yes. If field is unitized or meters are utilized prior to commingling.
- 7. Measurement involving meters: Yes.
- 8. Production reports:

- (a) By lease: No.
- (b) By well: Yes.
- (c) Time limit: 30 days from end of month in which production occurred.

Gas Production

1. Definition of a gas well: None.
2. Pressure base 14.65 psia @ 60 degrees F.
3. Initial potential tests: Yes. (No gas wells in Florida.)
 - (a) Time interval: Five days.
 - (b) Witness required: They may be witnessed.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes. Determined from maximum efficient rate (M.E.R.).
 - (b) Well allowable: Same as above.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Yes.
6. Commingling of gas in common facilities: Yes, after measurement.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 30 days subsequent to the month of reported production.

Water Disposal

1. State agencies that control disposal of produced salt water: Division of Resource Assessment and Management, Florida Geological Survey.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 75%.

(b) Royalty interest: 75%.

Taxation

Gas severance tax = index tax of 12.5% of MCF

Gas ad valorem tax = 0.0%

Total gas tax burden = 12.5% per MCF

Oil severance tax = 8.0%

Oil ad valorem tax = 0.0%

Total oil tax burden = 8.0%

1. Tax collection agency: Department of Revenue, 5050 W. Tennessee Street, Tallahassee, FL 32399-0100.
2. How tax is computed: Oil severance tax is computed by calculating 8% of the total value produced. Gas severance tax is computed by calculating the index rate (12.5%) times the production measured in MCF. The tax is actually an excise tax, but is commonly referred to as a severance tax.
3. Exemptions or exceptions: Oil and gas used on lease where produced is exempt from tax. Small wells producing less than 100 barrels per day and tertiary oil are taxed at a reduced rate of 5%.
4. Name of tax: The tax is an Excise Tax, but is commonly referred to as a Severance Tax.
5. Statutory citation: Chapter 211.025, and 211.02, Florida Statutes.

Land Leasing Information

1. Leasing Method: Sealed competitive bids.
2. Notice Method: Once a week for at least 4 weeks in some newspaper in the county.
3. Minimum bidding \$ (per acre): \$3.50
4. Qualification of the bidder:
5. State Statutes: §253.53, 54.
6. Maximum acres:
7. Contact: Dr. O. Greg Brock
E-mail: brock_g@epic5.dep.state.fl.us

Division of State Lands, Bureau of Public Land Administration, Department of Environmental Protection.

Naturally Occurring Radioactive Materials (NORM)

1. Regulating Agency: Department of Health, Bureau of Radiation Control, 1317 Winewood Blvd., Tallahassee, FL 32399-0700, Phone: (850) 487-2437, Fax: (850) 921-6364.
2. Relevant Statute/Regulations: Chapter 64E-5, Florida Administrative Code (soon to be reissued as chapter 64E-5, F.A.C.).
3. Scope:
4. Licensing:
5. Cleaning Equipment:

6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State: 30 drums at 55 gallons each.

OTHER:

Florida's oil and gas industry is divided into two regions. In the western Panhandle to the north of Pensacola lies the Jay trend, consisting of eight fields. In south Florida, the Sunniland trend includes 14 fields located to the west and southeast of Ft. Myers. Production in south Florida began in 1943; the Panhandle fields were not discovered until 1970. Production peaked at 47.5 million barrels in 1978 and has been in general decline since then, but both regions are expected to continue operations for many more years. The Jay fields dominate, contributing around 70 percent of total production. Offshore oil production in Florida waters is currently nonexistent due to a ban on exploration and development.

The Department of Health first investigated technologically enhanced naturally occurring radioactive materials (TENORM) contamination in Florida's oil and gas industry in the late 1980s. Exxon Company USA was the state's largest operator at time, for both the Panhandle and south Florida regions. In response to NORM regulations adopted by Louisiana and Texas, Exxon developed corporate guidelines that all of their personnel and contractors follow. The guidelines are designed to ensure compliance with the most stringent NORM regulations, regardless of whether or not the jurisdictions in which they were operating have established NORM regulations. Thus, Exxon and their contractor personnel working in Florida complied with corporate worker protection procedures, and their NORM wastes were properly disposed.

A staff health physicist inspecting Exxon's south Florida fields in 1989 found maximum radiation levels in the 20-30 μ R/hr range at the fields' tank batteries. A recently completed inspection of five of the oldest fields in the same region (now operated by Calmet Florida, Inc.) served to confirm the 1989 results. The highest gamma readings found was 80 μ R/hr in a saltwater storage tank; all other readings ranged from background (10-14 μ R/hr) to 40 μ R/hr, with most in the 20 μ R/hr range. The geochemistry of produced waters in the region does not appear to be conducive to radium replacement, resulting in low activity scale formation. Thirty-eight pipe scale samples were analyzed for radium content, with concentrations ranging from <0.75pCi/g.-11.5pCi/g. with an average of 2.1pCi/g.

The panhandle region was also investigated in the late 1980s, but documentation of the findings is lacking. Records indicate that in 1993, Exxon was approved to dispose of 186 barrels of NORM waste (drilling mud) downhole in a wellbore during plugging and abandonment of one of their exhausted wells. In all other cases, Exxon's NORM wastes were shipped out of state for disposal at licensed waste disposal facilities.

In 1996, staff inspectors visited the two treatment facilities operating in the region, one operated by Exxon, and the other by De Soto Oil and Gas, Inc. (now Petro Operating Co.). The highest external gamma reading (100-200 μ R/hr) were noted in separator tanks, but due to extremely low worker occupancy times in the elevated radiation fields, the readings were not considered an occupational hazard.

De Soto was found to be generating small quantities of NORM waste (approximately 50 drums) and storing them on site pending availability of a wellbore ready for plugging and abandonment, which they planned to use for downhole disposal of their wastes. Exxon no longer operates in the Panhandle region, having recently sold their interests to Louisiana Land Exploration (LL&E).

Due to the low occupancies for the areas where elevated gamma readings were noted, our current position is that oil and gas TENORM in Florida does not warrant increased regulatory oversight at this time. However, additional analysis of data and additional field measurements may lead us to reassess our view, particularly if an effort to promulgate comprehensive TENORM regulations is made.

11. Respondent: Walter Cofer.

GEORGIA

Administration

1. State agency: Environmental Protection Division, Department of Natural Resources, Geologic Survey Branch, Room 400, 19 Martin Luther King Jr. Dr., S. W., Atlanta, GA 30334-9004. Phone (404) 656-3214. (Rules and Regulations are available from the above).
2. Docketing procedure: None; permits are issued or denied within 4 weeks of properly completed applications.
 - (a) Emergency orders: The Director of the Environmental Protection Division may issue emergency orders for safety purposes or to protect ground and/or surface water.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: Well must be plugged according to agreed upon specifications. All information developed from the well must be submitted to the Geologic Survey.
 - (a) Amount per well: Flexible; up to \$50,000.
 - (b) Amount of blanket bond: \$50,000 and adequate documentation of financial resources to plug wells.

Spacing

1. Spacing requirements: Flexible; to insure public safety at well or to maximize production; refer to Rules and Regulations.
 - (a) Density: Flexible.
 - (b) Lineal: Flexible.
2. Exceptions: Yes.
 - (a) Basis: Adequate technical justification.
 - (b) Approval: By the Director of the Environmental Protection Division.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: Yes, from Department of Transportation with concurrence from Geologic Survey.
 - (c) Recompletion: Yes.

- (d) Plugging and abandoning: Yes.
- 2. Permit fee:
 - (a) Drilling: Yes, \$25.
 - (b) Seismic drilling: No.
 - (c) Recompletion: N/A.
 - (d) Plugging and abandoning: N/A.
- 3. Require filing report of work performed: Yes, well completion report.

Vertical Deviation

- 1. Regulation requirement: Flexible; refer to Rules and Regulations.
 - (a) When is directional survey necessary? Flexible.
 - (b) Filing of survey required: Yes.

Casing and Tubing

- 1. Minimum amount required:
 - (a) Surface casing: Yes, to bottom of all fresh water zones.
 - (b) Production casing: N/A.
- 2. Minimum amount of cement required:
 - (a) Surface casing: Yes, entire annular space.
 - (b) Production casing: N/A.
 - (c) Setting time: Not specified.
- 3. Tubing requirements:
 - (a) Oil wells: Not specified.
 - (b) Gas wells: Not specified.

Completion

- 1. Completion report required: Yes.
 - (a) Time limit: 45 days after completion.
 - (b) Where submitted: State Geologist, Georgia Geologic Survey, Room 400, 19 Martin Luther King Dr., S. W., Atlanta, GA 30334.
- 2. Well logs required to be filed: Yes.

- (a) Time limit: 45 days after well completion.
 - (b) Where submitted: State Geologist, Georgia Geologic Survey, Room 400, 19 Martin Luther King Dr., S. W., Atlanta, GA 30334.
 - (c) Confidential time period: Yes. Six months or longer.
 - (d) Available for public use: Yes, after confidential period expires.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes.
 - (a) Approval obtained: Yes.
 4. Commingling in well bore: Yes.
 - (a) Approval obtained: Yes.

Oil Production

1. Definition of an oil well: Georgia has no production as yet, so has not legally defined the term "oil well." To qualify for the oil well production bonus, the law requires at least 100 barrels of oil per day production.
2. Potential tests required: N/A.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
3. Statewide allowable: N/A.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
4. Maximum gas-oil ratio: N/A.
 - (a) Provision for limiting gas-oil ratio: N/A.
 - (b) Exception to limiting gas-oil ratio: N/A.
5. Bottom-hole pressure test reports required: N/A.
 - (a) Periodical bottom-hole pressure surveys: N/A.
6. Commingling oil in common facilities: N/A.
7. Measurement involving meters: N/A.
8. Production reports: N/A.
 - (a) By lease:

- (b) By well:
- (c) Time limit:

Gas Production

1. Definition of a gas well: Georgia has no production as yet, so has not legally defined the term "gas well".
2. Pressure base N/A psia @ _____ degrees F.
3. Initial potential tests: N/A.
 - (a) Time interval:
 - (b) Witness required:
4. Statewide allowable: N/A.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
5. Bottom-hole pressure test reports required: N/A.
 - (a) Periodical bottom-hole pressure surveys:
6. Commingling of gas in common facilities: N/A.
7. Measurement involving meters: N/A.
8. Production reports: N/A.
 - (a) By lease: N/A.
 - (b) By well:
 - (c) Time limit:

Water Disposal

1. State agencies that control disposal of produced salt water: Environmental Protection Division; Water Protection Branch.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: N/A at present; but rules and regulations provide for compulsory unitization.

Taxation

There is no state tax levied on oil and gas production in Georgia.

Land Leasing Information

1. Leasing Method: Sealed competitive bids.
2. Notice Method: Once a week for 2 consecutive weeks in the legal organ and in one or more newspapers in the county or counties.
3. Minimum bidding \$ (per acre):
4. Qualification of the bidder:
5. State Statutes: §50-16-43
6. Maximum acres:
7. Contact: Tony McCook
Phone: (404) 656-6328
E-mail: tony_mccook@mail.dnr.state.ga.us

Naturally Occurring Radioactive Material (NORM)

No regulations at this time.

IDAHO

Administration

1. State agency: Oil and Gas Conservation Commission, Idaho Department of Lands, 954 W. Jefferson, P O Box 83720, Boise, Idaho 83720. Telephone (208) 334-0231.
2. Docketing procedure: Proper application to be filed in accord with the "Rules of Practice and Procedure" accompanied by an application fee of \$100. A hearing date will be set by the Commission as soon as feasible and notice thereof given. Commission shall enter its order within 30 days following the hearing.
 - (a) Emergency orders: Section 47-324, Idaho Code. Situation causing order must require immediate action. Order will be effective up to 15 days from promulgation.
 - (b) Notice: Section 47-324, Idaho Code. Ten days. Notice published by the Commission.

Bond

1. Compliance bond required: Yes. Form P-2.
2. Conditions of bond: Conditioned upon the performance of the operator's duty to comply with the requirements of the Conservation Act and Rules. Released when plugging of well is approved by the Commission.
 - (a) Amount per well: \$10,000.
 - (b) Amount of blanket bond: \$25,000.

Spacing

1. Spacing requirements: Yes. General rules are automatic. (Rule 33.)
 - (a) Density: Generally, every well drilled for oil must be located on a drilling unit consisting of approximately 40 contiguous surface acres contained within the bounds of one governmental quarter-quarter sections or lots having one side in common, and being within one governmental quarter section upon which no part is attributed to another well completed or drilling to the same pool. In addition, said drilling unit will not have a side in common with another quarter-quarter section or lot upon which there is a well completed to or drilling to the same pool.

Generally, every well drilled for gas must be located on a drilling unit consisting of approximately 640 contiguous surface acres, which will be one governmental section or lots equivalent thereto, upon which no part is attributed to another well completed or drilling to the same pool.
 - (b) Lineal: Wells drilled for oil will not be located closer than 500 feet to any boundary of the unit, and not farther than 500 feet from the shortest center line of the unit.

Each well drilled for gas will be located within a square, each side to be 1,660 feet long and parallel to a center line of the section, and the center to coincide with the center of the section.
2. Exceptions: Yes. Section 47-321, Idaho Code.
 - (a) Basis: If well would likely be non-productive, or surface conditions will create excessive hazards or cost, or other good cause shown by applicant.
 - (b) Approval: Application to be filed with Commission. Must show reason for exception request, and show consent by the owners of all drilling units (established or projected) directly or diagonally offsetting the drilling unit involved with the exception. Section 47-321(d), Idaho Code.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes.
 - (b) Seismic drilling? Yes.
 - (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
2. Permit fee:
 - (a) Drilling: \$100.
 - (b) Seismic drilling: No.
 - (c) Recompletion: No.
 - (d) Plugging and abandoning: No.
3. Require filing report of work performed: Yes. Rule 35, Form P-7 and P-15.

Vertical Deviation

1. Regulation requirement: Yes. Rule 17.
 - (a) When is directional survey necessary? Drilling would be by special application under the Rules. Surveys would be required as necessary to insure well direction reasonably agrees with the plan as approved.
 - (b) Filing of survey required? Yes, upon completion.

Casing and Tubing

1. Minimum amount required: Rule 8.
 - (a) Surface casing: Yes. Surface casing to be set to a depth below all known and encountered fresh water aquifers, sufficiently deep to prevent blow-outs, and set through an impervious casing.
 - (b) Production casing: Casing program must be sufficient to prevent migration between horizons, and infiltration of injurious waters from other sources.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes. Cemented to the surface.
 - (b) Production casing: Yes. Degree of cementing depends upon well and field conditions.

- (c) Setting time: Yes, 8 hours.
- 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

- 1. Completion report required: Yes. Rule 9.
 - (a) Time limit: 30 days after completion.
 - (b) Where submitted: Sent to office of Commission.
- 2. Well logs required to be filed: Yes. Section 47-319, Idaho Code, Rule 9.
 - (a) Time limit: 30 days after completion.
 - (b) Where submitted: Office of the Commission.
 - (c) Confidential time period: Yes, upon request of operator. One year.
 - (d) Available for public use: All logs available to public, unless held confidential, in which case open to public following expiration of confidentiality period.
 - (e) Log catalog available: Yes, but very general and not published.
- 3. Multiple completion regulation: Yes. Rule 21.
 - (a) Approval obtained: Application to the Commission.
- 4. Commingling in well bore: Yes. Rule 22.
 - (a) Approval obtained: Application to the Commission.

Oil Production

- 1. Definition of an oil well: Rule 3. Oil well for the purposes of the Rules means any well capable of producing oil in paying quantities.
- 2. Potential tests required: Yes. Rule 9.
 - (a) Time interval: 30 days.
 - (b) Witness required: No.
- 3. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.

4. Maximum gas-oil ratio: 2,000 cubic feet per barrel of oil production. Rule 28, 2.9.
 - (a) Provision for limiting gas-oil ratio: Yes. Issuance of emergency order temporarily prohibiting continued production.
 - (b) Exception to limiting gas-oil ratio: Yes. Through hearing process.
5. Bottom-hole pressure test reports required: Yes. Rule 9. Form P-7.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Has authority, but no regulation promulgated to date. Section 47-319, Idaho Code.
7. Measurement involving meters: Yes. Rule 26.
8. Production reports: Rule 35. Commission has the authority. Specific requirements to be established with start of production.
 - (a) By lease:
 - (b) By well:
 - (c) Time limit:

Gas Production

1. Definition of a gas well: Rule 3. Gas well shall mean (a) a well which produces natural gas only; (b) any well capable of producing gas in commercial quantities and also producing oil from the same common source but not in commercial quantities; or (c) any well classed as a gas well by the Commission for any reason.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes. Rule 9.
 - (a) Time interval: 30 days.
 - (b) Witness required: No.
4. Statewide allowable:
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes. Rule 9. Form P-7.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: Has authority, but no regulations promulgated to date. Section 47-319, Idaho Code.
7. Measurement involving meters: Yes. Rule 27.

8. Production reports: Rule 35. Commission has the authority. Specific requirements to be established with start of production.
 - (a) By lease:
 - (b) By well:
 - (c) Time limit:

Water Disposal

1. State agencies that control disposal of produced salt water: Oil and Gas Conservation Commission, Idaho Department of Lands.

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:
 - (b) Royalty interest:

Taxation

Gas severance tax = 2.0%
 Gas ad valorem tax = 0.0%
 Total gas tax burden = 2.0%

Oil severance tax = 2.0%
 Oil ad valorem tax = 0.0%
 Total oil tax burden = 2.0%

1. Tax collecting agency: State Tax Commission, P.O. Box 36, Boise, ID 83722.
2. How tax is computed: The oil and gas severance tax rate is computed as 2.0% of the total value. At this time, Idaho does not have any producing wells and no tax is being collected.
3. Exemptions or exceptions: There are no exemptions or exceptions for gas tax in Idaho.
4. Name of tax: Severance.
5. Statutory citation: 47-330, 47-331, and 47-332 Idaho Code.

Land Leasing Information

1. Leasing Method: Competitive bidding at an oral auction.
2. Notice Method: No less than 30 days prior to the date of the auction in 2 newspaper of general circulation in Idaho and in one or more major trade journals of the department's choice.
3. Minimum bidding \$ (per acre): \$0.25 bonus.

4. Qualification of the bidder: Any person defined under IDAPA 20-03-16 §010-15, §020.
5. State Statutes: IDAPA 20-03-16 §§ 010-15, 015, 016, 020, 022, 023, 025, 026, 027, 028.
6. Maximum acres: 640 acres.
7. Contact: Sharon A. Murray. Minerals Program Manager, Idaho department of Lands, 954 W. Jefferson, P. O. Box 83720, Boise, Idaho 83720. telephone (208) 334-0231.

Naturally Occurring Radioactive Material (NORM)

No NORM regulations at this time.

ILLINOIS

Administration

1. State agency: Department of Natural Resources, Office of Mines and Minerals, Division of Oil and Gas, One Natural Resources Way, Springfield, IL 62702-1271. Phone (217) 782-7756.
2. Docketing procedure: Upon receipt of proper application, the Department shall promptly fix a date for hearing and cause notice of the hearing to be given.
 - (a) Emergency orders: Yes, for a period of 30 days or until a hearing is held.
 - (b) Notice: Notice of hearings will be published at least ten days prior to date of hearing by the Department.

Bond

1. Compliance bond required: Only for operators on record with the Department for less than two years. No bond required after that period.
2. Conditions of bond: Proper plugging and restoration of well-site on abandonment.
 - (a) Amount per well: \$1,500 less than 2,000 feet.
\$3,000 over 2,000 feet.
 - (b) Amount of blanket bond:

0 - 25 wells	\$ 25,000
26 - 50 wells	\$ 50,000
51 or more wells	\$100,000

Spacing

1. Spacing requirements:
 - (a) Density: Oil - 10 acres for an oil well in a sandstone, 20 acres for an oil well in limestone, 40 acres for an oil well deeper than 4,000 feet. Gas - 10 acres for a gas well in a sandstone, 20 acres for a gas well in a limestone, 40 acres over 2,000 feet but less than 5,000 feet, 160 acres over 5,000 feet for discovery well, offset well spacing set by hearing.
 - (b) Lineal: For an oil or gas well not less than 330 feet from the nearest external boundary lines of the drilling unit.
2. Exceptions: Yes.
 - (a) Basis: Topographical conditions, irregular section, secondary recovery operations, location over mine, or geological conditions.
 - (b) Approval: Administratively after verification of submitted information or by hearing depending on basis stated above.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: No.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes, if well drilled deeper or converted for use other than originally permitted.
 - (d) Plugging and abandoning: No.
2. Permit fee:
 - (a) Drilling: \$100.
 - (b) Seismic drilling: No.
 - (c) Recompletion: \$100, if well drilled deeper or converted for use other than originally permitted.
 - (d) Plugging and abandoning: No.
3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulations requirement: Yes.
 - (a) When is directional survey necessary? A proposed vertical deviation filed with permit application with actual survey required to be filed after well drilled.
 - (b) Filing of survey required: Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, depth based on local conditions.
 - (b) Production casing: Yes, set no higher than 50 feet above the top of the uppermost producing interval.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulated to surface.
 - (b) Production casing: yes, minimum of 250 feet above producing interval.
 - (c) Setting time: yes, minimum of four hours for surface casing before commencing drilling. No requirements for production casing.
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes.
 - (a) Time limit: Within 30 days of completion of well.
 - (b) Where submitted: Department of Natural Resources, Division of Oil and Gas, One Natural Resources Way, Springfield, IL 62702-1271.
2. Well logs required to be filed: Yes.
 - (a) Time limit: Within 90 days after drilling ceases.
 - (b) Where submitted: State Geological Survey, Natural Resources Building, 615 East Peabody Drive, Champaign, IL 61820.
 - (c) Confidential time period: Yes, if requested. Two years from date of permit.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
3. Multiple completion regulation: No, unless wellspacing affected by multiple zones.
 - (a) Approval obtained: Authorization obtained during permit process, amendment for later completions required only if spacing affected.
4. Commingling in well bore: Allowable, no authorization required.
 - (a) Approval obtained: None required.

Oil Production

1. Definition of an oil well: "Oil Well" shall mean any well drilled for the production of oil.
2. Potential tests required: No.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
3. Statewide allowable: No.
 - (a) Pool allowable: N/A.
 - (b) Well allowable: N/A.
 - (c) Exempt allowable: N/A.
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: N/A.
 - (b) Exception to limiting gas-oil ratio: N/A.

5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: N/A.
6. Commingling oil in common facilities: No.
7. Measurement involving meters: No.
8. Production reports: No.
 - (a) By lease: N/A.
 - (b) By well: N/A.
 - (c) Time limit: N/A.

Gas Production

1. Definition of a gas well: "Gas Well" means a well with a gas to oil production ratio equal to or greater than 10,000 cubic feet of gas to one barrel of oil.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: No.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
4. Statewide allowable: No.
 - (a) Pool allowable: N/A.
 - (b) Well allowable: N/A.
 - (c) Exempt allowable: N/A.
5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: N/A.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: No.
8. Production reports: No.
 - (a) By lease: N/A.
 - (b) By well: N/A.
 - (c) Time limit: N/A.

Water Disposal

1. State agencies that control disposal of produced salt water: Department of Natural Resources, Office of Mines and Minerals, Division of Oil and Gas.

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:
 - (a) Working interest: 51%
 - (b) Royalty interest: 51%

Taxation

1. There is no state severance tax levied on oil and gas in Illinois. There are county ad valorem taxes.

Land Leasing Information

1. Leasing Method: Sealed competitive bids on lands designated by state. State may reject all bids. Drilling on lands owned by Department of Natural Resources is prohibited.
2. Notice Method: Public notice by publication in newspaper or other publications with statewide distribution and notice given to persons on department maintained lease notice list.
3. Minimum bidding \$ (per acre): Minimum acceptable royalty rate – no less than 12 ½ % per centrum. Minimum bonuses in addition to the set royalty provision established at time of bid solicitation.
4. Qualification of bidder: Post bond and have no outstanding violations of Oil and Gas Act.
5. State Statutes: Oil and Gas Wells on Public Lands Act 5 ILCS 615/1 et. seq.
6. Maximum acres: Variable, to be determined at time of bid solicitation.
7. Contact: Duane Pulliam, interim Division Manager
Phone: (217) 782-7756
E-mail: duane.pulliam@illinois.gov

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Natural Resources, Division of Oil and Gas, One Natural Resources Way, Springfield, IL 62702-1271, Phone: (217) 782-7756, Fax: (217) 524-4819, E-mail: duane.pulliam@illinois.gov
Relevant Statute/Regulations: Illinois Oil and Gas Act – 225 ILCS 725/1.
3. Scope: Department has authority to regulate all oil and gas wastes. Does not name NORM specifically, but Department interprets all to include oilfield NORM.
4. Licensing: None required at this time. State Department of Nuclear Safety may purpose NORM regulations; however, current state low-level waste statutes implemented by Nuclear Safety are not clear on NORM authority.
5. Cleaning Equipment: None regulated at this time except from the standpoint of worker safety which is under the

jurisdiction of the Department of Nuclear Safety.

6. Disposal of Waste: Currently, only disposal of NORM in pit residues are regulated.
7. Subsequent Use of Equipment: Equipment not regulated at this time.
8. Subsequent Use of Materials: Use of potentially NORM contaminated materials are not regulated at this time.
9. Released/Sale of NORM-Contaminated Land: Current regulations only require a notice be filled with the County Clerk stating the presence of NORM at a closed pit site.
10. Projected Volume of stored NORM in the State: Unknown.
11. Respondent:
12. Regulating Agency: Illinois Department of Nuclear Safety, Division of Materials, 1035 Outer Park Drive, IL 62704, Phone: (217) 785-9935, Fax: (217) 782-1328.
13. Relevant Statute/Regulations: 32 Illinois Administrative Codes, but currently developing a specific TENORM rule.
14. Scope: Covers all radioactive material and facilities that are not areas of exclusive federal jurisdiction.
15. Licensing: Required for all that are not exempt.
16. Cleaning Equipment: License required.
17. Disposal of Waste: To specifically approved facilities and by specifically approved methods only.
18. Subsequent Use of Equipment: Okay.
19. Subsequent Use of Materials: Case-by-case evaluation needed.
20. Release/Sale of NORM-Contaminated Land: Case-by-case evaluation. Decommissioning generally required.
21. Projected Volume of stored NORM in the State: Unknown.
22. Respondent: Steven Collins.

INDIANA

Administration

1. State agency: Division of Oil and Gas, 402 West Washington Street, Room W293, Indianapolis, IN 46204. Phone (317) 232-4055.
2. Docketing procedure: Upon receipt of a petition concerning a matter within the jurisdiction of the Department, the hearing date will be fixed and notice will be given.
 - (a) Emergency orders: There is authority under the law to issue an emergency order, by the Director of the Department of Natural Resources.
 - (b) Notice: Fifteen days by the Department.

Bond

1. Compliance bond required: Yes. Except for exemption provided for by statute. Operators may submit annual well fee in lieu of bond.
2. Conditions of bond: Restoration of surface to its former condition and plugging of well.
 - (a) Amount per well: \$2,500.
 - (b) Amount of blanket bond: \$45,000.

Spacing

1. Spacing requirements: Yes.
 - (a) Density: Oil well - 10 acres for sandstone and 20 acres for all other reservoirs except wells in the established Trenton formation which allow 5 acre spacing. Gas well - above 1,000 feet same as above; below 1,000 feet, 40 acres.
 - (b) Lineal: Oil well - 330 feet from a property or unit line; 660 feet from another well producing from the same formation. Gas well - above 1,000 feet same as oil; below 1,000 feet, 330 feet from a property or unit line and 1,320 feet from another well. Non Commercial Gas well - no spacing or unit requirements. Established Trenton field wells 165 feet from property or unit line.
2. Exceptions: Yes.
 - (a) Basis: When geological and pool conditions justify.
 - (b) Approval: By hearing.

However, public notice is required prior to permit issuance.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:

- (a) Drilling an operating, service well or test hole: Yes.
- (b) Seismic drilling? Yes.
- (c) Recompletion? No.
- (d) Plugging and abandoning? No.

2. Permit fee:

- (a) Drilling: \$250 + \$500 for expedited processing (if requested).
- (b) Seismic drilling: N/A
- (c) Recompletion: None.
- (d) Plugging and abandoning: None.
- (e) Annual fee for each Class II well: None.
- (f) Annual fee for existing permitted wells: Yes.

<u>Number of Wells</u>	<u>Amount</u>
1 well	\$150
2-5 wells	\$300
6-25 wells	\$750
26-100 wells	\$1,500
>100 wells	\$1,500 plus \$15 for each well over 100

NOTE: The Division of Oil and Gas will send a notice to operators before December 1 of each year listing the wells permitted to the operator as of November 1 of that year.

3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: No.

- (a) When is directional survey necessary? When the operator drills a directional hole.
- (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:

- (a) Surface casing: Yes - below all fresh water, except where production casing cemented to surface.
- (b) Production casing: Yes, to top of last stratum drilled.

2. Minimum amount of cement required:

- (a) Surface casing: To surface, except as noted in 1. above.
- (b) Production casing: Yes, to bottom of last string run and/or cemented to surface.

- (c) Setting time: Upon completion of drilling.
- 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.
 - (c) Class II wells: Yes.

Completion

- 1. Completion report required: Yes.
 - (a) Time limit: Within 30 days of completion of the well.
 - (b) Where submitted: Division of Oil and Gas, 402 West Washington Street, Room 293, Indianapolis, IN 46204.
 - (c) Confidential time period: Yes. If requested, one year from date of completion.
- 2. Well logs required to be filed: Yes, if run. Three copies of each log run.
 - (a) Time limit: Within 30 days of date run.
 - (b) Where submitted: Division of Oil and Gas, 402 West Washington Street, Room 293, Indianapolis, IN 46204.
 - (c) Confidential time period: Yes. If requested, one year from date of completion.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
- 3. Multiple completion regulation: No.
 - (a) Approval obtained:
- 4. Commingling in well bore: No.
 - (a) Approval obtained.

Oil Production

- 1. Definition of an oil well: Statutes or regulations do not define oil well. (However, "oil" means all liquid petroleum produced at a well.)
- 2. Potential tests required: No.
 - (a) Time interval:
 - (b) Witness required:
- 3. Statewide allowable: No.
 - (a) Pool allowable:
 - (b) Well allowable:

- (c) Exempt allowable:
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: No.
 - (b) Exception to limiting gas-oil ratio: No.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: No.
- 7. Measurement involving meters: No.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: No.
 - (c) Time limit:

Gas Production

- 1. Definition of a gas well: Statutes or regulations do not define a gas well. ("Gas" means natural gas.)
- 2. Pressure base _____ psia @ _____ degrees F.
- 3. Initial potential tests: No.
 - (a) Time interval:
 - (b) Witness required:
- 4. Statewide allowable: No.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
- 5. Bottom-hole pressure tests reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: No.
- 8. Production reports:

- (a) By lease: No.
- (b) By well: No.
- (c) Time limit:

Water Disposal

1. State agencies that control disposal of produced salt water: Division of Oil and Gas, 402 West Washington Street, Room 293, Indianapolis, IN 46204.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization: No.
 - (a) Working interest:
 - (b) Royalty interest:

Taxation

Gas severance tax = 1.0% of value at the time the gas is severed, or \$0.03 per MCF; whichever is greater.

Gas ad valorem tax = 0.0%

Total gas tax burden = 1.0% or \$0.03 per MCF; whichever is greater

Oil severance tax = 1.0% of value at the time the oil is severed, or \$0.24 per barrel; whichever is greater.

Oil ad valorem tax = 0.0%

Total oil tax burden = 1.0% or \$0.24 per barrel; whichever is greater

1. Tax collecting agency: Special Tax Division, Department of Revenue, N248 State Office Building, 100 N. Senate, Indianapolis, IN 46204.
2. How tax is computed: Gas severance tax is computed as 1% of the value at the time the gas is severed or \$0.03 per MCF, whichever is greater. Oil severance tax is computed as 1% of the value at the time the oil is severed or \$0.24 per barrel, whichever is greater.
3. Exemptions or exceptions: None.
4. Name of tax: Petroleum Severance Tax.
5. Statutory citation: IC 6-8-1.

Land Leasing Information

1. Leasing Method: Sealed bids, but may offer competitive public bidding.
2. Notice Method:
3. Minimum bidding \$ (per acre): Set a minimum acceptable royalty rate, which may not be less than 12 1/2% and call for competitive offers by prospective lessees for cash bonuses in addition to the set royalty provision.
4. Qualification of the bidder:

5. State Statutes: IC 14-38-1-11
IC 14-38-1-12
IC 14-38-1-14
IC 14-38-1-16
6. Maximum acres: 3 sections or an equivalent area.
7. Contact: Herschel McDivitt, Director
Phone: (317) 232-4058
E-mail: hmcdivitt@dnr.in.gov

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: State Department of Health, Emergency Response and Radioactive Material Programs, Indoor and Radiologic Health, 2 North Meridian St., 5th Floor, Indianapolis, IN 46204-3003. Phone: (317) 233-7153, Fax: (317) 233-7154.
2. Relevant Statute/Regulations: Proposed - No state regulations for dealing with NORM in the oil and gas industry.
3. Scope: When found in scrap streams our office provides list of radiation brokers (CRCPD).
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: Herschel McDivitt

KANSAS

Administration

1. State Agency: State Corporation Commission, Conservation Division, Finney State Office Building, 130 S. Market, Room 2078, Wichita, KS 67202. Phone (316) 337-6200.
2. Docketing procedure: Hearings generally held on the third Thursday of each month. Applications must be received at least 30 days prior to date of hearing. Six month schedules available from the Conservation Division.
 - (a) Emergency orders: Yes, emergency action may be taken by the Commission without notice and hearing, such action to remain in force no longer than 30 days from the effective date. K.S.A. 55-605.
 - (b) Notice: At least 10 days prior to hearing. Kansas Corporation Commission, Conservation Division. K.S.A. 55-605 and K.A.R. 82-3-135.

License

1. License required: Yes, for every well operator, drilling, plugging contractor, including Cathodic protection bore holes and seismic drilling contractors and gas gathering system operators. Additionally, operators of gas gathering systems, facilities including all underground gas porosity storage wells and facilities must be licensed. K.S.A. 55-150, 55-155. Operators of a single residential gas well for home heating have a reduced license fee.
2. Conditions of license: Filing of a verified application, certificate of good standing from Secretary of State if applicable and payment of proper fees. K.A.R. 82-3-120; 82-3-121.

Bond

1. Compliance bond required: Yes. A bond or other financial assurance is required. K.A.R. 82-3-120.
2. Conditions of bond: Operator's must have an acceptable 3 (three) year past record of compliance. For operators that DO NOT meet this criteria they must post a performance bond or other means of financial assurance.
 - (a) Amount per well: .75¢ times the aggregate depth for all wells drilled or operated.
 - (b) Amount of blanket bond: Ranges from \$7,500 to \$45,000 depending on the number of wells and depth.

Spacing

1. Spacing requirements: Yes. K.A.R. 82-3-108 and 82-3-312.
 - (a) Density: 10 acres for oil and gas wells.
 - (b) Lineal: Gas and oil wells shall be located 330' or more from any lease or unit boundary line to qualify for a full allowable. K.A.R. 82-3-207 and 82-3-312.
2. Exceptions: Yes. Oil wells drilled to a depth of less than 2,000 feet in certain counties in eastern Kansas have a lineal distance requirement of 165 feet from the nearest lease or unit boundary line. K.A.R. 82-3-108(b.) Other exceptions to spacing requirements may be granted by Commission order after notice of the application and possible hearing.
 - (a) Basis: Application by operator.
 - (b) Approval: Commission order. Hearing if needed after notice. K.A.R. 82-3-108.

Pooling

1. Authority to establish voluntary: Yes. Terms of contract (lease).
2. Authority to establish compulsory: No.

Drilling Permit

1. Require permits for:
 - (a) Drilling a oil, gas, re-entry workover, service, cathodic borehole or gas storage well? Yes, K.A.R. 82-3-701 et seq. Statutory authority under K.S.A. 55-151. Required prior KCC Intent to Drill permit approval and operators are required to post approved permit on location with the drilling rig during drilling operations.
 - (b) Notification: Verbal notice of drilling commencement required to District offices.
 - (c) Seismic drilling: Yes, K.A.R. 82-3-115a.
 - (d) Recompletion: No, but completion report (ACO-1 Form) is required: K.A.R. 82-3-103. Notice to the appropriate KCC district office must be made at least 48 hours prior to the commencement of recompletion with prior work over pit authorization and approval. K.A.R. 82-3-132.
 - (e) Plugging and abandoning: Yes, K.A.R. 82-3-113 and 114. Also reentry of plugged and abandoned wells. K.A.R. 82-3-103. Re-entry notification under K.A.R. 82-3-132.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: \$.0325 per foot total depth. Min. \$35. K.A.R. 82-3-118. Seismic generally \$1-\$5 depending on depth of shot hole.
3. Require filing report (ACO-1 Form) of work performed: Yes, K.A.R. 82-3-130. Must be filed within 120 days of commencement of drilling operations.

Vertical Deviation

1. Regulation requirement: Yes, K.A.R. 82-3-103a.
 - (a) When is directional survey necessary? Any hole that deviates (including horizontal) greater than 7° from vertical, and/or when requested by Corporation Commission through hearing or per requirements.
 - (b) Filing of survey required: Yes, K.A.R. 82-3-128, 82-3-107, and 82-3-130 (ACO-1 Form).

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, K.A.R. 82-3-106 and by special order of the Commission. Table 1 for minimum depth. Protect through all unconsolidated material - for Protection of all fresh/usable groundwater.

- (b) Production casing: No. K.A.R. 82-3-105 requires that casing must seal off and isolate producing and water bearing zones, by being cemented in place. Must use a Portland Blend cement.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes, K.A.R. 82-3-106. Table I for minimum depths. Cement metallic casing to surface. Includes Cathodic protection bore holes surface casing pursuant to K.A.R. 82-3-702.
 - (b) Production casing: No. Unless depth of surface casing set does not meet Table I requirement. K.A.R. 82-3-105 requires that metallic casing must seal off and isolate producing and water bearing zones, by being cemented in place. Cathodic bore holes surface casing must be centralized and cemented or grouted in place to the surface pursuant to K.A.R. 82-3-702.
 - (c) Setting time: Yes, 8 hours. K.A.R. 82-3-106 (d) (4). Portland cement and blends K.A.R. 82-3-106(2) (A). Or as per grout manufacture's specifications for cathodic boreholes in K.S.A. 82-3-702.
 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No, except for certain gas storage wells.

Completion

1. Completion report required: Yes (ACO-1 Form).
 - (a) Time limit: Within 120 days from spud date. K.A.R. 82-3-130.
 - (b) Where submitted: Conservation Division.
2. Well logs required to be filed: Yes, all wireline electric logs (including geological report, Core data, DST's, and cement tickets).
 - (a) Time limit: Within 120 days of spud date. K.A.R. 82-3-130.
 - (b) Where submitted: Conservation Division.
 - (c) Confidential time period: Within 120 days of spud date by letter request. One year from date of letter request and may be extended one year by additional letter request. K.A.R. 82-3-107.
 - (d) Available for public use: Unless confidentiality requested, all logs are repositied with the Kansas Geological Survey.
 - (e) Log catalog available: Not at Kansas Corporation Commission. However, is available at Kansas Geological Survey.
3. Multiple completions regulation: Yes, K.A.R. 82-3-124.
 - (a) Approval obtained: by application. Hearing if needed after notice.
4. Commingling in well bore: Yes, K.A.R. 82-3-123.
 - (a) After Approval obtained: by application. Hearing if needed after notice.

Oil Production

1. Definition of an oil well: "Oil well" means a well that produced one stock tank barrel or more of crude oil to each 15,000 standard cubic feet of gas, as measured by the gas-oil ratio test prescribed by and reported on the form prescribed and furnished by the Commission.
2. Potential tests required: Yes.
 - (a) Time interval: In prorated pools productivity tests within 30 days of filing (ACO-1) completion report. K.A.R. 82-3-202.
 - (b) Witness required: Yes, by state representative. Representative of offset operator(s) optional. K.A.R. 82-3-202.
3. Statewide allowable: Yes. As provided for by K.A.R. 82-3-203. Per well allowable is 100, 200, 300 BOPD depending upon depth.
 - (a) Pool allowable: Yes. As provided for by K.A.R. 82-3-203 and by special proration orders.
 - (b) Well allowable: Yes. As provided for by K.A.R. 82-3-203 and by special proration orders.
 - (c) Discovery allowable: No.
4. Maximum gas-oil ratio: Yes, 15 mcf/1 BO.
 - (a) Special individual field rules provide for limiting oil production from high GOR wells.
5. Bottom-hole pressure test reports required: Not required unless by special order. Drill stem pressure tests are reported per ACO-1. K.A.R. 82-3-130, 82-3-107.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Yes. The production from one or more common source of supply may be commingled before delivery to a purchaser. K.A.R. 82-3-125.
7. Measurement involving meters: Yes, including electronic measurement devices.
8. Production reports: Only prorated pools. K.A.R. 82-3-204. Filed to KCC office.

Oil

- (a) By lease: Yes, if only one well; All others by individual well broken down from common tank. File form CO8A monthly.
- (b) By well: Yes, by meter or gauges reading.
- (c) Time limit: By 15th of succeeding month to the Conservation division. K.A.R. 82-3-204.
- (d) All prorated and non-prorated wells report production by lease through first purchaser to the Department of Revenue, Mineral Tax Division.

Gas Production

1. Definition of a gas well: "Gas well" means a well that:
 - (a) Produces gas not associated with oil at the time of production from that reservoir; or

- (b) Produces more than 15,000 standard cubic feet of gas to each stock tank barrel of oil from the same common source of supply, as measured by the gas-oil ratio test prescribed by and reported on the form prescribed and furnished by the Commission.
- 2. Pressure base 14.65 psia @ 60 degrees F.
- 3. Initial potential tests: Yes. K.A.R. 82-3-303 and 82-3-304.
 - (a) Time interval: 30 days for multipoint tests; 30 days for initial one-point stabilized flow tests. Must be submitted to Kansas Corporation Commission 30 days after the test. Test may not be required for wells producing less than 250 mcf per day by "minimum well" exemption. For such "minimum wells" an annual shut-in pressure must be submitted with the request for testing exemption.
 - (b) Witness required: Yes.
- 4. Statewide allowable: Yes. K.A.R. 82-3-312. 50% of calculated open flow with a 250 Mcfd minimum.
 - (a) Pool allowable: Yes. Allocation based primarily on basis of proration of market demand. K.S.A. 55-703.
 - (b) Well allowable: Yes. Individual field basic proration orders set out allocation formulas for gas wells.
 - (c) Exempt allowable: No. However, certain field rules include provisions for minimum allowables. There is also a statewide minimum allowable, for wells not located in specially designated pools. K.A.R. 82-3-312.
- 5. Bottom-hole pressure test reports required: No, unless common mineral and working interest ownership may allow for commingling. K.A.R. 82-3-305.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: Yes. K.A.R. 82-3-305 is the general rule, electronic gas measurement and measurement with a turbine meter is allowed and can be used in deliverability testing in certain prorated fields.
- 8. Production reports: Gas production is reported monthly by operators. K.A.R. 82-3-306.
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: Monthly. K.A.R. 82-3-306.

Water Disposal

- 1. State agencies that control disposal of produced salt water: The Kansas Corporation Commission controls disposal of produced water. K.A.R. 82-3-400 et seq.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply. Yes. K.S.A. 55-1301-1315.
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Unitization for enhanced recovery operations
 - (1) Working Interest: 63%

- (2) Royalty Interests (excluding overriding royalties): 63%
- (b) Unitization for management purposes
 - (1) Working Interest: 63%
 - (2) Royalty Interests (excluding overriding royalties): 75%

Taxation

Gas severance tax = 4.33%

Gas ad valorem tax = varies by county; approximately 10% of revenue

Total gas tax burden = approximately 15-17% of revenue

Oil severance tax = 4.33%

Oil ad valorem tax = varies by county; approximately 4% of revenue

Total oil tax burden = approximately 8% of revenue

1. Tax collecting agency: Department of Revenue. The Department of Revenue also collects the Kansas Corporation Commission Conservation Division fees which are currently 12.90 mills/MCF of produced gas, and 91.00 mills per barrel of oil.
2. How severance tax is computed: Gas severance is 8%, with a 3.67% credit for ad valorem tax, which is a net severance tax of 4.33%. The ad valorem tax is premised on market value of the lease as developed by applying the *Oil and Gas Guide* issued annually by the Kansas Department of Revenue, Division of Property Valuation. It is administered by county government and collected by them for use at the county level. A credit of 15 and 17% is given as expense allowance in the valuation of the gas lease for the expense of severance and ad valorem taxes. The 15% is applicable to the Hugoton Field and the 17% is applicable to all other gas producing properties.

Oil severance tax is 8% with a 3.67% credit for ad valorem taxes, which is a net severance tax of 4.33%. Oil lease ad valorem tax is generally 4% of revenues, hence the 3.67% credit for severance. The oil lease ad valorem tax is administered the same as the gas ad valorem tax.

Ad valorem values may vary widely year to year depending on price and production. In 1999 the price used for oil was \$8.75, in 2000 the price increased to \$19 and the valuation statewide doubled.

3. Exemptions or exceptions: The production of gas which is: (A) Injected for the purpose of lifting oil; (B) used for fuel on the lease; (C) lawfully vented or flared; (D) severed from a well having an average daily production with a gross value of not more than \$87 per day; (E) inadvertently lost by reason of accidental losses; (F) used for domestic or agricultural purposes on the lease; (G) placed in underground storage and which was severed from another state or the tax had been previously paid if severed in Kansas.

The severance and production of oil which is: (A) From a lease or production unit whose average daily production from a producing well, or from all producing wells is five barrels or less; (B) from producing wells which have a depth of 2,000 feet or more, and whose average daily production is six barrels or less (C) from a lease or production unit, whose production results from a tertiary recovery process; (D) from wells which have a completion depth of less than 2,000 feet and whose average daily production, from water flood, is six (6) barrels or less; (E) from wells which have a completion depth of 2,000 feet or more, and whose average daily production from a waterflood process, is seven barrels or less (F) test, frac or swab oil exchanged for value; (G) inadvertently lost by accidental means.

All oil leases, other than royalty interest therein, that have an average daily production of five barrels or less per producing well, or six barrels or less per producing well, which has a completion depth of 2,000 feet or more, are exempt from the severance tax under current law. Add one barrel if the well is a waterflood.

The production of oil or gas from a pool that was first produced after April 12, 1983 (new pool) is exempt from the severance tax. This exemption is temporary for a period of twenty-four (24) months from the date of first production. Authority for determining whether production is from a new pool rests with the Kansas Corporation Commission.

K.S.A. 79-4217 was amended by the 1998 legislature to provide for a seven year exemption from severance tax on any incremental increase in oil or gas production which is the result of a qualifying production enhancement project begun after July 1, 1998. The Kansas Corporation Commission established a process to certify that the production for which an exemption is sought is the result of a qualifying production enhancement project as set out in statute. The exemption certification process is covered under K.A.R. 82-3-900 *et. seq.*

K.S.A. 79-2001 permits production from oil wells producing above 2000 feet at a rate of 3 bbl per day to be exempt from the ad valorem tax excluding the equipment value, and royalty interests. Production of 5 bbl or less from 2001 feet and deeper are treated the same under the exemption. For gas wells that are 100 MCF per day or less, the production is exempt from ad valorem taxes.

4. Name of tax: Severance.
5. Statutory citation: Severance tax: K.S.A. 1994 Supp. 79-4216 et seq. K.S.A. 79-4217 (b); Ad valorem tax: K.S.A. 79-329; Exemptions: K.S.A. 79-2011.

Land Leasing Information

1. Leasing Method: Please read the general summary.
2. Notice Method:
3. Minimum bidding \$ (per acre):
4. Qualification of the bidder:
5. State Statutes:
6. Maximum acres:
7. Contact: Department of Administration, Phone: (785) 296-3011.

Naturally Occurring Radioactive Materials (NORM)

1. Regulating Agency: Radiation Control Program, Bureau of Air and Radiation; Kansas Department of Health and Environment.
2. Relevant Statute/Regulations: There are no existing or proposed regulations specific to NORM.
3. Scope: The State of Kansas Radiation Protection Regulations apply to all persons who receive, possess, use, transfer, own or acquire any source of radiation.
4. Licensing: NORM responses are evaluated to decide if radioactive materials license is required for the material.
5. Cleaning Equipment: Descaling or cleaning operations would require a Radioactive Materials License if scale or sludge contains significant quantities of radioactive materials such as Radium-226.
6. Disposal of Waste: There is currently no satisfactory cost-effective way of disposing of this material.
7. Subsequent Use of Equipment: Release criterion of contaminated equipment would fall under the scope of Kansas Radiation Protection Regulations. Specific requirements would be addressed depending upon the scope of the licensee's proposed activities.
8. Subsequent Use of materials: Release criterion of contaminated materials would fall under the scope of Kansas Radiation Protection Regulations. Specific requirements would be addressed depending upon the scope of the licensee's proposed

activities.

9. Release/Sale of NORM-Contaminated Land: A radioactive materials license would be required and appropriately transferred to the new owners.
10. Projected Volume of stored NORM in the State: The extent of NORM contamination in oil and gas operations in Kansas has not been assessed. It has been proposed that the Department contact with a consultant to assess the extent of NORM contamination in Kansas.
11. Respondent: David Whifill

Underground Injection Control

Kansas Corporation Commission, Conservation Division permits injection wells after application, notice and hearing if necessary. K.A.R. 82-3-400 *et seq.*

KENTUCKY

Administration

1. State agency: Division of Oil and Gas Conservation, P. O. Box 2244, Frankfort, KY 40601. Phone (502) 573-0147.
2. Docketing procedure: Any party to a property may request a hearing and said hearing will be set.
 - (a) Emergency orders: Upon application by an operator.
 - (b) Notice: 20 days in advance of the date set for the hearing.

Bond

1. Compliance bond required: Yes.

0 - 500 feet	\$ 500
501 - 1,000 feet	1,000
1,001 - 1,500 feet	1,500
1,501 - 2,000 feet	2,000
2,001 - 2,500 feet	2,500
2,501 - 3,000 feet	3,000
3,001 - 3,500 feet	3,500
3,501 - 4,000 feet	4,000
over 4,000 feet	5,000

or an amount set by the Kentucky Oil and Gas
Conservation Commission

2. Conditions of bond: All records must be filed and well properly plugged.
 - (a) Amount per well: See table above.
 - (b) Amount of blanket bond: \$10,000 – 1- 25 wells
 \$25,000 - 25 - 100 wells
 \$50,000 – 100 – 500 wells
 \$100,000 – over 500 wells for “qualified” operators that had an existing blanket bond on file with the Division as of 7-12-06. For “non-qualified” operators or new operators, blanket bonds are as follows:
 \$50,000 – 1-100 wells
 \$100,000 – over 100 wells.

Spacing

1. Spacing requirements: Yes.
 - (a) Density: 2.88 acres for shallow oil wells in non coal area
 7.85 acres for shallow oil wells in coal area
 18.03 acres for shallow gas well spacing
 Deep Wells: As established by Kentucky Oil and Gas Conservation Commission, or in lieu of approved spacing as follows:
 70 acres for oil wells between 4,000-7,000 feet
 281 acres for gas wells between 4,000-7,000 feet
 143 acres for oil wells deeper than 7,000 feet
 574 acres for gas wells deeper than 7,000 feet

- (b) Lineal: Oil well (non-coal area & less than 2000 feet) - 400 feet between wells and 200 feet from mineral boundary. Oil well (coal areas and wells in non-coal area between 2000 feet and 4000 feet) - 660 feet between wells and 330 feet from mineral boundary in coal producing areas and non-coal areas greater than 2,000 feet. Gas well - 1,000 feet between wells and 500 feet from mineral boundary for gas wells less than 4,000 feet deep. Varies with depth and geographic area.

2. Exceptions: Yes.

- (a) Basis: For tracts that are so situated that they have no drillable site.
- (b) Approval: By notice and hearing.

Pooling

- 1. Authority to establish voluntary: Yes.
- 2. Authority to establish compulsory: Yes.

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well: Yes, by statute.
 - (b) Seismic drilling? No.
 - (c) Recompletion? No restriction so long as it complies with spacing requirements and meets bonding requirements.
 - (d) Plugging and abandoning? Yes.
- 2. Permit fee:
 - (a) Drilling: \$300.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
 - (e) Well transfer fee: \$25.
- 3. Require filing report of work performed: Yes.

Vertical Deviation

- 1. Regulation requirement: For directional and horizontal wells.
 - (a) When is directional survey necessary? For all wells drilled horizontally or intentionally deviated to change the bottom hole location and for deep wells upon the request of the Kentucky Oil and Gas Conservation Commission.
 - (b) Filing of survey required? Yes.

Casing and Tubing

- 1. Minimum amount required:

- (a) Surface casing: Yes, at least 30' below deepest fresh water.
 - (b) Production casing: No.
2. Minimum amount of cement required:
- (a) Surface casing: Yes, circulate to surface, 30 feet below fresh water depth.
 - (b) Production casing: No, except for injection wells circulate to surface.
 - (c) Setting time: No.
3. Tubing requirements:
- (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes.
- (a) Time limit: 90 days after completion of drilling.
 - (b) Where submitted: Division of Oil and Gas, P. O. Box 2244, Frankfort, KY 40601.
2. Well logs required to be filed: Yes.
- (a) Time limit: 90 days.
 - (b) Where submitted: Division of Oil and Gas, P. O. Box 2244, Frankfort, KY 40601.
 - (c) Confidential time period: Yes, upon request for one year maximum.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
3. Multiple completion regulation: No authorization required.
- (a) Approval obtained.
4. Commingling in well bore: No requirements.
- (a) Approval obtained:

Oil Production

1. Definition of an oil well: Oil Well - means any well which produces one (1) barrel or more of oil to each ten thousand (10,000) cubic feet of natural gas.
2. Potential tests required: No.
- (a) Time interval:
 - (b) Witness required:
3. Statewide allowable: No.

- (a) Pool allowable:
- (b) Well allowable:
- (c) Exempt allowable:
- 4. Maximum gas-oil ratio: 10,000 cubic feet to 1 barrel crude oil.
 - (a) Provision for limiting gas-oil ratio: No.
 - (b) Exception to limiting gas-oil ratio:
- 5. Bottom-hole pressure test reports required: Only if such test is run by the operator.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: No requirements.
- 7. Measurement involving meters: No requirements.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: No.
 - (c) Time limit: By February 28 of following year to the Department of Revenue.
By April 15 of following year to the Division of Oil and Gas.

Gas Production

- 1. Definition of a gas well: Gas Well - means any well which:
 - (a) Produces natural gas not associated or blended with crude petroleum oil any time during production; or
 - (b) Produces more than ten thousand (10,000) cubic feet of natural gas to each barrel of crude petroleum oil from the same producing horizon.
- 2. Pressure base 14.73 psia @ 60 degrees F.
- 3. Initial potential tests: No requirement.
 - (a) Time interval:
 - (b) Witness required:
- 4. Statewide allowable: No.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
- 5. Bottom-hole pressure test reports required: Only if run by operator.

- (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No requirements.
- 7. Measurement involving meters: No requirement.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: Yes, to the Division of Oil and Gas.
 - (c) Time limit: By February 28 of following year to the Department of Revenue.
By April 15 of following year to the Division of Oil and Gas.

Water Disposal

- 1. State agencies that control disposal of produced salt water: Surface - Division of Water, 18 Reilly Road, Frankfort, KY 40601; Underground - Division of Oil and Gas Conservation, P. O. Box 2244, Frankfort, KY 40601.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 51%.
 - (b) Royalty interest: 51%.

Taxation

Gas gross production tax = 4.5%
 Gas ad valorem tax = approximately 1%
 Total gas tax burden = approximately 5.5%

Oil gross production tax = 4.5%
 Oil ad valorem tax = approximately 1%
 Total oil tax burden = approximately 5.5%

- 1. Tax collecting agency: Revenue Cabinet, Capitol Annex, Frankfort, KY 40601.
- 2. How tax is computed: Gross production tax - Natural gas is taxed at 4.5% of the gross value of the gas severed and processed in Kentucky. Oil is taxed at 4.5% of the market value of all the oil produced in the state. The oil tax is imposed and attached when the oil is first transported from the tanks or other receptacle located at the place of production, and shall be imposed upon all persons owning an interest in such oil.

Ad valorem tax - Kentucky has a broadly based classified property tax system. Total ad valorem tax includes both state and local taxes and is approximately 1% throughout the state. The state ad valorem tax rate for natural gas and oil property that is both producing and undeveloped was .148% in 1999. The .148% tax rate is expressed in cents per \$100 of assessed value. The total ad valorem tax rate varies by local district and depends on the local rates.

- 3. Exemptions or exceptions: A tax credit of 4.5% is available for inactive oil and gas wells. An inactive well is classified as one that has been inactive for a consecutive two-year period or a well that has been plugged and abandoned, in accordance with regulations determined by the Department of Mines and Minerals.
- 4. Name of tax: Gross Production.

5. Statutory citation: Natural gas tax - KRS 143A.010 et seq.; Oil tax - KRS 137.120; Ad valorem tax - KRS 132.820.

Land Leasing Information

No regulations at this time.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Cabinet for Health and Family Services, 275 East Main, Frankfort, KY 40601. Phone: (502) 564-3700, Fax: (502) 564-1492.
2. Relevant Statute/Regulations: CRCPD states that "TENORM does not include the natural radioactivity of rocks, soil, or background but instead refers to materials whose radioactivity is technologically enhanced by controlled practices." Part N of CRCPD states TENORM is "radioactive material." 902 KAR 100:010(176) states "radioactive material" means a solid, liquid, or gas which emits radiation spontaneously. TENORM falls into this area as defined by the CRCPD.
3. Scope: Given the above 902 KAR 100 could be considered applicable to TENORM. All the areas listed below would fall under existing regulations. If TENORM is not considered radioactive material, then Kentucky would have regulations applicable to this material.
4. Licensing:
5. Cleaning:
6. Disposal of waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the state:
11. Respondent: Dewey Crawford.

LOUISIANA

Administration

1. State agency: Office of Conservation, P. O. Box 94275, Capitol Station, Baton Rouge, LA 70804-9275. Phone (225) 342-5540.
2. Docketing procedure: LSA-RS-30:6(F) - Any interested person has the right to have the Commissioner call a hearing for the purpose of taking action in respect to a matter within the jurisdiction of the Commissioner by making a request therefore in writing. Upon receiving the request the Commissioner shall promptly call a hearing. After the hearing, and with all convenient speed and in any event within thirty days after the conclusion of the hearing, the Commissioner shall take whatever action he deems appropriate with regard to the subject matter. In the event of failure or refusal of the Commissioner to issue an order within the period of thirty days, he may be compelled to do so by mandamus at the suit of any interested person. LSA-RS-30:4(C) - The Commissioner has authority to make after notice and hearing as provided in this Chapter, any reasonable rules, regulations, and orders that are necessary from time to time in the proper administration and enforcement of this Chapter, including rules, regulations, or orders. Based on the above cited authority, the Commissioner of Conservation adopted "Rules of Procedure for Conducting Hearings before the Commissioner of Conservation of the State of Louisiana," effective April 1, 1964, and last revised effective October 11, 1983.
 - (a) Emergency orders: LSA-RS-30: 6C - If the Commissioner finds an existing emergency which in his judgment requires the making, changing, renewal, or extension of a rule, regulation, or order without first having a hearing, the emergency rule, regulation, or order shall have the same validity as if a hearing had been held after due notice. The emergency rule, regulation, or order shall remain in force no longer than fifteen days from its effective date. In any event, it shall expire when the rule, regulation, or order made after notice and hearing with respect to the same subject matter becomes effective.
 - (b) Notice: LSA-RS-30: 6B - No rules, regulation, order, or change, renewal, or extension thereof, shall, in the absence of an emergency, be made by the Commissioner under the provisions of this Chapter except after a public hearing upon at least ten days' notice given in the manner and form prescribed by the Commissioner. This hearing shall be held at a time and place and in the manner prescribed by the Commissioner. The Commissioner, in his discretion, may designate a member of his staff to conduct public hearings on his behalf. Any person having an interest in the subject matter of the hearing shall be entitled to be heard. Provided, however, that whenever any application shall be made to the Commissioner of Conservation for creation, revision or modification of any unit or units for production of oil or gas, or for adoption of any plan for spacing of wells or for cycling of gas, pressure maintenance or restoration, or other plan of secondary recovery, the applicant shall be required to file with the application two copies of a map of such unit or units or well spacing pattern or two explanations of such plan of cycling, pressure maintenance or restoration, or other secondary recovery program and at least thirty (30) days' notice shall be given of the hearing to be held thereon, in the manner prescribed by the Commissioner of Conservation, and a copy of such plat or explanation of program shall remain on file in the Office of Conservation in Baton Rouge, and in the Office of the District Manager of the Conservation District in which the property is located, and be open for public inspection, at least thirty (30) days prior to such hearing.

Financial Security

1. Compliance bond required: May be required.
2. Conditions of Financial Security: Statewide Order No. 29-B (LAC 43: XIX.104)
 - (A) Unless otherwise provided by the statutes, rules and regulations of the Office of Conservation, financial security shall be required by the operator of record (operator) pursuant to this section for each applicable well as further set forth herein in order to ensure that such well is plugged and abandoned and associated site restoration is accomplished. A compliance order and/or civil penalty which has been timely satisfied shall not cause an operator to be considered a non-compliant operator for the purpose of this section.

(1) Permit to Drill

- (a) On or after July 1, 2000 the applicant for a permit to drill must provide financial security for such well in accordance with the following:
 - (i) An operator who has exhibited a record of compliance with the statutes, rules and regulations of the Office of Conservation for a period of 48 months immediately preceding the permit date of the well and who has no outstanding violations shall be exempt from providing financial security under this section.
 - (ii) An operator who has not been a registered operator of record for a period of 48 months immediately preceding the permit date of the well in question shall comply with the following:
 - (a) An operator who has not previously been an operator of a well (drilling, drilled, or completed) shall provide financial security in a form acceptable to the commissioner prior to issuance of a permit to drill.
 - (b) An operator who has previously been an operator of a well (drilling, drilled or completed) for less than the prescribed 48 months but has otherwise exhibited a record of compliance with the statutes, rules and regulations of the Office of Conservation and who has no outstanding violations shall provide financial security in a form acceptable to the commissioner within 30 days of completion date as reported on Form Comp or Form WH-1.
 - (iii) An operator who has not exhibited a record of compliance with the statutes, rules, and regulations of the Office of Conservation for a period of 48 months immediately preceding the permit date of the well shall provide financial security in a form acceptable to the commissioner prior to issuance of permit to drill.

(2) Amended Permit to Drill/Change of Operator

- (a) Any application to amend permit to drill for change of operator must be accompanied by financial security in accordance with the following:
 - (i) An operator who has previously been an operator of a well for a period of at least 48 months immediately preceding the amended permit to drill date, who has exhibited a record of compliance with the statutes, rules and regulations of the Office of Conservation and who has no outstanding violations shall be exempt from providing financial security under this section.
 - (ii) Any operator who does not meet the criteria specified in 104.A.2.a.i. above shall provide financial security in a form acceptable to the commissioner prior to issuance of an amended permit to drill.
- (3) Financial security in a form acceptable to the commissioner shall be provided prior to issuance of a permit to drill or amended permit to drill to any operator which includes a primary officer therein who is or was a primary officer of an operator assigned an orphan status.
- (4) The financial security requirements provided herein shall apply to Class V wells as defined in LAC 43:XVII.103 for which an application for a permit to drill or amended permit to drill is submitted on and after July 1, 2000, at the discretion of the commissioner.

- (B) Compliance with this financial security requirement shall be provided by any of the following or a

combination thereof:

- (1) certificate of deposit issued in sole favor of the Office of Conservation in a form prescribed by the commissioner from a financial institution acceptable to the commissioner. A certificate of deposit may not be withdrawn, canceled, rolled over or amended in any manner without the approval of the commissioner; or
- (2) a performance bond in sole favor of the Office of Conservation in a form prescribed by the commissioner issued by an appropriate institution authorized to do business in the state of Louisiana; or
- (3) letter of credit in sole favor of the Office of Conservation in a form prescribed by the commissioner issued by a financial institution acceptable to the commissioner.

(C) Financial Security Amount:

(1) Land Location

- (a) Individual well financial security shall be provided in accordance with the following:

<u>Depth (ft.)</u>	<u>Amount</u>
<3,000	\$1.00 per foot
3,001 - 10,000	\$2.00 per foot
>10,001	\$3.00 per foot

- (b) Blanket financial security shall be provided in accordance with the following:

<u>Total Number of Wells</u>	<u>Amount</u>
<10	\$ 25,000.00
11-99	\$125,000.00
>100	\$250,000.00

- (2) *Water Location - Inland Lakes and Bays* - any water location in the coastal zone area as defined in LSA-R.S. 49:214.27 except in a field designated as offshore by the commissioner.

- (a) Individual well financial security shall be provided in the amount of \$8.00 per foot of well depth.
- (b) Blanket financial security shall be provided in accordance with the following:

<u>Total Number of Wells</u>	<u>Amount</u>
<10	\$ 125,000.00
11-99	\$ 625,000.00
>100	\$1,250,000.00

- (3) *Water Location - Offshore* - any water location in a field designated as offshore by the commissioner.

- (a) Individual well financial security shall be provided in the amount of \$12.00 per foot of well depth.
- (b) Blanket financial security shall be provided in accordance with the following:

<u>Total Number of Wells</u>	<u>Amount</u>
<10	\$ 250,000.00
11-99	\$1,250,000.00
>100	\$2,500,000.00

- (4) An operator of land location wells and water location wells who elects to provide blanket financial security

shall be subject to an amount determined by the water location requirements.

- (5) The amount of the financial security as specified above may be increased at the discretion of the commissioner.
- (D) A change of name by a compliant operator of record through acquisition, merger, or otherwise does not preclude said successor operator from meeting the requirements for exemption from financial security under this section.
- (E) The commissioner retains the right to utilize the financial security provided for a well in responding to an emergency applicable to said well in accordance with R.S. 30:6.1.
- (F) Financial security shall remain in effect until release thereof is granted by the commissioner pursuant to written request by the operator. Such release shall only be granted after plugging and abandonment and associated site restoration is completed and inspection thereof indicates compliance with applicable regulations or upon transfer of such well to an exempt operator. In the event provider of financial security becomes insolvent, operator shall provide substitute form of financial security within 30 days of notification thereof.
- (G) Plugging and abandonment of a well, associated site restoration, and release of financial security constitutes a rebuttable presumption of proper closure but does not relieve the operator from further claim by the commissioner should it be determined that further remedial action is required.
- (H) In the event that an operator has previously provided financial security pursuant to LAC 43:XIX.104, such operator shall provide increased financial security, if required to remain in compliance with this section, within 30 days after notice from the commissioner.

Authority Note: Promulgated in accordance with R.S. 30:4 et seq.

Historical Note: Adopted by the Department of Conservation (August 1943), amended by the Department of Natural Resources, Office of Conservation LR 26:1306 (June 2000), LR 27:1917 (November 2001).

Spacing

1. Spacing requirements:

- (a) Density: No minimum acreage requirements for oil or gas wells.
- (b) Lineal: Statewide Order No. 29-E (LAC 43:XIX.1901) applies and states that wells drilled in search of gas shall not be located closer than 330 feet to any property line nor closer than 2,000 feet to any other well completed in, drilling to, or for which a permit shall have been granted to drill to, the same pool.

Where Statewide Order No. 29-E (LAC 43:XIX.1901) is applicable, no spacing shall be required for oil wells drilled in search of oil to depths less than 3,000 feet subsea. Wells drilled in search of oil to depths below 3,000 feet subsea shall not be located closer than 330 feet from any property line nor closer than 900 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to, the same pool.

Statewide Order No. 29-H, applicable to "new" pools, has been terminated by Statewide Order No. 29-H-1. Spacing previously developed under Statewide Order No. 29-H will be regulated by Statewide Order No. 29-E. Any special order which adopted the spacing requirements of Statewide Order No. 29-H has been amended requiring the spacing provisions of Statewide Order 29-E (LAC 43:XIX.1901).

2. Exceptions: Yes.

- (a) Basis: Refer to Statewide Order No. 29-E (LAC 43:XIX.1901).
- (b) Approval: By letter setting forth all pertinent facts and reasons why granting the exception is necessary.

Pooling

1. Authority to establish voluntary: No.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes, Statewide Order No. 29-B, Section II (LAC 43:XIX.103).
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes, Statewide Order No. 29-B, Section III (LAC 43:XIX.105).
 - (d) Plugging and abandoning: Yes, Statewide Order NO. 29-B, Section III (LAC 43:XIX.105).
2. Permit fee:
 - (a) Drilling: Fee schedule subject to change annually. Please refer to the Office of Conservations Web site at www.dnr.state.la.us for a complete current fee schedule.

<u>Depth (ft.)</u>	<u>Amount</u>
0 - 3,000	\$ 126
3,001 -10,000	\$ 631
10,001 - Plus	\$1,264

- (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes, Statewide Order No. 29-B, Section IV (LAC 43:XIX.107).

Vertical Deviation

1. Regulation requirement: Yes, Statewide Order No. 29-B, Section XVIII (LAC 43:XIX.135).
 - (a) When is directional survey necessary? When the well is directionally controlled and is thereby intentionally deflected from the vertical, or the surface location is less than 330 feet from the nearest property line, and the well is drilled below a depth of 3,786 feet, or the resultant lateral deviation as calculated from Inclination Survey data is a distance greater than the distance from the center of the surface location of the well bore to the nearest property line, or the well bore deviates laterally a resultant distance greater than that determined by a five degree angle from a vertical line passing through the center of the surface location of the well bore.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, Statewide Order No. 29-B, Section V-B (LAC 43:XIX.109.B).
 - (b) Production casing: Yes, Statewide Order No. 29-B, Section V-D (LAC 43:XIX.109.D).

2. Minimum amount of cement required:
 - (a) Surface casing: Yes, Statewide Order No. 29-B, Section V-B (LAC 43:XIX.109.B).
 - (b) Production casing: Yes, Statewide Order No. 29-B, Section V-D (LAC 43:XIX.109.D).
 - (c) Setting time: Yes. Surface - "under pressure" for 12 hours. Production - "under pressure" for 12 hours, minimum total of 24 hours before initiating test or drilling plug.

3. Tubing requirements: None

Completion

1. Completion report required: Yes, Statewide Order No. 29-B, Section X (LAC 43:XIX.119).
 - (a) Time limit: Within 24 hours from time of completion. Notice may be made by telephone or telegram to the district manager if supplemented by written notice on proper form within three days from the completion date.
 - (b) Where submitted: Appropriate District Office of the Office of Conservation.
2. Well logs required to be filed: Yes, Statewide Order No. 29-B, Section IV (LAC 43:XIX.107).
 - (a) Time limit: Within 10 days after completion.
 - (b) Where submitted: Appropriate District Office of the Office of Conservation.
 - (c) Confidential time period: Yes, upon written request; (Act 4 of the Extraordinary Session of 1973) wells shallower than 15,000 feet--one year with a one-year extension; wells deeper than 15,000 feet--two years with a two-year extension; Act 691 of the Regular Session of 1979--offshore logs, upon written request--two years with a two-year extension.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes, Statewide Order Nos. 29-C-4 (LAC 43:XIX.1301).
4. Commingling in well bore: No, except in certain circumstances we use the same procedures as selective completion equipment as outlined in Statewide Order No. 29-C-4 (LAC 43:XIX.1305(G)).
 - (a) Approval obtained: By public hearing and administratively.

Oil Production

1. Definition of an oil well: No specific definition. In the event of uncertainty, a PVT analysis is required to be conducted by the operator.
2. Potential tests required: Yes, Statewide Order No. 29-B, Section X (LAC 43:XIX.119).
 - (a) Time interval: Within five days of completion.
 - (b) Witness required: Yes, by inspectors of the Office of Conservation.
3. Statewide allowable: Yes. The Statewide allowable is the summation of individual well and unit allowables.
 - (a) Pool allowable: Yes. For poolwide units created under LSA-RS-30:5(C), a maximum efficient rate (MER) allowable based upon the productive capability of the reservoir is assigned if request is submitted by operator and

approved by Office of Conservation. Otherwise, allowable for said poolwide units is based upon number of completions in the unit and the depth bracket allowable.

For competitive units created under LSA-RS-30: 9 each unit is assigned an allowable based upon the acreage in said unit and the acreage factor (Bbls./Acre) calculated for the pool. (Acreage factor based upon acres in pool and depth bracket.)

For a single unit created under LSA-RS-30:9, the unit is assigned an allowable based upon the depth bracket or if the unit encompasses the entire reservoir it may be assigned an MER allowable if the requirements as noted above are met.

Statewide Order No. 29-H has been terminated by Statewide Order No. 29-H-1 (LAC 43:XIX.2501), effective January 1, 1980, which provides: The allowable assignment for each oil well, including those wells previously assigned allowables based on the provisions of Statewide Order No. 29-H, should be based on the Statewide Crude Oil Depth Bracket Allowable Schedule adopted by Office of Conservation Order No. 151-A-2 (LAC 43:XIX.3701), effective October 20, 1994. Essentially, allowable for units previously developed under No. 29-H will be calculated in the same manner as the three paragraphs above.

- (b) Well allowable: Yes. Depth bracket allowable formula for lease wells.
 - (c) Exempt allowable: Yes. Hardship allowables, Statewide Order No. 45-I-A (LAC 43:XIX.3501), exempt allowables, stripper fields.
 - (d) Horizontal well allowable: Maximum Efficient Rate (MER) unless determined otherwise after public hearing in competitive situations (LAC 43:XIX.3701).
4. Maximum gas-oil ratio: Yes, Statewide Order No. 45-I-A (LAC 43:XIX.3501). 2,000 cubic feet of gas per barrel of oil.
 - (a) Provision for limiting gas-oil ratio. Yes. Allowed to produce quantity of oil determined by multiplying base allowable by base GOR and dividing by GOR of well.
 - (b) Exception to limiting gas-oil ratio: Yes. Refer to Statewide Order 45-I-A (LAC 43:XIX.3501).
 5. Bottom-hole pressure test reports required: Bottom hole pressure is requested on Form DM-1-R which is filed on or before the first day of May and November. Bottom hole pressure may also be required by special field order.
 - (a) Periodical bottom-hole pressure surveys: As answered above.
 6. Commingling oil in common facilities: Yes, Statewide Order No. 29-D-1 (LAC 43:XIX.1501).
 7. Measurement involving meters: Yes, Statewide Order No. 29-G-1 (LAC 43:XIX.2301).
 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: No.
 - (b) Time limit: On or before the first day of the third calendar month following the month covered by the report or within 60 days.

Gas Production

1. Definition of a gas well: No specific definition. In the event of uncertainty, a PVT analysis is required to be conducted by the operator.

2. Pressure base 15.025 psia @ 60 degrees F.
3. Initial potential tests: Yes, Statewide Order No. 29-B, Section X (LAC 43:XIX.119).
 - (a) Time interval: Within five days of completion.
 - (b) Witness required: Yes.
4. Statewide allowable: Yes, Statewide Order No. 29-F (LAC 43:XIX.2101). The statewide allowable is the summation of individual well and unit allowables (based on well potential test).
 - (a) Pool allowable: Yes. For poolwide units created under LSA-RS-30: 5C, the summation of the individual well potential tests of wells completed in the pool.

 For competitive units created under LSA-RS 30:9, each unit shall be assigned an allowable in accordance with the procedure outlined in Statewide Order No. 29-F (LAC 43:XIX.2101).

 For a single unit created under LSA-RS-30:9, the unit allowable is based upon well potential test.
 - (b) Well allowable: Yes. Based upon well potential test.
 - (c) Exempt allowables: Yes, stripper gas fields.
5. Bottom-hole pressure test reports required: Bottom-hole pressure is requested on Form DT-1 which is filed on or before the first day of May and November. Bottom-hole pressure may also be required by special field orders.
 - (a) Periodical bottom-hole pressure surveys: As answered above.
6. Commingling of gas in common facilities: Yes, Statewide Order No. 29-D (LAC 43:XIX.1501).
7. Measurement involving meters: Yes, LSA-RS-30:44 (required by statutes).
8. Production reports: Gas production is reported by lease or unit.
 - (a) By lease: Yes.
 - (b) By well: No.
 - (c) Time limit: On or before the first day of the third calendar month following the month covered by report or within 60 days.

Water Disposal

1. State agencies that control disposal of produced salt water: Office of Conservation and Department of Environmental Quality.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: None, however, 75% - if the unit is created under the provisions of LSA-RS-30:5C (multi-well or enhanced recovery).
 - (b) Royalty interest: None, however, 75% - if the unit is created under the provisions of LSA-RS-30:5C (multi-well or enhanced recovery).

Contact: Gary Ross, Assistant Commissioner of Conservation, Louisiana Office of Conservation, P.O. Box 94275, Baton Rouge, LA 70804-9275. Phone: (225) 342-5540.

Taxation

Gas severance tax, full rate = 26.9 cents per MCF
 Incapable oil well gas rate = 3 cents per MCF
 Incapable gas well gas rate = 1.3 cents per MCF
 Total gas tax burden = 1.3 cents up to 25.2 per MCF

Oil severance tax, full rate = 12.50% of value
 Oil severance tax, incapable rate = 6.25% of value
 Oil stripper well rate = 3.125**%
 Total oil tax burden = 3.125% to 12.50%
 **Exempt if the gross taxable value is less than \$20 barrel

1. Tax collecting agency: Department of Revenue and Taxation, Taxpayer Services Division, Severance Tax Section, P.O. Box 201, Baton Rouge, LA 70821.
2. How tax is computed: Crude oil and condensate is taxed at a full rate of 12.50% and crude oil only at an incapable rate of 6.25% of value. There is a stripper well rate of 3.125% of value for crude oil only. Gas is taxed at a full rate of 26.9 cents per MCF, and the rate is redetermined July 1 of each year.

The incapable rates are as follows:

- (a) oil well gas – 3 cents per MCF
- (b) gas well gas – 1.3 cents per MCF

3. Name of tax: Severance.
4. Statutory citation: Louisiana Revised Statutes, Title 47, Section 631 through 646.
5. Contact: Sebrina Coleman, Revenue Tax Director, Taxpayer Services Division, Severance Tax Section, Louisiana Department of Revenue, P.O. Box 201, Baton Rouge, LA 70821-0201. Phone: (225) 219-2200.

Land Leasing Information

1. Leasing Method: Sealed, public bid opened at monthly Mineral Lease Sale held on second Wednesday of every month.
2. Notice Method: Publication of tract description up for lease in the official journal of the state and in the official journal of the parish where the lands are located - must appear in these journals not more than 60 days prior to the date for the opening bids for that tract.
3. Minimum bidding \$ (per acre): Royalty bid cannot be less than 1/8 of all oil or gas produced and saved or utilized (LSA-R.S. 30:127).
4. Qualification of the bidder: Any person or entity authorized to do business in the state of Louisiana can submit bids.
5. State Statutes: LSA-R.S. 30:124-127
6. Maximum acres: 2,500 acres by State Mineral Board Policy.
7. Contact: Rick Heck, Director of Petroleum Lands, Petroleum Lands Division, Office of Mineral Resources, P. O. Box 2827, Baton Rouge, LA 70821-2827. Phone: (225) 342-6122.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Louisiana Department of Environmental Quality, Office of Environmental Compliance, Emergency and Radiological Services Division, Licensing and Registrations Sections, P.O. Box 4312, Baton Rouge, LA 70821-4312. Phone: (225) 219-3021, Fax: (225) 219-3154.
2. Relevant Statute/Regulations: Louisiana Administrative Code, Title 33, Part 15, Chapter 14 Regulation and Licensing of Naturally Occurring Radioactive Material (NORM), amended January 1995.
3. Scope: The regulations say: "These regulations apply to any person who engages in waste generation, extraction, mining, beneficiating, processing, possession, use, transfer, treatment, transportation, or disposal of NORM or recycling of NORM contaminated equipment in such a manner as to technologically alter the natural sources of radiation or their potential exposure pathways to humans." Yet, in practice, the State of Louisiana has put NORM regulatory emphasis on the oil and gas industry. Largely, because the occurrence of NORM has predominately been found in the oil and gas industry. There are few other industries such as paper and pulp and petrochemical where the regulation of NORM has been enforced.
4. Licensing: Louisiana created a general license requirement of all oil and gas operators/companies who own or operate sites where NORM contamination has been discovered. Upon discovery of the presence of NORM, an operator/company is required to notify the State of Louisiana of the site using the NORM notification form. The information is compiled into a database and each operator/company is assigned a general license number and each site is tracked by a site specific number. At the present, the State of Louisiana has approximately 450 NORM general licenses.

For companies engaged in providing NORM decontamination, handling, disposal, and other related NORM services, the State of Louisiana requires such companies to possess a NORM specific license issued from the Department or another agreement state. At the present, the State of Louisiana has 22 companies specifically licensed through the State of Louisiana.

5. Cleaning Equipment: NORM general licensees are allowed to *...perform maintenance on vessels, tanks, tubular goods, or water treatment systems, or the clearing of pipe lines to maintain oil and gas production...* under the onsite maintenance provision stated in LAC33:XV.1408.A.4., provided that written worker protection procedures are submitted to the Department, and that the maximum radiation level does not exceed two millirem per hour.

The decontamination of NORM contaminated equipment for release for unrestricted use is reserved for companies that possess a NORM specific license from the State of Louisiana or an agreement state. The handling and decontamination of NORM contaminated equipment and sites is largely performed by companies that possess a NORM specific license.

6. Disposal of Waste: At present, the following are disposal option available to oil and gas operators:
 - (a) Commercial treatment by method of landfarming. There are one or two commercial landfarms in Louisiana permitted for NOW disposal that accept NORM with concentration less than 30 picocuries per gram of Ra-226 or Ra-228.
 - (b) Non-commercial Downhole Disposal into wellbore to be plugged and abandoned.
 - (c) Commercial deep well injection. There are two commercial facilities in the state of Texas permitted and licensed to inject NOW/NORM into an injection well.
7. Subsequent Use of Equipment: NORM contaminated tubular goods and pipe are often decontaminated and then, reused. That which is unusable is decontaminated and sold as scrap.
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land: To release the site, documentation is required supporting the removal of the NORM. Included in the documentation, would be a radiation survey of the area where the NORM was present, soil sample data, and records supporting the transfer of the equipment or NORM waste for treatment, storage, or disposal. The release criteria for a site is outlined in Louisiana's NORM Implementation Manual and in LAC 33:XV.1417.

10. Projected Volume of stored NORM in the State: It is uncertain how much NORM is being stored in the state. In 1994 and 1995, two disposal options came available that provided an outlet for many operators to begin moving their inventory of NORM waste for disposal. One of the options existed in Louisiana through a company that operated a commercial landfarm specifically permitted/licensed to accept NOW/NORM waste. The other option existed in Texas through a company that operated a commercial injection well permitted/licensed to accept NOW/NORM waste.
11. Respondent: Brad Schexnayder, Licensing and Registrations Section, P.O. Box 4312, Baton Rouge, LA 70821-4312. Phone: (225) 219-3021, Fax: (225) 219-3154.

MARYLAND

Administration

1. State agency: Maryland Department of the Environment, Water Management Administration, Minerals, Oil and Gas Division, 1800 Washington Blvd., Baltimore, MD 21230.
2. Docketing procedure: The Department may act either upon its own motion or the petition of any interested person and shall promptly fix a date for a hearing and cause notice of the hearing to be given. The public hearing shall be held at the time and place described by the Department. Any interested person is entitled to be heard by the Department. Section 14-114(a) and (d), Annotated Code of the Public General Laws of Maryland (PLM).
 - (a) Emergency orders: The Department is authorized to issue an emergency order without notice or hearing. An emergency order may not remain effective for more than 15 days. Section 14-114(b), PLM.
 - (b) Notice: Except for an emergency, a rule, regulation, order or amendment may not be made by the Department without a public hearing upon at least 10 days notice. The Department of the Environment is responsible to give notice. Section 14-114(a), PLM.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: A bond is required on the form obtained from the Department of the Environment with regard to drilling, plugging and abandoning wells drilled for oil and gas. Said bond will not be released until all of the permit holder's obligations under the laws have been fulfilled to the satisfaction of the Department. Section 14-111(a)(5),(d)(1), PLM, 26.19.01.06(c)(5) and 26.19.01.13 CMR.
 - (a) Amount per well: No minimum.
\$100,000 maximum. Section 14-111(a)(5), PLM; 26.19.01.06(C)(5)(a) CMR.
 - (b) Amount of blanket bond: No minimum.
\$500,000 maximum. Section 14-111(a)(5), PLM; 26.19.01.06(C)(5)(a) CMR.

Spacing

1. Spacing requirements: Yes.
 - (a) Density: No proration units formed in Maryland for oil -- only voluntary units for gas.
 - (b) Lineal: 2,000 ft. from existing gas well, 1,320 ft. from existing oil well, 1,000 ft. from property line, 1,000 ft. from any occupied house, school, church, public building or place of public meeting for both oil and gas wells, 26.19.01.09 (C,D,E,F & G) and 26.19.08.06, Code of Maryland Regulations (CMR) and Section 14-112(a),(b)(c), PLM. Drilling prohibited in the Chesapeake Bay or its tributaries 26.19.01.09(A).
2. Exceptions: Yes. 26.19.01.09 (C, D, E, F & G), CMR.
 - (a) Basis: No permit will be issued to drill a well within 1,000 ft. of the boundary of a tract of land or the boundary of tracts of land included in a pooling agreement or within 1,000 ft. from any occupied dwelling house, school, church, public building or place of public meeting unless the permit holder has made a satisfactory written agreement with the oil and gas owner and lessee of such adjacent land or building. The Department may issue a permit to drill a well within 1,000 ft. of a boundary of a tract of land if it is impossible to locate a well 1,000 ft. or more from the boundaries of the tract.
 - (b) Approval: Following notice and hearing by the Department.

Pooling

1. Authority to establish voluntary: Yes. Section 14-113, PLM.
2. Authority to establish compulsory: No.

Drilling Permit

1. Require permits for:
 - (a) Drilling an exploration or gas storage well: Yes. Section 14-104, PLM, and 26.19.01.06(A), CMR. Conversion from exploration to production well requires permit modification, 26.19.01.09(K), CMR.
 - (b) Seismic Operations: Yes. Road access permit necessary from State Highway Administration if on state/federal roads. 26.19.01.03, CMR.
 - (c) Recompletion: Requires permit modification. 26.19.01.14(A)(1 & 2).
 - (d) Plugging and abandoning: No. Requires Departmental notification and affidavit of work performed, within Departmental guidelines, by operator. 26.19.01.12, CMR.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: No fee for filing completion report.
3. Require filing report of work performed: Yes. Completion report. 26.19.01.10(V), CMR.

Vertical Deviation

1. Regulation requirement: Yes. No more than 3° from vertical, 26.19.01.11, CMR.
 - (a) When is directional survey necessary? When correlative rights are in dispute, the Department may require directional and deviational surveys at the operators' expense, 26.19.01.11(D), CMR.
 - (b) Filing of survey required: No.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes. Surface casing to extend at least 100 ft. below the deepest known fresh water aquifer, or the deepest known workable coal seam, whichever is deeper. 26.19.01.10(O)(4), CMR.
 - (b) Production casing: Yes. The casing should be of a type and weight sufficient for the depth and formation pressures anticipated. 26.19.01.10(S).

2. Minimum amount of cement required:
 - (a) Surface casing: Yes. Annular surface return. 26.19.01.10(P).
 - (b) Production casing: Yes. 26.19.01.10(S).
 - (c) Setting time: Yes. 12 hours. 26.19.01.10(P)(3) and 26.19.01.10(S)(4).
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes. Section 14-111(a)(1), PLM and 26.19.01.10(V).
 - (a) Time limit: Within 30 days after completion of the well.
 - (b) Where submitted: Maryland Department of the Environment, Water Management Administration, Minerals, Oil & Gas Division, 2500 Broening Highway, Baltimore, MD 21224.
2. Well logs required to be filed: Yes. 26.19.01.10(V)(10), CMR.
 - (a) Time limit: Within 30 days after completion of the well.
 - (b) Where submitted: Maryland Department of the Environment, Water Management Administration, Minerals, Oil & Gas Division, 2500 Broening Highway, Baltimore, MD 21224.
 - (c) Confidential time period: Yes. All information is held confidential until the operator releases such information.
 - (d) Available for public use: Yes, after operator releases confidential information.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes.
 - (a) Approval obtained: Requires permit modification. 26.19.01.14(A)(1), CMR.
4. Commingling in well bore: Yes.
 - (a) Approval obtained: Requires permit modification. 26.19.01.14(A)(2), CMR.

Oil Production

1. Definition of an oil well: "Oil" means crude petroleum oil and other hydrocarbons regardless of gravity, which are produced at the wellhead in liquid form, except liquid hydrocarbons known as distillate or condensate recovered or extracted from gas. An oil well would be the drilled hole through which oil is produced. Section 14-102(f), PLM, and 26.19.01.01(B)(32), CMR.
2. Potential tests required: Yes. 26.19.01.10(V)(8), CMR.
 - (a) Time interval: Within 30 days after completion of the well.

- (b) Witness required: No.
- 3. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: N/A.
 - (b) Exception to limiting gas-oil ratio: N/A.
- 5. Bottom-hole pressure test reports required: Yes. Initially. 26.19.01.10(V)(8), CMR.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: Yes.
- 7. Measurement involving meters: Yes. The operator must verify the accuracy of oil meters. 26.19.01.10(N), CMR.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. 26.19.01.10(Y), CMR.
 - (c) Time limit: The operator must file a monthly production report quarterly to the Maryland Department of the Environment, Minerals, Oil & Gas Division.

Gas Production

- 1. Definition of a gas well: "Gas" means all natural gas and other fluid hydrocarbons, not defined as oil, which are produced from a natural reservoir. A gas well would be the drilled hole through which gas is produced. Section 14-102(e), PLM, and 26.19.01.01(B)(20), CMR.
- 2. Pressure base: None statewide. Garrett County is 14.73 psia @ 60 degrees F. Public Local Law of Garrett County, Sec. 27-2(j) 1971 Edition, as amended in 1978.
- 3. Initial potential tests: Yes. 26.19.01.10(V)(8), CMR.
 - (a) Time interval: Within 30 days after completion of the well.
 - (b) Witness required: No.
- 4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.

5. Bottom-hole pressure test reports required: Yes, initially. 26.19.01.10(V)(8), CMR.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: Yes.
7. Measurement involving meters: Yes. Section 14-119(a), PLM. A person who is the owner or operator of any gas well may not willfully take gas from the well unless the gas is metered by a standard metering system. Also 26.19.01.10(N), CMR.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. 26.19.01.10(Y), CMR.
 - (c) Time limit: The operator must file a monthly production report quarterly to the Maryland Department of the Environment, Minerals, Oil & Gas Division.

Water Disposal

1. State agencies that control disposal of produced salt water: The Hazardous and Solid Waste Administration of the Department of the Environment would, upon application, issue a discharge permit controlling both surface and subsurface hazardous or industrial wastes.

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:
 - (a) Working interest: N/A.
 - (b) Royalty interest: N/A.

Taxation

There is no statewide tax on oil and gas in Maryland. The only countywide tax that exists is a gas production tax in Garrett County.

1. Tax collecting agency: Garrett County Treasurer and Tax Collector, 203 S. Fourth Street, Oakland, MD 21550.
 - (a) Statewide: None.
 - (b) Countywide: Only Garrett County.
2. How tax is computed: Garrett County's gas production tax is computed as 7% of the gross wholesale market value of gas production. Out of this 7% of gross wholesale market value, 2.8% is the purchaser's proportion, and 4.2% is the producer's proportion.
3. Exemptions or exceptions: No.
4. Name of tax: Gas Production.

5. Statutory citation: 1957 Garrett County Code, Section 428, 1951, Chapter 265, Section 302(A) of Annotated Code.

Land Leasing Information

Regulations pending at this time.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environment, Minerals, Oil and Gas Division, 2500 Broening Highway, Baltimore, MD 21224. Phone: (410) 631-8055.
2. Relevant Statute/Regulations: No regulations or laws exist or are proposed regarding NORM in oil and gas production.
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land: Not applicable.
10. Projected Volume of stored NORM in the State:
11. Respondent: C. Edmon Larrimore

MICHIGAN

Administration

1. State agency: Office of Geological Survey, Department of Environmental Quality, P.O. Box 30256, Lansing, MI 48909. Phone (517) 241-1515. (Supervisor of Wells - same address).
2. Docketing procedure: Petition for matters to be heard before the Supervisor of Wells. Section 61516, Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended (NREPA); Administrative Rules R 324.1201 through R 324.1212.
 - (a) Emergency orders: Yes. By Supervisor of Wells set forth in Section 61516 of NREPA. Remains in full force and effect no more than 21 days. Hearing may be held in the interim and a permanent order is issued pursuant thereto.
 - (b) Notice: Twenty-one days prior to date of hearing (R 324.1204). The petitioner must furnish proof of publication and affidavits of proof of mailing by first class mail or personal service.

Bond

1. Compliance bond required: Yes. R 324.210, R 324.211.
2. Conditions of bond: Remaining in full force and effect until such time the well or wells are properly plugged and abandoned or sold and transferred to the new owner and released by the Supervisor of Wells. R 324.213, R 324.214, R 324.215, and R 324.216.
 - (a) Amount per well: Dependent on well depth, \$10,000 - \$30,000. R 324.212.
 - (b) Amount of blanket bond: Dependent on well depth, \$100,000 - \$250,000. R 324.212.

Spacing

1. Spacing requirements: Minimum 40-acre drilling unit conforming to governmental surveyed quarter-quarter section of land. Wells located approximately 1,320 feet apart. R 324.301.
 - (a) Density: Oil well - 40 acres. Gas well - 40 acres. R 324.301.
 - (b) Lineal: Oil well - 1,320 feet. Gas well - 1,320 feet. R 324.301 (b).
2. Exceptions: Yes. R 324.301 (2) and R 324.303.
 - (a) Basis: Evidence and testimony.
 - (b) Approval: By order of Supervisor of Wells pursuant to a public hearing, or pursuant to the voluntary pooling provisions of R 324.303.
 - (c) Pooled or communitized tracts may be developed according to approved alternative spacing and location plans. R 324.303.

Pooling

1. Authority to establish voluntary: Yes. R 324.303.
2. Authority to establish compulsory: Yes, public hearing is necessary. R 324.304.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes. R 324.201.
 - (b) Seismic drilling? Yes, for holes 50' or deeper and penetrating bedrock. Part 625, Mineral Wells of NREPA.
 - (c) Recompletion? Yes. Deepening R 324.206 and R 324.420; Rework R 324.511.
 - (d) Plugging and abandoning? Yes. R 324.901.
2. Permit fee:
 - (a) Drilling: \$300. Sec. 61525 of NREPA.
 - (b) Seismic drilling: \$500.00 for individual test wells. Blanket test permits (50' - 250') follow a permit fee schedule.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes. R 324.418, R 324.419, R 324.421, R 324.511, and R 324.902(10).

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? When the hole is intentionally directionally drilled. R 324.421.
 - (b) Filing of survey required? Yes. R 324.421.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes. R 324.408.
 - (b) Production casing: Yes. R 324.410.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulate to surface. R 324.408.
 - (b) Intermediate and Production casing: Varies on formation and depth. R 324.411, 413.
 - (c) Setting time: 12 hour minimum. R 324.411.
3. Tubing requirements: All wells shall run tubing on completion. For certain conditions, exceptions may be granted.
 - (a) Oil wells: Yes. R 324.507.
 - (b) Gas wells: Yes. R 324.507. Gas storage wells are exempt.

Drilling and Completion

1. Drilling report required: Yes. R 324.418 (a).
 - (a) Time Limit: Within 60 days after completion of drilling. R 324.418 (a).
2. Completion report required: Yes. R 324.418 (b).
 - (a) Time limit: Within 60 days after well completion operations. R 324.418 (b).
 - (b) Where submitted: Supervisor of Wells, Office of Geological Survey, Department of Environmental Quality, P. O. Box 30256, Lansing MI 48909.
3. Well logs required to be filed: Yes. R 324.419.
 - (a) Time limit: Within 30 days after conducting the logging run. R 324.419.
 - (b) Where submitted: Supervisor of Wells, address above.
 - (c) Confidential time period: If requested by letter. R 324.416 provides for 90 days after drilling completion.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
4. Multiple completion regulation: Yes. R 324.508.
 - (a) Approval obtained: Upon written application and approval of Supervisor of Wells.
5. Commingling in well bore: Yes. R 324.509.
 - (a) Approval obtained: Upon written application and approval of Supervisor of Wells.

Oil Production

1. Definition of an oil well: A well that produces economic quantities of liquid hydrocarbon that is in the liquid state in the reservoir.
2. Potential tests required: Yes. R 324.606.
 - (a) Time interval: Commenced within 10 days after completion.
 - (b) Witness required: Rarely but representative of the Supervisor of Wells may if he wishes.
3. Statewide allowable: No.
 - (a) Pool allowable: The Supervisor of Wells may set a pool allowable if required to prevent waste and after a public hearing. Oil and/or gas allowable can vary for each reservoir. Section 61506, 61512 of NREPA; R 324.601.
 - (b) Well allowable: The Supervisor of Wells may set a well allowable if required to prevent waste and after a public hearing. Section 61506, 61512, 61513 of NREPA; R 324.601.

- (c) Exempt allowable: Yes. If a well location exception is granted the well allowable maybe reduced. Discovery wells may get a full allowable in an offspot location. Section 61513 of NREPA; R 324.301.
- 4. Maximum gas-oil ratio: The Supervisor of Wells may establish efficient gas-oil ratios if required to prevent waste and after a public hearing. Section 61506 of NREPA; R 324.601.
 - (a) Provision for limiting gas-oil ratio: Yes. The Supervisor of Wells may set oil or gas allowables on basis of gas-oil ratio for specific fields, after public hearing. Section 61506, 61512, 61513 of NREPA; R 324.601.
 - (b) Exception to limiting gas-oil ratio:
- 5. Bottom-hole pressure test reports required: Supervisor of Wells may require for specific reservoir. R 324.609.
 - (a) Periodical bottom-hole pressure surveys: Yes, for specified reservoirs.
- 6. Commingling oil and/or gas in common facilities: Yes, with approval of Supervisor of Wells. Requires facility details, and schematic drawing. Each well's production must be individually measured and compared to and balanced with actual sales. All details are to be reported on forms provided. R 324.510.
- 7. Measurement involving meters: Yes. R 324.510.
- 8. Production reports: All wells.
 - (a) By lease: Yes. R 324.610, R 324.612, or Supervisor of Wells Order.
 - (b) By well: Yes. R 324.610, R 324.612, or Supervisor of Wells Order.
 - (c) Time limit: 45 days following production month.

Gas Production

- 1. Definition of a gas well: A well that produces economic quantities of hydrocarbons that are in the gaseous state in the reservoir.
- 2. Pressure base 14.73 psia @ 60 degrees F.
- 3. Initial potential tests: Yes. AOF test (1 or 4 point).
 - (a) Time interval: Before pipeline connection permit is permanently issued.
 - (b) Witness required: Rarely.
- 4. Statewide allowable: Yes. 17 1/2% of AOF for single well reservoirs.
 - (a) Pool allowable: Yes. When transmission lines are running at capacity and curtailment is required.
 - (b) Well allowable: Yes. Proration allowable (when more than one well is in reservoir) is based on amount of pay under the drilling unit (90% generally) and absolute open flow test (10% generally).
 - (c) Exempt allowable: Yes. Low potential wells have a minimum allowable.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Yes.

6. Commingling of gas in common facilities: Yes, with approval of Supervisor of Wells. Requires facility details and schematic drawing. Each well's production must be individually measured and compared to and balanced with actual sales. All details are to be reported on forms provided. R 324.510.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: Yes, if pooled or unitized.
 - (b) By well: Yes.
 - (c) Time limit: 45 days following production month.

Water Disposal

1. State agencies that control disposal of produced salt water: Office of Geological Survey, Department of Environmental Quality. Section 61506 of NREPA; R 324.801 to R 324.808.

Unitization

1. Unitization of all or part of a pool or common source of supply for secondary or enhanced recovery: Yes. Part 617, Unitization, of NREPA.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization by one of the following: (Section 61706.).
 - (a) Persons liable for 75% of costs and owners of 75% of royalty production.
 - (b) Persons entitled to 75% of all production proceeds and owners of 50% of royalty production.
 - (c) Persons entitled to 90% of all production.

Taxation

Gas severance tax = 5.0%
 Gas ad valorem tax = 0.0%
 Total gas tax burden = 5.0%

Oil severance tax = 6.6%
 Oil ad valorem tax = 0.0%
 Total oil tax burden = 6.6%

1. Tax collecting agency: Department of Treasury, Customer Contract Division, Lansing, MI 48922.
2. How tax is computed:
 - (a) Michigan's gas severance tax is 5%. The oil severance tax is 6.6%.
 - (b) In addition to the severance tax there is a surveillance fee imposed to cover regulatory costs. The fee is set at a 1% maximum.
 - (c) The producer or purchaser pays severance tax on the gross cash market value of the gas and oil produced during the preceding month, computed at the wellhead, exclusive of the production attributable to the State, the United States, or a political subdivision of the State of United States. In addition, producers pay a surveillance fee on the gross cash

market value of the gas and oil to cover costs of state regulation. The fee is set in an amount calculated to cover the regulatory costs for the upcoming year, with a maximum rate of one percent.

3. Exemptions or exceptions: The severance tax on a stripper oil well is reduced to 4.0%.
4. Name of tax: Severance.
5. Statutory citation: Act 451 PA of 1994, Section 61524; Act 48 PA of 1929, Sec. 3, 14.

Land Leasing Information

1. Leasing Method: Competitive public auction.
2. Notice Method: At least once in a newspaper where the lands are situated not less than 10 days before the sale.
3. Minimum bidding \$ (per acre): \$13.00.
4. Qualification of the bidder: No specific qualification - any person.
5. State Statutes: Section 324.502 of the NREPA; Administrative Rules R 299.8102 – 299.8107.
6. Maximum acres: 160 acres.
7. Contact: Thomas Wellman
wellmant@michigan.gov
 Phone: (517) 373-7666

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environmental Quality
 For NORM materials associated with well plugging: Office of Geological Survey, P.O. Box 30256, Lansing, MI 48909.
 Phone: (517) 241-1548, Fax: (517) 241-1601.
 For other NORM materials: Waste and Hazardous Materials Division, P.O. Box 30630, Lansing, MI 48909-8130.
 Phone: (517) 335-8204, Fax: (517) 335-8706.
2. Relevant Statute/Regulations:
 For NORM materials associated with well plugging: Special Order of the Supervisor of Wells/Supervisor of Mineral Wells, Issued 11/3/1992.
 For other NORM materials: Act 368, P.A. 1978 as amended. The associated administrative rules (Michigan's Ionizing Radiation Rules) have not yet been revised to specifically address NORM concerns related to oil and gas production. Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226 (Guidelines) are applicable.
3. Scope: Special Order deals with approved method for plugging wells in which NORM contamination exists on downhole equipment or is generated during plugging operations.
4. Licensing: None required.
5. Cleaning Equipment: None specified.
6. Disposal of Waste:
 NORM-contaminated tubulars may be reinserted into the well bore from which it was taken. Soils and other materials contaminated with NORM during plugging may be disposed of by insertion into the well being plugged.
 Bulk waste with a radium-226 concentration not exceeding 50 picocuries per gram, averaged over any single shipment, can be disposed of in a Type II solid waste landfill. The maximum radium-226 concentration within any single shipment must not exceed 100 picocuries per gram. Waste materials with radium-226 in concentrations above 50 picocuries per

gram must be disposed of at a licensed radioactive waste disposal facility.

7. Subsequent Use of Equipment: If NORM-contaminated equipment is not reinserted, it may be stored, reused, or recycled following applicable state and federal government regulations.
8. Subsequent Use of Materials: As for equipment above.
9. Release/Sale of NORM-Contaminated Land: If release is for *unrestricted* use, the Guidelines will be used to determine acceptable levels of residual contamination of radium-226. If release under certain restrictions may be appropriate, the Department will review specific site proposals for other release limits using the methodology for dose assessment in NUREG/CR-5512, Vol. 1 (U.S. Nuclear Regulatory Commission, October 1992). Restricted use release will not be approved if the maximum individual total effect dose equivalent can exceed 100 millirem per year under a reasonable worst-case scenario. Each specific site remediation proposal involving restricted use must include an *As Low as Reasonably Achievable* analysis.
10. Projected Volume of stored NORM in the State: Not applicable.
11. Respondent: Ray Vugrinovich (Office of Geological Survey), David Minnaar (Waste and Hazardous Materials Division).

MISSISSIPPI

Administration

1. State agency: State Oil and Gas Board, 500 Greymont Avenue, Suite E, Jackson, MS 39202-3446. Phone (601) 354-7114.
2. Docketing procedure: (a) Regular monthly meetings are held by the Board on the third Wednesday of each month. (b) Upon receipt of a proper request for hearing, by written petition or application, the Board shall call a hearing within 30 days and must take action with regard to the subject matter within 30 days after the conclusion of the hearing provided all required forms and data have been filed. Prehearing exhibits must be filed at least 9 days prior to the hearing.
 - (a) Emergency orders: Emergency order may be entered by the Board, on good cause shown, without notice and hearing, but the order is valid for a period of 45 days only and a hearing must be held, after notice, within that time.
 - (b) Notice: Twenty days prior to the regularly scheduled hearing date by the party who files the petition, or in action initiated by the Board, the agency. Thirty days for force pooling with risk penalties. All notices are signed by the State Oil and Gas Supervisor.

Bond

1. Compliance bond required: Yes; for new permits to drill and for transfer of permits. Statewide Rule 4.
2. Conditions of bond: Statewide Rule 4.
 - (a) Amount per well: \$10,000 {0' - 10,000'}, \$15,000 {10,001' - 16,000'}, \$30,000 (16,001' - 20,000'}, \$50,000 {20,001' or more}.
 - (b) Amount of blanket bond: \$100,000.

Spacing

1. Spacing requirements: Yes. Statewide Rules 7 and 8.
 - (a) Density: Oil well - 40 acres above 12,000 ft. and 80 or 160 acres below 12,000 ft. Gas well - 320 acres above 12,000 ft. and 640 acres below 12,000 ft.
 - (b) Lineal: Oil well - Statewide Rule 7. Gas well - Statewide Rule 8, unless special field rules authorize exception.
2. Exceptions: Yes. Statewide Rule 9.
 - (a) Basis: Either by adoption of Special Field Rules, which take precedence over State-wide Rules, or by request for exception to either.
 - (b) Approval: By notice and hearing before the State Oil and Gas Board.

Pooling

1. Authority to establish voluntary: Yes. Section 53-3-7.
2. Authority to establish compulsory: Yes. Section 53-3-7, 1972 Code.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Statewide Rule 4.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes. Statewide Rule 4 (h) & 25.
 - (d) Plugging and abandoning: Yes. Statewide Rules 27 & 28.
 - (e) Change of operator: Yes. Statewide Rule 5.
2. Permit fee:
 - (a) Drilling: \$600, \$600 SWDW. (Class II Wells, UIC) Statewide Rule 4.
 - (b) Seismic drilling: No.
 - (c) Recompletion: \$100. Statewide Rule 4.
 - (d) Plugging and abandoning: No.
 - (e) Change of operator: \$100. Statewide Rule 5.
3. Require filing report of work performed: Yes, Statewide Rule 23 and (Rule 28B(3d)).

Vertical Deviation

1. Regulation requirement: Yes, Statewide Rule 14.
 - (a) When is directional survey necessary? Intentionally deviated wells, and all producible wells drilled which are an exception to the spacing rules under Statewide Rule 9 shall have directional surveys made to the total depth of the hole before setting the final string of casing. A certified copy of such directional survey shall be filed with the Board by the operator within 30 days from the making thereof. This requirement may be waived by the Supervisor, with the concurrence of the Chief Engineer, upon acceptable proof filed by the operator, whether by inclination survey or otherwise, that the bottom-hole location did not cross any unit boundaries.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, based on well total depth. Statewide Rule 11.
 - (b) Production casing: Statewide Rule 12. To a sufficient depth adequately to protect the oil or gas bearing pool.
2. Minimum amount of cement required:
 - (a) Surface casing: Statewide Rule 11, 500 sacks of cement or circulated to surface.
 - (b) Production casing: Statewide Rule 12, 500 feet above casing shoe.

- (c) Setting time: Surface casing - 12 hours and production casing - 24 hours.
- 3. Tubing requirements: Statewide Rule 18.
 - (a) Oil wells: Each flowing oil well is limited to a maximum of 2 1/2-inch tubing.
 - (b) Gas wells: Gas wells are limited to 4-inch tubing.

Completion

- 1. Completion report required: Statewide Rule 23.
 - (a) Time limit: Within 6 months for Stratigraphic test; all others within 30 days after completion or recompletion.
 - (b) Where submitted: State Oil and Gas Board, 500 Greymont Avenue, Suite E, Jackson, MS 39202-3446.
- 2. Well logs required to be filed: Statewide Rule 24.
 - (a) Time limit: Within 6 months for Stratigraphic test; all others within 30 days after completion or within 60 days from logging date which ever is the earliest.
 - (b) Where submitted: State Oil and Gas Board, 500 Greymont Avenue, Suite E, Jackson, MS 39202-3446.
 - (c) Confidential time period: If so requested. Six months. Eighteen months for strat tests. May be extended an additional six months by the Supervisor and an additional year by the Board, after notice and hearing.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes, microfiche file with index.
- 3. Multiple completion regulation: Statewide Rule 15.
 - (a) Approval obtained: After notice and hearing before State Oil and Gas Board.
- 4. Commingling in well bore: Statewide Rule 15.
 - (a) Approval obtained: After notice and hearing before State Oil and Gas Board.

Oil Production

- 1. Definition of an oil well: Oil well shall mean any well capable of producing oil and which is not a gas well as defined herein.
- 2. Potential tests required: Statewide Rule 41.
 - (a) Time interval: N/A.
 - (b) Witness required: Not required.
- 3. Statewide allowable: No.
 - (a) Pool allowable: No, except in unitized pools.
 - (b) Well allowable: Statewide Rule 35, according to depth of producing interval, or MER.

- (c) Exempt allowable: Yes, discovery well of pool may produce at an unrestricted rate until cost of drilling and completing is recovered. Section 53-1-17, Miss. Code of 1972.
- 4. Maximum gas-oil ratio: 2,000-1. Statewide Rule 40.
 - (a) Provision for limiting gas-oil ratio: Yes. Statewide Rule 40.
 - (b) Exception to limiting gas-oil ratio: Yes, if authorized by the Board after notice and hearing.
- 5. Bottom-hole pressure test reports required: Statewide Rule 38.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: Statewide Rule 21A.
- 7. Measurement involving meters: Statewide Rule 21C.
- 8. Production reports: Statewide Rule 42.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time Limit: First day of the second month following the month for which production is reported.

Gas Production

- 1. Definition of a gas well: Gas well shall mean any well the production from which is predominantly gas or condensate, or both.
- 2. Pressure base 15.025 psia @ 60 degrees F. Statewide Rule 2 (h).
- 3. Initial potential tests: Statewide Rule 41.
 - (a) Time interval: N/A.
 - (b) Witness required: Not required.
- 4. Statewide allowable: No.
 - (a) Pool allowable: Statewide Rule 34.
 - (b) Well allowable: Yes, the pool allowable is allocated to wells based on maximum efficient rate of production from the pool. Statewide Rule 34.
 - (c) Exempt allowable: Yes. Discovery well of pool may produce at an unrestricted rate until cost of drilling and completing is recovered. Section 53-1-17, Miss. Code of 1972.
- 5. Bottom-hole pressure test reports required: Statewide Rule 38.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: Statewide Rule 21.
- 8. Production reports:

- (a) By lease: No.
- (b) By well: Yes. Statewide Rule 42.
- (c) Time limit: First day of the second month following the month for which production is reported.

Water Disposal

1. State agencies that control disposal of produced salt water: Regulatory agency (State Oil and Gas Board). Federal Underground Injection Control (UIC) Program (Safe Drinking Water Act) for Class II wells has been assigned to the State Oil and Gas Board. Bureau of Pollution Control will regulate industrial waste injection wells.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. Section 53-3-101, Miss. Code of 1972.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 75%.
 - (b) Royalty interest: 75%.

Taxation

Gas severance tax = 6.0%
 Gas ad valorem tax = 0.0%
 Gas Maintenance tax = 0.5 cents per mcf
 Total gas tax burden = 6.0% + .05 cents per mcf

Oil severance tax = 6.0%
 Oil ad valorem tax = 0.0%
 Oil Maintenance tax = 4.4 cents per barrel
 Total oil tax burden = 6.0% + 4.4 cents per barrel

1. Tax collecting agency: Severance tax - Mississippi State Tax Commission, P. O. Box 1033, Jackson, MS 39215. Maintenance Tax Assessments - State Oil and Gas Board, 500 Greymont Avenue, Suite E, Jackson, MS 39202-3446.
2. How tax is computed: Gas severance tax is 6% of the value of the production, at the mouth of the well. The maintenance tax assessments for gas are computed as 0.5 cents per MCF of gas. Oil severance tax is 6% of the value of the production, at the mouth of the well. The maintenance tax assessments for oil are 4.4 cents per barrel of oil. A severance tax return must be filed on or before the 25th of the month following the month of production.
3. Exemptions or exceptions:
 - (a) Wells completed after April 1, 1994, that use an approved enhanced oil recovery method receives a three percent (3%) reduced rate.
 - (b) To receive exempt status, a written request must be submitted to the Mississippi Oil and Gas Board.
4. Name of tax: Severance:
5. Statutory citation: Gas Severance Tax 27-25-703, Oil Severance Tax 27-25-503, Maintenance Tax Assessments 53-1-73.

State Land Leasing Information

1. Leasing Method: Negotiation bid and advertisement sealed bids - offshore: often use an advertisement sealed bids.
2. Notice Method: Advertisement in a Jackson paper, Southeastern Oil Review, and newspaper in the county where the

activities occur.

3. Minimum bidding \$ (per acre): \$2.00 per acre, 3/16 of Royalty - mostly advertise the minimum bidding amount on the case by case.
4. Qualification of the bidder: Any person can submit bids - residency is not required.
5. State Statutes: MS ST §29-7-3
6. Maximum acres: Offshore - 1/2 block.
7. Contact: Jack Moody
Phone: (601) 961-5522
E-mail: jack_moody@deq.state.ms.us

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Health, Division of Radioactive Health, Radioactive Materials Branch, P.O. Box 1700, Jackson, MS 39215. Phone: (601) 354-6167, Fax: (601) 354-6687.
2. Relevant Statute/Regulations: Mississippi State Board of Health Regulations for Control of Radiation, Section N.
3. Scope: Mississippi Legislature gave NORM regulatory action to the State Oil and Gas Board in 1995.
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: B. J. Smith
12. Regulating Agency: Mississippi State Oil and Gas Board for E&P generated NORM, 500 Greymont Ave., Ste. E, Jackson, MS 39202. Phone: (601) 354-6474, Fax: (601) 354-6873.
13. Relevant Statute/Regulations: Rule 68. Disposal of NORM. State Code 53-1-3 (t)
Rule 69. Control of NORM. State Code 53-1-17 (7)
14. Scope: Applies to NORM derived from exploration and production activities at facilities which on or after 7/1/95 were permitted by the State Oil and Gas Board, and which on some date were active or inactive.
15. Licensing: None. Site survey required on all sites with results reported on Form 21.
16. Cleaning Equipment: Required for "release for unrestricted use" but not regulated.
17. Disposal of Waste: Permitted under Rule 68 for disposal by landspreading, in wells being plugged and abandoned, or offsite at a licensed low level radioactive waste or NORM disposal facility.
18. Subsequent Use of Equipment: No restrictions if transferred to another producer. Radiation limits if released for unrestricted use.

19. Subsequent Use of Materials: No restrictions if used by another oil and gas producer.
20. Release/Sale of NORM-Contaminated Land: No restrictions if transferred to another producer. Radiation limits for release for unrestricted use.
21. Projected Volume of stored NORM in the State: N/A.
22. Respondent: W. Kent Ford

MISSOURI

Administration

1. State agency: State Oil and Gas Council administered through the Geological Survey Program, P. O. Box 250, Rolla, MO 65402. Phone (573) 368-2143.
2. Docketing procedure: Public hearing held at such time and place as may be prescribed by the Council.
 - (a) Emergency orders: By Chapter 259.140 RSMo. Council is authorized to issue an emergency order without hearing which shall be effective upon promulgation. Effective for no more than 15 days.
 - (b) Notice: 10 days. State Oil and Gas Council. Chapter 259.140 RSMo.

Bond

1. Compliance bond required: Yes. 10 CSR 50-2.020 - Surety Bond, Certificate of Deposit, or Letter of Credit. Chapter 259.070 (d) RSMo.
2. Conditions of bond: Form OGC-2. Bond is the obligation of the owner of producing well or wells or proposals to drill for oil or gas or for stratigraphic purposes.

- (a) Amount per well: 10 CSR 50-2.020.

<u>Depth (ft.)</u>	<u>Amount</u>	<u>Depth (ft.)</u>	<u>Amount</u>
0- 500	\$1,000	2,001-5,000	\$4,000
501-1,000	2,000	5,001----	4,000
1,001-2,000	3,000		Plus \$1/ft. beyond 5,001

- (b) Amount of blanket bond: 10 CSR 50-2.020.

<u>Depth (ft.)</u>	<u>Amount</u>	<u>Number of Unplugged Wells/Bond</u>
0- 800	\$20,000	50
801-1,200	30,000	15

Spacing

1. Spacing requirements: Yes.
 - (a) Density: 10 CSR 50-2-070

Oil - 40 acres may be excepted if less than 1200 ft. deep to producing formation.

Gas - 640 acres may be excepted if less than 1500 ft. deep to producing formation.
 - (b) Lineal: 165 feet from lease boundary or property line for an oil well. 234 feet for a gas well. 10 CSR 50-2.070. Non-commercial gas well 165 feet from lease line.
2. Exceptions: Yes. 10 CSR 50-2.070.
 - (a) Basis: To protect against offset drainage from wells drilled prior to enactment of Chapter 259 RSMo. and special project development.

- (b) Approval: Upon application to the State Geologist who is administrator. 10 CSR 50-2.070.

Pooling

1. Authority to establish voluntary: 10 CSR 50-4.010.
2. Authority to establish compulsory: 10 CSR 50-5.010.

Drilling Permit

Change in legislation allowing Global Positioning System well location in lieu of Registered Land Survey.

The Oil and Gas Council recently authorized an amendment to the rules that allows for oil and gas well locations to be determined by a Global Positioning System (GPS) receiver. The rule allows the use of GPS receivers as an alternative to standard land surveying methodologies. Determining the location of oil and gas wells with a GPS unit will be easier, quicker, and less costly thereby allowing the oil and gas industry to reduce certain costs and operate more efficiently.

<http://www.sos.mo.gov/adrules/csr/current/10csr/10c50-2.pdf>

10CSR 50-2.030 (2) (A) *Amended: Filed, Sept. 15, 2006, effective April 30, 2007.*

1. Require permits for:
 - (a) Drilling a producing or service well? Yes. 10 CSR 50-2.030.
 - (b) Seismic drilling: Not specifically stated under oil and gas law, may be required under water well regulations, 10 CSR 23-6.010.
 - (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes. 10 CSR 50-2.060.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: Not under oil and gas law, but may be required under water well regulations, 10 CSR 23-6.010.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes. 10 CSR 50-2.050. OGC-5 Drilling Report.

Vertical Deviation

1. Regulation requirement: No.
 - (a) When is directional survey necessary? Never.
 - (b) Filing of survey required? If taken by operator. 10 CSR 50-2.050.

Casing and Tubing

1. Minimum amount required: 10 CSR 50-2.040.
 - (a) Surface casing: Yes.

- (b) Production casing: No.
- 2. Minimum amount of cement required:
 - (a) Surface casing: Yes, to surface.
 - (b) Production casing: As necessary to protect all water, oil or gas bearing strata, etc.
 - (c) Setting time: Yes. Minimum 6 hours, maximum 24 hours depending on amount of CaCl_2 .
- 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

- 1. Completion report required: Yes. 10 CSR 50-2.050.
 - (a) Time limit: 30 days.
 - (b) Where submitted: To the State Geologist, P.O. Box 250, Rolla, MO 65402.
- 2. Well logs required to be filed: Yes. 10 CSR 50-2.050.
 - (a) Time limit: 30 days.
 - (b) Where submitted: To the State Geologist, P.O. Box 250, Rolla, MO 65402.
 - (c) Confidential time period: Yes. One year if requested.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes.
- 3. Multiple completion regulation: No.
 - (a) Approval obtained: No.
- 4. Commingling in well bore: No.
 - (a) Approval obtained: No.

Oil Production

- 1. Definition of an oil well: Crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas other than gas produced in association with oil and commonly known as casinghead gas. 10 CSR 50-1.030.
- 2. Potential tests required: No.
 - (a) Time interval: No.
 - (b) Witness required: No.
- 3. Statewide allowable: No. However, Council has statutory authority. Chapter 259.090 RSMo.

- (a) Pool allowable: No.
- (b) Well allowable: No.
- (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes. Chapter 259.70 RSMo.
 - (b) Exception to limiting gas-oil ratio: No.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: No.
- 7. Measurement involving meters: No.
- 8. Production reports: 10 CSR 50-2.080.
 - (a) By lease: Yes.
 - (b) By well: Yes, if requested.
 - (c) Time limit: 30 days.

Gas Production

- 1. Definition of a gas well: All natural gas and all other fluid hydrocarbons, which are produced at the wellhead and not defined as oil. 10 CSR 50-1.030.
- 2. Pressure base Not stated psia @ ____ degrees F.
- 3. Initial potential tests: No.
 - (a) Time interval: No.
 - (b) Witness required: No.
- 4. Statewide allowable: No. (Council has authority.) Chapter 259.090 RSMo.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No.
- 7. Measurements involving meters: No.
- 8. Production reports: 10 CSR 50-2.080.

- (a) By lease: Yes.
- (b) By well: Yes, if requested.
- (c) Time limit: 30 days.

Water Disposal

- 1. State agencies that control disposal of produced salt water: 10 CSR 50-2.090. State Oil and Gas Council.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source supply. Yes. 10 CSR 50-5.010
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization. Chapter 259.120 RSMo.
 - (a) Working interest: 75%.
 - (b) Royalty interest: 75%.

Taxation

There is no state tax levied on oil and gas production in Missouri. Chapter 259.220 RSMo.

Land Leasing Information

No regulations at this time.

Naturally Occurring Radioactive Material (NORM)

- 1. Regulating Agency: Missouri Department of Natural Resources, Division of Environmental Quality, Solid Water Program, P.O. Box 176, Jefferson City, MO 65102. Phone: (573) 751-5401, Fax: (573) 526-3902.
- 2. Relevant Statute/Regulations: 10 CSR 50-2.090. Solid Waste regulations deal with NORM. There is no oil or gas production that needs NORM regulation.
- 3. Scope:
- 4. Licensing:
- 5. Cleaning Equipment:
- 6. Disposal of Waste:
- 7. Subsequent Use of Equipment:
- 8. Subsequent Use of Materials:
- 9. Release/Sale of NORM-Contaminated Land:
- 10. Projected Volume of stored NORM in the State:
- 11. Respondent: Chris Nagel DEQ

Jeff Jaquess - Oil and Gas

MONTANA

Administration

1. State agency: Board of Oil and Gas Conservation, P.O. Box 217, Helena, MT 59624. Phone (406) 449-2622. Technical Office: 2535 St. Johns Avenue, Billings, MT 59102, Phone (406) 656-0040. Northern Field Office: 218 Main Street, P.O. Box 690, Shelby, MT 59474, Phone (406) 434-2422.
2. Docketing procedure: Upon receipt of petition concerning any matter within the jurisdiction of the Board, the Board will promptly fix a date for hearing and cause notice of the hearing to be given. The Board must enter its order within 30 days after its hearing.
 - (a) Emergency orders: Sections 82-11-141, 82-11-151, Montana Code Annotated (MCA). Yes, when an emergency requiring immediate action is found to exist, the Board is authorized to issue an emergency order without advance notice or hearing, which shall be effective upon promulgation. An emergency order may not remain in effect beyond the next regular meeting of the Board.
 - (b) Notice: An order or amendment thereof may not be made by the Board without a public hearing upon at least ten (10) days notice. At least 20 days prior to the public hearing, a person who applies for a well spacing unit or who applies to pool all interests in a well spacing unit shall cause written notice to be served upon the record owners of the oil and gas leasehold interests sought to be spaced or pooled.

Bond

1. Compliance bond required: Yes. Rule 36.22.1308.
2. Conditions of bond: Conditioned upon proper plugging and abandonment of a well and restoration of the surface to its original contours.
 - (a) Amount per well: \$1500 (2000 feet or less); \$5,000 (3500 feet or less); \$10,000 greater than 3500 feet.
 - (b) Amount of blanket bond: \$50,000.

May be increased to \$3,000, \$10,000, \$20,000, or \$100,000 respectively at the Board's discretion.

Spacing

1. Spacing requirements: Yes. Rule 36.22.702.
 - (a) Density: 40 acres for oil wells less than 6,000' deep; 160 acres for wells from 6,001' to 11,000'; 320 acres for wells deeper than 11,000'. For a gas well, 640 acres.
 - (b) Lineal: 330' from legal subdivision line for wells less than 6,000'; 660' from quarter section lines for wells 6,001 to 11,000; 660' from drilling unit boundaries for wells below 11,000'. For gas wells, 990' from governmental section lines.
2. Exceptions: Yes, Rule 36.22.702(1).
 - (a) Basis: For wildcat wells less than 6,000', wells may be moved a maximum of 75' closer to quarter-quarter section line, and wells between 6,000' to 11,000' may be moved a maximum for 150' closer to quarter section lines in extremely rough terrain where it is impractical to move in any other direction but only after inspection by the Board representative and subsequent approval by the petroleum engineer or his authorized agent. No tolerance for wells below 11,000' nor for gas wells.
 - (b) The Board may also grant exceptions to protect correlative rights or to prevent waste. Section 82-11-124, MCA.

- (c) Approval: Administrative approval for tolerances described in (a). Exceptions beyond those tolerances in (a) require notice and hearing.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Rule 36.22.601.
 - (b) Seismic drilling: Permit is issued by County Clerk and Recorder. Rule 36.22.503; Section 82-1-105, MCA.
 - (c) Recompletion: Yes. Rule 36.22.601(2).
 - (d) Plugging and abandoning. Yes. Rule 36.22.1301.
2. Permit fee:
 - (a) Drilling: Fee is based on depths as follows: 0 - 3,500, \$25; 3501' - 7,000', \$75; 7,001 - below, \$150. Rule 36.22.603.
 - (b) Seismic drilling: \$5.00. Section 82-1-105(4), MCA.
 - (c) Plugging and abandoning: None.
3. Require filing report of work performed: Yes. Rule 36.22.1013.
4. Require publication of notice of intent to drill: Yes. If the proposed well or hole is not located within the boundaries of a delineated field for which, after public hearing, an order has been entered by the Board that drilling permits may issue for locations within that field without further public hearing, the applicant must cause publication of notice in a format prescribed by the Board in one issue of a newspaper in general circulation in Helena and a newspaper of general circulation in the county where the proposed well or hole is located. Proof of such publication in the form of a copy of the page on which the add appears showing the ad and the date of publication or an affidavit of the publisher must be filed with the Board. Any party may demand in writing an opportunity to be heard within ten (10) days after the date of the publication of the notice. Rule 36.22.601.
5. Require notice to surface owner: Yes. Sections 82-10-503, 82-11-122, MCA.

Vertical Deviation

1. Regulation requirement: Yes, Rule 36.22.1003. Unless otherwise ordered by the Board upon hearing all wells shall be so drilled that the horizontal distance between the bottom of the hole and the location at the top of the hole shall be at all times at a practical minimum.
 - (a) When is directional survey necessary? When the intent is to direct the bottom of the hole away from the vertical, notice shall be filed with the Board and administrative approval obtained. Deviations to straighten the hole, sidetrack junk or correct mechanical difficulties need not be approved. Administrative approval for controlled directional drilling is not available where the proposed bottomhole location is not in compliance with applicable field or statewide well locations rules. Rule 36.22.1003.

- (b) Filing of survey required? Yes, within 30 days after completion of work.

Casing and Tubing

1. Minimum amount required: Rule 36.22.1001.
 - (a) Surface casing: Yes. Shall be run to reach a depth below all potable fresh water located at levels accessible for agricultural and domestic use.
 - (b) Production casing: No specific requirements.
2. Minimum amount of cement required: Rule 36.22.1001.
 - (a) Surface casing: Yes. Sufficient to circulate to surface.
 - (b) Production casing: No.
 - (c) Setting time: Yes, 8 hours before pressure testing. All cemented casing strings shall stand under pressure until the cement has reached a compressive strength of 300 pounds per square inch.
3. Tubing requirements: Rule 36.22.1206.
 - (a) Oil wells: Yes. All flowing oil wells shall be equipped with and producing through tubing unless the well is a dual completion.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes. Rule 36.22.1013.
 - (a) Time limit: Within 30 days after completion for field development wells, within six (6) months for wildcat wells, within three (3) years for stratigraphic test wells.
 - (b) Where submitted: Board of Oil and Gas Conservation, 2535 St. Johns Avenue, Billings, MT 59102 for wells drilled in Southern District; Board Field Office, Box 690, Shelby, MT 59474 for wells drilled in Northern District.
2. Well logs required to be filed: Yes. Rule 36.22.1013.
 - (a) Time limit: Within 30 days of completion for field development wells, within six (6) months of completion for exploratory wells, within three (3) years for completion for stratigraphic test wells.
 - (b) Where submitted: Two copies to the Board of Oil and Gas Conservation district office where the well is located (Billings or Shelby).
 - (c) Confidential time period: Operator may withhold filing of logs and completion information on exploratory wells for up to six (6) months after the completion date; information from stratigraphic test wells may be held confidential for three (3) years.
 - (d) Available for public use: Yes. Logs and other well information are available for public use in Billings for the entire state and in Shelby for the Northern district wells only.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. Rule 36.22.1004 for dual completion.
 - (a) Approval obtained: By first notifying the Board on Form No. 2 and by notifying each offset operator in writing at

least 10 days prior to commencement and obtaining approval from the petroleum engineer or his authorized agent after such 10 days. If within such 10 days any offset operator shall file with the Board a written protest to the proposal, the matter shall be immediately set for hearing, after notice, and shall not be approved until permitted by order of the Board after such hearing.

4. Commingling in well bore: Yes. Rule 36.22.1208.
 - (a) Approval obtained: Must receive written permission from the Board, which may require at the discretion of the Board, notice and hearing.

Oil Production

1. Definition of an oil well: Any well capable of producing oil in paying quantities; not a gas well. Rule 36.22.302(33).
2. Potential tests required: Yes. Rule 36.22.1013.
 - (a) Time interval: Filed on prescribed form within 30 days following completion of field wells and 6 months following completion of wildcats.
 - (b) Witness required: No.
3. Statewide allowable: No.
 - (a) Pool allowable: Yes. The Board may set allowables for pools or wells when warranted to protect correlative rights or prevent waste. None in effect at this time.
 - (b) Well allowable: See (a).
 - (c) Exempt allowable: No provision.
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes. Rule 36.22.1216; Section 82-11-124(2), MCA. GOR's to be reported within 30 days after completion. May be limited after notice and hearing upon application.
 - (b) Exception to limiting gas-oil ratio: Yes.
5. Bottom-hole pressure test reports required. Rule 36.22.1214. Yes, within 30 days following completion, and reported on prescribed form within 20 days after test is made.
 - (a) Periodical bottom-hole pressure surveys: Subsequent tests may be required by the Board to provide adequate data for establishing the maximum efficiency rates of production (MER).
6. Commingling oil in common facilities: No provision.
7. Measurement involving meters: No provision.
8. Production reports: Rule 36.22.1242.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Filed on prescribed form on or before the last day of each month succeeding the month in which the production or taking occurs.

Gas Production

1. Definition of a gas well: Any well which produces natural gas only; or any well capable of producing gas in commercial quantities and also producing oil from the same common source of supply but not in commercial quantities; and any well classified as a gas well by the Board for any reason. Rule 36.22.302(27).
2. Pressure base 14.73 psia @ 60 degrees F. Rule 36.22.1218.
3. Initial potential tests: Yes. Rule 36.22.1013.
 - (a) Time interval: 30 days after completion for field wells; 6 months after completion for "wildcat" wells.
 - (b) Witness required: no.
4. Statewide allowable: No provision.
 - (a) Pool allowable: The Board has the authority to limit production when warranted to prevent waste and to protect correlative rights. Usually, operators only limit production in times of low market demand.
 - (b) Well allowable: See (a).
 - (c) Exempt allowable: No provision.
5. Bottom-hole pressure test reports required. Rule 36.22.1214. Yes, within 30 days following completion, and reported on prescribed form within 20 days after test is made.
 - (a) Periodical bottom-hole pressure surveys: Subsequent tests may be required by the Board to provide adequate data for establishing the maximum efficiency rate of production (MER).
6. Commingling oil in common facilities: No provision.
7. Measurement involving meters: Yes. Rule 36.22.1218.
8. Production reports: Rule 36.22.1242.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Filed on prescribed form on or before the last day of each month succeeding the month in which the production or taking occurs.

Water Disposal

1. State agencies that control disposal of produced salt water: Yes. Rule 36.22.1226. Controlled by Board of Oil and Gas Conservation.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. Sections 82-11-204, 205, 206, 207, and 208, MCA.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization: Yes. Section 82-11-207, MCA.
 - (a) Working interest: 80%.

- (b) Royalty interest: 80%.

Taxation

Gas severance tax = see chart below

Gas ad valorem tax = see chart below

Total gas tax burden = variable; see summary below

Oil severance tax = see chart below

Oil ad valorem tax = see chart below

Total oil tax burden = variable; see summary below

1. Tax collecting agency: Department of Revenue, Natural Resources and Corporation Tax Division, Mitchell Building, Helena, MT 59601.
2. How tax is computed:

Natural gas is taxed on the gross taxable value of production based on the type of well and type of production according to the following schedule for working interest and nonworking interest owners:

Natural gas production tax in Montana:		Working Interest	Nonworking Interest
(a) Primary Recovery Production:			
(1)	first twelve months of qualifying production:	0.8%	15.1%
(2)	after twelve months:		
(a)	pre-1999 wells:	15.1%	15.1%
(b)	post-1999 wells:	9.3%	15.1%
(b)	Stripper Natural Gas:	11.3%	15.1%
(c) Horizontally Completed Well Production:			
(1)	first 18 months:	0.8%	15.1%
(2)	next 18 months:	9.3%	15.1%

- The total gross value of natural gas produced and sold each quarter is determined by taking the total number of cubic feet of natural gas produced and sold each month as the average value at the mouth of the well during the month that the natural gas is produced and sold, as determined by the department.
- In computing the total number of cubic feet of gas produced and sold, the amount of gas used by the person in connection with the operation of the well must be deducted from the total.

Oil is taxed on the gross taxable value of production based on the type of well and type of production according to the following schedule for working and nonworking interest owners.

Oil production tax in Montana:		Working Interest	Nonworking Interest
(a) Primary Recovery Production:			
(1)	first twelve months of qualifying production:	0.8%	15.1%
(2)	after 12 months:		
(a)	pre-1999 wells:	12.8%	15.1%
(b)	post-1999 wells:	9.3%	15.1%
(b)	Stripper Oil Production:		

- | | | | | |
|-----|--|-------|-------|-------|
| (1) | first 1 through 10 a day production: | 5.8% | 15.1% | |
| (2) | more than 10 barrels a day production: | 9.3% | 15.1% | |
| (c) | Stripper Well Exemption Production: | 0.8% | 15.1% | |
| | Horizontally Completed Well Production: | | | |
| (1) | first 18 months of qualifying production: | 0.8% | 15.1% | |
| (2) | after 18 months: | | | |
| | (a) pre-1999 wells: | 12.8% | 15.1% | |
| | (b) post-1999 wells: | 9.3% | 15.1% | |
| (d) | Incremental Production: | | | |
| (1) | new or expanded secondary recovery production: | 8.8% | 15.1% | |
| (2) | new or expanded tertiary production: | | 6.1% | 15.1% |
| (e) | Horizontally Recompleted Well: | | | |
| (1) | first 18 months: | 5.8% | 15.1% | |
| (2) | after 18 months: | | | |
| | (a) pre-1999 wells: | 12.8% | 15.1% | |
| | (b) post-1999 wells: | 9.3% | 15.1% | |
3. Exemptions or exceptions: Exemptions for natural gas used by the operator in connection with his operations is exempt.
 4. Name of tax: Production Tax (ex-severance).
 5. Statutory citation: Production Tax (ex-severance): Sections 15-36-301 through 324, MCA.

Land Leasing Information

1. Leasing Method: Public auction - oral bidding.
2. Notice Method: Advertisement in three Montana newspapers, Montana Department of Natural Resources Web site, www.dnrc.state.mt.us/trust/mmbog.htm and Rocky Mountain Oil Journal.
3. Minimum bidding \$ (per acre): \$1.50 per acre, minimum bid is \$100.
4. Qualification of the bidder: Any person can submit bids. Corporations must be incorporated in Montana or licensed to do business in the state.
5. State Statutes:
6. Maximum acres: 1 section or 1 portion of 1 section
7. Contact: Barbara Hamburg
Phone: (406) 444-4561

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Montana Department of Public Health and Human Services.
2. Relevant Statute/Regulations: None; will be developing regulations within the next year, based on the CRCPD's state suggested regulations.
3. Scope:
4. Licensing:

5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: George Eicholtz

NEBRASKA

Administration

1. State agency: Nebraska Oil and Gas Conservation Commission, P. O. Box 399, Sidney, NE 69162. Phone (308) 254-6919. Web site <http://www.nogcc.ne.gov>
2. Docketing procedure: Hearings held on fourth Tuesday of each month. Application must be received 21 days prior to hearing date. Original and six copies must be filed.
 - (a) Emergency orders: Yes. Order is effective upon promulgation, but shall remain effective for no more than 20 days.
 - (b) Notice: 15 days. Applicant is responsible, in most cases, by certified mail and Commission by newspaper notice.

Bond

1. Compliance bond required: Yes. Rule 3.004.
2. Conditions of bond: Duty to comply with all laws of the state and the rules, regulations and orders of the Commission.
 - (a) Amount per well: \$5,000.
 - (b) Amount of blanket bond: \$25,000.

Spacing

1. Spacing requirements: Yes, unless accepted by public hearing. Rule 3.013.
 - (a) Density: 40 acres for oil or gas well.
 - (b) Lineal: No closer than 500 feet to 40-acre legal subdivision line for oil or gas, wells deeper the 2,500'. No closer than 300 feet to 40 acre legal subdivision for wells less than 2,500'.
2. Exceptions: Yes.
 - (a) Basis: Topographical, irregular sections or geological considerations.
 - (b) Approval: Administrative if all owners within 500 ft. of proposed well approve, or by public hearing. Production may be limited to protect correlative rights.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes. Rule 3.003.
 - (b) Seismic drilling? Yes. Rule 3.032.

- (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
2. Permit fee:
 - (a) Drilling: \$200. No fee for service well.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: \$100. - producer, none - dry hole. Rule 3.028.
 3. Require filing report of work performed: Yes. Rule 3.006 & 3.007.

Vertical Deviation

1. Regulation requirement: Yes. Rule 3.014.
 - (a) When is directional survey necessary? When necessary to insure protection of correlative rights.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Through fresh water zones.
 - (b) Production casing: No.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulate.
 - (b) Production casing: No.
 - (c) Setting time: Yes. 500 psi compressive strength.
3. Tubing requirements
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes. Rule 3.006.
 - (a) Time limit: 30 days from logging date.
 - (b) Where submitted: Commission offices, Sidney, NE.
2. Well logs required to be filed: Yes. Rule 3.031.
 - (a) Time limit: 30 days from logging date.

- (b) Where submitted: Commission offices, Sidney, NE.
- (c) Confidential time period: Yes, not more than 12 months.
- (d) Available for public use: Yes.
- (e) Log catalog available: No.
- 3. Multiple completion regulation: Yes. Rule 3.017.
 - (a) Approval obtained: Application and public hearing.
- 4. Commingling in well bore: Yes. Rule 3.016.
 - (a) Approval obtained: Application and public hearing.

Oil Production

- 1. Definition of an oil well: A well from which the principal production at the wellhead is oil as defined in the Act. Rule 1.009.
- 2. Potential tests required: Yes.
 - (a) Time interval: 30 days or in accordance with special field rules.
 - (b) Witness required: No.
- 3. Statewide allowable: No.
 - (a) Pool allowable: Yes, based on M.E.R.
 - (b) Well allowable: Yes, based on M.E.R. or protection of correlative rights.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: Yes, to prevent waste only.
 - (a) Provision for limiting gas-oil ratio: Yes, to prevent waste.
 - (b) Exception to limiting gas-oil ratio: Yes.
- 5. Bottom-hole pressure test reports required: When required by special field rules.
 - (a) Periodical bottom-hole pressure surveys: See above.
- 6. Commingling oil in common facilities: Yes, providing production is metered or measured separately.
- 7. Measurement involving meters: To the extent that production be accurately measured.
- 8. Production reports: Yes.
 - (a) By lease: Yes.
 - (b) By well: Only by specific order.

- (c) Time limit: 25th day of month following production.

Gas Production

1. Definition of a gas well: The principal production of which at the wellhead is gas as defined in the Act. Rule 1(10).
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: 30 days.
 - (b) Witness required: No.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes, M.E.R. or ratable take.
 - (b) Well allowable: Yes, M.E.R. or ratable take.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: When required by special field rules.
6. Commingling of gas in common facilities: Yes, after application and public hearing.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: When required by special field rules.
 - (c) Time limit: 25th day of month following production.

Water Disposal

1. State agencies that control disposal of produced salt water: Oilfield waters handled by Oil and Gas Commission. Rule 4. Section 57-905 (4), Revised statutes. Chapter 4, underground injection. 3.022, produced water pits.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. Section 57-910, Revised statutes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 65%.
 - (b) Combined interest: 75%.

Taxation

State Taxes

County Taxes

Gas severance Tax = 3.0%
 Gas Ad Valorem = 0%
 Conservation Tax = 0.3%
 Total Current Tax = 3.3%

Real Estate @ Fair Market Value
 @ County's Mill Levies
 Personal Property, Tangible Equipment
 Located at Well and Tank Battery

Oil Severance Taxes
 Non-stripper = 3.0%
 Stripper = 2.0%
 Oil Ad Valorem = 0%
 Conservation Tax = 0.3%
 Total Current Tax = 2.3% to
 = 3.3%

Real Estate @ Fair Market Value
 @ County's Mill Levies
 Personal Property, Tangible Equipment
 Located at Well and Tank Battery

1. Tax collecting agency: Department of Revenue, P. O. Box 94818, Lincoln, NE 68509. As well as, various county treasurers.
2. How tax is computed: Severance tax is levied at the rate of three percent (3%) of the value of non-stripper oil and natural gas severed from the soil of the state. Stripper wells producing oil shall remit severance tax at the rate of two percent (2%). The first purchaser pays the tax if the oil or natural gas is sold in Nebraska, or by the person doing the severing if the oil or gas is sold outside Nebraska. The tax collected is identified as either coming from school lands or from all other lands. The entire amount is credited to the Severance Tax Fund.

The Severance Tax Administration Fund receives one percent of the gross severance tax receipts, excluding those receipts from tax derived from oil and natural gas severed from school lands. The balance of the Severance Tax Fund received from school lands is allocated to the Permanent School Fund. The balance of the Severance Tax Fund received from other than school lands is allocated as follows:

- (a) the Legislature may transfer an amount to be determined by the Legislature through the appropriations process up to \$300,000 for each year to the State Energy Office Cash Fund,
- (b) the Legislature may transfer an amount to be determined by the Legislature through the appropriations process up to \$30,000 for each year to the Governor's Policy Research Office for administration of the Municipal Natural Gas Regulation Revolving Loan Fund, and
- (c) on August 1, 2000, the State Treasurer shall transfer one hundred thousand dollars to a cash fund to be administratively created under the Legislative Council for the purpose of conducting the study authorized by subsection (5) of section 19-4617, and
- (d) the remainder shall be credited to the Permanent School Fund. Any funds transferred that are not expended by June 30, 2001 shall be credited to the Permanent School Fund.

There is also a conservation tax of 3 mills/dollar effective 6/01/2006. Counties also make oil and gas tax assessments that vary from county to county. Values are based upon "fair market value" of lease as determined by appraiser.

3. Exemptions or exceptions: Oil or gas as is used only in severing operations or for repressuring or recycling purposes is excluded from the gas severance tax. The interests of government units and Native American Indian tribes are exempt from the severance tax. Oil produced from stripper wells is subject to a severance tax of two percent, rather than three percent.
4. Statutory Citation: Section 57-701 through 57-714, Nebraska Revised Statutes.

Land Leasing Information

1. Leasing Method: Public auction - oral bidding.
 NOTE: file at the Board of Educational Lands and Funds
2. Notice Method: Public notice - placed in a publication two consecutive weeks in a legal newspaper, published in the

county where the land to be leased is situated.

3. Minimum bidding \$ (per acre): If the land is located in the county and there is no oil and gas production - \$1.00/acre bonus and 1/8 royalty; if the land is located in the county and there is oil and gas production - \$2.00/acre bonus and 1/6 royalty.
4. Qualification of the bidder: Any person who nominated and submitted the complete lease sale application with the minimum one (1) year rental fee.
5. State Statutes: NE ST
 - §23-3109
 - §23-3110
 - §57-220
6. Maximum acres: 640 acres per section
7. Contact: Laura Bahr-Frew
(402) 471 – 2014
Board of Educational Lands and Funds
nebrbelf@mail.state.ne.us

NOTE: Nebraska holds two (2) sales a year.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: HHS Regulation and Licensure, Public Health Assessment, Radioactive Material Program, P. O. Box 95007, Lincoln, NE 68509. Phone: (402) 471-2168.
2. Relevant Statute/Regulations: At the present time, Nebraska has not adopted specific NORM regulations. Occurrences of NORM problems are currently handled under the state's general regulations for the control of radiation.
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: Brian Hearth

NEVADA

Administration

1. State agency: Nevada Commission on Mineral Resources, Division of Minerals, 400 W. King St., Suite 106, Carson City, NV 89703-4212. Phone (775) 684-7040, FAX (775) 684-7052.
2. Docketing procedure: The Division may act upon its own motion or upon the petition of any interested person concerning any matter within the jurisdiction to set a date for hearing without undue delay. The Division shall enter its order within 30 days after the hearing.
 - (a) Emergency orders: Yes. The Division may issue emergency orders without notice and hearing. Emergency rule, regulation or order shall remain in force no longer than 15 days from its effective date.
 - (b) Notice: No less than 10 days prior to the date of the hearing. The Administrator of the Division of Minerals is responsible to give notice.

Bond

1. Compliance bond required: Yes, a bond of not less than \$10,000 for individual well bonds and not less than \$50,000 for statewide drilling bond is required for all drilling in Nevada. The Division will accept a federal bond in a form and amount equivalent to the form and amount approved by the Division.
2. Conditions of bond: Sufficient surety conditioned for the performance of the duty to plug each dry or abandoned well or the repair of wells causing waste.
 - (a) Amount per well: \$10,000.
 - (b) Amount of blanket bond: \$50,000.

Spacing

1. Spacing requirements: Yes.
 - (a) *Density:

Oil well - 5,000' or less: 40 acres - not less than 330' from boundary of quarter-quarter section.

Oil well - more than 5,000': 160 acres - not less than 330' from boundary of quarter section.

Gas well - 5,000' or less: 160 acres - not less than 660' from boundary of quarter section.

Gas well - more than 5,000': 640 acres - not less than 990' from boundary of section.
 - (b) Lineal: No provision. Determined after hearing.

*The spacing requirements do not apply to federal units, working interest agreements, and areas subject to existing orders.
2. Exceptions: Yes.
 - (a) Basis: Protection of correlative rights of lessees, location may be nonproductive, or topographical conditions.
 - (b) Approval: By hearing after proper notice and order issued by the Division.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes, Application for Permit to Drill an Oil or Gas Well.
 - (b) Seismic drilling? No.
 - (c) Recompletion: Yes.
 - (d) Plugging and abandoning: Yes, Sundry Notice and Report on Wells.
2. Permit fee:
 - (a) Drilling: \$200.00.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: Plugging and Abandonment program by Sundry Notice , Division approval required
3. Require filing report of work performed: Oil and Gas Completion Report, Oil, Gas and Geothermal Well Plugging Report.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? Due to spacing requirements, directional surveys may be required during drilling operations. Upon well completion, bottom hole surveys are required.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Must be set into impervious formation. Not less than 500 ft. required on all wells or 10 percent of projected total depth if greater than 5,000 ft.
 - (b) Production casing: No provision.
2. Minimum amount of cement required:
 - (a) Surface casing: Circulate cement to surface.
 - (b) Production casing: 500 feet above bottom of casing.
 - (c) Setting time: Yes - minimum compressive strength of 300 psi at bottom-hole conditions must be attained.

3. Tubing requirements:

- (a) Oil wells: No.
- (b) Gas wells: No.

Completion

1. Completion report required: Yes - Oil and Gas Completion Report.

- (a) Time limit: Thirty days.
- (b) Where submitted: Division of Minerals.

2. Well logs required to be filed: Yes - two copies.

- (a) Time limit: Thirty days after completion.
- (b) Where submitted: Division of Minerals.
- (c) Confidential time period: Yes - six months. May be extended for series of wells.
- (d) Available for public use: Yes.
- (e) Log catalog available: No.

3. Multiple completion regulation: Yes.

- (a) Approval obtained: May be approved administratively.

4. Commingling in well bore: Yes.

- (a) Approval obtained: Production from one pool shall not be commingled with that from another pool in the same field before gauging.

Oil Production

1. Definition of an oil well: "Oil well" means any well which is not a gas well and which is capable of producing oil or condensate.

2. Potential tests required: No provision.

- (a) Time interval: No provision.
- (b) Witness required: No provision.

3. Statewide allowable: No.

- (a) Pool allowable: No.
- (b) Well allowable: Yes. May be limited by the Division after notice and hearing to protect correlative rights and to prevent waste.
- (c) Exempt allowable: No.

4. Maximum gas-oil ratio: No.

- (a) Provision for limiting gas-oil ratio: Yes. No well shall be permitted to produce gas in excess of the maximum ratio determined by the Division for a pool after notice and hearing.

- (b) Exception to limiting gas-oil ratio: Yes. If excess is returned to the pool from which produced.
- 5. Bottom-hole pressure test reports required: No provision.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: Yes. Common tankage may be used to receive the production from any number of wells, provided adequate tankage and other equipment is installed so that production for each well can be accurately determined at reasonable intervals.
- 7. Measurement involving meters: No provision.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes – Oil and Gas Producers Monthly Report.
 - (c) Time limit: Thirty days.

Gas Production

- 1. Definition of a gas well: "Gas well" means a well which produces primarily natural gas or any well classified as a gas well by the Division.
- 2. Pressure base 14.73 psia @ 60 degrees F.
- 3. Initial potential tests: Each gas well must be tested initially by the multipoint back pressure method at a time prescribed by the Division.
 - (a) Time interval: No provision.
 - (b) Witness required: No provision.
- 4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: Yes. May be limited by the Division after notice and hearing to protect correlative rights and to prevent waste.
 - (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: No provision.
 - (a) Periodical bottom-hole pressure surveys: No provision.
- 6. Commingling of gas in common facilities: Yes. Common tankage may be used to receive the production from any number of wells, provided adequate tankage and other equipment is installed so that production for each well can be accurately determined at reasonable intervals.
- 7. Measurement involving meters: Yes.
- 8. Production reports:

- (a) By lease: No.
- (c) By well: Yes.
- (d) Time limit: Thirty days.

Water Disposal

1. State agencies that control disposal of produced salt water: Division of Minerals, Division of Environmental Protection.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 62.5%.
 - (b) Royalty interest: 62.5%.

Taxation

Gas administrative fee = 100 mills per 50,000 per cubic ft of gas

Total gas tax burden = \$0.10 per 50,000 cubic feet of gas

Oil tax burden = 100 mills per barrel of oil

Total oil tax burden = \$0.10 per barrel of oil

1. Tax collecting agency: Administrative Fee - Nevada Division of Minerals, 400 W. King St., Suite 106, Carson City, NV 89703. Net Proceeds of Mines Tax - Nevada Department of Taxation, Capitol Complex, 1550 East College Parkway, Carson City, NV 89706.
2. How tax is computed: The administrative fee is 100 mills per BBL or 50,000 cubic feet of natural gas. The Net Proceed of Mines Tax is an annual assessment based on percent of net proceeds after allowable deductions.
 - (a) Notwithstanding the provisions of NAC 522.343, the amount of the administrative fee that a producer or purchaser of oil or natural gas must pay pursuant to subsection 2 of NRS 522.150 for new production is one-half cent per barrel of oil or per 50,000 cubic feet of natural gas, as appropriate, and in accordance with the provisions of this section.
 - (b) Upon the filing of Form 5, the well completion report, pursuant to NAC 522.510, the division shall determine whether the production from the well that is the subject of the report qualifies as new production. If the division determines that the production from the well qualifies as new production, the producer or purchaser is entitled to pay the administrative fee required by subsection 2 of NRS 522.150 for that new production at the reduced rate prescribed in subsection 1 for 12 consecutive months, beginning on the put-on production date reported in Form 5 for that well. At the end of the 12-month period, the producer or purchaser must pay the administrative fee required by NRS 522.150 for further production from the well in the amount prescribed in NAC 522.342.
 - (c) A producer or purchaser may, pursuant to NRS 522.110, challenge a determination made by the division pursuant to subsection 2.
 - (d) As used in this section, "new production" means production from a new or existing well that is completed in a new interval, as determined by the division.
3. Exemptions or exceptions: None.

4. Name of tax: Administrative Fee and Net Proceeds of Mines Tax.
5. Statutory citation: Administrative Fee: Nevada Revised Statutes (NRS) 522.150; Net Proceeds of Mines Tax – NRS 362.100.

Land Leasing Information

No regulations at this time.

Naturally Occurring Radioactive Material (NORM)

No NORM regulations at this time.

NEW YORK

Administration

1. State agency: Department of Environmental Conservation, Division of Mineral Resources, 625 Broadway, 3rd Fl., Albany, NY 12233-6500. Phone (518) 402-8056. Region 9 Office, 182 E. Union St., Allegany, NY 14706-1328. Phone (716) 372-0645. Region 8 Office, 6274 East Avon-Lima Road, Avon, NY 14414. Phone (585) 226-2466.
2. Docketing Procedure: Compulsory integration hearings will be held on a regular schedule to address recently permitted wells where the Department determines integration is necessary in accordance with new statutory provisions which took effect in August 2005. Other public hearings are held upon the Department's own motion or upon application of any interested party. The Department shall promptly fix a date for a hearing thereon. The hearings shall be held without undue delay after the filing of the petition. The Department shall make its order within sixty days after the close of the hearing record.
 - (a) Emergency orders: The Department may make an emergency order without notice or hearing, which shall be effective when made. No emergency order shall be effective for more than fifteen days.
 - (b) Notice – compulsory integration hearings: The well operator is responsible to provide notice to uncontrolled interests in spacing units and by publication at least 30 days prior to an integration hearing.
 - (c) Notice – other matters: At least ten days notice, exclusive of the date of service. The Department is responsible to give notice.

Bond

1. Compliance bond required: Yes, but only for post-regulatory (10/1/63) wells, and only with respect to plugging and abandonment.
2. Conditions of bond: That the well be properly plugged and abandoned, all notices and reports be filed with the Department and the surface be restored to a condition similar to the adjacent terrain.
 - (a) Amount per well:
 - (1) For wells less than 2,500 feet in depth:
 - a. 1 to 25 wells: \$2,500 per well, up to \$25,000.
 - b. 26 to 50 wells: \$25,000 plus \$2,500 per well in excess of 25, up to a total of \$40,000.
 - c. 51 to 100 wells: \$40,000 plus \$2,500 per well in excess of 50, up to a total of \$70,000.
 - d. Over 100 wells: \$70,000 plus \$2,500 per well in excess of 100, up to \$100,000.
 - (2) For wells between 2,500 feet and 6,000 feet in depth:
 - a. 1 to 25 wells: \$5,000 per well, up to \$40,000.
 - b. 26 to 50 wells: \$40,000 plus \$5,000 per well in excess of 25, up to a total of \$60,000.
 - c. 51 to 100 wells: \$60,000 plus \$5,000 per well in excess of 50, up to a total of \$100,000.
 - d. Over 100 wells: \$100,000 plus \$5,000 per well in excess of 100, up to a total of \$150,000.
 - (3) For wells over 6,000 feet in depth: Amount set by the Department based upon the anticipated cost to plug the well. Not to exceed \$250,000 per well, up to a total of \$2,000,000.
 - (4) If the operator has wells described in (1) and others in (2), instead of providing bonding to satisfy the provisions of each category, he/she may provide an amount as if all the wells were between 2,500 feet and 6,000 feet in depth.
 - (b) Amount of blanket bond: No bond required in excess of (a).
3. Acceptable alternatives to a surety bond:

- (a) Cash on deposit with Department.
- (b) Escrow account.
- (c) Irrevocable letter of credit.
- (d) Certificate of Deposit.

Spacing

1. Spacing requirements: Yes.

- (a) Density, gas wells outside of pre-1995 fields which are not being extended:
 - (1) Medina or shale, any depth: 40 acres +/- 10%.
 - (2) Onondaga reef or Oriskany, any depth: 160 acres +/- 10%.
 - (3) Fault-bounded Trenton and/or Black River hydrothermal dolomite, 4000 - 8000 feet deep: 320 acres +/- 10%.
 - (4) Fault-bounded Trenton and/or Black River hydrothermal dolomite, deeper than 8000 feet: 640 acres +/- 5%.
 - (5) All other pools, less than 4000 feet deep: 80 acres +/- 10%.
 - (6) All other pools, 4000 - 6000 feet deep: 160 acres +/- 10%.
 - (7) All other pools, 6000 - 8000 feet deep: 320 acres +/- 10%.
 - (8) All other pools, deeper than 8000 feet: 640 acres +/- 5%.
- (b) Density, all other non-exempt fields, pools or wells: 40 acres or in the center of a circle of radius 660 feet, subject to change under provision of a spacing order.
- (c) Lineal, gas wells outside of pre-1995 fields which are not being extended:
 - (1) Medina or shale, any depth: 660 feet from any unit boundary.
 - (2) Onondaga reef or Oriskany, any depth: 660 feet from any unit boundary.
 - (3) Fault-bounded Trenton and/or Black River hydrothermal dolomite, 4000 - 8000 feet deep: one-half mile from any other well in another unit in the same pool and no less than 1000 feet from any unit boundary that is not defined by a field-bounding fault and in no even less than 660 feet from any unit boundary.
 - (4) Fault-bounded Trenton and/or Black River hydrothermal dolomite, deeper than 8000 feet: one mile from any other well in another unit in the same pool and no less than 1500 feet from any unit boundary that is not defined by a field-bounding fault and in no even less than 660 feet from any unit boundary.
 - (5) All other pools, less than 4000 feet deep: 660 feet from any unit boundary.
 - (6) All other pools, 4000 - 6000 feet deep: 660 feet from any unit boundary.
 - (7) All other pools, 6000 - 8000 feet deep: 1000 feet from any unit boundary.
 - (8) All other pools, deeper than 8000 feet: 1500 feet from any unit boundary.

- (d) Lineal, all other non-exempt fields, pools, or wells: 660 feet from the boundary line of any lease or unit and 1,320 feet from any other producing well completed or being drilled to the same pool.
 - (e) Wells along the NY/PA state border have a reduced minimum setback distance of 330 feet.
 - (f) A spacing order promulgated after notice and a comment period supersedes statewide spacing provisions.
2. Exceptions: Yes.
- (a) Basis: Reasonable exceptions to protect correlative rights and prevent waste.
 - (b) Approval, gas wells outside of pre-1995 fields which are not being extended: A spacing order is required before the well permit may be issued. The Order may be issued after notice and a comment period, without a hearing, if no substantive and significant issues are raised. A hearing will be scheduled if the Department determines that a substantive and significant issue has been raised in a timely manner.
 - (c) Approval, all other non-exempt fields, pools or wells: May be granted administratively after proper notice and if no objections are filed. A public hearing is required if a substantive and significant dispute exists.
 - (c) Oil fields or pools discovered, developed and operated prior to 1/1/81 are exempt from spacing requirements.
 - (d) Underground gas storage wells, solution salt mining wells, brine disposal wells, stratigraphic wells and geothermal wells are exempt from spacing requirements.

Pooling

- 1. Authority to establish voluntary: Yes.
- 2. Authority to establish compulsory: Yes.

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes.
 - (d) Plugging and abandoning: Yes.
 - (e) Stratigraphic test well: Yes, if greater than 500 feet deep.
 - (f) Geothermal well: Yes, if greater than 500 feet deep.
 - (g) Brine disposal well: Yes, if greater than 500 feet deep.
- 2. Permit fee:
 - (a) \$100 plus \$190 for each 500 feet of depth or portion thereof.
 - (b) Seismic drilling: None. No permit required.

- (c) Recompletion: If recompletion includes deepening the well to a lower zone, a permit fee is required; in other cases no fee is required.
- (d) Plugging and abandoning: None.
- 3. Require filing report of work performed: Yes.

Vertical Deviation

- 1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? Upon Department request and/or as a condition of permit to drill an intentionally deviated well.
 - (b) Filing of survey required? Yes.

Casing and Tubing

- 1. Minimum amount required:
 - (a) Surface casing: Minimum of 75 feet below deepest fresh water formation or 75 feet into bedrock, whichever is greater.
 - (b) Production casing: Prevent migration between zones and commingling.
- 2. Minimum amount of cement required:
 - (a) Surface casing: Cement to surface.
 - (b) Production casing: To a height sufficient to prevent any movement of oil, gas or water outside of the casing. In principal or primary aquifer areas, production casing must be cemented to the surface.
 - (c) Setting time: Yes. Prudent current industry practices, according to casing and cementing guidelines issued by our office.
- 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

- 1. Completion report required: Yes.
 - (a) Time limit: Within 30 days after completion of any well.
 - (b) Where submitted: NYS Department of Environmental Conservation, Division of Mineral Resources for region where well is located.
- 2. Well logs required to be filed: Yes.
 - (a) Time limit: Within 30 days after completion of any well.

- (b) Where submitted: NYS Department of Environmental Conservation, Division of Mineral Resources for region where well is located.
 - (c) Confidential time period: Department will hold well logs and completion data confidential for six months from spud date. This period may be extended an additional six months if drilling has been continuous throughout the first six month period. An operator may request a maximum of two years confidentiality pursuant to Section 23-0313 of the New York State Oil, Gas and Solution Mining Law.
 - (d) Available for public use: Yes. Access is available after the applicable six month or two-year confidentiality period expires.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. 6NYCRR 554.6.
 - (a) Approval obtained: Prior permission is required for a multiple completion.
 4. Commingling in well bore: Yes, with permission of the Department.
 - (a) Approval obtained: By application. Approval may be granted on an administrative basis or after public hearing at the Department's discretion.

Oil Production

1. Definition of an oil well: No definition.
2. Potential tests required: If pertinent (not on stripper wells).
 - (a) Time interval: At operator's discretion.
 - (b) Witness required: No.
3. Statewide allowable:
 - (a) Pool allowable: No in most areas.
 - (b) Well allowable: No, except under regulations for the "Bass Island" trend or as provided in a spacing order.
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: 2,000 cu. ft./bbl. but can be changed by application and public hearing.
 - (a) Provision for limiting gas-oil ratio: Yes.
 - (b) Exception to limiting gas-oil ratio: Only on a pool basis. By application and public hearing.
5. Bottom-hole pressure test reports required: Only in specific instances.
 - (a) Periodical bottom-hole pressure surveys: Only in specific instances.
6. Commingling oil in common facilities: Yes, upon application to and with prior approval of the Department.
7. Measurement involving meters: No.
8. Production reports:
 - (a) By lease: Yes, annually.

- (b) By well: Yes, annually.
- (c) Time limit: Three months after close of calendar year to which report pertains. "Bass Island" well production is reported on a quarterly basis, filed within 60 days after the close of the quarter concerned.

Gas Production

1. Definition of a gas well: No definition.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: At operator's discretion.
 - (b) Witness required: No.
4. Statewide allowable:
 - (a) Pool allowable: No.
 - (b) Well allowable: No, except under regulations for the "Bass Island" or as provided in a spacing order.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Only in specific instances.
 - (a) Periodical bottom-hole pressure surveys: Only in specific instances, "Bass Island" wells are tested annually.
6. Commingling of gas in common facilities: Yes, upon application to and with prior approval of the Department.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes [if available – delete text in brackets].
 - (c) Time limit: Three months after close of calendar year to which report pertains. "Bass Island" well production is reported on a quarterly basis, filed within 60 days after the close of the quarter concerned.

Water Disposal

1. State Agencies that control disposal of produced salt water: Department of Environmental Conservation, Division of Water, Division of Environmental Permits, and Division of Mineral Resources.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 60%.
 - (b) Royalty interest: 60%.

Taxation

There is no state severance tax levied on oil and gas in New York. However, oil and gas properties are taxed at the local level and production is a factor in determining the assessed value of the property. The NYS Office of Real Property Tax Services sets the unit of production based on data supplied by operators. For performing that service the state charges operators an annual fee based on production.

Land Leasing Information

1. Leasing Method: Sealed bids. Negotiated lease option for small tracts.
2. Notice Method: Published in the official newspaper or newspapers or otherwise in a newspaper designated for such purposes.
3. Bid Guarantee \$ (per acre): \$500.00 for each nominated area + \$1 per acre, if the tract is 125 acres or less, then min. \$5 per acre. Minimum bid is \$15.00 per acre.
4. Qualification of the bidder: Any person in compliance with the Law and Regulations.
5. State Statutes: New York State Environmental Conservation Law § 23-1101
6. Maximum acres: No established maximum.
7. Contact: Charles Gilchrist
Phone: (518) 402-8056
E-mail: crgilchr@gw.dec.state.ny.us
8. Leasing Method: Sealed bids. Negotiated noncompetitive lease option for split minerals interests and small tracts necessary to consolidate production units.
9. Notice Method: Published in the official newspaper or newspapers or otherwise in a newspaper designated for such purposes.
10. Bid Guarantee \$ (per acre): \$500.00 for each nominated area + \$1 per acre, if the tract is 125 acres or less, then min. \$5 per acre. Minimum bid is \$15.00 per acre.
11. Qualification of the bidder: Any person.
12. State Statutes: New York State Environmental Conservation Law § 23-1101
13. Maximum acres: No established maximum.
14. Contact: Charles Gilchrist
Phone: (518) 402-8056
E-mail: crgilchr@gw.dec.state.ny.us

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environmental Conservation (DEC), Division of Solid & Hazardous Materials, 625 Broadway, 9th Floor, Albany, NY 12233-7255. Phone: (518) 402-8579, Fax: (518) 402-8646
2. Relevant Statute/Regulations: 6 NYCRR Part 380 - Rules and Regulations for Prevention and Control of Environmental Pollution by Radioactive Materials.

3. Scope: Discharge and disposal of radioactive materials; applies to NORM if:
 - (a) Processed and concentrated and
 - (b) Subject to radioactive materials licensing.
4. Licensing: Department of Environmental Conservation is not a radioactive materials licensing agency. The licensing agencies in New York State (State Health Department, State Labor Department, New York City Health Department) have not required licenses for NORM from oil and gas production.
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land: DEC has cleanup guidelines for soils contaminated with radioactive materials (DSHM, TAGM 4003); DEC does not regulate sale of NORM-contaminated land.
10. Projected Volume of stored NORM in the State: DEC has not made this estimate.
11. Contact: Barbara Youngberg.

NEW MEXICO

Administration

1. State agency: New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division, 1220 S. Saint Francis Drive, Santa Fe, NM 87505. Phone (505) 476-3440, FAX (505) 476-3462, Web site <http://emnrd.state.nm.us/ocd>.
2. Docketing procedure: Upon receipt of a proper application, the Division will hold a public hearing at such time and place as it prescribes, not less than 30 days after filing of the application. The Division Director may appoint members of the staff as Examiners to conduct public hearings.
 - (a) Emergency orders and rules: Action by the Division without a hearing. Orders issued without hearing remain in force no longer than 15 days. Emergency hearings may be called with shortened notice. Rule 1225.
 - (b) Notice: Dependent on type of proceeding. Minimum of 20 days, except in emergency. By applicant. Rule 1210.

Financial Assurance

1. Plugging financial assurance required: Yes. NMSA 1978, § 70-2-14. Rule 101. Surety, cash bond, irrevocable letter of credit, or well-specific plugging insurance policy.
2. Conditions of financial assurance: That the well be plugged and abandoned, and the well site remediated, in compliance with Division rules.
 - (a) Amount per well: \$5,000 plus \$1.00 per foot of depth in major producing counties; \$10,000 plus \$1.00 per foot of depth elsewhere.
 - (b) Amount of blanket bond: \$50,000.
Single well bond may be required in addition to blanket bond for wells inactive for more than 2 years. NMSA 1978 § 70-2-14; Rule 101.
3. Waste management facilities: Rule 53.
 - (a) Commercial facilities: Greater of (i) \$25,000 or (ii) closure cost estimate (Note: Existing facilities capped at \$250,000 per facility, except in event of a major modification).
 - (b) Centralized facilities: \$25,000 per facility or \$50,000 statewide blanket bond.

Spacing

1. Spacing requirements: Yes. Rule 104 or special pool rules, unless otherwise specified by special pool rules.
 - (a) Density: 40 acres for an oil well. SE gas: 160 acres to Top Wolfcamp and 320 acres (with 2 wells allowed per 320-acre unit) Wolfcamp and older. NW gas: 160 acres to base of the Dakota and 640 acres below the Dakota. All other areas 160- acre gas.
 - (b) Lineal: Oil: 330 feet from spacing unit boundary. Gas: 660 feet from spacing unit boundary 10 feet from any quarter/quarter line in a 160 acre or 320 acre unit; 1200 feet from unit boundary, 130 feet from any quarter line and 10 feet from any quarter/quarter line in a 640-acre unit.
2. Exceptions to well location requirements: Yes.
 - (a) Basis: When necessary to prevent waste or protect correlative rights. Rule 104F. Water floods and pressure maintenance. Rule 701.

- (b) Approval: District Offices for waterfloods and pressure maintenance; Administrative for other reasons. Any application may be set for hearing.
3. Exceptions to acreage/density requirements: Yes.
 - (a) Basis: Exceptions to acreage requirements may be granted to conform to U.S. Public land surveys or if proposed unit meets certain configuration requirements. Exception to number of wells in a unit may be granted at discretion of the Director. Rule 104.D.
 - (b) Approval: Exceptions to acreage requirements necessary to conform to public land surveys may be approved by District Office for small variances, or administratively for longer variances. Other exceptions may be approved administratively. Exceptions to numbers of wells per unit require hearing. Any application may be set for hearing. Rule 104.D.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes for separate tracts or undivided interests within a spacing unit. NMSA 1978, § 70-2-17 and 70-2-18. Rule 35.

Drilling Permit

1. Require permits for: All lands.
 - (a) Drilling a producing or service well: Rules 102 and 1101. Permitting on federal lands coordinated with BLM. Rule 1128.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes. Rule 1102. Permitting on federal lands coordinated with BLM. Rule 1128.
 - (d) Plugging and abandoning: Yes. Rule 1103.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes. Rule 1103.

Vertical Deviation

1. Regulation requirement: Yes. Rule 111.
 - (a) When a wellbore deviates more than five degrees in any 500-foot interval and where there exists the possibility that such excessive deviated wellbore exceeds the distance to the nearest outer boundary line of that well's spacing unit.
 - (b) Filing of survey required: Yes.

Casing and Tubing

1. Minimum amount required: Rule 107.
 - (a) Surface casing: Through all usable fresh water zones.
 - (b) Production casing: To sufficient depth to ensure protection of all oil and gas bearing strata, including the one(s) being produced.
 - (c) Specific requirements in certain areas.
2. Minimum amount of cement required: Rule 107 B-I.
 - (a) Surface casing: Yes, circulate to surface.
 - (b) Production casing: Yes, to ensure protection of all oil and gas bearing strata encountered in the well, including the one(s) being produced.
 - (c) Setting time: 18 hours in some areas; in other areas where cement has reached a compressive strength of 500 psi – see rule 107.G.
3. Tubing requirements:
 - (a) Flowing oil wells: Yes, if casing larger than 2 7/8 inches.
 - (b) Gas wells: Yes, if casing larger than 3 1/2 inches.

All flowing oil wells and gas wells: Set tubing as near the bottom as practical with tubing perforations not more than 250 feet above top of pay.

Completion

1. Completion report required: Yes. Rules 117 and 1105.
 - (a) Time limit: Within 20 days following completion.
 - (b) Where submitted: Appropriate district office.
2. Well logs required to be filed: Yes. Rule 1105.
 - (a) Time limit: 20 days.
 - (b) Where submitted: District office.
 - (c) Confidential time period: Yes. 90 days if requested in writing.
 - (d) Available for public use: Yes.
 - (e) Log catalog information: No, but all logs are currently available on the Division's Internet Web site. (Commercial microfilm available; IHS Energy Group and MJ Systems in Denver. Also, New Mexico Bureau of Mines, New Mexico Institute of Mining and Technology, Socorro, New Mexico have duplicate copies of most logs filed with the Division).
3. Multiple completion regulation: Rule 112-A.

- (a) Approval obtained: By District approval of Form C-101 and/or C-103.
4. Commingling in well bore: Rule 303-C.
- (a) Approval obtained: Administrative in most cases; appropriate cases set for hearing. Ability to establish reference cases to simplify processes. Rule 303-C.

Oil Production

1. Definition of an oil well: Any well that produces less than 100,000 cu. ft. of gas per barrel of oil from a pool classified as an oil pool. Rules 7.G(5) and 7.0(4). In an associated oil and gas pool it is a well that produces less than 30,000 cu. ft. per barrel. Rules of the "General Rules and Regulation for the Associated Oil and Gas Pacts of NW and SE New Mexico" as promulgated by R-5353, as amended.
2. Potential tests required: No.
 - (a) Time interval: None specified. Not applicable.
 - (b) Witness required: No. Not applicable.
3. Statewide allowable: Yes. Rule 505.
 - (a) Pool allowable: Pool rules may establish well allowables at levels different than statewide allowables.
 - (b) Well allowable: Yes. From periodic gas-oil ratio tests.
 - (c) Exempt allowable: Yes. Discovery allowables.
4. Maximum gas-oil ratio: 2,000:1.
 - (a) Provision for limiting gas-oil ratio. Yes. Top pool allowable times limiting GOR for that pool.
 - (b) Exception to limiting gas-oil ratio. Yes. After notice and hearing, pool GOR could be increased.
5. Bottom-hole pressure test reports required: In some pools.
 - (a) Periodic bottom-hole pressure surveys: In some pools.
6. Commingling oil in common facilities: Yes. Rules 303.B. Administrative approval provided that production is accurately measured prior to commingling. Application may be set for hearing if there is diverse ownership and an owner objects, or otherwise at the direction of the Director.
7. Measurement involving meters: In Automatic Custody Transfer and where there is diversified ownership in commingling.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Rule 1115.
 - (c) Time limit: 15th day of second month following the month of production.

Gas Production

1. Definition of a gas well: Any well that produces from a pool classified as a "gas pool" or produces with a GOR of 100,000 cu. ft. per barrel or more. In associated pool, it is a well which produces with a GOR of 30,000 cu. ft. per barrel or more.
2. Pressure base 15.025 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: 30 days after Christmas tree - unconnected wells. 60 days after connection to gas transportation system.
 - (b) Witness required: No.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes. Set twice yearly for prorated pools. Rule 605, Order No. R-8170-H, as amended.
 - (b) Well allowable: Yes. Proration schedules for prorated pools published in April and October allocating pool allowable to individual wells; schedules currently suspended.
 - (c) Exempt allowable: Hardship wells may be authorized (after notice and hearing) to produce at a minimum rate. Minimum allowables for prorated pools may also be established on a pool basis after notice and hearing.
5. Bottom-hole pressure test reports required: No.
 - (a) Periodic bottom-hole pressure surveys: No.
 - (b) Surface Pressures: No.
6. Commingling of gas in common facilities: Yes.
7. Measurement involving meters: All gas must be accounted for by metering or other method approved by the Division. Rule 403.A.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Rule 1115.
 - (c) Time limit: 15th day of second month following the month of production. Note: Gas transporter must file a report of gas taken by the 15th day of the second month following the month the gas was taken.

Water Disposal

1. State agencies that control disposal of produced salt water and all related oil field waste: New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division. Rules 50, 701-712.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: For secondary recovery and pressure maintenance only. NMSA 1978, §70-7-1 through 70-7-21.
2. Minimum percentage for ratification of the order providing for unit operations:
 - (a) Working interest: 75%.

- (b) Royalty interest: 75%.

Taxation

Gas severance tax = 3.75%
 Gas ad valorem production tax = varies due to county derived rate
 Gas school tax = 4.0%
 Gas conservation tax = .19%
 Gas ad valorem equipment tax = county derived rate
 Total gas tax burden = approximately 9.14%

Oil severance tax = 3.75%
 Oil ad valorem tax = varies due to county derived rate
 Oil school tax = 3.15%
 Oil conservation tax = .19%
 Oil ad valorem equipment tax = county derived rate
 Total oil tax burden = approximately 8.29%

1. Tax collection agency: Taxation and Revenue Department, Audit and Compliance Division, Oil and Gas Bureau, P.O. Box 2308, Santa Fe, NM 87504-2308.
2. How tax is computed:
 - (a) school tax: 4% (gas) 3.15% (oil)
 - (b) severance tax: 3.75% (oil, gas)
 - (c) conservation tax: .19% (oil, gas)
 - (d) ad valorem production tax: variable due to county derived rate
 - (e) natural gas processors tax: effective 1/1/99, tax is imposed on the amount of MMBTUs of natural gas delivered to a processor at a processing facility. Tax rate is derived on a state fiscal year basis and is calculated through a statutory-based method.
 - (f) ad valorem equipment tax: derived by county and is based from values reported by taxpayers from previous calendar year and is assessed against the operator of record of the property.
3. Due dates:
 - (a) school, severance, conservation, ad valorem production: 55 days after month of sale.
 - (b) natural gas processors tax: 25 days after the month of receipt of gas by processor.
 - (c) ad valorem equipment tax: assessed to operator in October (based on previous year's taxable value) and due November 30.
4. Adjustments:
 - (a) Adjustments recognized for school, severance, conservation, and ad valorem production tax include:
 - (1) royalties paid or due to the United States, the State of New Mexico or any Indian tribe, Indian pueblo or Indian ward of the United States.
 - (2) actual costs associated with transportation and processing.
 - (b) Adjustments recognized for the natural gas processors tax include MMBTU's of natural gas that are:

- (1) used for natural gas processing by the processor.
 - (2) returned to the lease from which it is produced.
 - (3) legally flared by the processor.
 - (4) lost as a result of processing plant malfunction or other incidences of force majeure.
- 5. Tax incentives:
 - (a) well-workover projects - 2.45% severance tax on the excess of the production projection for both oil and natural gas.
 - (b) production restoration projects - zero severance tax rate for ten years on natural gas and oil.
 - (c) Indian intergovernmental tax credit - 75% of the lesser of:
 - (1) the aggregate amount of severance-type taxes imposed by the Indian nation or
 - (2) the aggregate amount of severance-type taxes imposed by the State.
 - (d) qualified enhanced oil recovery projects - 1.875% severance tax rate on oil
 - (e) Stripper well properties - incentive rates apply both to severance tax and school tax.

REPEALED EFFECTIVE 12-31-05.
 Note: All incentive programs may be sunsetted based upon prices currently recognized for oil.
- 6. Statutory citation:
 - (a) Severance tax: NMSA Section 7-29-1 et seq.
 - (b) Conservation tax: NMSA Section 7-30-1 et seq.
 - (c) Emergency school tax: NMSA Section 7-31-1 et seq.
 - (d) Natural gas processors tax: NMSA Section 7-33-1 et seq.
 - (e) Ad valorem production tax: NMSA Section 7-32-1 et seq.
 - (f) Production equipment ad valorem tax: NMSA Section 7-34-1 et seq.

Land Leasing Information

- 1. Leasing Method: A monthly two part competitive sale, with the first part of the sale being sealed bids that have been received by the Accounting Division of the State Land Office prior to 9:30 am of sale day. Part two is additional tracts by oral auction as listed in the sale notice.
- 2. Notice Method: A lease sale notice bulletin is mailed approximately three weeks prior to each monthly sale to all industry operators that have been placed at their request on the mailing list. An un-official copy of the sale notice is available through baervan@nmt.edu.
- 3. Minimum bidding: Called a "minimum bonus bid" and set at \$10,000.00 for a standard 640-acre section (a 320 acre tract would be \$5,000.00), in the restricted (producing) areas. Minimum bonus in the non-restricted (frontier) areas is set at \$1.00 per acre.
- 4. Qualification of the bidder: No pre-qualifying of bidders except for the assignment of a computer identification number called an OGRID Number.

5. State Statutes: NMSA 1978, § 19-7-1, NMSA 1978, § 19-10-17, NMSA 1978, § 19-10-70.
6. Minimum acres: Tracts offered in both restricted and non-restricted areas are limited to a maximum of one full section (approximately 640 acres).
7. Contact person: Joe Mraz
Phone: (505) 827-5774
E-mail: jmraz@slo.state.nm.us
Naturally Occurring Radioactive Material (NORM)
1. Regulating Agency: Radiation Licensing and Registration Section, New Mexico Environmental Department (NMED).
Oil Conservation Division, New Mexico Energy, Minerals and Natural Resources Department (OCD).
2. Relevant Statute/Regulation:

NMED: Naturally Occurring Radioactive Materials in the Oil and Gas Industry (Subpart 14)

Scope: Apply to persons who engage in extraction, transfer, storage or disposal of NORM. Apply to sludges and scale and storage and cleaning of tubulars and equipment.

OCD: Disposal of Regulated Naturally Occurring Radioactive Material (Rule 714)

Scope: Establish procedures for the disposal of regulated NORM.
3. Licensing: General and specific
4. Cleaning Equipment: Allowed under worker protection plans and limits of exposures in the regulations.
5. Disposal of Waste: Not regulated if 30 Pico curies per gram or less of Ra226 above background or 150 Pico curies per gram or less of any other NORM radio nucleide about background. Disposal in commercial-centralized facilities, plugged and abandoned wells, Class I and II injection wells permitted with permit. Disposal of regulated NORM in non-retrievable flow lines and pipelines permitted so long as the accumulation resulted from normal operations.
6. Subsequent Use of Equipment: Facilities and equipment containing regulated NORM shall not be released for unrestricted use.
7. Storage of Materials: NORM can be stored up to one year under general licenses, longer under specific licenses or an extension granted by NMED.
8. Projected Volume of Stored NORM in the State: Unknown
9. Respondent: Jerrie Moore, NMED; Roger Anderson, OCD

NORTH CAROLINA

Administration

1. State agency: Department of Environment and Natural Resources, Division of Land Resources, 1612 Mail Service Center, Raleigh, NC 27699-1612. Phone (919) 733-3833.
2. Docketing procedure: The structure and operating procedure of our regulatory agency is by design both simple and flexible. However, should oil and gas production become a reality, the agency would be restructured as is deemed necessary.
 - (a) Emergency orders:
 - (b) Notice:

Bond

1. Compliance bond required: Yes, Rule .0004.
2. Conditions of bond: The bond is conditioned that "any well opened or caused to be opened by an operator shall, upon abandonment, be plugged in accordance with the rules and regulations of said department."
 - (a) Amount per well: \$5,000.
 - (b) Amount of blanket bond: None.

Spacing

1. Spacing requirements: No, "upon completion of a discovery well within a new pool or reservoir, the Department shall consider and adopt, after public hearing, temporary well spacing and drilling units." As additional reservoir information becomes available, permanent rules and regulations will be adopted including: minimum drilling unit; method of determining pool allowable; method of allocating total allowable; minimum distances from separate leasehold or pooled unit and between wells to the same reservoir.
2. Exceptions: Yes, Rule .0006 (c).
 - (a) Basis: The basis for such exceptions is topographic conditions, geologic conditions and other pertinent conditions.
 - (b) Approval: Exceptions are granted if it is shown that more hydrocarbons can be recovered under the leasehold by such exceptions.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes.
 - (b) Seismic drilling? No.

- (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
2. Permit fee:
 - (a) Drilling: \$50.
 - (b) Seismic drilling:
 - (c) Recompletion: \$15.
 - (d) Plugging and abandoning? \$15.
 3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? A directional survey is necessary for each well subsequently produced for oil or gas. "All wells shall be drilled in such a manner that vertical deviation of the hole does not exceed 3 degrees between the bottom of the hole and the top of the hole, and shall not deviate in such a manner as to cross property or unit lines."
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required: Yes, Rule .0007.
 - (a) Surface casing: Yes, "The surface casing shall extend from the surface to the first impervious layer not less than 50' below all fresh water strata."
 - (b) Production casing: No.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes, "the casing shall be so centralized and the annulus of such size that cement can be injected to fill the entire space behind casing back to the surface."
 - (b) Production casing: Yes, "it shall be cemented with sufficient volume to fill the annular space back of the casing to a point at least 500' above casing shoe and at least 50' above the producible reservoir nearest to the surface."
 - (c) Setting time: Yes, "if drilling is to continue following cementing operations, the cement shall set a minimum of 24 hours before the plug is drilled."
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes, Rule .0008.

- (a) Time limit: A completion report must be filed within 30 days after completion of a producing well.
 - (b) Where submitted: The report must be submitted to the Department on a form prescribed by the Department.
2. Well logs required to be filed: Yes.
- (a) Time limit: The filing of well logs is required within 30 days of termination of drilling operations.
 - (b) Where submitted: The well logs are held in permanent files within the Department at the office of the State Geological Survey.
 - (c) Confidential time period: Yes, "upon request of the operator, the Department will hold such information in confidence for a period of 1 year. Extensions of this confidentiality shall be allowed up to a maximum of 1 year at the discretion of the Department."
 - (d) Available for public use: Yes.
 - (e) Log catalog available: A compilation of all data available on the exploratory oil wells drilled through 1976 (Information Circular #22) can be purchased from the State Geological Survey for \$3.00.
3. Multiple completion regulation: No, there are no such regulations at the present time; however, the Department does have the authority to adopt such regulations.
- (a) Approval obtained:
4. Commingling in well bore: No, there are no such regulations at the present time; however, the Department does have the authority to adopt such regulations.
- (a) Approval obtained:

Oil Production

NOTE: Because there has been no oil or gas production within the state, the rules and regulations concerned with production are of a general nature. However, should production become a reality, these general areas will be addressed and specific regulation will be adopted where necessary.

- 1. Definition of an oil well: An oil well is any well capable of producing crude petroleum oil and all other hydrocarbons regardless of gravity, which are produced at the well in liquid form.
- 2. Potential tests required: No.
 - (a) Time interval:
 - (b) Witness required:
- 3. Statewide allowable: The Department has the authority to limit production, upon public hearing, but the specifics have not been addressed in the present set of regulations.
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio:
 - (b) Exception to limiting gas-oil ratio:
- 5. Bottom-hole pressure test reports required: Yes.

- (a) Periodical bottom-hole pressure surveys: Yes.
- 6. Commingling oil in common facilities: No.
- 7. Measurement involving meters: No.
- 8. Production reports: No.
 - (a) By lease:
 - (b) By well:
 - (c) Time limit:

Gas Production

- 1. Definition of a gas well: A gas well is any well capable of producing natural gas including casinghead gas and all other fluid hydrocarbons not defined as oil.
- 2. Pressure base None psia @ ____ degrees F.
- 3. Initial potential tests: No.
 - (a) Time interval:
 - (b) Witness required:
- 4. Statewide allowable: The Department has the authority to limit production, upon public hearing, but the specifics have not been addressed in the present set of regulations.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Yes.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: No.
- 8. Production reports: No.
 - (a) By lease:
 - (b) By well:
 - (c) Time limit:

Water Disposal

- 1. State agencies that control disposal of produced salt water: The Division of Water Quality within the Department is responsible for the control of water disposal.

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:

(a) Working interest:

(b) Royalty interest:

Taxation

There is no state tax levied on oil and gas production in North Carolina.

Land Leasing Information

No Regulations at this time.

Naturally Occurring Radioactive Materials (NORM)

1. Regulating Agency: Division of Radiation Protection, 3825 Barrett Dr., Raleigh, NC 27609-7221. Phone: (919) 571-4141, Fax: (919) 571-4148.
2. Relevant Statute/Regulations: G.S. 104E and 15A NCAC Chapter 11.
3. Scope: All aspects of radiation protection.
4. Licensing: Uses and sources of radioactive material and particle accelerators.
5. Cleaning Equipment: U.S. Department of Transportation contamination limits.
6. Disposal of Waste: LLRW.
7. Subsequent Use of Equipment: Per case basis.
8. Subsequent Use of Materials: Per case basis.
9. Release/Sale of NORM-Contaminated Land: Per case basis.
10. Projected Volume of stored NORM in the State: Unknown; large PO4 plant.
11. Respondent: Richard Fry.

NORTH DAKOTA

Administration

1. State agency: North Dakota Industrial Commission, Dept. of Mineral Resources, Oil and Gas Division, 600 East Boulevard Ave., Dept. 405, Bismarck, ND 58505-0840. Phone (701) 328-8020. Web site: www.oilgas.nd.gov
2. Docketing procedure: North Dakota Century Code (NDCC) Section 38-08-11. Upon application or motion of the Commission, a hearing before the Commission is set at which time as will permit 15 days notice.
 - (a) Emergency orders: Emergency orders may be issued by the Commission, and shall remain in force until a proper order can be issued, after notice and hearing, but not more than 40 days.
 - (b) Notice: Fifteen days notice is required for all hearings except hearings involving a complaint which requires 45 days notice. The Commission is responsible for giving notice either by personal service or by one publication in a newspaper of general circulation in the State Capitol and in a newspaper of general circulation in the county where the affected property is situated.

Bond

1. Compliance bond required: North Dakota Administrative Code (NDAC) Section 43-02-03-15. Surety or Cash Bond.
2. Conditions of bond: Full compliance with the statutes, rules and regulations of the Commission.
 - (a) Amount per well: \$20,000, except that wells drilled to a total depth of 2,000 feet or less may be bonded in a lesser amount upon administrative approval.
 - (b) Amount of blanket bond: Ten wells or less, \$50,000. The \$50,000 blanket bond is limited in its coverage to contain no more than three unplugged dry holes, plugged wells with site not reclaimed, and/or abandoned wells. More than 10 wells, \$100,000. The \$100,000 blanket bond is limited in its coverage to contain no more than six unplugged dry holes, plugged wells with site not reclaimed, and/or abandoned wells.
 - (c) Commercial disposal wells are not allowed on blanket bonds. Each such well is bonded at the \$20,000 single well rate.
 - (d) Secondary recovery projects require a unit bond in the appropriate amount as listed in paragraphs (a) and (b) above.

Spacing

1. Spacing requirements: NDAC Section 43-02-03-18. Within 30 days after oil or gas is discovered in a pool not covered by an order of the Commission, a spacing hearing is docketed. In the absence of an order of the Commission, the general spacing regulations are as follows:
 - (a) Density (vertical or directional oil well): 40 acres for vertical or directional oil wells drilled and projected no deeper than the Mission Canyon Formation; 160 acres for vertical or directional oil wells drilled or projected deeper than the Mission Canyon Formation; 160 acres for gas wells.
 - (b) Lineal (vertical or directional oil well): Not less than 500 feet from the 40-acre drilling unit boundary for vertical or directional oil wells no deeper than the Mission Canyon Formation and not less than 660 feet from the 160-acre drilling unit boundary for vertical or directional oil wells deeper than the Mission Canyon Formation. Not less than 500 feet to any 160-acre drilling unit boundary for gas wells projected no deeper than the Mission Canyon Formation and not less 660 feet to any 160-acre drilling unit boundary for gas wells projected deeper than the Mission Canyon Formation.

- (c) Density (horizontal oil wells): 320 and 640 acres for horizontal oil wells.
 - (d) Lineal (horizontal oil wells): Not less than 500 feet from the 320 or 640-acre drilling unit boundary for horizontal oil wells.
 - (e) Density (gas wells): 160 acres for gas wells.
 - (f) Lineal (gas wells): Not less than 500 feet from the 160-acre drilling unit boundary for gas wells drilled or projected no deeper than the Mission Canyon Formation; not less than 660 feet from the 160-acre drilling unit boundary for gas wells drilled or projected deeper than the Mission Canyon Formation.
2. Exceptions: Yes—NDAC Section 43-02-03-18.1.
- (a) Basis: Surface conditions require or well at proper location would not produce in paying quantities, also, in order to protect correlative rights, prevent waste, or effect greater ultimate recovery of oil and gas.
 - (b) Approval: By order of the Commission after notice and hearing.

Pooling

- 1. Authority to establish voluntary: Yes—NDCC Section 38-08-08 and NDAC Section 43-02-03-16.3.
- 2. Authority to establish compulsory: Yes—Section 38-08-08 and NDAC Section 43-02-03-16.3.

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well? Yes—NDAC Section 43-02-03-16.
 - (b) Seismic drilling? Exploration permit required—NDAC Section 43-02-12-04.
 - (c) Recompletion? Yes—NDAC Section 43-02-03-16.
 - (d) Plugging and abandoning? Yes—NDAC Section 43-02-03-33. (Includes site reclamation).
 - (e) Saltwater disposal? Yes—NDAC Section 43-02-05-04.
 - (f) Enhanced recovery well? Yes—NDAC Section 43-02-05-04.
- 2. Permit fee:
 - (a) Drilling: \$100.
 - (b) Seismic Exploration: \$100. Regulated by the Industrial Commission, Oil and Gas Division.
 - (c) Recompletion: \$50.
 - (d) Plugging and abandoning: No.
 - (e) Saltwater disposal well to be drilled: \$100.
 - (f) Injection well to be drilled: \$100.
- 3. Require filing report of work performed: Yes—NDAC Section 43-02-03-31.

Vertical Deviation

- 1. Regulation requirement: Yes—NDAC Section 43-02-03-25.

- (a) When is directional survey necessary? On all directionally and horizontally drilled holes. On any well when the location of the bottom of the hole is in doubt.
- (b) Filing of survey required? Yes, the survey contractor must file a certified copy.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, 50' below Fox Hills Fm—NDAC Section 43-02-03-21.
 - (b) Production casing: Yes—Per field order. Must be set and cemented at a point no higher than the top of the producing formation.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes. Must cement to surface.
 - (b) Production casing: Yes.
 - (c) Setting time: Yes. 12 hours surface casing. Production casing until tail cement reaches a compressive strength of 500 psi.
3. Tubing requirements:
 - (a) Oil wells: Yes—NDAC Section 43-02-03-21. All wells must be tubed with tubing set as near bottom as practicable. Flowing wells to be equipped with packer. Can request waiver.
 - (b) Gas wells: Yes—NDAC Section 43-02-03-21. All wells must be tubed with tubing and packer set as near the bottom as practicable.
 - (c) Saltwater disposal wells: Yes—NDAC Section 43-02-05-06. All wells must be tubed with tubing and packer set immediately above the injection zone.
 - (d) Enhanced recovery: Yes—NDAC Section 43-02-05-06. All wells must be tubed with tubing and packer set immediately above the injection zone.

Completion

1. Completion report required: Yes—NDAC Section 43-02-03-31.
 - (a) Time limit: 30 days except completion reports for discovery wells must be submitted immediately.
 - (b) Where submitted: North Dakota Industrial Commission, Oil and Gas Division.
2. Well logs required to be filed: Yes—NDAC Section 43-02-03-31.
 - (a) Time limit: 30 days.
 - (b) Where submitted: North Dakota Industrial Commission, Oil and Gas Division.
 - (c) Confidential time period: If requested. 6 months.
 - (d) Available for public use: Yes.

- (e) Log catalog available: Yes.
- 3. Multiple completion regulation: Yes—NDAC Section 43-02-03-26.
 - (a) Approval obtained: Multiple completions can be approved by the Director.
- 4. Commingling in well bore: Yes—NDAC Section 43-02-03-42.
 - (a) Approval obtained: Order of the Commission or the Director, after notice and hearing.

Oil Production

- 1. Definition of an oil well: NDAC Section 43-02-03-01. Any well capable of producing oil and which is not defined as a gas well.
- 2. Potential tests required: Yes.
 - (a) Time interval: First 24 hours after completion. Requested info under Completion Report—Form 6.
 - (b) Witness required: No.
- 3. Statewide allowable: Yes—NDAC Section 43-02-03-63. Applicable only if production exceeds demand. Market demand proration. A normal 40-acre proration unit allowable is set by Commission and is uniform for all normal units within all pools to depths of 5,000 feet. Allowables increase with depth below 5,000 feet.
 - (a) Pool allowable: May be set by rule or order of the Commission, after notice and hearing, to prevent waste or to protect correlative rights.
 - (b) Well allowable: May be set by rule or order of the Commission, after notice and hearing, to prevent waste or to protect correlative rights.
 - (c) Exempt allowable: Yes. Under market demand proration, the first 4 wells in a pool may produce 200 b/d. Exemption continues for 18 months or until 5th well is completed.
- 4. Maximum gas-oil ratio: 2,000/1. NDAC Section 43-02-03-39.
 - (a) Provision for limiting gas-oil ratio: Yes. Commission may, after notice and hearing, restrict production from well if deemed necessary to conserve reservoir energy.
 - (b) Exception to limiting gas-oil ratio: Yes. Commission may, after notice and hearing, waive restrictions.
- 5. Bottom-hole pressure test reports required: Yes—NDAC Section 43-02-03-41.
 - (a) Periodical bottom-hole pressure surveys: Yes. Per field order.
- 6. Commingling oil in common facilities: Yes—NDAC Section 43-02-03-48.1. Provided the volume is determined in barrels of oil through meter measurements or tank measurements, and the production from each well can be accurately determined at reasonable intervals. Commingling of production in a central production facility from two or more wells having diverse ownership that is not metered prior to commingling may only be approved by the Commission after notice and hearing.
- 7. Measurement involving meters: Yes—NDAC Section 43-02-03-48.2. Custody transfer meters and allocation meters allowed with calibration requirements.
- 8. Production reports: Yes—NDAC Section 43-02-03-52.
 - (a) By lease: No.
 - (b) By well: Yes.

- (c) Time limit: First day of second month following production.

Gas Production

1. Definition of a gas well: NDAC Section 43-02-03-01. A well producing gas or natural gas from a common source of gas supply as determined by the Commission.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: First 24 hours after completion.
 - (b) Witness required: No.
4. Statewide allowable: No—NDAC Section 43-02-03-69.
 - (a) Pool allowable: Yes. May be set after notice and hearing on the basis of purchaser nominations.
 - (b) Well allowable: Only by order of the Commission after notice and hearing.
 - (c) Exempt allowable: Only by order of the Commission after notice and hearing.
5. Bottom-hole pressure test reports required. Yes—NDAC Section 43-02-03-41.
 - (a) Periodical bottom-hole surveys: Yes, determined by order of the Commission.
6. Commingling of gas in common facilities. NDAC Section 43-02-03-48.1. Only by order of the Commission after notice and hearing.
7. Measurement involving meters: Yes—NDAC Section 43-02-03-14.2. Sales meters and allocation meters allowed with calibration requirements.
8. Production reports: NDAC Section 43-02-03-52.1.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Fifth day of second month following production.

Water Disposal

1. NDAC Section 43-02-05-04. State agencies that control disposal of produced salt water: The North Dakota Industrial Commission, Oil and Gas Division, regulates the subsurface disposal of fluids which are brought to the surface in connection with oil and gas production.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes—NDCC Section 38-08-08.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization: NDCC Section 38-08-09.5.
 - (a) Working interest: 60%.
 - (b) Royalty interest: 60%.

Taxation

Gas gross production tax = \$0.04 per MCF adjusted annually per consumer price index

Gas ad valorem tax = 0.0%

Total gas tax burden = \$0.04 per MCF adjusted annually per consumer price index Gas tax rate for fiscal year 2008 (July 1, 2007 through June 30, 2008) is \$0.1428 per MCF.

Oil gross production tax = 5.0%

Oil ad valorem tax = 0.0%

Oil extraction tax = 6.5%, 4.0%, 2%, or 0.0%

Total oil tax burden = 11.5%, 9.0%, 7%, or 5.0%

1. Tax collecting agency: State Tax Commissioner, State Capitol, Bismarck, ND 58505-0599.
2. How tax is computed: Oil is taxed at 5.0% gross production plus oil extraction levy of either 0.0%, 4.0% or 6.5%. Gas is taxed at \$0.04 per MCF as adjusted annually per consumer price index.
3. Exemptions or exceptions:

Shallow gas produced during the first twenty-four months of production beginning with the date of first sales from a well completed or recompleted in a shallow gas zone is exempt from gross production tax.

Stripper oil is exempt from the oil extraction tax.

There is a fifteen-month exemption from the oil extraction tax for new wells drilled and completed as vertical wells, a twenty four-month exemption for new wells drilled and completed as horizontal wells, and a five-year exemption for new wells drilled and completed within the boundary of an Indian reservation. After the exempt period, the extraction tax rate is 4.0% for all new wells.

Incremental production from a qualifying secondary recovery project is exempt from the extraction tax for five years beginning on the date incremental production begins. Incremental production from a qualifying tertiary recovery project is exempted from the extraction tax for ten years beginning on the date incremental production begins. Thereafter the oil extraction tax rate is 4.0%.

Oil produced from a qualifying two-year inactive well is exempted from the extraction tax for a period of ten years; thereafter the extraction tax rate is 4.0%.

Oil produced from a qualifying horizontal re-entry well is exempted from the extraction tax for a period of nine months after completion; thereafter the extraction tax rate is 4.0%.

Oil produced from a qualifying work-over project is exempt from the extraction tax for a period of twelve months, beginning the third month after the project is completed; thereafter the extraction tax rate is 4.0%.

If a sustained rise in the average price of a barrel of crude oil makes the trigger provision effective, many exemptions and rate reductions become void. If this is followed by a sustained drop in the average price of a barrel of crude that makes the trigger provision ineffective, the exemptions and rate reductions are reinstated. Trigger price for calendar year 2007 is \$42.89 per barrel.

4. Name of Tax: Gross Production and Oil Extraction.
5. Statutory citation: North Dakota Century Code Chapter 57-51 (Gross Production Tax) and North Dakota Century Code Chapter 57-51.1 (Oil Extraction Tax).

Mineral Leasing Information

1. Leasing Method: Oral bidding; but could be done with sealed bids. Sales are generally held the first Tuesday of February, May, August and November.
2. Notice of Method: Sale list that is sent out to approximately 300 companies and individuals that have asked to receive the list. Also, the sale is advertised in various county newspapers.
3. Minimum bidding \$ (per acre): Minimum of \$1.00/acre. The sale list is generated by an interested individual or company nominating a tract for the next available sale. By the nomination, the nominee is agreeing to pay the minimum bid.
4. Qualification of the bidder: No specific qualification. However, any bid can be rejected.
5. State Statutes: NDCC 15-05 and 38-09
6. Maximum acres: 160 acres.
7. Royalty rate: The lease for any tract within three miles of existing production will be issued with a 1/6 royalty provision. Leases outside the three miles will be issued with a 1/8 royalty.
8. Contact: Rick D. Larson
Phone: (701) 328-2800
E-mail: rdlarson@state.nd.us
Website: www.land.state.nd.us

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: North Dakota Department of Health, Division of Air Quality, 918 East Divide Avenue, 2nd Floor, Bismarck, ND 58501-1947, Phone: (701) 328-5188, Fax: (701) 328-5200.
2. Relevant Statute/Regulations: Regulations: North Dakota Radiological Health Rules, North Dakota Administrative Code Article 33-10. Statute: North Dakota Century Code Chapters 23-20, 23-20.1, and 23-20.2
3. Scope: The regulations cover all ionizing radiation sources, including NORM. However, there isn't a specific chapter on NORM in regulations. North Dakota has not adopted regulations equivalent to the CRCPD's Part N.
4. Licensing: Licensing of NORM is handled the same way as licensing of other radioactive materials, using North Dakota Radiological Health Rules chapter 33-10-03, which is based upon the CRCPD's Part C, "Licensing of Radioactive Materials." Also, anyone who owns NORM is considered to be a general licensee and would need to comply with applicable portions of the North Dakota Radiological Health Rules.
5. Cleaning Equipment: No specific standards for cleaning equipment. Would need to obtain a license to provide NORM decontamination services.
6. Disposal of Waste: Must receive approval of North Dakota Department of Health before disposing of NORM. Disposal in a plug and abandon well has been approved in the past; approval is on a case-by-case basis.
7. Subsequent Use of Equipment or Materials: Equipment and materials must be permanently decontaminated below or equal to the standards in Appendix F of Chapter 33-10-04.1. A survey must be made after decontamination and the North Dakota Department of Health and subsequent transferee or owner must be provided with a copy of the survey. Equipment or materials can't be sold, leased, or transferred until the decontamination survey has been verified and accepted by the North Dakota Department of Health.
8. Release/Sale of NORM-Contaminated Land: Must be 5 picocuries of radium or less per gram of dry soil. Results of

surveys must be provided to North Dakota Department of Health and property owner or subsequent tenant or transferee. Property can't be vacated, sold, or transferred until a decontamination survey has been verified and accepted by North Dakota Department of Health.

9. Projected Volume of stored NORM in the State: Unknown.
10. Contact: Ken Wangler
Phone: (701) 328-5188
E-mail: kwangler@state.nd.us
Website: www.health.state.nd.us/ehs

OHIO

Administration

1. State agency: Department of Natural Resources, Division of Mineral Resources Management, 2045 Fountain Sq. H-3, Columbus, OH 43229-6693. (Chapter 1509, Ohio Revised Code). Phone (614) 265-6633.
2. Docketing procedure: Upon the filing of an appeal, the Commission shall promptly fix the time and place at which the hearing on the appeal will be held.
 - (a) Orders: The Chief may issue orders, effective without prior hearing. Such order is an adjudication order. Any appeal to such order must be made to the Oil and Gas Commission within 30 days of the receipt of the order and notice of the appeal must be filed with the Chief within three (3) days after the appeal is filed with the Commission.
 - (b) Notice: The Commission must give at least 10 days written notice by mail of the time set for the appeal.

Bond

1. Compliance bond required: Any owner before being issued a permit shall execute and file with the Division of Mineral Resources Management a Surety Bond.
2. Conditions of bond: The Surety Bond is conditioned on compliance with the well plugging and land restoration requirements of the law. Section 1509.07 O.R.C. The Surety Bond is conditioned on compliance with the restoration requirements of Section 1509.072, plugging requirements of Section 1509.12, permit provisions of Section 1509.13 of the Revised Code, and all rules and orders of the Chief of the Division of Mineral Resources Management relating thereto.
 - (a) Amount per well: \$5,000 individual.
 - (b) Amount of blanket bond: \$15,000.
 - (c) Financial statements are accepted in limited situations in lieu of bond.
 - (d) Landowners with one well for their own use can file a one time filing fee of \$50.

Spacing

1. Spacing requirements: Rule 1501: 9-1-04. No distinction is made between oil wells or gas wells. The general spacing regulations are as follows:
 - (a) Density: Wells drilled to a pool from zero to 1,000 feet in depth require a subject tract or drilling unit containing not less than one acre.

Wells drilled to a pool from 1,000 to 2,000 feet in depth require a subject tract or drilling unit containing not less than 10 acres.

Wells drilled to a pool from 2,000 to 4,000 feet require a subject tract or drilling unit containing not less than 20 acres.

Wells drilled to a pool from 4,000 feet or deeper require a subject tract or drilling unit containing not less than 40 acres.
 - (b) Lineal: Well must be located not less than 200 feet from any well drilling to, producing from, or capable of producing from the same pool. Well must be located not less than 100 feet from any boundary of the subject

tract or drilling unit. (0 to 1,000 feet in depth)

Well must be located not less than 460 feet from any well drilling to, producing from, or capable of producing from the same pool. Well must be not less than 230 feet from any boundary of the subject tract or drilling unit. (1,000 to 2,000 feet in depth)

Well must be located not less than 600 feet from any well drilling to, producing from, or capable of producing from this same pool. Well must be located not less than 300 feet from any boundary of the subject tract or drilling unit. (2,000 to 4,000 feet in depth)

Well must be located not less than 1,000 feet from any well drilling to, producing from, or capable of producing from the same pool. Well must be located not less than 500 feet from any boundary of the subject tract or drilling unit. (4,000 feet or deeper)

2. Exceptions:

- (a) Basis: For offset wells and if an applicant can demonstrate that such exception will protect correlative rights and/or promote conservation by permitting oil and gas to be produced which could not otherwise be produced.
- (b) Approval: Exceptions can be granted by the Chief. Establishing temporary minimum well spacing in the vicinity of discovery wells. Rule 1501: 9-1-04 (D) requires approval of the Technical Advisory Council.

Pooling

- 1. Authority to establish voluntary: Yes. Section 1509.26 O.R.C.
- 2. Authority to establish compulsory: Yes. Section 1509.27 O.R.C.

Drilling Permit

1. Require permits for:

- (a) Drilling a producing or service well: Yes.
- (b) Seismic drilling: No.
- (c) Recompletion: Yes. Permit required for reopen, deepen, and plug-back.
- (d) Plugging and abandoning: Yes.

2. Permit fee:

- (a) Drilling: \$250 (in non-urban areas). In Townships with unincorporated population exceeding 5,000 but less than 10,000: \$500, where unincorporated population exceeds 10,000 but is less than 15,000: \$750 and where unincorporated population exceeds 15,000 and in all municipal corporations: \$1000 (Expedited permit seven day processing extra \$500 fee required.) 1509.06 O.R.C.
- (b) Seismic drilling: No.
- (c) Recompletion: \$250 for reopen, deepen, and plug-back. No fee for recompletion in same zone.
- (d) Plugging and abandoning: \$50 for producer; none for dry hole. (Expedited permit one-five day processing extra \$250 fee required).

3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? Anytime a well bore is deviated. A well bore may not be deviated without prior approval.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes.
 - (b) Production casing: No.
2. Minimum amount of cement required:
 - (a) Surface casing: No - Cable Tool, Yes - Rotary Tool.
 - (b) Production casing: No.
 - (c) Setting time: No, Unless specified by permit conditions.
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes.
 - (a) Time limit: 30 days.
 - (b) Where submitted: Division of Mineral Resources Management.
2. Well logs required to be filed: Yes (If any logs are run).
 - (a) Time limit: 30 days.
 - (b) Where submitted: Division of Mineral Resources Management.
 - (c) Confidential time period: Six months and an additional 6 months if requested in writing (for exploratory wells only).
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes, from the Ohio Division of Geological Survey.
3. Multiple completion regulation: No regulation but each case is considered on its own merits.
 - (a) Approval obtained:
4. Commingling in well bore: No regulation but each case is considered on its own merits.
 - (a) Approval obtained:

Oil Production

1. Definition of an oil well: Do not have one.
2. Potential tests required: No.
 - (a) Time interval: No.
 - (b) Witness required: No.
3. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: No.
 - (b) Exception to limiting gas-oil ratio: No.
5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: No.
7. Measurement involving meters: No.
8. Production reports: Yes.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Annually.

Gas Production

1. Definition of a gas well: Do not have one.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes, must be submitted with well completion record.
 - (a) Time interval: 30 days.
 - (b) Witness required: No.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.

- (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: No.
- 7. Measurement involving meters: Yes.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Annually (March 15).

Water Disposal

- 1. State agencies that control disposal of produced salt water: Department of Natural Resources, Division of Mineral Resources Management.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 65%. Section 1509.28 O.R.C.
 - (b) Royalty interest: 65%. Section 1509.28 O.R.C.

Taxation

Gas severance tax = 2.5 cents per MCF gas
 Gas ad valorem tax = variable by county
 Energy and education = \$.001/MCF (one tenth of one cent)
 Total gas tax burden = 2.6 cents per MCF gas

Oil severance tax = 10 cents per barrel of oil
 Oil ad valorem tax = variable by county
 Energy and education = \$.01 bbl/oil
 Total oil tax burden = 11 cents per barrel of oil

- 1. Tax collecting agency: Severance tax - Department of Taxation, Highway Use, Motor Fuel and Excise Tax, Box 530, Columbus, OH 43216. Ad Valorem tax - Auditor of county in which wells are located.
- 2. How tax is computed: Severance tax - 10 cents per BBL of oil and 2.5 cents per MCF gas. Of the money received by the treasurer of state from the severance tax levied on oil and gas, ninety percent is credited to an oil and gas well fund. Ten percent of the severance tax levied is credited to a state geological mapping fund. Ad valorem tax – Oil and gas contained or produced in or upon any lot or parcel of land is assessed for purposes of ad valorem taxation by the county auditor or each county. The aggregate valuation of the land and minerals therein will be taxed at a varying rate depending on the tax rate in effect for each county.

3. Exemptions or exceptions: Severance tax – Landowners owning a well(s) on their land for natural gas production for their own use that mounts to less than \$1,000 of yearly cumulative market value is not subject to severance tax. There is no such exemption for oil production. Ad valorem tax – Flush production is subject to a reduced rate of taxation.
4. Name of tax: Severance and Ad Valorem.
5. Statutory citation: Section 5749 O.R.C. - Severance; Section 5713.05 O.R.C. - Ad Valorem; Section 1510. O.R.C. - Energy Education.

Land Leasing Information

No regulations at this time

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Natural Resources, Division of Mineral Resources Management, 1855 Fountain Sq. Ct., Bldg. H, 2nd Floor, Columbus, OH 43224. Phone: (614) 265-6633, Fax: (614) 268-4316.
2. Relevant Statute/Regulations: Ohio has no rules specific to oil and gas NORM.
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: Scott Kell

OKLAHOMA

Administration

1. State agency: Oklahoma Corporation Commission, Oil and Gas Conservation Division, P.O. Box 52000, Oklahoma City, OK 73152-2000. Phone: (405) 521-2302. Fax: (405) 521-3099. Web: www.occeweb.com. The Commission's Oil and Gas Conservation Rules are contained in OAC (Oklahoma Administrative Code) 165:10-1-1, et seq., and its Rules of Practice appear in OAC 165:5-1-1, et seq.
2. Docketing procedure: Ordinarily 80 to 100 unprotested cases per day are set on the administrative law judges' dockets for hearings on Monday and Tuesday. Protested cases are set for hearing on Wednesday through Friday which encompass 10 to 30 cases per week. The Pollution and Enforcement Docket is held on Wednesday and Friday with approximately 20 cases per week. Emergency and motion dockets are held on Monday and Tuesday with approximately 5 to 10 emergency applications and 10 to 20 motions set on these dockets. Matters set for hearing in the Commission's Tulsa office correspond to the foregoing docket dates for its Oklahoma City office, with the exception of the Pollution and Enforcement docket, which occurs on Tuesday in the Commission's Tulsa office. The Commission's Tulsa office is located at 440 South Houston, Suite 114, Tulsa, OK, 74127. Phone: (918) 581-2296. Fax: (918) 581-2597.
 - (a) Notice: Fifteen days notice is required for many hearings on applications. Five days notice is required for emergency and motion hearings unless otherwise specified.
 - (b) Fees: A \$100.00 filing fee is assessed for conservation docket and pollution docket base applications. Filing fees of \$1,000.00 are charged for applications pertaining to commercial disposal wells, commercial earthen pits and commercial soil farming. The filing fee for a permit to drill is \$175.00, and the filing fee for an emergency walk through permit to drill is \$500.00. The permit filing fee for a one time land application of water based fluids is \$100.00, and the filing fee for an emergency walk through permit for a one time land application of water based fluids is \$200.00. Additional fees for motions and emergency applications filed pursuant to the base application are not required.

Surety

1. Surety required: Category A: Financial Statement showing net worth in Oklahoma of not less than \$50,000.00; Category B: Corporate Surety Bond, Irrevocable Commercial Letter of Credit, Bank Joint Custody Receipt, Certificate of Deposit, Cashier's Check, Cash, or other negotiable instrument in the minimum amount of \$25,000.00. The amount of Category B surety may be set higher at the discretion of the Director of the Conservation Division. The Commission is authorized to establish Category B surety in an amount greater than \$25,000.00 based upon the past performance of the operator and its insiders and affiliates regarding compliance with the laws of Oklahoma, and compliance with any rules promulgated thereto including, but not limited to, the drilling, operation and plugging of wells, closure of surface impoundments or removal of trash and equipment. For good cause shown concerning pollution or improper plugging of wells by an operator posting either Category A or Category B surety or by an insider or affiliate of such operator, the Commission, upon application of the Director of the Conservation Division after notice and hearing, may require the filing of additional Category B surety in an amount greater than \$25,000.00 but not to exceed \$100,000.00. See Okla. Stat. Tit. 52 § 318.1 and OAC 165:10-1-10, et seq.
2. Conditions of surety and operator's agreement: That all wells will be drilled, operated and plugged in accordance with Rules and Regulations of the Commission and Oklahoma law. Financial statements must be updated annually. Letters of Credit must be valid for at least one year and updated annually. Certificates of Deposit must be valid for at least a minimum of one year. An operator's agreement must accompany any form of Surety submitted and updated annually. Surety is used for plugging wells, closure of surface impoundments and removal of trash and equipment.
 - (a) Amount per well: If statewide plugging liability is less than \$25,000.00, Category B surety can be submitted based on estimated cost of plugging for each well operated. The estimated cost of plugging and abandonment shall not include any salvage value as to recoverable casing, tubing or wellhead equipment. Surety shall be increased as additional wells are added to the responsibility of the operator and may be decreased as included wells are properly plugged and abandoned.

- (b) Amount of blanket bond: Corporate Surety Bond amount: \$25,000.00. Irrevocable Commercial Letter of Credit amount: \$25,000.00. Financial Statement minimum net worth amount: \$50,000.00. Bank Joint Custody Receipt, Certificate of Deposit or cash amount: \$25,000.00.
- (c) Performance bond - Seismic Operators: \$50,000.00.
- (d) Financial surety guarantee-stratigraphic test hole operations-in accordance with OAC 165:10-1-10.

Spacing

1. Spacing requirements: Not mandatory. If desired, upon application, notice (to each person or governmental entity having the right to participate in production from the proposed drilling and spacing unit or the existing drilling and spacing unit and publication notice in a newspaper of general circulation published in Oklahoma County and in each county in which lands embraced in the application are located) and hearing.
 - (a) Standard square drilling and spacing units: 10, 40, 160, or 640 acres. Standard rectangular drilling and spacing units: 20, 80 or 320 acres. See OAC 165:10-1-22. *Drilling additional well into one unit spacing can be permitted by hearing only.
 - (b) Permitted well locations: The center of the unit for any standard square drilling and spacing unit. The permitted well location within standard rectangular drilling and spacing units shall be the centers of alternate square tracts constituting the units (alternate halves of the unit). Well will be deemed drilled at the permitted location if drilled within the following tolerance areas: (A) Not less than 165 feet from the boundary of any standard 10-acre drilling and spacing unit or the proper square 10-acre tract within any standard 20-acre drilling and spacing unit. (B) Not less than 330 feet from the boundary of any standard 40-acre drilling and spacing unit or the proper square 40-acre tract within any standard 80-acre drilling and spacing unit. (C) Not less than 660 feet from the boundary of any standard 160-acre drilling and spacing unit or the proper square 160-acre tract within any standard 320-acre drilling and spacing unit. (D) Not less than 1320 feet from the boundary of any standard 640-acre drilling and spacing unit. See OAC 165:10-1-24.
 - (c) Horizontal drilling: A horizontal well is a well drilled, completed, or recompleted in a manner in which the horizontal component of the completion interval in the geological formation exceeds the vertical component thereof and which horizontal component extends a minimum of 150 feet in the formation. For information concerning drilling and producing a horizontal well on a lease basis or in a conventional drilling and spacing unit, creation of horizontal well units, well location requirements, determination of unit size and allowable, horizontal well spacing requirements, etc. refer to OAC 165:10-3-28 of the Commission's Oil and Gas Conservation rules, and OAC 165:5-7-6, 165:5-15-3, 165:5-15-8 and 165:5-15-9 in the Commission's Rules of Practice for additional requirements regarding horizontal wells.
2. Exceptions: Yes.
 - (a) Basis: To prevent waste, protect correlative rights, to encounter the edge of a known producing reservoir, or because of surface obstructions.
 - (b) Approval: Upon application, notice (including written notice to offset operators and working interest parties toward whom the location is to be moved) and hearing. An allowable penalty may be imposed.
3. Dewatering units: The Commission may establish drilling and spacing units not to exceed 160 acres in size regarding reservoir dewatering to extract oil from reservoirs having initial water saturations at or above 50%. See OAC 165:10-15-18 regarding production tests and reports for reservoir dewatering oil spacing units.

Pooling

1. Authority to establish voluntary: Yes, by private contract.
2. Authority to establish compulsory: Yes, for owners of the right to drill who cannot agree as to how the unit should be

developed. Spacing is a prerequisite. 52 O.S.87.1(e). See OAC 165:5-7-7, 165:5-15-3 and OAC 165:10-25-1, et seq.

Drilling Permit

1. Require permits for: (See OAC 165:10-3-1) (See OCC's website for instructions on electronic submissions of permits to drill)
 - (a) Drilling a producing, injection, salt water disposal, or service well: Yes.
 - (b) Seismic exploration activities and stratigraphic test hole operations: Yes. See OAC 165:10-7-31.
 - (c) Recompletion: Yes.
 - (d) Reentry: Yes.
 - (e) Deepening an existing well: Yes.
2. Application fee:
 - (a) Drilling: \$175.00 fee for standard processing. \$500.00 fee if processed on a walk through basis.
 - (b) Seismic operations: None.
 - (c) Recompletion: \$175.00 fee for standard processing. \$500.00 fee if processed on a walkthrough basis.
 - (d) Reentry: \$175.00 fee for standard processing. \$500.00 fee if processed on a walkthrough basis.
 - (e) Deepening an existing well: \$175.00 fee for standard processing. \$500.00 fee if processed on a walkthrough basis.
 - (f) Stratigraphic test hole operations: \$175.00 fee for standard processing. \$500.00 fee if processed on a walkthrough basis.

Seismic

1. All applicants, before commencing any seismic operations, must:
 - (a) Register with the OCC and include a permanent mailing address.
 - (b) Post a financial surety guarantee with the OCC.
 - (c) Provide to the OCC the name and business or field address of the contractor responsible for the operations being conducted.
 - (d) Notify all surface owners of property where seismic operations will occur at least 15 days prior to commencement of operations. The notice shall include a copy of the oil or gas lease or seismic permit or other legal instrument of similar nature authorizing the use of the surface for seismic operations and shall include the name of the company which is conducting the seismic operations and anticipated date of commencement of operations.
2. Applicants must obtain a permit from the Conservation Division for seismic operations on a Form 1000S.
 - (a) Permit must be obtained for each seismic operation.
 - (b) Attach a pre-plat of the operation area.
 - (c) Post a performance bond in the amount of \$50,000.00, or other form of surety in an amount approved by the Conservation Division.
 - (d) Permits are good for one (1) year from the date of issuance.

- (e) Commission shall approve or deny application within 30 days of receipt of the application.
- (f) Persons without valid permit can be fined \$1,000. See OAC 165:10-7-31 concerning seismic and stratigraphic operations, and OAC 165:10-7-15 regarding drilling or seismic activity near superfund sites or hazardous waste facilities.
- (g) Written notice of commencement of seismic operation to be filed with the Conservation Division within fourteen days after commencement of such operation.
- (h) No seismic shot hole blasting shall be conducted within 200 feet of any habitable dwelling, building or water well without written permission from the owner of the property or within 500 feet of any superfund site or hazardous waste facility.
- (i) Within 30 days after completing a seismic operation, the applicant receiving the permit shall submit a copy of the approved Form 1000S certifying the plugging of all seismic shot holes in compliance with OAC 165:10-7-31 and a post-plat or acceptable form of survey showing the actual location of all seismic shot holes.

Stratigraphic test hole operations

1. All applicants, before commencing any stratigraphic test hole operations, must:
 - (a) Register with the OCC and include a permanent mailing address.
 - (b) Post a financial surety guarantee with the OCC in accordance with OAC 165:10-1-10.
 - (c) Notice to surface owners must be given according to OAC 165:10-3-1(g).
2. Applicants must obtain a permit from the Conservation Division for stratigraphic test hole operations on a Form 1000.
 - (a) Permit must be obtained for each stratigraphic test operation.
 - (b) Surface casing requirements shall be met according to OAC 165:10-3-4, storage and disposal of fluids associated with the drilling of stratigraphic test holes shall meet the requirements of OAC 165:10-7-16, the duty to plug and abandon, to notify the Conservation Division prior to plugging stratigraphic test holes, the manner of plugging and plugging certification shall be in accordance with OAC 165:10-11-3, OAC 165:10-11-4, OAC 165:10-11-6 and OAC 165:10-11-7 unless applicant can demonstrate to the Conservation Division's District Office that another method will provide sufficient protection to groundwater supplies and long term land stability.
 - (c) Permits are good for six (6) months from the date of issuance.
 - (d) Commission shall approve or deny application within 30 days of receipt of the application.
 - (e) Persons without valid permit can be fined \$1,000. See OAC 165:10-7-31 concerning seismic and stratigraphic operations, and OAC 165:10-7-15 regarding drilling or seismic activity near superfund sites or hazardous waste facilities.
 - (f) Written notice of spudding of stratigraphic well to be filed with the Conservation Division within fourteen days after spudding of well.

Casing, Cementing, and Wellhead Equipment (OAC 165: 10-3-4)

1. Minimum surface casing required: Unless an alternate casing program is authorized by the OCC, suitable and sufficient surface casing shall be run and cemented from bottom to top with a minimum setting depth which is the greater of ninety feet below the surface, or fifty feet below the base of treatable water.
2. Wells which penetrate unitized common sources of supply: Each newly drilled or reentered well which penetrates a common source of supply in which enhanced recovery operations are being conducted shall be properly cased

and cemented from not less than 100 feet below to not less than 100 feet above each unitized common source of supply to prevent migration of formation fluids and contain formation pressure. In the event the well is to be plugged without being cased, the well shall be properly cemented over the aforementioned interval(s) during plugging procedures.

3. Wellhead equipment: Except in proven areas where less equipment is known to be adequate, every drilling well shall be equipped with a mastergate, or its equivalent, or an adequate blowout preventer. A flow line valve of proper size and working pressure shall be attached.
4. Minimum amount of cement required for additional casing strings: If additional casing other than surface casing is run, except for temporary purposes, it shall be run, set, and cemented with a calculated volume of cement sufficient to fill the annular space behind the casing string from the base of the casing string to a minimum height which is the greater of 5% of the depth to which the casing string is set or a height of 200 feet. Wells approved for horizontal completion are exempt upon approval of the Conservation Division.
5. Pressure testing of casing strings: Before drilling the cement plug in a casing string, the operator shall pressure test the installed casing for 30 minutes at a minimum pressure which is the lesser of the surface gauge pressure equal in pounds per square inch to 0.2 of the length of the casing in feet or 1500 psig. During the 30 minute test, if the surface pressure drops 10% or more, the operator shall repair and retest the casing until the aforementioned requirements are met, or plug the well according to Commission rules.

Completion

1. Completion report required: Yes, by Well Completion Report (Form 1002A).
 - (a) Time limit: Within 30 days after completion of operations, regardless of whether or not the well was completed as a dry hole, producer, injection, disposal or service well. An amended Completion Report shall be filed with the Commission within 30 days after completion of operations to reenter, recompleat and/or convert to an injection or disposal well. The Conservation Division shall not assign an allowable to a well without a current Completion Report being on file with the Conservation Division. OAC 165:10-3-25. The operator of the well shall also submit, along with its Form 1002A Completion Report, Form 1002C Cementing Report(s) describing all cementing operations on surface, intermediate and production casing strings, including multistage cementing jobs. OAC 165:10-3-4(i).
 - (b) Where submitted: Oklahoma Corporation Commission, Oil and Gas Conservation Division, Oklahoma City office.
2. Well logs required to be filed: Yes, resistivity and porosity type wireline logs, if run. Resistivity and porosity type wireline logs include, but are not limited to, spontaneous potential, induction, laterolog and density and gamma ray neutron logs. OAC 165:10-3-26.
 - (a) Time limit: Within 60 days from the earlier of the date of completion of the well or the date the last formation evaluation type wireline log was run.
 - (b) Where submitted: Oklahoma Corporation Commission, Oil and Gas Conservation Division, Oklahoma City office.
 - (c) Confidential time period: Yes, if requested and Form 1002B timely filed. Held confidential for one year from the date the last log was run on the well. Optional six months' extension may be granted upon written request. OAC 165:10-3-26.
 - (d) Available for public use: Yes, unless confidential, then only after expiration of confidential time period.
 - (e) Log catalog available: No.
3. Multiple zone completion and production regulations: Yes. See OAC 165:10-3-35, 165: 10-3-36, 165:10-3-37, 165:10-3-38 and 165:5-7-22.

- (a) Approval for multiple zone completions: Administratively, subsequent to submission of Form 1023. Hearing required only if protested or if required by the Commission.
- 4. Commingling of production: Yes. See OAC 165:10-3-39 and 165:5-7-24.
 - (a) Approval obtained: Administratively, subsequent to submission of Form 1023. Hearing required only if protested or if required by the Commission.
- 5. Venting or flaring: See OAC 165:10-3-15, and also operation in hydrogen sulfide areas addressed in OAC 165:10-3-16.

Oil Production

- 1. Definition of an oil well: GOR (Gas-Oil Ratio) of less than 15,000 to one. Classification is for allowable purposes. OAC 165:10-13-2. GOR means the ratio of the gas produced in standard cubic feet to one barrel of oil produced during any stated period. Condensate and load oil excepted under OAC 165:10-13-6 shall not be considered as oil for purposes of determining GOR. OAC 165:10-1-2.
- 2. Potential and production tests required: Yes. See OAC 165:10-13-3, OAC 165:10-15-6 (discovery oil pools), OAC 165:10-15-10 (allocated oil wells), OAC 165:10-15-13 (unallocated oil wells), OAC 165:10-15-15 (enhanced oil recovery projects), OAC 165:10-15-17 (excessive water exempt oil projects) and OAC 165:10-15-18 (reservoir dewatering oil spacing units).
 - (a) Time interval: 30 days after completion of the well (discovery oil pool); 30 days after the earlier of making the election, completion of the well, or recompletion of the well (unallocated oil wells).
 - (b) Witness required: Operator shall give 24 hour notice of the opportunity to witness the initial test to the Conservation Division and the offset operator(s) producing from the same pool.
- 3. Allowables. See OAC 165:10-15-5 (discovery oil allowables), 165:10-15-9 (allocated oil allowables), 165:10-15-12 (unallocated oil allowables), 165:10-15-14 (enhanced oil recovery project allowables), 165:10-15-16 (excessive water exempt oil project allowables) and 165:10-15-18 (allowables for reservoir dewatering oil spacing units).

Gas Production

- 1. Definition of a gas well: GOR (Gas-Oil Ratio) of 15,000 to one or more. Classification is for allowable purposes. OAC 165:10-13-2.
- 2. Initial potential tests: Yes, Form 1016.
 - (a) Time interval: The initial test for all gas wells shall be run into the pipeline within 30 days and test results filed within 45 days after the date of first sales of gas. OAC 165:10-17-6.
 - (b) Witness required: Regarding initial tests for special allocated gas wells, the operator of the well shall provide 24 hours notice to the Conservation Division of its intent to run an initial test in order to give the Conservation Division the opportunity to witness said test, but in no case shall the operator be precluded from performing said test and filing the results as provided above. Initial tests for special allocated gas wells need not be witnessed, nor signatures obtained, if witnessed, in order for the Conservation Division to assign an allowable to said well. Initial tests for unallocated gas wells with calculated open flow of less than two million cubic feet per day are exempt from witnessing by Conservation Division personnel. OAC 165:10-17-6.
- 3. Allowables for unallocated gas wells: The allowable is established in a semiannual proration hearing by the Commission and currently is 65% of WHAOF or 2,000 MCF/d, whichever is greater.

Depending upon market demand considerations, these allowable percentages are subject to change in future years.

- (a) Pool allowables: Yes-allocated, special allocated and unallocated pools.
- (b) Well allowable: Allowables for allocated pools are addressed in OAC 165:10-17-8. Special allocated gas pool allowables are dealt with in OAC 165:10-17-9, and allowables for unallocated gas wells appear in OAC 165:10-

17-11.

- (c) Natural gas priority schedule: Any common purchaser as defined in 52 O.S. § 240 shall purchase all the gas which may be offered for sale and which may reasonably be reached by its trunk lines or gathering lines, without discrimination in favor of one producer as against another or in favor of any one source of supply as against another, except as authorized by the Commission as follows. In the interest of the prevention of waste and protection of correlative rights, the following priority schedule shall be implemented by any first purchaser of gas whenever the permitted production from all wells in any common source of supply in its system in this State, including gas which is processed, is in excess of that purchaser's reasonable market demand; provided, however, if the first purchaser does not contractually control wellhead production, the first taker of gas shall be responsible for implementation of the following priority schedule (OAC 165:10-17-12):
 - (1) Hardship and distressed wells.
 - (2) Enhanced recovery wells.
 - (3) Wells producing casinghead gas and associated gas.
- 4. Bottom-hole pressure test reports required: No.
 - (a) Periodic bottom-hole pressure surveys: No.
- 5. Commingling of gas in common facilities: Yes, if approved by Oklahoma Tax Commission.
 - (a) Commingling of gas zones in wellbore: Yes. See OAC 165:10-3-39 and 165:5-7-24.
 - (i) Approval obtained: Administratively, subsequent to submission of Form 1023. Hearing required only if protested or if required by the Commission.
- 6. Measurement involving meters and recorders: Yes. See OAC 165:10-17-5.
- 7. Production reports: Yes.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Reporting party: Measurer of gas meter.
 - (d) Time limit: Last day of succeeding month.

Underground Injection Wells

- 1. The OCC regulates underground injection wells, which are classified as follows:
 - (a) Enhanced recovery injection wells-wells in which fluids are injected to increase the recovery of hydrocarbons.
 - (b) Disposal wells-wells in which fluids brought to the surface in connection with oil or natural gas production are injected, for purposes other than enhanced recovery.
 - (c) Storage wells-wells used to inject, for storage purposes, hydrocarbons which are liquid at standard temperature and pressure.
 - (d) Simultaneous injection wells-wells which inject or dispose of salt water at the same time they are producing oil and/or gas to the surface.
- 3. See OAC 165:10-5-1, et seq. and OAC 165:5-7-27.

Unitization

1. Unitized management of a common source of supply: Yes, for enhanced recovery. See Okla. Stat. Tit. 52 § 287.1 et seq., OAC 165:5-7-20 and OAC 165:5-15-2.
2. Minimum percentage of ratification or approval regarding plan of unitization:
 - (a) Not less than 63% by lessees of record of the unit area affected thereby.
 - (b) Not less than 63% by owners of record (exclusive of royalty interests owned by lessees or by subsidiaries of any lessee) of the normal 1/8 royalty interest in and to the unit area.
3. Allowable: Based on capacity of unit to produce. See OAC 165:10-15-14.
4. Production test and reports for enhanced oil recovery projects: See OAC 165:10-15-15.
5. Injection Well: Permit to individual well.
6. Mechanical integrity tests: Required initial tests and subsequent tests-see OAC 165:10-5-6.
7. Unitized management of a common source of supply-brine and associated gas. See OAC 165:5-7-21.

Seeping Natural Gas Program

1. Coordination. The Commission coordinates response efforts when notified of an occurrence of seeping natural gas. The Commission enlists private industry, state, county, municipal and local government official entities as needed to aid the Commission in investigating, identifying and abating the hazard, and the Commission can require a utility to run tests to reevaluate the occurrence as to the utility's lines and equipment.
2. Jurisdiction. The Commission is authorized to promulgate and enforce rules and to issue and enforce orders pertaining to seeping natural gas pursuant to Okla. Stat. Tit. 52 § 317.1. The Commission's rules regarding its Seeping Natural Gas Program appear in OAC 165:10-12-1, et seq. Such rules not only establish procedures for the investigation of seeping natural gas, but also provide for the administration of the Seeping Natural Gas Fund so as to provide funding to eligible property owners for the mitigation of seeping natural gas on their property if the Commission is unable to abate the hazard of a seeping natural gas occurrence by issuing an order to a responsible person or by plugging a well.

Taxation

Gas gross production tax = 7.0%
 Gas ad valorem tax = Varies by county
 Petroleum excise tax = 0.095 of 1%
 OERB voluntary contribution = 0.1 of 1%
 Marginal Well Commission = \$0.001 per MCF

Oil gross production tax = 7.0%
 Oil ad valorem tax = Varies by county
 Oil excise tax = .095 of 1.0%
 OERB voluntary contribution = 0.1 of 1%
 Marginal Well Commission = \$0.002 per barrel

1. Tax collecting agency: Gross Production Division, Oklahoma Tax Commission, 409 N. E. 28th Street, Third Floor, Oklahoma City, OK 73105.
2. How tax is computed: Gross Production Tax - 7%; Petroleum Excise Tax - .095% of 1.0%. There are also two voluntary contributions. One is the Oklahoma Energy Resources Board (OERB) voluntary contribution and is .1 of 1% (1 mill). The other is handled by the Oklahoma Commission on Marginally Producing Oil and Gas Wells and is 0.2 cents per

barrel liquid and 0.1 cent per 10,000 feet of gas. The voluntary contributions are paid up front (as the product is sold) and producers can, but seldom do, request a refund of these contributions from the respective boards in March/April each year.

3. Exemptions or exceptions: There is a tax exemption for enhanced recovery projects on qualified incremental increase in production, re-established production from qualified inactive wells, production from qualified deep wells, and production from qualified horizontal wells. Projects must be qualified by the Oklahoma Corporation Commission through application.
4. Name of tax: Gross Production Tax, and Petroleum Excise Tax.
5. Statutory citation: Gross Production Tax - Oklahoma Statutes Title 68, Section 1001; Oil Excise Tax - Oklahoma Statutes Title 68, Section 1101.

Land Leasing Information

1. Leasing Method: Public sealed competitive bids. Also have auctions where 5 year lease contracts are sold, these auctions are done every October.
2. Notice Method: Notice of such sale to be published for 30 days in a newspaper of general circulation in the county where such lands are situated and in a newspaper of general circulation in the State of Oklahoma.
3. Minimum bidding \$ (per acre): No less than \$5.00 per acre, except in a special lease sale. Sometimes land is appraised at a higher fair market value, in these instances the minimum bidding may be higher.
4. Qualification of the bidder: Responsible bidder
5. State Statutes: OK ST Title 64
§92
§281
§285
Rules and Reg.
385:15-1-3~12
6. Maximum acres: 160 acres
7. Contact: Pary Shofner
pary.shofner@clo.state.ok.us
phone: (405) 604-8160

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environmental Quality, Radiation Management Section, 1000 N.E. 10th St., Oklahoma City, OK 73117. Phone: (405) 271-7484.
2. Relevant Statute/Regulation: Oklahoma Department of Quality has no rules to specifically address NORM. Existing radiation rules are interpreted on a case-by-case basis as necessary.
3. Scope: NORM rules have been proposed by industry, but exact scope and content are influx.
4. Licensing: No rules at this moment
5. Cleaning Equipment: no guidance published
6. Disposal of waste: Solid waste rules prohibit disposal of solid waste landfills (RCRA landfills).

7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land: No policy
10. Projected Volume of stored NORM in the State: No estimate at this time
11. Respondent: Mike Broderick, Ralph Johnson

OREGON

Administration

NOTE: The Oregon Legislature passed House Bill 3188 and upon the Governor's signature, became effective June 27, 2007. The bill will likely cause numbering changes, and as a result, references to Oregon Revised Statutes and Oregon Administrative Rules will likely change. The main provisions of the bill are:

- Permit fees increase.
- Improve environmental protection by the requirement of a detailed reclamation plan to be submitted with the application.
- Upgrading language to be consistent with the APA.
- Interagency coordination.
- Clarification of technical terms.

The updated statutes are anticipated to be available around January 2008. The updated administrative rules will likely be available in February or March 2008. The Enrolled House Bill 3188 may be viewed online at:

<http://www.leg.state.or.us/07reg/measpdf/hb3100.dir/hb3188.en.pdf>

1. State agency: Department of Geology and Mineral Industries (DOGAMI), 229 Broadalbin Street SW, Albany OR 97321. Phone (541) 967-2080. FAX: (541) 967-2075.
2. Docketing procedure: Hearings according to Oregon Administrative Law ORS 183, notice period 10 days, published in newspaper of general circulation. Hearings to be held for promulgating rules or orders. ORS 520.105 and ORS 520.115.
 - (a) Emergency orders: Yes, for a limited period of time.
 - (b) Notice: 30 days - by the Department issuing the rule or order.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: Compliance with rules and regulations of the department.
 - (a) Amount per well: \$10,000, less than 2000'; \$15,000, well 2,000' to 5,000'; \$25,000 more than 5000'.
 - (b) Amount of blanket bond: \$100,000 minimum and must equal the individual well bond amounts.
 - (c) Amount per seismic drilling program: \$50,000. This may be waived if operator has blanket bond.

Spacing

1. Spacing requirements: Yes. Rules 632-10-156 and 632-10-157.
 - (a) Basis: Special rules for fields will be adopted by the Board, if a hearing is required.
 - (b) Approval: By the State Geologist if no hearing is required. By the Governing Board of the department if a hearing is required.

Pooling

1. Authority to establish voluntary: Yes. ORS 520.240.

2. Authority to establish compulsory: Yes. Rule 632-10-161, ORS 520.220. Compulsory unitization - small tracts.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Rule 632-10-010, ORS 520.025.
 - (b) Seismic drilling: Yes. Rule 632-15-015, ORS 520.095.
 - (c) Recompletion: Yes. Rule 632-10-010.
 - (d) Plugging and abandoning: Yes. Rule 632-10-198.
2. Permit fee:
 - (a) The application fee for a permit to drill a well is \$2,000.
 - (b) The fee for a request to extend the period for completion of drilling is \$500.
 - (c) The fee to modify operations at a well is \$1,500.
 - (d) The fee to sidetrack a well is \$500.
 - (e) The fee to plug and abandon a well is \$1,000.
 - (f) The annual renewal fee for operation and maintenance of a well is \$1,500 the first renewal year and \$500 for each subsequent year.
 - (g) The application fee for a permit to drill an information hole is to be determined by the department based on the estimated cost of review and approval, and the number and location of holes to be drilled. The fee may not exceed \$1,000 per information hole.
 - (h) The fee for approval of a seismic program shall be determined by the department based on the estimated cost of review and approval, but may not exceed \$1,000.
 - (i) The governing board of DOGAMI by rule may specify a schedule of fees for costs incurred by the department for activities related to field designation.
3. Require filing report of work performed: Yes. Rule 632-10-016.

Vertical Deviation

1. Regulation requirement: Rule 632-10-142.
 - (a) When is directional survey necessary? If intentionally deviated.
 - (b) Filing of survey required? Yes. Rule 632-10-142.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Rule 632-10-014 - General control.
 - (b) Production casing: Rule 632-10-014 - General control.
2. Minimum amount of cement required:
 - (a) Surface casing: Bottom to top. Rule 632-10-014.
 - (b) Production casing: Based on fluid zones. Rule 632-10-014.
 - (c) Setting time: 12 hours. Rule 632-10-014.
3. Tubing requirements:
 - (a) Oil wells: General. Rule 632-10-132. Bottom of tubing on flowing wells not higher than 100 feet above the

producing formation.

- (b) Gas Wells: General. Rule 632-10-132. Bottom of tubing on flowing wells not higher than 100 feet above the producing formation.

Completion

1. Completion report required: Yes. ORS 520.095(2) and Rule 632-10-016.
 - (a) Time limit: Within 20 days of completion or abandonment.
 - (b) Where submitted: To the Department.
2. Well logs required to be filed: Yes. ORS 520-095 (2) and Rule 632-10-016.
 - (a) Time limit: Within 20 days of completion or abandonment, or suspension.
 - (b) Where submitted: To the Department.
 - (c) Confidential time period: Yes, two years.
 - (d) Available for public use: Yes. ORS 520.095(2) and Rule 632-10-016.
 - (e) Log catalog available. Yes.
3. Multiple completion regulation: Yes. Rule 632-10-152.
 - (a) Approval obtained: Through the State Geologist.
4. Commingling in well bore: No. Rule 632-10-152.

Oil Production

1. Definition of an oil well: "Oil Well" shall mean any well not a gas well capable of producing oil or condensate in paying quantities. Rule 632-10-008.
2. Potential tests required: Yes, by order of Board. Rule 632-10-170.
 - (a) Time interval: Not specified.
 - (b) Witness required: Yes. Rule 632-10-170.
3. Statewide allowable: Implied. Rule 632-10-148.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
4. Maximum gas-oil ratio: Determined by Board. Rule 632-10-186.
 - (a) Provision for limiting gas-oil ratio: Yes. Maximum ratio set by Board for pool.

- (b) Exception to limiting gas-oil ratio: Yes, if excess is returned to the production formation.
- 5. Bottom-hole pressure test reports required: Yes, by order of Board. Rule 632-10-170.
 - (a) Periodical bottom-hole pressure surveys: Yes. Rule 632-10-170.
- 6. Commingling oil in common facilities: No. Rule 632-10-164.
- 7. Measurement involving meters: No.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: Last day of each month succeeding the month in which the purchasing of taking occurs. Rule 632-10-166.

Gas Production

- 1. Definition of a gas well: Well producing natural gas (does not include oil or condensate). Rule 632-10-008.
- 2. Pressure base _____ psia @ _____ degrees F. Not specified.
- 3. Initial potential tests: Yes. Rules 632-10-174, 176, 178.
 - (a) Time interval: Time necessary to effect accurate determination.
 - (b) Witness required: Yes.
- 4. Statewide allowable: Implied. Rule 632-10-148.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
- 5. Bottom-hole pressure test reports required: Yes, by order of Board. Rule 632-10-170.
 - (a) Periodical bottom-hole pressure surveys. Yes. Rule 632-10-170.
- 6. Commingling of gas in common facilities: Yes, if ratable take can be maintained. Rule 632-10-182.
- 7. Measurement involving meters: Yes. Rule 632-10-182.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: Last day of each month succeeding the month in which the purchasing or taking occurs.

Water Disposal

1. State agencies that control disposal of produced salt water: Department of Geology and Mineral Industries and Department of Environmental Quality would control waste water disposal. Rule 632-10-192.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. ORS 520.290.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 75%.
 - (b) Royalty interest: 75%.

ORS 520.290.

Taxation

Gross production tax = 6.0%
 Gas ad valorem tax = 0.0%
 Total gas tax burden = 6.0%

Oil production tax = 6.0%
 Oil ad valorem tax = 0.0%
 Total oil tax burden = 6.0%

1. Tax collecting agency: Department of Revenue, Revenue Building, 955 Center Street, N.E., Salem, OR 97310.
2. How tax is computed: Oregon has a gross production tax for oil and gas that is computed at 6%.
3. Exemptions or exceptions: There is an exemption on the first \$3,000 in gross sales value each calendar quarter from each well. Also, royalty or other interest owned by state, county, city, town or school district or other political subdivision is exempt from the tax.
4. Name of tax: Gross Production.
5. Statutory citation: Oregon Revised Statute Chapter 324.

Land Leasing Information

1. Leasing Method: Sealed bids or oral bid auction.
2. Notice Method: At least one public notice of each auction by publication in a newspaper of general circulation in the county in which the lands are located at least 30 days prior to the auction date.
3. Minimum bidding \$ (per acre): The minimum starting bid amount per acre will be set forth in the notice by the Director.
4. Qualification of the bidder: A citizen of the U.S. of legal age or partnership or a corporation registered with the State Corporation Division, or a domestic governmental body.
5. State Statutes: Oregon Admin. Rules
 - §141-010-0010
 - §141-010-0020
 - §141-070-0020
 - §141-070-0050
 - §141-070-0060
 - §141-070-0080

§141-070-0090
 §141-070-0100
 §141-071-0535 ~
 §141-071-0595

6. Maximum acres: 640 acres
7. Contact: Steve Purchase, Assistant Director, Field Operations
 Phone: (503) 378-3805, Extension 279
 775 Summer Street, N.E.
 Salem, OR 97310-1337

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Oregon Health Division, Radiation Protection Services, 800 N.E. Oregon St., Portland, OR 97232.
 Phone: (503) 731-4014.
2. Relevant Statute/Regulations: OAR 333-117-010 to -370.
3. Scope: Anyone who engages in extraction, mining, beneficiating, processing, use, transfer or disposal.
4. Licensing: Yes.
5. Cleaning Equipment: Yes.
6. Disposal of Waste: Yes.
7. Subsequent Use of Equipment: Yes.
8. Subsequent Use of Materials: Yes.
9. Release/Sale of NORM-Contaminated Land: Must meet decommissioning and decontamination criteria.
10. Projected Volume of stored NORM in the State:
11. Respondent: Ray Paris and Dan Wermiel

PENNSYLVANIA

Administration

(NOTE: Oil and gas in Pennsylvania is regulated under three separate acts. For brevity initials will be used in this summary. The Oil and Gas Act, Act of 12-19-84, P.L. 1140, No. 223 is termed OGA; the Coal and Gas Resource Coordination Act, Act of December 18, 1984, No. 214 is termed RCA; and the Oil and Gas Conservation Law, Act of July 25, 1961, P.L. 825, 58 P.S. §401 et seq. is termed OGCL.) Regulations promulgated under these statutes are found at Title 25 PA Code Chapters 78 & 79.

1. State agency: Department of Environmental Protection, Bureau of Oil and Gas Management, central office at P. O. Box 8765, Harrisburg, PA 17105-8765. Phone (717) 772-2199. Regional office: 400 Waterfront Drive, Pittsburgh, PA 15222-4745. Phone (412) 442-4015. Regional office: 230 Chestnut Street, Meadville, PA 16335. Phone (814) 332-6860.
2. Docketing procedure: OGA: Objections may be filed and conference held. The parties may appeal to the Environmental Hearing Board. Sections 202 and 501. RCA: Objections are filed with the Department, then submitted to a panel, which makes recommendations to the Department. Section 12. Decisions may be appealed to the Environmental Hearing Board. OGCL: Objections and comments may be filed with the Department or testified to at public meetings concerning spacing and integration applications.
 - (a) Emergency orders: Yes. Emergency action can be taken by the Department without a prior hearing. Actions are appealable to the Environmental Hearing Board. Section 503 OGA and Section 410 OGCL.
 - (b) Notice: OGA: Notice of intent to revoke or suspend a well permit or registration is given to the well operator. The well operator has 15 days to request a conference. Section 503. OGCL: Notice of spacing and integration orders must be provided in accordance with Sections 7, 8, and 10 of the Act. RCA: Notice is issued by the Department in regard to conflicting permit applications (Section 6), objections to drilling (Section 12), and by the well operator in regard to plugging (Section 13).

Bond

1. Compliance bond required: Section 215 of OGA requires a bond in the amount of \$2,500 per well or a blanket bond in the amount of \$25,000 for wells drilled on or after April 18, 1985.
2. Conditions of bond: Conditioned on the operator's faithful performance of the drilling, restoration, water supply replacement, and plugging requirements of the OGA.

Spacing

1. Spacing requirements: OGA: None. RCA: Gas wells in workable coal seams must be at least 1,000 feet from any other well. OGCL: An operator may apply for a spacing order pursuant to Section 7 of the Act. A conservation well must be at least 330 feet from the boundary of the tract or unit.
2. Exceptions: RCA: Yes.
 - (a) Basis: Minimum spacing may be as little as 900 feet where permit applicant and owner of workable coal seam consent.
 - (b) Approval: By the Department of Environmental Protection.
- 2.1 Exceptions: OGCL: Yes, if the well would not be likely to produce in paying quantities, if there are adverse surface conditions, or if coal operators have objected and a well is prohibited in a certain area. Section 7.
 - (a) Approval: By the Department of Environmental Protection.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes. OGCL, Section 8.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. OGA, Section 201; RCA, Section 5; OGCL, Section 6.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes, if it constitutes redrilling, alteration, deepening or drilling.
 - (d) Plugging and abandoning: OGA: Well operator or owner must notify Department and coal operator, lessee or owner of his intent to plug and abandon a well, pursuant to Section 210. RCA: Any person may apply for authorization to clean out, plug or replug a nonproducing well, Section 13.
2. Permit fee:
 - (a) Drilling: \$250 per oil well; \$350 per gas well; no fee to adopt an orphan well.
 - (b) Seismic drilling: None.
 - (c) Recompletion: If it constitutes redrilling, alteration, deepening or drilling, a permit application fee of \$150 is required.
 - (d) Plugging and abandoning: None under the RCA.
 - (e) Registration: \$15 per well, or \$250 for blanket registration of wells that are submitted simultaneously.
3. Require filing report of work performed:
 - (a) Annual production report.
 - (b) Records of drilling or altering a well within 30 days of cessation of drilling.
 - (c) Completion report within 30 days.
 - (d) If requested by the Department within 90 days of completion, operator must file electrical, radioactive, or other standard industry logs within 3 years if they have been run. Other geological data must be filed if requested by the Department within one year. Section 12, OGA.
 - (e) Well operator must submit certificate of plugging. OGA, Section 210; RCA, Section 13, and 25 Pa. Code §79.17, promulgated pursuant to the OGCL.

Vertical Deviation

1. Regulation requirement:
 - (a) When is directional survey necessary? OGA: Section 201 requires the well operator to designate the proposed angle and direction of the well, if the well is to be deviated substantially from a vertical course. This information must be stated on the plat submitted with the permit application. OGCL: A complete angular deviation and directional survey must be submitted upon completion of an intentionally deviated well. 25 Pa. Code §79.16.

- (b) Filing of survey required? OGA: Information on the angle and direction of well, as described above, is required to be filed with the permit application. OGCL: Yes.

Casing and Tubing

1. Minimum amount required:

- (a) Surface casing: Wells must have sufficient casing so as to prevent waste and the required minimum amount of surface casing to be set must be in accordance with Table 1 unless otherwise specified by the Department.

Table 1

<u>Proposed Total Depth (in feet)</u>	<u>Minimum Casing Required (in feet)</u>
3,800 to 5,000	400
5,001 to 5,500	500
5,501 to 6,000	600
6,001 to 6,500	700
6,501 to 7,000	800
7,001 to 8,000	1,000
8,001 to 9,000	1,200
9,001 to 10,000	1,400
Deeper than 10,000	1,800

Wells must be cased through fresh water bearing strata to prevent the migration of gas or fluids into sources of fresh groundwater and to prevent pollution or diminution of fresh groundwaters. Casing and cementing requirements defined by 25 Pa. Code §78.71-86, promulgated pursuant to the OGA and OGCL.

- (b) Through coal seams: Wells must be cased to prevent the migration of gas or fluids into a seam from which coal has been removed. Where the coal seam has not been removed, the well must be drilled to such a depth and size to permit the placing of casing in the well, so that all gas or fluids will be excluded from the coal seam. OGA, Section 207. Casing and cementing requirements defined by 25 Pa. Code § 78.71-86, promulgated pursuant to the OGA.
- (c) Production casing: OGCL: Wells must be cased to prevent the migration of all fluids from any formation covered by the Act to any other formation. 25 Pa. Code §79.12(c).
2. Minimum amount of cement required:
- (a) Surface casing: Casing and cementing standards defined by 25 Pa. Code § 78.71-86, promulgated pursuant to the OGA and OGCL.
- (b) Production casing: For conservation wells, the production casing must be cemented to fill the annular space to a point at least 500 feet above the casing shoe and at least 200 feet above the uppermost perforations.
- (c) Setting time: Cement must be set to a minimum compression strength of 350 psi and at least for 8 hours. 25 Pa. Code §78.85(b)
3. Tubing requirements:
- (a) Oil wells: No provision.
- (b) Gas wells: No provision.

Completion

1. Completion report required: Yes.
 - (a) Time limit: OGA: Well records must be filed within 30 days of cessation of drilling. A report containing additional information as required by regulation shall be filed within 30 days after completion.
 - (b) Where submitted: To the Department of Environmental Protection.
2. Well logs required to be filed: Yes.
 - (a) Time limit: Well records must be filed within 30 days of cessation of drilling. Within 90 days after completion or recompletion if requested by the Department, the well operator must submit a copy of the electrical, radioactive or other standard industry logs within 3 years if they have been run. If requested by the Department within one year, the well operator must file drill stem test charts; formation water analyses; porosity, permeability, or fluid saturation measurements; core analysis and lithologic log or sample description.
 - (b) Where submitted: To the Department of Environmental Protection.
 - (c) Confidential time period: None.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: See Department of Environmental Protection.
3. Multiple completion regulation: Not applicable.
 - (a) Approval obtained. Not applicable.
4. Commingling in well bore: Not applicable.
 - (a) Approval obtained: Not applicable.

Oil Production

1. Definition of an oil well: A bore hole drilled or being drilled for the purpose of or to be used for producing, extracting, or injecting hydrocarbons in liquid form at standard temperature of 60 degrees Fahrenheit and pressure 14.7 psia combined definition of well and oil.
2. Potential tests required: None.
 - (a) Time interval: Not applicable.
 - (b) Witness required: Not applicable.
3. Statewide allowable: No regulation making general allotments of production.
 - (a) Pool allowable: Not applicable.
 - (b) Well allowable: Not applicable.
 - (c) Exempt allowable: Not applicable.

4. Maximum gas-oil ratio: No regulation.
 - (a) Provision for limiting gas-oil ratio: No.
 - (b) Exception to limiting gas-oil ratio: No.
5. Bottom-hole pressure test reports required: Provision to include in well record, if taken.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: No.
7. Measurement involving meters: No.
8. Production reports: OGA, Section 212.
 - (a) By lease: No.
 - (b) By well: Annual production report is required on an individual well basis.
 - (c) Time limit: Annual.

Gas Production

1. Definition of a gas well: A bore hole drilled or being drilled for the purpose of or to be used for producing, extracting, or injecting any fluid, either combustible or noncombustible, which is produced in a natural state from the earth and which maintains a gaseous or rarified state at standard temperature of 60 degrees Fahrenheit and pressure 14.7 psia, any manufactured gas, any by-product gas, or any mixture of gases. Combined definition of well and gas.
2. Pressure base 14.7 psia @ 60 degrees F.
3. Initial potential tests: None.
 - (a) Time interval: Not applicable.
 - (b) Witness required: Not applicable.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Provision to include in well record, if taken.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: No.
8. Production reports: OGA, Section 212.

- (a) By lease: No.
- (b) By well: Annual production report is required on an individual well basis.
- (c) Time limit: Annual.

Water Disposal

1. State agencies that control disposal of produced salt water: Department of Environmental Protection.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes, upon application for an integration order by an operator having an interest in the spacing unit.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: No provision.
 - (b) Royalty interest: No provision.

Taxation

There is no state tax levied on oil and gas production in Pennsylvania.

Land Leasing Information

1. Leasing Method: Department of Conservation and Natural Resources receives nominations for lease sale on an open basis. Once critical mass is achieved from the continuous nominations process a competitive lease sale may be held, typically utilizing sealed bids. Leases are usually offered and awarded on highest bonus bid, but there are also royalty type sales called for from time to time.
2. Notice Method: Advertisement and mailing to all interested parties as well as to the parties on their prospective bidder list for notification.
3. Minimum bid amount per acre \$ (10.00 per acre): Annual Rentals at \$5.00 per acre.
4. Qualification of the bidder: Any person - corporation must be registered to do business within Pennsylvania and be in good standing with the Department of State's Corporation Bureau to participate in the bid process.
5. State Statutes: Act # 1995-18
6. Maximum acres: Variable, but average size of lease tracts has historically been around 2,000 acres per lease tract.
7. Contact: Teddy W. Borawski, Jr.
Phone: (717) 772-0269

NOTE: Lease sales held on a variable schedule depending on the number of nominations and the general industry interest level. On average, lease sales have occurred approximately once a year, but less frequently in the last five years.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environmental Protection, Bureau of Oil and Gas Management, P.O. Box 8765, Harrisburg, PA 17105-8765. Phone: (717) 772-2199.
2. Relevant Statute/Regulations: None existing or proposed. Surveys have shown NORM is not an issue with oil and gas production in Pennsylvania.

3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Contact person : Ronald Gilius
12. Regulating Agency: Department of Environmental Protection, Bureau of Radiation Protection, P.O. Box 8469, Harrisburg, PA 17105-8469. Phone: (717) 787-3720.
13. Relevant Statute/Regulations: Pennsylvania has no NORM regulations.
14. Scope: NORM problems are addressed using existing regulations and EPA/NRC standards on a case-by-case basis.
15. Licensing:
16. Cleaning Equipment:
17. Disposal of Waste:
18. Subsequent Use of Equipment:
19. Subsequent Use of Materials:
20. Release/Sale of NORM-Contaminated Land:
21. Projected Volume of stored NORM in the State:
22. Contact person: Louis Urciuolo

SOUTH DAKOTA

Administration

1. State agency: Fred V. Steece, Oil and Gas Supervisor, Department of Environment and Natural Resources, 2050 W. Main, Ste #1, Rapid City, SD 57702. Phone (605) 394-2229, Fax (605) 394-5317.
2. Docketing procedure: Make application to above address. Department will review for completeness and will set hearing date if required according to type of application as follows: Hearing required: spacing, forced pooling, unitization; Administrative Approval: exception location, underground injection, commingling, directional drilling, horizontal drilling. (Note: if objection is filed within 20 days of the last publication date, a hearing will be scheduled.) Hearings held by S.D. Board of Minerals and Environment.
 - (a) Emergency orders: Law allows issuance of emergency orders by the Board without notice and hearing, that are effective for 15 days.
 - (b) Notice: Notice of public hearing must be published at least 20 days in advance of hearing. Supervisor will give notice.

Bond

1. Compliance bond required: A "Plugging and Performance Bond" (Form 3) and a "Surface Restoration Bond" (Form 10) are required. "Surface Restoration Bond" required when surface and mineral estates are severed.
2. Conditions of bond: Conditions are to plug each abandoned well, restore premises, and to fulfill requirements set out in paragraphs 45-9-5 to 45-9-18, South Dakota Codified Law (SDCL).
 - (a) Amount per well: \$5,000 for plugging; \$2,000 for surface restoration.
 - (b) Amount of blanket bond: \$20,000 for plugging; \$10,000 for surface restoration.

Spacing

1. Spacing requirements: Yes. Rule 74:10:03:08, 74:10:03:09, and 74:10:03:10.
 - (a) Density: Oil, 40 acres; gas, 640 acres.
 - (b) Lineal: Oil well - 500 feet from quarter-quarter boundary and 1,000 feet between wells. Gas well - 500 feet from section line and 3,750 feet between wells.
2. Exceptions: Yes. Address request to Supervisor at the above address.
 - (a) Basis: Topographic reasons, well at prescribed location would not produce economically or other good cause shown. (Rule 74:10:03:11).
 - (b) Approval: Administratively by the Department. Applicant must provide evidence of "good cause", must provide affidavit of service by certified mail to "any person whose property may be affected by the hearing". The Department publishes a Notice of Recommendation on the matter in the official county newspaper and the official state newspaper, and others. Upon 20 days notice if no objections are filed, the application may be approved. If objections are made, a hearing is required.

Pooling

1. Authority to establish voluntary: Yes. SDCL 45-9-30 to 45-9-36.
2. Authority to establish compulsory: Yes. SDCL 45-9-31, et seq. Board has the authority to assess a penalty for risk on

the non-participating owner in a spacing unit; (Rules 74:10:18:01 to 74:10:18:06. SDCL 45-9-37 to 49-9-52).

Drilling Permit

1. Require permits for:

- (a) Drilling a producing or service well: Yes. Permit is good for one year. The minimum requirements for obtaining a permit are the filing of the following: organization report, application for permit to drill, certified plat map, \$100 permit fee, plugging and performance bond, surface restoration bond, certificate of negotiation with surface owner or lessee, bonding company information sheet. Application for pit liner variance (Rule 74:10:03:13) may be made to the Department. The Department may attach conditions to both the application for permit to drill and to the application for pit liner variance.

Applications for horizontal wells must meet the minimum requirements for obtaining a permit to drill in addition to the following information: size, weight, and amount of all casing strings; top of cement behind each casing string; mud program; coordinates of the casing shoe; coordinates of the terminus; depth of kick-off point; azimuth of the horizontal segment; down-hole survey frequency; name and address of surveying contractor; and location of cementing tool. (Rule 74:10:03:01.01).

- (b) Seismic drilling: Yes. Contact Surface Mining Program, Department of Environment and Natural Resources, Joe Foss Bldg., 523 E. Capitol Ave., Pierre, SD 57501. Phone: (605) 773-4201.
- (c) Recompletion: Yes, for re-entry. Rule 74:10:03:01. Other work to be submitted on a Sundry Notice.
- (d) Plugging and abandoning: No, but Supervisor must be contacted for approval of plugging program before plugging begins. A well may be saved for conversion to a water well upon notification of oil and gas supervisor.

2. Permit fee:

- (a) Drilling: \$100 per well.
- (b) Seismic drilling: No. Contact Surface Mining Program, Department of Environment and Natural Resources, Joe Foss Bldg., 523 E. Capitol Ave., Pierre, SD 57501. Phone (605) 773-4201.
- (c) Recompletion: \$100 per well; require permit to drill a re-entry (see above).
- (d) Plugging and abandoning: No fee; require plugging report (Form 7) within 30 days.

3. Require filing report of work performed: Yes. Completion report (Form 4); Plugging report (Form 7), Sundry Notice (Form 6). Require two copies each of the following: geologic report, drill-stem test reports, all geophysical logs, all downhole surveys, core report and analyses, water analyses, and 10-foot sample cuttings.

4. Injection wells: Casing strings must be designed or retro-fitted to prevent pollution of fresh water resources by disposed fluid. Tubing strings are required in injection wells. Mechanical integrity must be shown initially and at least every five years. Continuous mechanical monitoring is allowed under certain circumstances. Wells are inspected periodically by supervisor's office.

Vertical Deviation

1. Regulation requirement:

- (a) When is directional survey necessary? Required for all directional and horizontal wells; secretary may require deviation test if necessary; special permit required from secretary utilizing Notice of Recommendation for directional drilling. (Rule 74:10:03:20 and 74:10:03:21). Minimum distances must be maintained from spacing unit boundaries and between wells, for all horizontal and directional holes.

- (b) Filing of survey required? Yes, required on all directional and horizontal holes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Fields: Yes, see field rules for specific fields. Statewide: Yes, must be set below all shallow fresh water sands; not less than 100 feet.
 - (b) Production casing: Yes. All freshwater zones are to be sealed or separated by casing and cement. Cement bond log is required on all completed wells. See field rules for specific fields.
2. Minimum amount of cement required:
 - (a) Surface casing:

Fields: Yes. Require cementing by pump and plug method and cement returns to the surface.

Statewide: Yes. Require cementing by pump and plug method and cement returns to the surface.
 - (b) Production casing:

Fields: Yes. See rules in specific field orders.

Statewide: Cement to seal or separate all fresh water zones not covered by the surface casing.
 - (c) Setting time: Yes. Surface casing 12 hours, production casing 24 hours.
3. Tubing requirements:
 - (a) Oil wells: Yes. Require wells to be equipped with tubing.
 - (b) Gas wells: Yes. Require wells to be equipped with tubing.
4. Injection wells: Casing strings must be designed or retro-fitted to prevent pollution of fresh water resources by disposed fluid. Tubing strings are required in injection wells. Injection volumes both for salt water disposal and for enhanced recovery, whether air, gas or water, or other fluid, must be reported monthly on Form 5A by the 25th day of the succeeding month. Pressure fall-off tests are required on all air injection wells initially and at intervals of at least every five years. Annular pressure mechanical integrity tests are required on all water injection wells initially and at intervals of at least every five years. Continuous mechanical monitoring is allowed under certain circumstances.

Completion

1. Completion report required: Yes. Well Completion or Recompletion Report and Log (Form 4).
 - (a) Time limit: 30 days.
 - (b) Where submitted: Oil and Gas Supervisor, Department of Environment and Natural Resources, 2050 W. Main, Ste. #1, Rapid City, SD 57702.
2. Well logs required to be filed: Yes. All electrical and geophysical logs, down hole surveys, geologic reports, water analyses, DST reports, core analyses, and any other geological or engineering data.
 - (a) Time Limit: 30 days.
 - (b) Where submitted: Oil and Gas Supervisor, above address.
 - (c) Confidential time period: Yes. Six months, if requested in writing, may be extended if requested in writing.

- (d) Available for public use: Yes. Public information after confidential period is over.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. Administratively by the Department utilizing Notice of Recommendation (Rule 74:10:03:20 and 74:10:03:21).
 - (a) Approval obtained: Applicant must provide affidavit of service by certified mail to "any person whose property may be affected by the hearing". The Department publishes a Notice of Recommendation on the matter in required newspapers. Upon 20 days notice, if no material objections are filed, the application is approved. If objections are made a hearing is required.
 4. Commingling in well bore: May be granted administratively by the Department. Applicant must provide affidavit of service by certified mail to "any person whose property may be affected by the hearing". The Department publishes a Notice of Recommendation on the matter in required newspapers. Upon 20 days notice, if no material objections are filed, the application is approved. If objections are made a hearing is required.

Oil Production

1. Definition of an oil well: "A well capable of producing oil". Rule 74:10:02:01(18).
2. Potential tests required: Yes. To be reported on completions or recompletion report and log (Form 4). (Rule 74:10:05:02).
 - (a) Time interval: 30 days.
 - (b) Witness required: May be at discretion of Oil and Gas Supervisor.
3. Statewide allowable: No. The Board has authority to prorate and allocate, but has never enforced proration.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
4. Maximum gas-oil ratio: Yes. The Board may require "that wells not be operated with inefficient gas-oil or water-oil ratios". In addition, the Board may fix their ratios and limit production from wells with inefficient gas-oil or water-oil ratios. SDCL 45-9-10.
 - (a) Provision for limiting gas-oil ratio: Yes. SDCL 45-9-10.
 - (b) Exception to limiting gas-oil ratio: Yes. Can be granted administratively if no objections are received by the Department, by utilizing the Notice of Recommendation procedure. (Rule 74:10:03:20 and 74:10:03:21).
5. Bottom-hole pressure test reports required: BHP required on new pool within 30 days. Rule 74:10:05:02.
 - (a) Periodic bottom-hole pressure surveys: May be required in field rules.
6. Commingling oil in common facilities: Yes. Production from different pools may be commingled provided the amount of production from each pool is determined by a method approved by the Department. (Rule 74:10:05:03). Approval may be granted administratively utilizing the Notice of Recommendation procedures. (Rule 74:10:03:20 and 74:10:03:21).
7. Measurement involving meters: Use of calibrated meter measurements or tank measurements are allowed.

8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Operator must report oil, gas and water produced on Form 5.
 - (b) Time limit: 25th day of following month. (Rule 74:10:05:12).
9. Water flood and enhanced recovery:
 - (a) Make application to oil and gas supervisor for all underground injection operations.
 - (b) Unit operations may be approved after notice and hearing by the Board of Minerals and Environment.
 - (c) Report volume of fluid injected and pressure by 25th of following month on Form 5A.
10. Change of operator:
 - (a) File Notice of Change of Operator (Form 13, pg. 1&2) to be executed by both the transferring party and the receiving party. File with oil and gas supervisor.
 - (b) Bond coverage must be in force on the receiving party and filed with the oil and gas supervisor before transferring party's bond can be considered for release.

Gas Production

1. Definition of a gas well: "A well capable of producing gas from a common source of gas supply as determined by the Board, excluding gas that cannot be sold for use". (Rule 74:10:02:01(11)).
2. Pressure base 14.65 psia @ 60 degrees F.
3. Initial potential tests: Required to report on Form 4.
 - (a) Time interval: 30 days.
 - (b) Witness required: At discretion of Oil and Gas Supervisor.
4. Statewide allowable: None.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
5. Bottom-hole pressure test reports required: Yes, new pool.
 - (a) Periodical bottom-hole pressure surveys: May be required in field rules. Shut-in pressure required annually.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: Gas must be metered; gas produced must be reported by the operator whether or not delivered to a gas transportation facility. The operator is required to report all produced gas to the Oil and Gas Supervisor. (Rule 74:10:06:03).

8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes. Operator must report all gas produced on Form 5.
 - (c) Time limit: 25th of following month. (Rule 74:10:05:12).

Water Disposal

1. State agencies that control disposal of produced salt water: Board of Minerals and Environment, (Contact Oil and Gas Supervisor's Office). (Rule 74:10:05:13, 74:10:05:15, and 74:10:09:01 thru 74:10:09:14). Report volume of fluid injected by the 25th of the following month on Form 5A.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes. "The Board upon its own motion may, and upon the application of any interested person shall, hold a hearing to consider the need for the operation as a unit of one or more pools or parts thereof in a field". (SDCL 45-9-37). Risk compensation is allowed up to 200 percent of the non-participating owners share of the reasonable actual unit expenses, exclusive of one-eighth royalty, to the recovered our of production from the unit.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 60%.
 - (b) Royalty interest: 60%.

Taxation

Gas severance tax = 4.5% of value
Gas conservation tax = 2.4 mils or .24%
Gas ad valorem tax = variable by county
Total gas tax burden = 4.74% of value

Oil severance tax = 4.5% of value
Oil conservation tax = 2.4 mils or .24%
Oil ad valorem tax = variable by county
Total oil tax burden = 4.74% of value

1. Tax collecting agency: Department of Revenue, Anderson Building, 445 E. Capitol Ave., Pierre, SD 57501-3185.
2. How tax is computed: South Dakota has a severance tax that is 4.5% of the value of oil and gas. There is also a conservation tax of 2.4 mils on the value of oil and gas. Counties also make tax assessments. The County Assessor determines real and personal property taxes.
3. Exemptions or exceptions: None
4. Name of tax: Severance; Conservation
5. Statutory citation: SDCL 10-39B

Land Leasing Information

1. Leasing Method: Public auction.

2. Notice Method: The notice shall be published once each week for at least 2 consecutive weeks in the official newspapers of the county, where the land is located.
3. Minimum bidding \$ (per acre): No less than \$2.00 per acre.
4. Qualification of the bidder:
5. State Statutes: SDCL 5-7
6. Maximum acres: 640 acres per tract.
7. Contact: Oil and Gas Administrator, Dept. of School and Public Lands, State Capitol, 500 E. Capitol, Pierre, SD 57501. Phone: (605) 773-3303, Fax: (605) 773-5520.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environment and Natural Resources, 2050 W. Main, Ste. 1, Rapid City, SD 57702. Phone: (605) 394-2229.
2. Relevant Statute/Regulations: South Dakota has no oilfield rules addressing NORM at present. There are no NORM rules being proposed at present.
3. Scope: Not applicable.
4. Licensing: Not applicable.
5. Cleaning Equipment: Not applicable.
6. Disposal of Waste: Not applicable.
7. Subsequent Use of Equipment: Not applicable.
8. Subsequent Use of Materials: Not applicable.
9. Release/Sale of NORM-Contaminated Land: Not applicable.
10. Projected Volume of stored NORM in the State: Not applicable.
11. Respondent: Fred V. Steece

TENNESSEE

Administration

1. State agency: State Oil and Gas Board, 13th Floor, L & C Tower, 401 Church St., Nashville, TN 37243-0445. Phone (615) 532-0166, Fax (615) 532-1517, E-mail michael.k.burton@state.tn.us.
2. Docketing procedure: Upon request of a concerned party or as called by the Oil and Gas Board. TCA 60-1-204; 1040-6-1-.01 of Rules and Regulations.
 - (a) Emergency orders: Can be issued by order of the Oil and Gas Board. TCA 60-1-204(c).
 - (b) Notice: Ten (10) days notice. By the State Oil and Gas Board Supervisor.

Bond

1. Compliance bond required: Yes, may be in the form of cash, a certified check, corporate surety, irrevocable standby letter of credit or joint custody certificate of deposit. 1040-2-1 of Rules and Regulations.
2. Conditions of bond: Plugging - Compliance with laws and Rules and Regulations - filing with the Supervisor all records required by the Board - plugging of well (or wells) in accordance with the law and Rules and Regulations. Reclamation - Separate reclamation bond for restoration of well site and access roads, with minimum established ground cover of at least 90 percent after plantings have survived two growing seasons. 1040-2-1 of Rules and Regulations.
 - (a) Amount per well: Plugging - \$2,000, \$1,000 for domestic gas wells; Reclamation - \$1,500 for new wells, \$1,000 for a change of operator for wells on which initial reclamation has been accomplished.
 - (b) Amount of blanket bond: Plugging - \$10,000, up to a maximum of 10 wells per bond; Reclamation - none, except that letters of credit or joint custody certificates of deposit may be submitted in appropriate amounts to cover multiple wells.

Spacing

1. Spacing requirements: Yes. 1040-2-4 of Rules and Regulations.
 - (a) Density: Oil wells - 0-1,000 feet, 10 acres; 1,001-2,000 feet or to the base of the Devonian Chattanooga Shale, whichever is deeper, 20 acres; more than 2,000 feet or below the base of the Devonian Chattanooga Shale, whichever is deeper, 40 acres. No density requirement for horizontal wells.

Gas Wells - 0-1,000 feet, 10 acres; 1,001-2,000 feet or to the base of the Devonian Chattanooga Shale, whichever is deeper; 20 acres; more than 2,000 feet deep or below the base of the Devonian Chattanooga Shale, whichever is deeper - 5,000 feet or to the top of the Cambrian Conasauga Group, whichever is deeper, 40 acres; more than 5,000 feet deep or below the top of the Cambrian Conasauga Group, whichever is deeper, 160 acres. No density requirement for horizontal wells.
 - (b) Lineal: Oil wells - 330 feet or more from any property (lease) or unit line, and 660 feet or more from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool. No specific well-to-well distance requirement for horizontal wells.

Gas wells - 0-5,000 feet or to the top of the Cambrian Conasauga Group, whichever is deeper, 330 feet or more from any property (lease) or unit line, and 660 feet or more from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; more than 5,000 feet deep or below the top of the Cambrian Conasauga Group, whichever is deeper, 660 feet or more from any property (lease) or unit line, and 1,320 feet or more from any other well completed in, drilling to, or which a permit shall have been granted to drill to the same pool. No specific well-to-well distance requirement for horizontal wells.

2. Exceptions: Yes.

- (a) Basis: For valid geological or topographic reasons.
- (b) Approval: Administratively by Supervisor, 1040-2-4-.01(k), or by Oil and Gas Board after public hearing, 1040-2-4-.01(k6).

Existing wells may be deepened and produced for oil or gas from whatever zone(s) production may be obtained on the existing permitted unit size.

Spacing of oil and gas wells - Referendum TCA 60-1-106. Oil or gas wells in Overton County: 0-2, 500 feet, 200 feet or more from any property line, and 400 feet or more from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool. Oil and gas wells in Clay and Pickett Counties: 200 feet or more from any property line, and 400 feet or more from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool.

Pooling

- 1. Authority to establish voluntary: Yes. TCA 60-1-202; 1040-2-2-.02(8) of Rules and Regulations.
- 2. Authority to establish compulsory: Yes. TCA 60-1-202(4)(M).

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: No.
 - (c) Recompletion: No.
 - (d) Plugging and abandoning: No.
- 2. Permit fee:
 - (a) Drilling: \$150.
 - (b) Seismic drilling: None. 1040-2-.02.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
 - (e) Change of operator: \$25.
 - (f) Amendment: \$25.

- 3. Require filing report of work performed: Yes. 1040-2-10.

Vertical Deviation

- 1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? When well bore deviates laterally greater than 5 degrees from vertical. 1040-2-8-.01(a).

- (b) Filing of survey required? Yes. 1040-2-10-.01(a).

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Yes, not less than 50 feet below all fresh water strata encountered in the well. 1040-2-7-.02.
 - (b) Production casing: No.
2. Minimum amount of cement required:
 - (a) Surface casing: Yes, circulate to fill annular space to the surface. 1040-2-7-.02.
 - (b) Production casing: No.
 - (c) Setting time: No.
3. Tubing requirements: 1040-3-2-.01.
 - (a) Oil wells: Yes, if flowing, unless otherwise allowed by the supervisor upon application.
 - (b) Gas wells: Yes.

Completion

1. Completion report required: Yes. 1040-2-10-.02(b).
 - (a) Time limit: Within 10 days after completion. 1040-2-10-.02(f).
 - (b) Where submitted: Supervisor, State Oil and Gas Board Office. 1040-2-10-.01 of Rules and Regulations.
2. Well logs required to be filed: Yes, if run. 1040-2-10-.02(a).
 - (a) Time limit: Within 30 days from date of drilling total depth. 1040-2-10-.01.
 - (b) Where submitted: To Supervisor, State Oil and Gas Board Office.
 - (c) Confidential time period: Yes, if requested. Six months from date of drilling to total depth upon written request of permittee. 1040-2-10-.05.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes. 1040-3-1-.07.
 - (a) Approval obtained: By application for multiple completion to Supervisor. 1040-3-1-.07(1).
4. Commingling in well bore: Yes.
 - (a) Approval obtained: By order of Oil and Gas Board after public hearing. 1040-6-1-.01.

Oil Production

1. Definition of an oil well: Not defined in Rules and Regulations. An oil well with a gas/oil ratio in excess of 2,000

cubic feet of gas per barrel of oil (2,000:1) shall be considered a high gas/oil ratio well and maybe limited by the Supervisor in the amount of gas permissible to produce.

2. Potential tests required: Yes. 1040-3-1-.04(1) of Rules and Regulations.
 - (a) Time interval: When requested by the Supervisor.
 - (b) Witness required: Yes.
3. Statewide allowable: No.
 - (a) Pool allowable: Yes, by fieldwide rules.
 - (b) Well allowable: Yes. 1040-3-1-.04(1)(d).
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: Yes. 2,000:1. 1040-4-7-.01.
 - (a) Provision for limiting gas-oil ratio: Yes. High GOR wells may be limited to amount of gas permissible to produce by the Supervisor.
 - (b) Exception to limiting gas-oil ratio: Yes. Not specifically stated in Rules and Regulations.
5. Bottom-hole pressure test reports required: Yes, upon request by Supervisor. 1040-3-1-.07.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Yes. (1) Submission of diagram of installation; (2) Producer certifies accurate measurement and method will not create inequities; (3) List of all affected parties. 1040-4-5-.01.
7. Measurement involving meters: No.
8. Production reports:
 - (a) By lease: Yes. 1040-4-3-.05.
 - (b) By well: No.
 - (c) Time limit: 25th day of succeeding month of production.

Gas Production

1. Definition of a gas well: Not defined in Rules and Regulations.
2. Pressure base 14.73 psia @ 60 degrees F. 1040-.1-1-.01.
3. Initial potential tests: Yes. 1040-3-1-.04(1)
 - (a) Time interval: 15 days after completion.
 - (b) Witness required: Yes.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes, by fieldwide rules.

- (b) Well allowable: Yes, by fieldwide rules.
- (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: Yes, upon request of Supervisor.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: Yes. Same requirements as for oil production. 1040-4-5-.01.
- 7. Measurement involving meters: No, except for testing.
- 8. Production reports: 1040-4-3-.11.
 - (a) By lease: Yes.
 - (b) By well: No.
 - (c) Time limit: 25th day of succeeding month.

Water Disposal

- 1. State agencies that control disposal of produced salt water: State Oil and Gas Board. 1040-4-1-.11. Tennessee Department of Environment and Conservation, Division of Ground Water Protection. 1200-4-6.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply: Yes. TCA 60-1-202(4)(M)&(N).
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization: Pool producers owning more than 50 percent of the pool acreage.
 - (a) Working interest: No.
 - (b) Royalty interest: No.

Taxation

Gas severance tax = 3.0% of the sale price
 Gas ad valorem tax = 0.0%
 Total gas tax burden = 3.0% of the sale price

Oil severance tax = 3.0% of the sale price
 Oil ad valorem tax = 0.0%
 Total oil tax burden = 3.0% of the sale price

- 1. Tax collecting agency: Tennessee Department of Revenue, Petroleum Tax Division, 702 Andrew Jackson State Office Building, Nashville, TN 37242.
- 2. How tax is computed: Oil and gas severance tax is computed as 3% of the sale price.
- 3. Exemptions or exceptions: Free gas used by the property owner or tenant under the terms of the lease is exempt unless it is in lieu of cash payment. Gas that has been injected into the ground for underground storage and thereafter withdrawn is also exempt.
- 4. Name of tax: Severance.
- 5. Statutory citation: Tennessee Code Annotated 60-1-301.

Land Leasing Information

No Regulations at this time.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Environment and Conservation; Division of Radiological Health, 401 Church St., 3rd Fl., L & C Annex, Nashville, TN 37243-1532.
2. Relevant Statute/Regulations: State Regulations for Protection Against Radiation, 1200-2-4, 1200-2-5, 1200-2-10.
3. Scope: The state of Tennessee does not distinguish between NORM and any other radioactive material (NARM, byproduct, transuranic, special nuclear material). All radioactive material is subject to the regulations of the state of Tennessee.
4. Licensing: All radioactive material including NORM is subject to the licensing of the state of Tennessee unless excluded on a case-by-case basis. This includes possession, storage, use, transfer, receive, own or the acquisition of any radioactive material unless otherwise exempted (NRC, Agreement State Exemptions).
5. Cleaning Equipment: This would require a specific license issued by the state of Tennessee for the authorization of a particular process.
6. Disposal of Waste: Waste must be disposed of as radioactive unless otherwise specifically authorized by the state of Tennessee (case-by-case).
7. Subsequent Use of Equipment: Equipment can be "free-released" if it meets the requirements of 1.86, NRC Regulatory Guide.
8. Subsequent Use of Materials: Materials must be specifically licensed for use as any other radioactive material unless specifically authorized by the state of Tennessee (case-by-case).
9. Release/Sale of NORM-Contaminated Land: Not encountered. Property would have to be decontaminated to levels at or very near 'true background.' Land could possibly be sold with institutional controls and restrictions if it was not completely "clean." (case-by-case).
10. Projected Volume of stored NORM in the State: Unknown, not characterized in this fashion.
11. Respondent: Michael Page.

TEXAS

Administration

1. State agency: Railroad Commission of Texas, Oil and Gas Division, 1701 N. Congress, Austin, TX 78701. Mailing address: P.O. Box 12967, Austin, TX 78711-2967. Phone (512) 463-6838.
2. Docketing procedure: Simple informal written request setting out requested action results in docketing of a public hearing. Minimum 10 days notice of hearing required by law. Various applications may be considered and approved administratively without hearing after notice and opportunity for hearing.

Compliance

1. An organizational report or any application for a permit is not accepted from, and P-4 certificate of compliance is not issued to, an organization
 - (a) that has had a violation relating to safety or the prevention or control of pollution for which a final order has been entered and all appeals exhausted; and, (1) the conditions that constituted the violation have not been corrected or (2) the assessed penalties and/or fines have not been paid, or
 - (b) that has an officer who served as an officer of an organization as described in (a) at the time of violation within seven years preceding the date on which the report, application or certificate is filed.
2. A permit, certificate of compliance, or P-5 Organization Report may be revoked, after notice and opportunity for hearing, for an organization as described in No. 1, above.

P-5 Financial Assurance

1. Financial assurance required: An annual financial assurance will be required for each organization filing an initial or renewal Form P-5 Organization Report who is engaged in activities regulated by the Commission other than those on the following list: (A) local distribution company; (B) gas marketer; (C) Crude Oil Nominator; (D) first purchaser; (E) well servicing company; (F) survey company; (G) salt water hauler; (H) gas nominator; (I) gas purchaser; or (J) well plugger. For organization required to file financial assurance, the following options are available:
 - (a) Individual Performance Bond, Letter of Credit, or Cash Deposit. For use by organizations that operate wells only. The value of the bond/letter/deposit is determined by multiplying \$2/foot by the total aggregate depth of all wells on the schedule for the operator. This includes active, inactive, injection or disposal, 14(b) (2) extension, hydrocarbon storage, etc.
 - (b) Blanket Performance Bond, Letter of Credit, or Cash Deposit. This option can be used by any organization (and must be used by organizations with activities other than the operation of wells for which financial assurance is required). The value of the bond/letter/deposit is set according to a schedule based on the number of wells operated (which includes all wells):

\$25,000	-	an operator with 1 to 10 wells or an operator performing regulated activities other than the operation of wells (e.g., reclamation plants, gas processing plants, pipelines, gatherers, etc.)
\$50,000	-	an operator with 11 to 99 wells
\$250,000	-	an operator with 100 or more wells

Financial Assurance that is required due to the operation of wells may be satisfied by the filing of an acceptable well-specific insurance policy that provides for the plugging of a particular wellbore in an amount at least equal to that required under option (a) above. If such a policy is filed for a wellbore, then that wellbore is disregarded when calculating an operator's organizational financial assurance requirement.

2. For operators of wells located off-land (i.e., in bay or inland waters or offshore), the financial assurance required to be posted by an operator is increased (in addition to that required under #1 above) as follows:
 - (a) “Entry Level Bay & Offshore Bonding”: an amount equal to the presumed plugging cost for plugging a single non-land well. By rule, the presumed plugging cost for an offshore well is \$100,000; for wells located in the bay or inland waterways, \$60,000. The amount required to be posted may be reduced if the operator has security posted with other local jurisdictions covering these wells that may be collected by the Commission.
 - (b) “Non-Producing Bay & Offshore Well Bonding”: for each non-land well that is not productive of hydrocarbons (including inactive and service-type wells), the financial assurance requirement is increased by the presumed plugging cost of that well. The amount required to be posted under this requirement is reduced by the amount required to be posted under “Entry Level Bay & Offshore Bonding” above, and may be further reduced based on the ratio of non-producing to producing bay & offshore wells and on an evaluation of the net worth of the company.

An insurance policy as described in 1(a) above may be filed for a bay or offshore wellbore to exclude it from financial assurance calculations provided that it provides coverage in an amount at least equal to the presumed plugging cost of that wellbore as given in 2

Spacing

1. Spacing requirements: Yes. (Rule 37) Statewide 467'-1200' - spacing 40 acres for oil or gas wells.
 - (a) Density: Statewide 40 acres; Field rules adopted after hearing may specify different density.
 - (b) Spacing: Statewide 467'-1200'; Field rules adopted after hearing may specify different spacing.
 - (c) Districts 7B, 9 all depths and 7C McCulloch to a depth of 2000' County spacing and density according to depth.
2. Exceptions: Yes.
 - (a) Basis: Prevention of waste or confiscation.
 - (b) Approval: By application. Approved without hearing if no protest received after notice or if waivers submitted.
 - (c) Fee: \$200.00 (Eff. 12-20-01)

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Only where voluntary efforts fail and in accordance with strict statutory requirements, after notice and hearing.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes, for an oil, gas, geothermal, fluid injection, fluid source, exploratory or service well.
 - (b) Seismic drilling: Yes, if well penetrates base of usable water.
 - (c) Cathodic protection well: Yes, if well penetrates the base of usable quality water.
 - (d) Recompletion: Yes, if change in field and/or reservoir is made.
 - (e) Reentry of a plugged wellbore: Yes.

- (f) Materially amended: Yes, change after approval of permit.
2. Drilling Permit Applications and fee. (Rule 5) When filing is required, the following documents must be submitted: Form W-1, plat, along with a current Organization Report (ACTIVE) on file with the Commission, and correct filing fee.
- (a) Drilling: Fee is determined by total depth of wellbore except in case of a plugback. Drilling Permit Fee Based on Depth: 0'-2000' is \$200, 2001'-4000' is \$225, 4001-9000' is \$250, > 9000' is \$300. Additional fee of \$150.00 (eff. 9-1-01) to expedite, in person or through the mail or requested by telephone,. An additional \$200.00 (eff. 12-20-01) fee if exception to the fields spacing or density rule is sought.
- (b) Seismic drilling: Minimum \$200.00 (eff. 9-1-01) fee if permit is required. Refer to (a).
- (c) Recompletion: Minimum \$200.00 (eff. 9-1-01) fee when change in field and/or reservoir is requested. Refer to (a).
- (d) Reentry of a plugged wellbore: Minimum of \$200.00 (eff. 9-1-01) fee. Refer to (a).
- (e) Materially amended: Minimum \$200.00 (eff. 9-1-01) fee plus amended application. Refer to (a).
3. Require filing report of work performed: Yes, completion reports, or plugging reports.

Vertical Deviation

1. Regulation requirement: Yes. (Rules 11, 12, & 86)
- (a) When is directional survey necessary? All rotary-drilled wells completed as producers must be surveyed to determine the deviation from vertical (inclination surveys). The first test measurement must be made at a depth not greater than 500 feet from the surface and succeeding points must be made at either 500 feet intervals or the nearest drill bit change not exceeding 1,000 feet. If the cumulative displacement calculated from the surface location exceeds the permitted distance to the nearest lease line, the Commission requires that a directional survey be run. A directional survey is also required on a well permitted as an intentionally deviated wellbore to a predetermined bottom hole location.
- If it becomes necessary to by-pass junk by random deviation, written notice must be given to the appropriate Commissions District Office and Austin Offices and drilling may proceed without interruption.
- (b) Filing of directional survey required? Yes, by survey of company through registered or certified mail from the Commission approved surveying company.

Casing and Tubing

1. Minimum amount required: (Rule 13)
- (a) Surface casing: Yes. Adequate amount to protect usable quality water zones. Depth of usable - quality water determined by the Texas Commission on Environmental Quality.
- (b) Production casing: Yes. The production casing shall be landed and cemented below the gas-oil contact, or set completely through and perforated in the oil saturated portion of the reservoir below the gas-oil contact.
2. Minimum amount of cement required:
- (a) Surface casing: Yes. Circulate to surface.
- (b) Production casing: Yes, at least 600 feet above shoe; also 600 feet above shallowest productive horizon.
- (c) Setting time: Yes. For surface casing, compressive strength must be at least 500 psi at the shoe prior to drill out.
3. Tubing requirements:
- (a) Oil wells: Yes. All flowing oil wells must be produced through tubing. The bottom of the tubing must not be

higher than 100 feet above the producing zone nor more than 50 feet above the top of a liner. In a multiple zone structure, however, when an operator elects to equip a well in such a manner that small thru-tubing type tools may be used to perforate, complete, plug back, or recompleat without the necessity of removing the installed tubing, the bottom of the tubing may be set at a distance up to, but not exceeding, 1,000 feet above the top of the perforated or open-hole interval actually open for production in the well bore. In no case shall tubing be set at a depth of less than 70% of the distance from the surface to the top of the completion interval.

- (b) Gas wells: No.
- (c) Injection/Disposal wells: Yes. Injection wells must be equipped with tubing set on a mechanical packer with the packer set no higher than 200 feet below the top of cement behind the production casing and at least 150 feet below the base of useable quality water. Disposal wells must be equipped with tubing set on a mechanical packer with the packer set no higher than 100 feet above the permitted disposal interval. If there are permeable zones between the proposed packer setting depth and the injection interval, the packer must be set below the permeable zones or the permit application must be amended to include those permeable zones in the proposed injection interval.

Completion

1. Completion report required: Yes. (Rule 16)
 - (a) Time limit: Within 30 days after completion of well or the plugging of such well, if the well is dry hole.
 - (b) Where submitted: Railroad Commission, appropriate District Office, in duplicate.
2. Well logs required to be filed: A porosity or resistivity log run over the entire wellbore or in the alternative, if no such log is run over the entire wellbore, the log which is the most complete of such logs run (effective date February 28, 1986). In addition, if well is deepened a copy of basic electric log run after September 1, 1985 should be submitted if such log is run over a deeper interval than the interval covered by a basic electric log already on file.
 - (a) Time limit: With the completion or plugging report.
 - (b) Where submitted: Railroad Commission, Austin, TX.
 - (c) Confidential time period: Yes. Rule 16. The owner or operator may request delayed filing of the log(s). Delay of filing may be for one year, and the owner or operator may request an additional filing delay of two years, provided the written request is filed prior to the expiration date of the initial confidentiality period. If a well is drilled on land submerged in state water, an additional filing delay of two years may be requested so that a possible total filing delay of five years may be obtained.
 - (d) Available for public use: Yes, logs received at the RRC after 6/2004 are available for free via the internet. Copies of log indices and well logs also are available through the University of Texas, Bureau of Economic Geology. See <http://www.beg.utexas.edu/mainweb/services/geophylog.htm>
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. (Rule 6)
 - (a) Approval obtained: Multi-completion application.
4. Commingling in well bore: (Rule 10) No, except that authority to commingle separate fields/reservoirs may be granted after notice. No hearing necessary unless application is protested, administratively denied, or operator requests hearing.

Oil Production

1. Definition of an oil well: (Rule 79) Any well which produces one (1) barrel or more crude petroleum oil to each one hundred thousand (100,000) cubic feet of natural gas.
2. Potential tests required: Yes.

- (a) Time interval: 10 days after test is completed.
 - (b) Witness required: Notice to Railroad Commission is required in advance so Railroad Commission may witness at its discretion.
3. Statewide allowable: Yes. Production factor is at 100% for all fields.
- (a) Pool allowable: Yes. MER for specific fields.
 - (b) Well allowable: Yes. By Statewide Rule 45.
 - (c) Exempt allowable: Yes. Special exempt after notice and hearing; marginal by statute; discovery by Statewide Rule.
4. Maximum gas-oil ratio: (Rule 49) Yes, 2,000 cubic feet per one barrel of oil; can be higher or lower after notice and hearing.
- (a) Provision for limiting gas-oil ratio: Yes. Gas limit per well. Maximum oil allowable times maximum gas-oil ratio.
 - (b) Exception to limiting gas-oil ratio: Yes, after notice and hearing.
5. Bottom-hole pressure test reports required: (Rule 41) Required on the discovery oil well in any new field and must be filed on prescribed form and sent in with new field application.
- (a) Periodical bottom-hole pressure surveys: Some circumstances.
6. Commingling oil from different leases in common facilities: (Rules 26 & 27) Yes, on application Form P-17, common facilities can be authorized for a common operator subject to separate measurement into the facility. Separate measurement may not be required if royalty and working interest owners are identical in ownership between leases to be commingled or notice and opportunity for hearing is provided to all interest owners.
7. (Rule 32) No gas from any well may be permitted to escape into the air after the expiration of 10 days from the time the gas is encountered in the well, or 10 days from the time of perforating the casing opposite a gas-bearing zone if casing is set through the zone, whichever is later. Exceptions may be administratively granted.
8. Measurement involving meters: Yes. (Rules 26 & 27)
9. Production reports:
- (a) By lease: Yes, for oil wells.
 - (b) By well: No.
 - (c) Time limit: Report filed by end of month following month covered.

Gas Production

1. Definition of a gas well: (Rule 79) Any well (a) which produces natural gas not associated or blended with crude petroleum oil at the time of production, or (b) which produces more than one hundred thousand (100,000) cubic feet of natural gas to each barrel of crude petroleum oil from the same producing horizon or (c) which produces natural gas from a formation or producing horizon productive of gas only encountered in a well bore through which crude petroleum oil also is produced through the inside of another string of casing or tubing. A well which produces hydrocarbon liquids, a part of which is formed by a condensation from a gas phase and part of which is crude petroleum oil, shall be classified as a gas well unless there is produced one (1) barrel or more of crude petroleum oil per one hundred thousand (100,000) cubic feet of natural gas; and that the term "crude petroleum oil" shall not be construed to mean any liquid hydrocarbon mixture or portion thereof which is not in the liquid phase in the reservoir, removed from the reservoir in such liquid phase, and obtained at the surface as such.
2. Pressure base 14.65 psia @ 60 degrees F.

3. Initial potential tests: Yes. (Rule 28)
 - (a) Time interval: 30 days from date of completion, allowable will go back only 15 days. (Rule 16, 28a, 31(a)(B))
 - (b) Witness required: Notice to Railroad Commission is required in advance so Railroad Commission may witness at its discretion.
4. Statewide allowable: No.
 - (a) Pool allowable: Market demand determined by reservoir.
 - (b) Well allowable: Yes. (Based on allocation formula and market demand.) Allocation formula can be suspended when all operators in field consent and have market for 100% of the well's capability.
 - (c) Special allowable: Yes. On special application to prevent waste. Also wells capable of producing 100 MCF or less per day are eligible for administrative special allowable as well as those capable of 250 MCF per day, or less in prorated fields with no special field rules. Also, wells whose average monthly production during the last six consecutive months falls below a cutoff percentage determined by the Commission of the well's top allowable.
5. Bottom-hole pressure test reports required: Yes (may be calculated).
 - (a) Periodical bottom-hole pressure surveys: On new field discoveries and in fields where BHP is part of the allocation formula.
6. Commingling of gas from different wells in common facilities: Yes. On application, Form P-17, common facilities can be authorized for one or more operators subject to notice of application and opportunity for hearing. Separate measurement may not be required if royalty and working interest owners are identical in ownership between leases to be commingled or notice and opportunity for hearing is provided all interest owners.
7. No gas from any well may be permitted to escape into the air after the expiration of 10 days from the time the gas is encountered in the well, or 10 days from the time of perforating the casing opposite a gas-bearing zone if casing is set through the zone, whichever, is later. Exceptions by rule or may be administratively granted upon application.
8. Measurement involving meters: Yes.
9. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Report filed by end of month following month covered.

Environmental Programs

1. The Railroad Commission of Texas has sole regulatory responsibility for preventing the pollution of surface and subsurface water in the state by activities associated with the exploration, development, and production of oil, gas, or geothermal resources. This responsibility includes the management of wastes generated by oil, gas, and geothermal operations. The scope of the Commission's jurisdiction over these wastes is described in detail in statewide Rule Section 3.30 (16 TAC Section 30, Memorandum of Understanding between the Railroad Commission of Texas, and the Texas Commission on Environmental Quality). The rule became effective May 31, 1998.
2. The Commission's water protection and waste management programs for oil and gas operations are administered principally through the Technical Permitting Section, the Site Remediation Section, and the Field Operations Section of the Oil and Gas Division.

Technical Permitting administers the Commission's permitting programs for drilling of wells and for injection wells and other methods of management of oil and gas wastes. The Site Remediation Section coordinates state-managed, operator-

funded, and voluntary site remediation programs. The section also administers selected grants, provides technical support to other sections of the Oil and Gas Division and coordinates with other state and federal agencies on environmental matters.

Field Operations coordinates the activities of the Oil and Gas Division's nine district offices in inspecting oil and gas operations and enforcing the Commission's rules. Additionally, the section coordinates Oil Field Cleanup -funded well plugging and salvage activities.

3. The Commission administers that portion of the federal Underground Injection Control Program relating to injection wells used for disposal of oil and gas wastes (Statewide Rule 9), enhanced recovery of oil and gas (Statewide Rules 46), and underground storage of hydrocarbons (Statewide Rules 95, 96, and 97). EPA approved the Commissions' UIC program for these wells on April 23, 1982. The Commission also has jurisdiction over brine mining injection wells and the EPA approved the brine mining program application in 2004. In 2006, the Commission processed permit applications for 2054 injection wells and monitored the status and operation of more than 50,784 permitted injection wells. The injection of exploration and production wastes into solution- mined salt caverns is an innovative disposal methodology that is permitted by the Commission. The Commission has issued permits for eleven disposal facilities. The Commission's regulation of disposal of E & P wastes into caverns has drawn interest from other states and the Minerals Management Service. Both federal officials and officials from other states have heralded the Commission's UIC program as a model of efficiency and effectiveness.

The Commission regulates the underground storage of hydrocarbons in salt caverns and depleted reservoirs to protect the environment and ensure public safety (Statewide Rules 95, 96, and 97). Texas is a regional center for underground hydrocarbon storage. Solution-mined caverns in both bedded and domal salt are extensively used for long-term, seasonal, and short-term storage. Current working gas storage in Texas is 372 bcf. Growth in storage capacity and deliverability largely reflects the addition of new cavern storage wells.

Under Statewide Rule 8, the Commission regulates the management and reuse of oil and gas waste at the surface. Methods of storage and disposal include the use of pits, landfarms and surface discharge. All pits and disposal methods must be specifically authorized by rule or be individually permitted. Management also includes the permitting of commercial oil and gas waste haulers.

The Commission regulates the management of tank bottoms and other hydrocarbon wastes at reclamation plants under Statewide Rule 57. A reclamation plant requires a permit to operate. The Commission regulates commercial recycling facilities that convert oil and gas wastes into new commercial products (such as road base) under a new rule (Chapter 4, Subchapter B), which became effective on December 4, 2006. All wastes generated must be disposed of in accordance with Statewide Rules 8, 9, and 46.

In the fall of 1993, the Commission adopted by rule standards and procedures for clean up of crude oil spills in non-sensitive areas (Statewide Rule 91).

In 2003, the Commission adopted a new rule (Chapter 4, Subchapter F) for oil and gas naturally occurring radioactive material (NORM). In Texas, the RRC regulates disposal of oil and gas NORM waste and the Texas Department of State Health Services (TDSHS), regulates most other aspects of oil and gas NORM management. In 2003, the RRC adopted new regulations for identification and labeling of oil and gas equipment contaminated with NORM waste. These regulations were developed in consultation with the TDSHS. NORM that occurs in produced water is exempt from TDSHS rules applicable to transportation and storage and is not subject to special NORM disposal regulations. The rule is based on risk of exposure to NORM. The rule authorizes certain disposal methods for NORM oil and gas waste under certain conditions, and requires specific authorization for other disposal methods. Staff from the RRC, TDSHS, and the Texas Commission on Environmental Quality (TCEQ) meet quarterly to discuss radiation issues and to coordinate efforts. In addition, the Texas Radiation Advisory Board (TRAB), which consists of 18 members appointed by the governor, is charged with providing recommendations and technical advice to the RRC, the TDSHS, and TCEQ.

The Commission also regulates the management of nonexempt oil and gas waste that is determined to be hazardous waste (Rule 98). Rule 98 became effective on April 1, 1996. Rule 98 standards are applicable only to generators and transporters of hazardous oil and gas waste. Rule 98 contains no provisions for permitting hazardous waste treatment, storage, or disposal facilities. Rule 98 is as stringent as the federal hazardous waste regulations under the Resource Conservation and Recovery Act, Subtitle C (RCRA). The Commission has contacted EPA regarding delegation of RCRA authority.

The Commission's water protection rules for oil and gas operations also include rules for drilling, casing, cementing, completing, and plugging wells (Statewide Rules 13, 14, 99, and 100). These rules incorporate state-of-the-art procedures for protecting usable quality water zones.

4. The Commission vigorously enforces its oil and gas rules despite its limited resources. The Oil and Gas Division had an average of 126 field inspectors, well pluggers, and cleanup coordinators located at nine District Offices across the state during 2006. In 2006, these inspectors performed 118,109 inspections and discovered 22,772 pollution violations. Also, a sophisticated automatic data processing system helps the Commission record and track compliance.

All violations are actively pursued until compliance is achieved. The various enforcement mechanisms the Commission uses include violation letters, pipeline severances, zero allowables, seals, and administrative penalties of up to \$10,000 per day. The Commission selects the appropriate enforcement mechanism to address a particular violation based on various factors, such as the severity and duration of the violation.

5. The cornerstone of the Commission's Oil and Gas Division environmental effort are two programs funded by the Oil Field Cleanup (OFCU) Fund: Well Plugging and Site Remediation. These programs have been instrumental in protecting the Texas environment by properly plugging or remediating abandoned oil field sites.

The Oil Field Cleanup Well Plugging and Site Remediation programs have been and continue to be, effective instruments for implementation of the RRC's responsibility to protect the environment from pollution associated with oil and gas operations. While the wells and sites are designated as state funded, the Oil Field Cleanup Fund derives funding entirely from fees, penalties and other payments from the oil and gas industry. One major source is the regulatory fee assessed on the production of oil and gas, which is 5/8 (eff. 9-1-01) of a cent per barrel of oil and 1/15 (eff. 9-1-01) of a cent per thousand cubic feet of gas.

The Commission supplements the Oil Field Cleanup Fund with EPA grants to plug additional wells in the drainage basins of stream, reservoir, and bay segments impaired with chlorides, sulfates, and total dissolved solids. These EPA grants are funneled through the Texas Commission on Environmental Quality (TCEQ) and the Railroad Commission works closely with the TCEQ to obtain approval of these grants. Since September 2000, the RRC has successfully obtained approval from the EPA to plug 1,080 wells with grant funds totaling approximately \$10.5 million in various stream segments across the state. The actual number of wells plugged through the end of May of 2007 is 1,461 with a total plugging cost of \$8,132,961.

The Commission has entered into inter-agency contracts with the Texas General Land Office (GLO) to plug wells on State submerged lands. These contracts are sister agency partnerships that call for the RRC to use its expertise in well plugging operations and for the GLO to fund the well plugging operations on State submerged lands. Since September 2000, the RRC and the GLO have partnered to plug 62 bay and offshore wells for approximately \$9.5 million.

During the last 20 years, the RRC has made a committed effort through compliance audits, response to citizen complaints and focused sweeps, to identify the unplugged oil and gas wells that present the greatest threat to the environment. Based on a highly effective prioritization scheme the wells with the greatest possible impact to the environment are being properly plugged. During 2006, the RRC plugged 1,824 wells using OFCU Funds, EPA grants, and GLO funds. Between September 1, 1983 and August 31, 2006, the RRC has plugged 26,078 wells at a cost of over \$122,000,000 from all sources of funds.

Site Remediation, which became operational during fiscal year 1992, performs cleanup activities on abandoned routine, emergency and complex sites. Routine sites, which are often remediated in concert with well pluggings, commonly consist of pit closure, tank removals and minor surface spill cleanups. Emergency sites require immediate actions to protect human health or the environment. Complex sites typically include detailed assessment activities (often requiring several mobilizations), a determination of the source of the contamination and recommended remedial alternatives.

Similar to the Well Plugging Program, the Site Remediation Section prioritizes sites based on the present or possible future impact to the environment. With larger sites, staff is often challenged with determining if the source of

pollution is natural or man-made, which potential operator is responsible, how to evaluate the site and which remedial method is appropriate for the situation. The Site Remediation Section has completed 3382 clean-up activities from the program's inception in 1992 to the close of fiscal year 2006.

Another important function of the Commission's Site Remediation Section is the management of the Operator Cleanup Program (OCP). Operator cleanups are complex assessment and remediation activities voluntarily conducted by a responsible operator, usually at environmentally sensitive sites. The program ensures that pollution outside of SWR 91 non-sensitive area oil spill cleanup requirements and beyond routine SWR 8 cleanups and closures are addressed promptly and adequately. Oversight of OCP activities is usually by staff in Austin headquarters and District Office (DO) staff. The majority of the projects are long-term remediation projects that require specialized skills to review and manage. The Commission tracks approximately 500 complex operator cleanups. These projects involve frequent sampling, reporting, and evaluation to ensure final cleanup is protective of the public health, safety and the environment.

An added incentive for cleanup outside of the OCP was enabled by Senate Bill 310, 77th Legislature (2001), which amended Texas Natural Resources Code, Chapter 91, by adding new Subchapter O, specifically authorizing the Commission to establish a Voluntary Cleanup Program (VCP) that is self-funded through the collection of application and oversight fees and that these fees be deposited to the Oil Field Cleanup Fund. Railroad Commission rules regarding the VCP were adopted in June 2002 (16 TAC, Chapter 4, Subchapter D). The purpose of the VCP is to provide an incentive to lenders, developers, owners, and operators to remediate soil and water impacted by activities over which the Commission exercises jurisdiction by removing the liability to the lenders, developers, owners, and operators who did not cause or contribute to the contamination.

In return for the release of liability, the State offsets oversight costs through the collection of fees, reduces the need for State-managed cleanup activities, and expedites the return of contaminated properties into productive use. As of August 31, 2006, there were 37 active VCP sites. Since program inception in the summer of FY02, 22 sites have been cleaned up and certificates of completion issued as of July 25, 2007.

The pursuit of environmental investigation and cleanup grants has been a direct outgrowth of efforts by the RRC to leverage the OFCU fund and obtain cleanup for sites that might not otherwise be addressed or fall to the fund. Currently there are four grants awarded to Site Remediation: one Brownfield Subtitle C State Response Program grant, and three non-Point Source Watershed grants for a total of \$3.4 million. Each grant pursued and awarded either directly or indirectly by the EPA leverages private party cleanups and the OFCU fund and, ultimately, leads to the cleanup and closure of oil and gas contamination sites.

- (a) Testing inactive wells
- (b) Testing requirements: (Rule 14) Any well inactive one year or more that is 25 or more years old must be tested to ensure that it does not present a threat of pollution. Inactive wells seeking 14(b)(2) plugging extensions based on the filing of a W-1X must also be tested before the W-1x extensions can be granted.
- (c) Types of Tests:
 - (1) Fluid level test: Must indicate an adequate separation between the base of usable-quality water and level of fluids within the wellbore. Must be performed annually, except that for W-1X purposes the test must be conducted no earlier than 90 days prior to W-1X filing.
 - (2) Mechanical integrity test: The casing must be tested to a depth at least 250 feet below the deepest usable-quality water, or 100 feet below the calculated top of cement behind the production casing, whichever is deeper.
The casing must be tested to a minimum pressure of 250 psi, and the pressure must be maintained for at least 30 minutes. If successful, no other test is required for 5 years (4 years for W-1X purposes).
- (d) Notification: Appropriate district office a minimum of 48 hours prior to conducting the mechanical integrity or fluid level test.
- (d) Reporting test results: File Commission FORM H-15, "Test on an Inactive Well More than 25 years old".

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: No.
2. Generally a minimum percentage of agreement before approval of voluntary unitization:
 - (a) Working interest: 85%.
 - (b) Royalty interest: 65%.

Taxation

Gas severance tax = 7.5% of the market value
 Gas ad valorem tax = variable by county
 Oil Field Cleanup Regulatory Fee on gas = $1/15^{\text{th}}$ of 1 cent per MCF
 Oil Severance tax = 4.6% of the market value
 Oil ad valorem tax = variable by county
 Oil Field Cleanup Regulatory Fee
 Crude oil/condensate = $5/8^{\text{th}}$ of 1 cent per barrel
 Crude oil regulatory tax = $3/16^{\text{th}}$ of 1 cent per barrel
 Oil spill fee for crude oil/condensate = 2 cents per bbl

1. Tax collecting agency: State Comptroller of Public Accounts, Capitol Station, Austin, TX 78701
2. How tax is computed:
 - (a) Severance:

crude oil/condensate	4.6% of value
natural gas	7.5% of value
 - (b) Regulatory tax:

crude oil	3/16ths of 1 cent per barrel
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 - (c) Oil Field Cleanup Regulatory Fee:

crude oil/condensate	5/8 th of 1 cent per barrel
natural gas	1/15 th of 1 cent per MCF
 - (d) Oil Spill Fee:

crude oil/condensate	2 cents/bbl for each barrel transferred through a "marine terminal" TX coastal waters.
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3. Exemption or reduction of severance tax as follows:
 - (a) Gas from high-cost gas wells (Reduction in tax for first 120 months- high cost gas produced from a well-bore spud or completed after August 31, 1996. Total reduction in tax not to exceed 50% of drilling and completion cost of the well bore (incentive became permanent as of September 1, 2003).
 - (b) Crude oil from some enhanced oil recovery projects (reduction of tax) and an additional reduction for crude oil produced from enhanced recovery using anthropogenic carbon dioxide.
 - (c) Crude oil/gas well gas/casinghead gas produced from wells that are certified by February 28, 2010, as inactive two years (exemption)
 - (d) Incremental oil/casinghead gas from oil leases with minimal oil production in 1996 that improved production between September 1, 1997 and December 31, 1998 (reduction of tax)
 - (e) Marketed casing head gas previously vented or flared (exemption from tax)

4. Statutory citations

- | | | |
|-----|-----------------------------|---|
| (a) | Severance tax
Oil
Gas | Texas State Tax Code, Title 2, Subtitle I
Chapter 202
Chapter 201 |
| (b) | Regulatory Tax | Texas Natural Resources Code (TNRC) Title |
| (c) | Oil Field Cleanup | Regulatory Fee Oil TNRC Title 3, Subtitle A, Chapter 81 |
| (d) | Gas | TNRC Title 3, Subtitle A, Chapter 81 |
| (e) | OSPRA Fee | TNRC Title 2, Subtitle C, Chapter 40 |

Land Leasing Information

1. Leasing Method: Sealed bid.
2. Notice Method: At least 30 days prior to lease sale date, the appropriate board will advertise in at least 4 daily newspapers for at least 3 issues.
3. Minimum bidding \$ (cash bonus): Along with the bonus, each bidder is required to pay by separate check an amount equal to 1 ½% of the bid payable to the commissioner as a special sales fee.
4. Qualification of the bidder: Anybody in good standing with the State Comptroller can submit bids.
5. State Statutes: Chapter 32 and 52 of the Texas Natural Resources Code

Rules: 31 TX ADC
 Chapter 9
 §151.2
 Chapter 201
6. Maximum acres:
7. Contact: Mickey R. Olmstead
 E-mail: molmstea@wpgate.glo.state.tx.us

Naturally Occurring Radioactive Material (NORM)

See Environmental Programs for NORM information.

UTAH

Administration

1. State agency: Department of Natural Resources, Division of Oil, Gas and Mining, 1594 W. North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, UT 84114-5801. Phone (801) 538-5340. Fax (801) 359-3940. Web site: www.ogm.utah.gov.
2. Docketing procedure: Petitions requesting a hearing should be filed by the 10th day of each calendar month for docketing of a hearing by the Board or appointed Hearing Examiner at the regularly scheduled meeting during the following calendar month, usually the 4th Wednesday.
 - (a) Emergency orders: Issued by the Division Director or any Board member without notice or hearing. Order effective until the next regularly scheduled meeting of the Board.
 - (b) Notice: Publication given by Board by the 1st day of the month in which the hearing is held, but in no event less than 15 days before the hearing. In addition to published notice, the Board shall give notice by mail to all interested parties.

Bond

1. Compliance bond required: Yes, for active wells on school trust lands and fee or private lands and for disposal facilities.
2. Conditions of active well bond: For the performance of the duty to plug each dry or abandoned well, to repair each well causing waste or pollution, and to maintain and restore the well site.
 - (a) Amount per well:

<u>Well Depth (ft)</u>	<u>Bond Amount (\$)</u>
0 - 1,000	\$1,500
1,000 - 3,000	\$15,000
3,000 - 10,000	\$30,000
Greater than 10,000	\$60,000
 - (b) Amount of blanket bond: Wells < 1,000 ft. in depth - \$15,000
Wells > 1,000 ft. in depth - \$120,000

Full cost bonding may be required for shut-in or temporarily abandoned wells that are found in violation of Rule R649-3-36.

3. Conditions of disposal facility bond: Disposal facilities, other than injection wells, shall be bonded in order to protect the State and oil and gas producers from unnecessary liabilities and cleanup costs in the future.
 - (a) Bond amounts are calculated according to the amount of pit area, pit storage capacity and stockpiled waste assessed at the following rates:
 - (i) \$14,000 per acre of pit, plus
 - (ii) \$1.00 per barrel of produced water for one-quarter of the total storage capacity of the facility, plus
 - (iii) \$30 per cubic yard of solid or semi-solid waste material stockpiled at the facility.
 - (b) The initial and minimum bond amount for any facility is \$10,000 and the total bond amount will be as calculated in part (a). Disposal facility operators may request incremental bond posting above the initial amount at a rate of \$0.02 per barrel of liquid or \$0.60 per cubic yard of solid/semi-solid waste material accepted for disposal at the facility.
 - (c) The incremental rules in part 3 a & b apply to operators of pits in operation prior to 1997 and do not apply to any new construction or operators. All new operators and pits are being bonded at full cost. Although this is not yet a

rule it is a policy that is strictly adhered to.

Spacing

1. Spacing requirements: Yes. Statewide location and siting of vertical wells and statewide spacing for horizontal wells.
 - (a) Vertical well density: In the absence of special orders of the Board establishing drilling units or authorizing different well density or location patterns for particular pools or parts thereof, each oil and gas well shall be located in the center of a 40-acre quarter quarter section, or a substantially equivalent lot or tract or combination of lots or tracts as shown by the most recent government survey, with a tolerance of 200 feet in any direction from the center location.
 - (d) Lineal setbacks for vertical wells: No oil or gas well shall be drilled less than 920 feet from any other well drilling to or capable of producing oil or gas from the same pool.
 - (e) Horizontal well density: A temporary 640 acre spacing unit consisting of the governmental section in which a horizontal well is located, is established for orderly development of an anticipated pool.
 - (f) Lineal setbacks for horizontal wells: In the absence of special orders of the Board, no portion of the horizontal interval within the potentially productive formation shall be closer than 660 feet to a drilling or spacing unit boundary, federally unitized area boundary, uncommitted tract within a unit, or boundary line of a lease which is not committed to the drilling of such a horizontal well. Any horizontal interval shall not be closer than 1,320 feet to any vertical well completed in and producing from the same formation.
2. Exceptions: Yes.
 - (a) Basis: Not specifically defined but may include geological topographical, cultural, archeological, and others as requested by the operator.
 - (b) Approval: Granted administratively providing that evidence of necessity, verification of lease ownership and the written consent from all owners within a 460-foot radius of the proposed well location or owners of directly or diagonally offsetting drilling units are received by the Division.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require approvals for:
 - (a) Drilling a producing or service well? Yes.
 - (b) Seismic drilling? Yes.
 - (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
 - (e) Reentry of an abandoned well. Yes.
2. Permit fee:
 - (a) Drilling: None.

- (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Yes.
- (a) When is directional survey necessary? (1) Intentional deviation and directional drilling programs and, (2) at the discretion of the Division Director when it is determined or questioned that the tolerances for vertical drilling are exceeded.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
- (a) Surface casing: Yes. (1) To a depth below all known or reasonably estimated, utilizable, domestic, fresh water levels, (2) to a depth sufficient to prevent blowouts or uncontrolled flows.
 - (b) Production casing: As necessary.
2. Minimum amount of cement required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes, special circumstances.
 - (c) Setting time: No.
3. Tubing requirements:
- (a) Oil wells: As necessary.
 - (b) Gas wells: As necessary.

Completion

1. Completion report required: Yes.
- (a) Time limit: 30 days after cessation of operations on abandonment or completion of any well drilled for the production of oil or gas.
 - (b) Where submitted: Division of Oil, Gas and Mining.
2. Well logs required to be filed: Yes.
- (a) Time limit: 30 days.
 - (b) Where submitted: Division of Oil, Gas and Mining.

- (c) Confidential time period: Yes, one year, if requested.
- (d) Available for public use: Yes.
- (e) Log catalog available: Yes.
- 3. Multiple completion regulation: Yes.
 - (a) Approval obtained: Administrative approval or Board hearing.
- 4. Commingling in well bore: Yes.
 - (a) Approval obtained: Administrative approval or Board hearing.

Oil Production

- 1. Definition of an oil well: Any well capable of producing oil in substantial quantities.
- 2. Potential tests required: Yes. In conjunction with gas-oil ratio (GOR) test.
 - (a) Time interval: 15 days following completion or recompletion.
 - (b) Witness required: As necessary.
- 3. Statewide allowable: No.
 - (a) Pool allowable: Yes. (1) To the extent provided by the granting of well spacing or spacing exception orders by the Board and, (2) by order of the Board to protect correlative rights, prevent waste, preserve reservoir pressure and obtain maximum recovery.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes. Determined on individual well basis for purposes of conservation or prevention of waste.
 - (b) Exception to limiting gas-oil ratio: Yes. If conclusively proven reservoir or energy waste does not occur.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: Yes.
- 7. Measurement involving meters: Yes.
- 8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 45 days.

Gas Production

1. Definition of a gas well: Any well capable of producing gas in substantial quantities that is not an oil well.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: 15 days following completion or recompletion of a well.
 - (b) Witness required: As necessary.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes.
 - (i) To the extent provided by the granting of well spacing or spacing exception orders by the Board and,
 - (ii) By order of the Board to protect correlative rights, prevent waste, preserve reservoir pressure and obtain maximum recovery.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Yes. As requested by the Division.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 45 days.

Water Disposal

1. State agencies that control disposal of produced salt water: Division of Oil, Gas and Mining.

Unitization

1. Compulsory unitization of all or part of a pool or common sources of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: 70%.
 - (b) Royalty interest: 70%.

Taxation

Gas severance tax = 3.0% up to and including the first \$1.50 per MCF of gas
5.0% of the value from \$1.51 and above per MCF of gas

Gas ad valorem tax = variable

Total gas tax burden = 3.0% or greater

Oil severance tax = 3.0% of the value up to and including the first \$13 per barrel for oil

5.0% of the value from \$13.01 and above per barrel of oil

Oil ad valorem tax = variable

Total oil tax burden = 3.0% or greater

1. Tax collecting agency: Utah Tax Commission, 210 North 1950 West, Salt Lake City, UT 84134.
2. How tax is computed:

Severance Tax -

- (a) Effective January 1, 2004, the severance tax rate for natural gas is as follows:
 - (1) 3.0% of the value up to and including the first \$1.50 per MCF for gas; and
 - (2) 5.0% of the value from \$1.51 and above per MCF for gas.
- (b) Effective January 1, 2004, the severance tax rate for oil is as follows:
 - (1) 3.0% of the value up to and including the first \$13 per barrel for oil; and
 - (2) 5.0% of the value from \$13.01 and above per barrel for oil.
- (c) Effective January 1, 2004, the severance tax for natural gas liquids is 4% of the taxable value for natural gas liquids.

Conservation Tax -

A 2-mill fee is levied and assessed on the value at the well of oil or gas produced, saved, and sold or transported from the premises where the oil or gas is produced.

Ad Valorem Property Tax -

For the taxable year beginning January 1, 1992, the taxable value of the underground oil and gas rights shall be determined by discounting future net revenues to their present value as of the lien date of the assessment year and then subtracting the value of applicable exempt federal, state and Indian royalty interests. The value of the production equipment shall be considered in the value of the oil and gas reserves. Other tangible property shall be separately valued at fair market value.

3. Exemption or exceptions:
- (a) Severance Tax: - No tax is imposed upon:
- (1) the first \$50,000 annually in gross value of each well or wells;
- (2) stripper wells, unless the exemption prevents the severance tax from being treated as a deduction for federal tax purposes;
- (3) the first 12 months of production for wildcat wells started after January 1, 1990; or

- (4) the first six months of production for development wells started after January 1, 1990;
 - (5) governmental interests (royalties); and
 - (6) oil or gas used in drilling or completion operations for recycling or repressuring purposes.
- (b) Conservation Tax: - No tax is imposed upon:
- (1) governmental interests (royalties); and
 - (2) oil or gas used in drilling or completion operations or for recycling or repressuring purposes.
- (c) Ad valorem property Tax: - No tax is imposed upon exempt federal, state and Indian royalty interests.
- (d) Recompletion or Workover Tax Credit: -

Working interest owners participating in the expenses of recompletions or workovers are entitled to a severance tax credit equal to 20% of the amount paid for the recompletion or workover. The tax credit is limited to \$30,000 per well during each calendar year.

- (e) Incremental production incentive: -

A 50% reduction in the severance tax rate is imposed upon the incremental production achieved from an enhanced recovery project initially approved by the board as a new or expanded enhanced recovery project on or after January 1, 1996.

4. Name of tax: Severance, Conservation, and Ad Valorem.

5. Statutory Citation:

Severance:	Utah Code Ann. Section 59-5-101 through 59-5-119.
Conservation:	Utah Code Ann. Section 40-6-14.
Ad Valorem:	Utah Code Ann. Section 59-2-201, and 59-2-210.

Land Leasing Information

- 1. Leasing Method: Competitive sealed bids.
- 2. Notice Method: Notice mailed to mailing list. Ad placed in Rocky Mountain Oil and Gas Journal.
- 3. Minimum bidding \$ (per acre): \$1 per acre on trust lands. Depends on tract on sovereign lands.
- 4. Qualification of the bidder: Anyone can submit a sealed bid. Corporations must be registered in Utah.
- 5. State Statutes: See contact information.
- 6. Maximum acres: Sovereign lands are limited by statute and cannot exceed approximately 2,560 acres. Trust lands do not have a limit.
- 7. Contact: School and Institutional Trust Lands Administration: Phone: (801) 538-5100
Forestry, Fire and State Lands: Phone: (801) 538-5555

Naturally Occurring Radioactive Material (NORM)

- 1. Regulating Agency: Department of Environmental Quality, Division of Radiation Control, P.O. Box 144850, Salt Lake City, UT 84114-4850. Phone: (801) 536-4250, Fax: (801) 533-4097.
- 2. Relevant Statute/Regulations: R313-19-13(2)(a)(i)(B) provides that naturally occurring radioactive material (NORM)

containing less than 15 picocuries per gram radium-226 is exempt from regulation. Amounts greater than this are subject to licensing.

3. Scope: Current rules are somewhat limited in scope. The Conference of Radiation Control Program Directors (CRCPD) has released draft rules for the licensing and regulation of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM). The Division of Radiation Control supports this effort.
4. Licensing: Requirements for licensing are found in the Utah Rules at R313-22.
5. Cleaning Equipment: Licensees are allowed to clean and release equipment for unrestricted release. Methods and procedures are generally approved as part of the licensing process but they may also be approved when a licensee undergoes decommissioning.
6. Disposal of Waste: Licensed radioactive waste is generally disposed of by transfer to a licensed low-level radioactive waste land burial facility. Radiation Control Rules in R313-15-1002 provide for other disposal procedures (on-site burial).
7. Subsequent Use of Equipment: Contaminated equipment may be released for unrestricted use once the licensee has decontaminated the equipment Division standards. The standards used as those found in Nuclear Regulatory Commission Regulatory Guide 1.86 (June 1974).
8. Subsequent Use of Materials: Licensed materials may be transferred to others for subsequent use provided the transfer is in accordance with R313-19-41.
9. Release/Sale of NORM-Contaminated Land: Licensed facilities (land) must meet decommissioning clean-up standards before it may be used for unrestricted purposes.
10. Projected Volume of stored NORM in the State: Unknown.
11. Other: See Utah Radiation Control Rules on the Internet at: www.deq.state.ut.us/eqrad/drc_hmpg.htm.
12. Respondent: Craig Jones
Phone: (801) 536-4264

VIRGINIA

Administration

1. State agency: Department of Mines, Minerals and Energy, Division of Gas and Oil, 202 N. 9th St., 8th Floor, Richmond, VA 23219-3402. Phone (276) 676-5423.
2. Docketing procedure:

Hearing an objection to permit applications held not less than 20 or more than 30 days from original filing of objection. Section 45.1-361.35, Virginia Gas and Oil Act.

Hearing on application for pooling order/drilling units held at next monthly Virginia Gas and Oil Board meeting if application made 30 days in advance. Section 45.1-361.20, Virginia Gas and Oil Act, and Regulation 4 VAC 25-160-30.

- (a) Emergency orders: Yes. The Gas and Oil Inspector may issue an emergency order for 30 days. Notice must be given and a hearing held to make emergency orders permanent. Section 45.1-361.27, Virginia Gas and Oil Act.

- (b) Notice:

The Gas and Oil Inspector must give notice ten days prior to a hearing on an objection to a permit application. Section 45.1-361.35, Virginia Gas and Oil Act.

Applicants for a hearing before the Board must give notice to all gas, oil, coal or mineral owners on tracts subject to the hearing at least 30 days in advance. Section 45.1-361.19, Virginia Gas and Oil Act, and Regulation 4 VAC 25-160-30.

The Board must publish notice of hearings at least 20 days in advance. Section 45.1-361.19, Virginia Gas and Oil Act.

Bond

1. Compliance bond required: Yes. Section 45.1-361.31, Virginia Gas and Oil Act.
2. Conditions of bond: Bond shall remain in effect to insure compliance with all oil and gas laws and regulations. Plugging portion of bond held for life of well; stabilization portion can be released by Gas and Oil Inspector when area stabilized. Section 45.1-361.31, Virginia Gas and Oil Act.
 - (a) Amount per well or other operation: An amount sufficient to plug the well and restore the site, not less than \$10,000 per well plus \$2,000 per acre of disturbed land. Section 45.1-361.31, Virginia Gas and Oil Act.
 - (b) Amount of blanket bond: One to 15 wells, \$25,000; 16 to 30 wells, \$50,000; 31 to 50 wells, \$75,000; 51 or more wells, \$100,000. Section 45.1-361.31, Virginia Gas and Oil Act.

Spacing

1. Spacing requirements: Yes. In the absence of field rules established by the Virginia Gas and Oil Board, statewide spacing, based on minimum distance between wells, is as follows:
 - (a) For oil: not within 1,250 ft. of another well completed in the same pool, and not within 625 ft. of the boundary of acreage supporting the well.
 - (b) For gas: not within 2,500 ft. of another well completed in the same pool, and not within 1,250 ft. of the boundary of acreage supporting the well.

- (c) For coalbed methane gas wells: not within 1,000 ft. of another coalbed methane gas well, and not within 500 ft. of the boundary of acreage supporting the well.
 - (d) For coalbed methane gas wells located in the gob: not within 500 ft. of another coalbed methane gas well completed in the gob and not within 250 ft. of the boundary of acreage supporting the well. Section 45.1-361.17, Virginia Gas and Oil Act.
2. Exceptions: Yes.
- (a) Basis: The Virginia Gas and Oil Board hears unique testimony regarding each application for exception and renders a decision based on that testimony.
 - (b) Approval: All exceptions to statewide spacing must be approved by the Board and detailed in an order issued by the Board. Section 45.1-361.17, Virginia Gas and Oil Act, and Regulation 4 VAC 25-160-60.

Pooling

- 1. Authority to establish voluntary: Yes, Section 45.1-361.18, Virginia Gas and Oil Act.
- 2. Authority to establish compulsory: Yes, by Virginia Gas and Oil Board.
 - (a) For gas or oil: Section 45.1-361.21, Virginia Gas and Oil Act, and Regulation 4 VAC 25-160-70.
 - (b) For coalbed methane gas: Section 45.1-361.21 and 45.1-361.22, Virginia Gas and Oil Act, and Regulation 4 VAC 25-160-70 and 4 VAC 25-160-80.

Drilling Permit

- 1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Section 45.1-361.29, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-10.
 - (b) Seismic drilling: Yes. Section 45.1-361.29, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-10.
 - (c) Recompletion: Yes. Section 45.1-361.29, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-10.
 - (d) Plugging and abandoning: Yes. Section 45.1-361.29, Virginia Gas and Oil Act.
 - (e) Permit transfers: Yes. Regulation 4 VAC 25-150-120.
- 2. Permit fee:
 - (a) Drilling and gathering pipelines: \$260. (Plus a \$50.00 surcharge for the Orphaned Well Fund) Section 45.1-361.29, Virginia Gas and Oil Act.
 - (b) Seismic drilling: \$130. Section 45.1-361.29, Virginia Gas and Oil Act.
 - (c) Recompletion: \$130. Section 45.1-361.29, Virginia Gas and Oil Act.
 - (d) Permit transfer: \$65. Regulation 4 VAC 25-150-120.
 - (e) New permits for wells and pipelines: \$50 to the Orphaned Well Fund. Section 45.1-361.40, Virginia Gas and Oil Act.
 - (f) Permit Modification: \$130. Section 45.1-361.29, Virginia Gas and Oil Act.
- 3. Require filing report of work performed: Yes. Section 45.1-361.27, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-210, 4 VAC 25-150-220, 4 VAC 25-150-360, 4 VAC 25-150-380, 4 VAC 25-150-400, 4 VAC 25-150-420, 4 VAC 25-150-460 as applicable.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? For any well penetrating a mineable coal seam and having an inclination greater than 1° from true vertical. Regulation 4 VAC 25-150-280; when intentionally deviated, when deviated outside of a drilling unit boundary or on an exception location, Regulation 4 VAC 25-160-200.
 - (b) Filing of survey required: Yes. Regulation 4 VAC 25-150-360; Regulation 4 VAC 25-160-200.

Casing and Tubing

1. Minimum amount required: Yes. Regulation 4 VAC 25-150-530 and 4 VAC 25-150-610.
 - (a) Surface casing: Yes, minimum 300' or 50' below the lowest groundwater water zone whichever is deeper. Exploratory well or gas well in Tidewater region: Virginia Code Section 62.1-195.1.
 - (b) Production casing: For coalbed methane gas wells, Regulation 4 VAC 25-150-620.
2. Minimum amount of cement required: Yes. Regulation 4 VAC 25-150-530 and 4 VAC 25-150-610.
 - (a) Surface casing: Yes.
 - (b) Production casing: No.
 - (c) Setting time: Minimum of 8 hours and allow the cement to achieve a calculated compressive strength of 500 psi before drilling. Regulation 4 VAC 25-150-530 and 4 VAC 25-150-610.
3. Tubing requirements: No.
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes. Regulation 4 VAC 25-150-360.
 - (a) Time limit: Within 30 days of completion. Regulation 4 VAC 25-150-10.
 - (b) Where submitted: Division of Gas and Oil.
2. Well logs required to be filed: Yes. Regulation 4 VAC 25-150-360.
 - (a) Time limit: Driller's log within 30 days of reaching total depth. Electric log within 2 years. Regulation 4 VAC 25-150-360.
 - (b) Where submitted: Division of Gas and Oil.
 - (c) Confidential time period: Yes, the earlier of 90 days after completion or 18 months after well reaches total depth automatic or 2 years after completion or 4 years after well reaches total depth if well is certified as exploratory. Section 45.1-361.6, Virginia Gas and Oil Act.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
3. Multiple completion regulation: No.
 - (a) Approval obtained: Yes.

4. Commingling in well bore: Yes.
- (a) Approval obtained: None.

Oil Production

1. Definition of an oil well: Any well that produces or appears capable of producing a ratio of less than 6,000 cubic feet of gas to each barrel of oil on the basis of initial gas-oil ratio test. Regulation 4 VAC 25-150-10.
2. Potential tests required: Yes. Regulation 4 VAC 25-160-200.
 - (a) Time interval: None.
 - (b) Witness required: No.
3. Statewide allowable: No.
 - (a) Pool allowable: Yes, for conventional gas or oil; No, for coalbed methane gas.
 - (b) Well allowable: Yes, for conventional wells; No, for coalbed methane gas wells.
 - (c) Exempt allowable: Yes.
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes.
 - (b) Exception to limiting gas-oil ratio: Yes.
5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Yes.
7. Measurement involving meters: Yes. Regulation 4 VAC 25-150-400.
8. Production reports: Yes. Section 45.1-361.38, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-210 and 4 VAC 25-150-220.
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: Monthly and Annually.

Gas Production

1. Definition of a gas well: Any well which produces or appears capable of producing a ratio of 6000 cubic feet (6 mcf) of gas or more to each barrel of oil on the basis of a gas-oil ratio test. Regulation 4 VAC 25-150-10.
2. Pressure base 14.73 psig @ 60 degrees F.
3. Initial potential tests: Yes. Regulation 4 VAC 25-160-200.
 - (a) Time interval: None.
 - (b) Witness required: No.
4. Statewide allowable: No.
 - (a) Pool allowable: Yes, for conventional gas or oil; No, for coalbed methane gas.
 - (b) Well allowable: Yes, for conventional gas or oil; No, for coalbed methane gas.

- (c) Exempt allowable: Yes.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling of gas in common facilities: Yes.
- 7. Measurement involving meters: Yes. Regulation 4 VAC 25-150-400.
- 8. Production reports: Yes. Section 45.1-361.38, Virginia Gas and Oil Act, and Regulation 4 VAC 25-150-210 and 4 VAC 25-150-220.

Water Disposal

- 1. State agencies that control disposal of produced salt water: Division of Gas and Oil, Regulation 4 VAC 25-150-420, and Department of Environmental Quality. Both state and federal permits are required for a water disposal injection well.
- 2. Injection wells: Yes under EPA primarily.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply: Upon order of the Virginia Gas and Oil Board. Sections 45.1-361.15, 45.1-361.20, 45.1-361.21 and 45.1-361.22, Virginia Gas and Oil Act and Regulation 4 VAC 25-160-50.
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: None set.
 - (b) Royalty interest: None set.

Taxation

Gas severance tax = up to 2.0% of gross receipts
 Local road improvement tax = up to 1.0% of gross receipts
 Total gas tax burden = up to 3.0% of gross receipts

Oil severance tax = ½ of 1.0% of gross receipts
 Local road improvement tax (oil coal) = up to 1.0% of gross receipts
 Total oil tax burden = up to 1 ½ of gross receipts

- 1. Tax collecting agency: Any city or county government.
- 2. How tax is computed: Oil severance tax is computed as 1/2 of 1% of the gross receipts. Gas severance tax is computed up to 2% of gross receipts. There is a Local Road Improvement Tax of up to 1% of gross receipts for both oil coal and gas.
- 3. Exemptions or exceptions: None.
- 4. Name of tax: Severance Tax on Oil; Severance Tax on Gas; Local Coal and Gas Road Improvement and Virginia Coalfield Economic Development Authority Tax.
- 5. Statutory citation: Code of Virginia, § 58.1-3712, 3712.1, 3713, 3713.1, 3713.2, 3713.3 and 3713.4.

Land Leasing Information

1. Leasing Method: Competitive sealed bids.
2. Notice of Method: Notice by publication once a week for 4 successive weeks in at least 2 newspapers of general circulation.
3. Minimum bidding \$ (per acre):
4. Qualification of the bidder:
5. State Statutes: VA ST
 §11-37, §20-1A-6
 §53.1-31
 §59.1-259
6. Maximum acres:
7. Contact:

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Mines, Minerals and Energy, Division of Gas and Oil, P.O. Box 1416, Abingdon, VA 24212. Phone: (276) 676-5423, Fax: (276) 676-5459.
2. Relevant Statute/Regulations: At this time, the Commonwealth of Virginia does not have regulations regarding NORM and does not have nor anticipate proposing regulations for naturally occurring radioactive material in oil and gas production.
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the state:
11. Respondent: Bob R. Wilson

WASHINGTON

Administration

1. State agency: Department of Natural Resources, Division of Geology and Earth Resources, Olympia, WA 98504-7007. Phone (360) 902-1450.
Ron Teissere, Oil and Gas Supervisor
2. Docketing procedure: Department issues notice of hearing to State Code Reviser's Office, interested parties, and gives public notice in a newspaper at least 20 days before the proposed hearing.
 - a. Emergency orders: Yes. Department can promulgate them with no notice. They cannot be in effect more than 90 days.
 - b. Notice: 20 days. The Department is responsible to give notice.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: Bond is for proper abandonment of well and remains in force until that is accomplished and well site has been reclaimed.
 - a. Amount per well: Not less than \$50,000.
 - b. Amount of blanket bond: Not less than \$250,000.

Spacing

1. Spacing requirements: Yes. Not smaller than the maximum area that can be efficiently drained by one well. Because we have no production, specific limits have never been set.
 - a. Density: Not greater than 160 acres for oil or 640 acres for gas.
 - b. Lineal: Not closer than 500 feet to lease boundary line.
2. Exceptions:
 - a. Basis: Department rules that prescribed location would not produce in paying quantities or that surface conditions would add a burden or hazard.
 - b. Approval: From the department.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - a. Drilling a producing or service well: Yes.
 - b. Seismic drilling: Yes. Blanket permit.
 - c. Recompletion: Yes.
 - d. Plugging and abandoning: Yes, part of drilling permit.
2. Permit fee:

a. Drilling:	<u>Depth (ft)</u>	<u>Amount</u>	<u>Depth (ft)</u>	<u>Amount</u>
	0- 3,500	\$250	7,001 - 12,000	\$ 750
	3,501 - 7,000	500	12,001 or below	1,000

 - b. Seismic drilling: \$100.
 - c. Recompletion: \$100 under special conditions.
 - d. Plugging and abandoning: No.

3. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement: Yes.
 - a. When is directional survey necessary? Before beginning the deviation.
 - b. Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required: Yes. Depends on the situation. Each well is handled separately according to the conditions that exist.
 - a. Surface casing: Yes.
 - b. Production casing: Yes.
2. Minimum amount of cement required:
 - a. Surface casing: TD to surface.
 - b. Production casing: From the shoe into surface casing.
 - c. Setting time: Yes. Not less than 16 hours.
3. Tubing requirements:
 - a. Oil wells: Yes.
 - b. Gas wells: Yes.

Completion

1. Completion report required: Yes.
 - a. Time limit: 30 days.
 - b. Where submitted: Department of Natural Resources, Division of Geology and Earth Resources, P O Box 47007, Olympia WA 98504-7007.
2. Well logs required to be filed: Yes.
 - a. Time limit: Thirty days for descriptive logs, 6 months for downhole surveys.
 - b. Where submitted: Division of Geology and Earth Resources.
 - c. Confidential time period: Yes. Twelve months from day of filing.
 - d. Available for public use: Yes.
 - e. Log catalog available: No. Information Circular 75 indicates what well logs are available.
3. Multiple completion regulation: Yes.
 - a. Approval obtained: Department action.
4. Commingling in well bore: Yes.
 - a. Approval obtained: Department action.

Oil Production

1. Definition of an oil well: No legal definition.
2. Potential tests required: No.
 - a. Time interval: On a case by case basis.
 - b. Witness required: Yes.
3. Statewide allowable: All allowables would be set by the Department on a pool by pool basis.
 - a. Pool allowable:
 - b. Well allowable:
 - c. Exempt allowable:

4. Maximum gas-oil ratio: Yes.
 - a. Provision for limiting gas-oil ratio: Yes.
 - b. Exception to limiting gas-oil ratio: Yes.
5. Bottom-hole pressure test reports required: No.
 - a. Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Yes, with written permission from the Supervisor.
7. Measurement involving meters: No.
8. Production reports: Yes.
 - a. By lease:
 - b. By well: Yes.
 - c. Time limit: 30 days.

Gas Production

1. Definition of a gas well: No legal definition.
2. Pressure base _____ psia @ _____ degrees F.
3. Initial potential tests: Yes.
 - a. Time interval: 24 hours.
 - b. Witness required: Yes.
4. Statewide allowable: Yes. All allowables would be set by the Department on a pool by pool basis.
 - a. Pool allowable:
 - b. Well allowable:
 - c. Exempt allowable:
5. Bottom-hole pressure test reports required: No.
 - a. Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: Yes, with written permission from the Supervisor.
7. Measurement involving meters: Yes.
8. Production reports: Yes.
 - a. By lease: Yes.
 - b. By well: Yes.
 - c. Time limit: 30 days.

Water Disposal

1. State agencies that control disposal of produced salt water: Department of Ecology.

Unitization

2. Compulsory unitization of all or part of a pool or common source of supply: Yes, but only for secondary recovery.
3. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - a. Working interest: As determined by the Department.
 - b. Royalty interest: As determined by the Department.

Taxation

There is no state tax levied on oil and gas in Washington at this time.

Land Leasing Information

1. Leasing Method: Sealed-bid auction. No over the counter sales of state oil and gas leases.
2. Notice Method: Advertised in the Olympia paper, and the official notice of Auction is distributed to oil and gas community mailing list.
3. Application Process: A \$25 application fee and a bid deposit of \$150 per parcel must accompany each application for lease. The bid deposit will be refunded if the applicant is not the successful bidder. If the applicant is the successful bidder, the deposit will go toward the first year's annual rental (\$1.25/acre). The bid deposit will be forfeited if the successful bidder fails to execute the lease.
4. Minimum bidding: The successful bidder will be determined by the highest bonus bid offered for each parcel. The starting bonus bid will be \$2.00/acre. A \$1.00/acre surcharge will also be assessed to the successful bidder to cover the costs of associated environmental reviews and lease processing.
5. Qualification of the bidder: Anyone can submit a sealed-bid.
6. State Statutes:
 Chapter 79.14 Revised Code of Washington (RCW)
 Available at <http://slc.leg.wa.gov>
 Chapter 332.12 Washington Administrative Code (WAC)
 Available at <http://slc.leg.wa.gov>
7. Maximum acres: 640 acres or one government-surveyed section (some parcels in this category exceed 1,000 acres).
8. Contact: Bob Suda, Product Sales and Leasing Division
 Washington Department of Natural Resources
 P.O. Box 47016
 Olympia, WA 98504-47016
 Phone: 360.902.1642
 E-mail: bob.suda@wadnr.gov
 Web site: www.dnr.wa.gov

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, WA 98504-7827. Phone: (360) 753-3459, Fax: (360) 753-1496.
2. Relevant Statute/Regulations: No specific NORM regulations.
3. Scope: WAC 246-221-001 establishes standards for protection against radiation hazardous including Radium-226.
4. Licensing: WAC 246-232-120 lists the amount of Radium-226 that is exempt from licensing.
5. Cleaning Equipment: WAC 246-232-140 Schedule D lists acceptable surface contamination levels for alpha, beta and gamma.
6. Disposal of Waste: 246-249-080 Large volumes of NORM (acceptance criteria).
7. Subsequent Use of Equipment: Same as 246-232-1.40.
8. Subsequent Use of Materials: Same as 246-232-120.
9. Release/Sale of NORM-Contaminated Land: 246-235 Specific License criteria.

10. Projected Volume of stored NORM in the State: Not determined.

11. Respondent: Gary Robertson

WEST VIRGINIA

Administration

1. State agency: West Virginia Oil and Gas Conservation Commission and Department of Environmental Protection, Office of Oil and Gas, both located at 601 57th St., Charleston, WV 25304. Phone (304) 926-0450, Fax (304) 926-0452.
2. Docketing procedure: (a) Monthly meeting of Commission, (b) Hearing upon application not less than 20 days nor more than 45 days following receipt, time and location of hearing specified in notice; proposed order 30 days following hearing; opportunity to comment 15 days following proposed order; thereafter issue order as appropriate.
 - (a) Emergency orders: Yes.
 - (b) Notice: 10 days. Certified mail to well operators and pertinent coal operators, and regular mail to all parties requesting receipt of notice.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: Bond is for the life of the well and plugging and reclamation.
 - (a) Amount per well: \$5,000.
 - (b) Amount of blanket bond: \$50,000.

Spacing

1. Spacing requirements: General rule: deep wells, 3,000' from wells producing from same formation and 400' from lease line; shallow wells, none; Coalbed methane wells, 1600' without consent from coal owner/operator between wells and 100' from lease line.
 - (a) Density: Maximum - 640 acres for gas wells and 160 acres for oil wells in a unit.
 - (b) Lineal: Deep wells only 3,000' from wells producing from the same formation except by special field rules; none for shallow wells for gas or oil.
2. Exceptions: Yes.
 - (a) Basis: Economic, geological or topographic or reservoir necessity.
 - (b) Approval: By application, hearing and order.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes, Oil and Gas Conservation Commission, CBM wells and the Coalbed Methane Review Board. Deep wells in primary production; all wells in enhanced recovery.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes, by the Department of Environmental Protection, Office of Oil and

- Gas.
 - (b) Seismic drilling: No.
 - (c) Recompletion: Yes.
 - (d) Plugging and abandoning: Yes.
- 2. Permit fee:
 - (a) Drilling: \$650.
 - (b) Fracture: \$650.
 - (c) Seismic drilling: NA.
 - (d) Recompletion: \$650 - well work permit fee.
 - (e) Plugging and abandoning: \$100 per pit registration; no discharge, no fee.
- 3. Require filing report of work performed: Yes.

Vertical Deviation

- 1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? Deep wells.
 - (b) Filing of survey required? Yes, if performed (for instance, directional drilling).

Casing and Tubing

- 1. Minimum amount required: Protect coal.
 - (a) Surface casing: Protect fresh water.
 - (b) Production casing: Yes.
- 2. Minimum amount of cement required:
 - (a) Surface casing: To surface.
 - (b) Coal casing: 30 feet below deepest coal seam to surface.
 - (c) Production casing: Adequate for separation of producing zones and high pressure zones.
 - (d) Setting time: Yes. Minimum of 8 hours and 500 lb. compression strength.
- 3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

- 1. Completion report required: Yes.

- (a) Time limit: 90 days.
 - (b) Where submitted: Department of Environmental Protection, Office of Oil and Gas.
2. Well logs required to be filed: Deep wells only.
- (a) Time limit: 90 days.
 - (b) Where submitted: Oil and Gas Conservation Commission.
 - (c) Confidential time period: Yes. One year, additionally to three total years for good cause.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: Yes.
3. Multiple completion regulation: Yes, deep wells.
- (a) Approval obtained: Justification at hearing.
4. Commingling in well bore: Yes.
- (a) Approval obtained: Justification at hearing.

Oil Production

- 1. Definition of an oil well: "Oil Well" shall mean any well which produces less than 6,000 cubic feet of gas to each barrel of oil on the basis of initial gas-oil ratio test, defining oil and gas as in the Statute.
- 2. Potential tests required: GOR.
 - (a) Time interval: 24 hour minimum.
 - (b) Witness required: No.
- 3. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: Yes, in special deep well circumstances.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: Less than 6,000 cubic feet of gas to one barrel of oil.
 - (a) Provision for limiting gas-oil ratio: No.
 - (b) Exception to limiting gas-oil ratio: No.
- 5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
- 6. Commingling oil in common facilities: No.
- 7. Measurement involving meters: No.

8. Production reports:
 - (a) By lease: Yes, for secondary recovery fields; otherwise, no.
 - (b) By well: Yes.
 - (c) Time limit: Annually before March 31 of following year.

Gas Production

1. Definition of a gas well: "Gas Well" shall mean any well which produces 6,000 cubic feet or more of gas to each barrel of oil on the basis of the initial gas-oil ratio test, defining oil and gas in the Statute.
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes.
 - (a) Time interval: Not less than 24 hours.
 - (b) Witness required: No.
4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: Yes, in special deep well circumstances.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: No.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: No.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: Yes, for secondary recovery fields; otherwise, no.
 - (b) By well: Yes, MCF.
 - (c) Time limit: Annually before March 31 of following year.

Water Disposal

1. State agencies that control disposal of produced salt water: Department of Environmental Protection, Division of Water and Waste Management.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:

(a) Working interest: None for primary, 75% for enhanced.

(b) Royalty interest: None for primary, 75% for enhanced.

Taxation

Gas severance tax = 5.0%

Gas ad valorem tax = 0.0%

Total gas tax burden = 5.0%

Oil severance tax = 5.0%

Oil ad valorem tax = 0.0%

Total oil tax burden = 5.0%

1. Tax collecting agency: State Tax Department, P. O. Drawer 1826, Charleston, WV 25327.
2. How tax is computed: Gross value: The gross value is the value of the natural gas or oil produced, as shown by the gross proceeds derived from the sale thereof by the producer - 5.0%.
3. Exemptions or exceptions: Removal of natural gas from underground storage facilities into which the natural gas has been mechanically injected following its initial removal from the earth. Any separation process of oil or natural gas commonly employed to obtain marketable natural resource produced is exempt from taxation. (But see, WV Code §11-13-2e, Gas Storage Tax).

The following are excluded from severance tax as of 1/1/2000:

- (a) Natural gas provided to the surface rights owner.
 - (b) Wells that have an average daily production of the immediately preceding year is less than five thousand cubic feet.
 - (c) Oil wells that have an average daily production for the immediately preceding calendar year of less than one-half barrel of oil.
 - (d) Wells that have not produced marketable quantities of natural gas or oil for five consecutive years immediately preceding the year in which a well is placed back into production and thereafter produces marketable quantities of natural gas or oil, severance tax is not levied for a maximum period of ten years from that point.
4. Name of tax: Severance Tax.
 5. Statutory citation: WV Code §11-13A-3a.

Land Leasing Information

There are no regulations at this time.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Bureau for Public Health.
2. Relevant State/Regulations:
3. Scope: Regulations cover radioactive materials but not specific to NORM.
4. Licensing: Does not license.

5. Cleaning Equipment:
6. Disposal of Waste:
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of Stored NORM in the State:
11. Respondent: Beattie DeBord

WYOMING

Administration

1. State agency: Wyoming Oil and Gas Conservation Commission, P. O. Box 2640, Casper, WY 82602. Phone (307) 234-7147.
2. Docketing procedure: Oil and gas hearings are scheduled a year in advance, generally on the second Tuesday of each month. Applications are accepted and heard monthly and orders issued within 30 days. S.S. 30-219.2.
 - (a) Emergency orders: Emergency orders can be issued without notice and hearing. A regular hearing with notice must be held within 15 days. S.S. 30-223 (c).
 - (b) Notice: Notice of hearings given by the Commission at least 10 days prior to the date of the hearing; 30 days on rule changes and on applications for aquifer exemptions. Chapter IV, Section 12. The Commission gives notice in all applications. Occasionally the applicant duplicates the notice. S.S. 30-223 (b) and (d).

Bond

1. Compliance bond required: Yes.
2. Seismic bonds. Chapter IV, Section 6. Client company - \$50,000; Geophysical contractors - \$50,000; Seismic hole plugger's - \$10,000.
3. Drilling, operating, plugging, and restoration bonds for fee lands:
 - (a) Bonds for wells less than 2,000 feet in depth. Chapter III, Section 4 - \$10,000 individual bond, \$75,000 blanket bond.
 - (b) Bonds for wells deeper than 2,000 feet. Chapter III, Section 4 - \$20,000 individual bond, \$75,000 blanket bond.
 - (c) Additional bonding up to \$3.00 per foot for idle wells in excess of 8,300' or 25,000' depending on level of blanket bond in place. Chapter III, Section 4.
 - (d) Bonding options:
 - (1) Owner's surety bond. Chapter III, Section 4 - \$10,000 or \$20,000 as applicable.
 - (2) Owner's blanket bond. Chapter III, Section 4 - \$75,000.
 - (3) Letter of Credit. Chapter III, Section 6.
 - (4) Certificate of deposit. Chapter III, Section 5.
 - (5) Cash (cashier's check). Chapter III, Section 5.
4. Drilling, operating, plugging, and restoration bonds for state lands (Bond of Lessee). Bond of Lessee is provided to the Commissioner of Public Lands - \$10,000 individual bond, \$100,000 blanket bond, with the same bonding options as available for fee lands.
5. Split Estates Bond: Statute § 30-5-404. Surety bond or guaranty; approval; objections; release of surety bond or guaranty.
 - a. The surety bond or other guaranty shall be in an amount of not less than two thousand dollars (\$2,000.00) per well site on the land. At the request of the oil and gas operator, after attempted consultation with the surface owner the commission may establish a blanket bond or other guaranty in an amount covering oil and gas operations on the surface owner's land as identified by an oil and gas operator in the written notice required under W.S. 30-5-402(e). Neither the minimum amount of the per well site bond or other guaranty by the commission is intended to establish any amount for reasonable and foreseeable damages.

- b. WOGCC Rule, Chapter 3, Section 4(i); Provides the minimum amount of bond and the forms of surety which may be accepted by the Commission in satisfaction of the requirements contained within the Wyoming Split Estates Act. It also provides that a field wide bond may be posted. This change is required to implement the Wyoming Split Estates Act.

Spacing

1. Spacing requirements: Yes.
 - (a) Density: 40 acres for an oil well; 40, 160 and 640 acres for a gas well; 40 and 80 acres for a coalbed methane well.
 - (b) Lineal: For an oil well, not closer than 460 feet to the exterior boundaries of a 40-acre subdivision. Same for a gas well or a coalbed methane well, center of NE/4 or SW/4 with 200 feet of tolerance on 40 acres, and the center of a 160-acre tract with 200 feet of tolerance. Chapter III, Section 2.
 - (c) Horizontal wells, no closer than 660' to unit boundary or 1320' from any vertical well completed in the same zone. Temporary 640 acre spacing. Certain areas have alternate spacing patterns. Requires notice in one half (1/2) mile area.
2. Exceptions: Yes.
 - (a) Basis: Geologic or topographic.
 - (b) Approval: Administratively in the absence of any objection; by Commission order should there be an objection. Chapter III, Section 3 and Chapter V, Section 16.

Pooling

1. Authority to establish voluntary: Yes. S.S. 30-221 (f) and (g).
2. Authority to establish compulsory: Yes.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes. Chapter III, Section 8.
 - (b) Seismic drilling: Yes. Chapter IV, Section 6.
 - (c) Stratigraphic or Core Hole: Yes. Chapter III, Section 9.
 - (d) Deepening an existing well: Yes. Chapter III, Section 8.
 - (e) Plugging and abandoning: Yes. Chapter III, Section 18.
 - (f) Reserve and workover pits: Yes. Chapter IV, Section 1.
2. Permit fee:
 - (a) Drilling: \$50.00 drilling permit. Good for one year.
 - (b) Seismic and stratigraphic/corehole drilling: \$50.00 drilling permit.

- (c) Recompletion: \$50.00 if deeper.
 - (d) Workovers, plugging and abandoning: None.
 - (e) Injection well and disposal well annual fee \$75.00.
3. Require filing report of work performed: Yes. Form No. 4, for wells and pits and Seismic Completion Report for seismic lines.

Vertical Deviation

1. Regulation requirement: Yes. Chapter III, Section 24 and 25.
- (a) Directional survey required? Yes.
 - (b) Filing of survey required? Yes, within 30 days after completion.
 - (c) Directional drilling approval valid for one year.

Casing and Tubing

1. Minimum amount required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes.
 - (c) Wells drilled within the special sodium drilling area: Yes.
2. Minimum amount of cement required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes.
 - (c) Wells drilled within the special sodium drilling area: Yes.
 - (d) Setting time: Yes, eight hours.
3. Tubing requirements: See Chapter III, Section 22, General Drilling Rules.
- (a) Oil wells: Yes.
 - (b) Gas wells: Yes.

Completion

1. Completion report required: Yes.
- (a) Time limit: Within 30 days after completion.
 - (b) Where submitted: To the Oil and Gas Conservation Commission.
2. Well logs required to be filed: Yes.
- (a) Time limit: Within 30 days after logs are run or within 30 days after completion of any further operation on it, if such operations involve drilling or redrilling. If requested, a 30-day extension to the filing due date may be

granted.

- (b) Where submitted: The Oil and Gas Conservation Commission. Chapter III, Section 21, Filing of Well Logs.
 - (c) Confidential time period: Yes, if requested, for six months.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes. Chapter III, Section 35.
 - (a) Approval obtained: Administratively, in the absence of any objection; otherwise by Commission order.
 4. Commingling in well bore: Yes. Chapter III, Section 35.
 - (a) Approval obtained: Administratively in the absence of any objection; otherwise by Commission order.

Oil Production

1. Definition of an oil well: Oil well shall mean a well the principal production of which, at the mouth of the well, is oil, as defined by the Wyoming Conservation Law. Chapter I, Section 2(ff).
2. Potential tests required: Yes. Form 3.
 - (a) Time interval: Within 30 days.
 - (b) Witness required: Yes, by the operator; occasionally by the Commission.
3. Statewide allowable: No.
 - (a) Pool allowable: Occasionally in order to preserve reservoir pressure and obtain the maximum amount of recovery.
 - (b) Well allowable: Yes, after notice and hearing by statute, the production from an exception location can be curtailed.
 - (c) Exempt allowable: No.
4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Occasionally. Only after notice and hearing in order to prevent subsurface waste and maintain the maximum reservoir pressure.
 - (b) Exception to limiting gas-oil ratio: Yes.
5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: They can be. Chapter III, Section 36.
6. Commingling oil in common facilities: Approved administratively on application. Adequate metering or measuring of oil must be assured.
7. Measurement involving meters: No.
8. Production reports:

- (a) By lease: No.
- (b) By well: Yes.
- (c) Time limit: 30 days after production.

Gas Production

1. Definition of a gas well: Gas well shall mean a well the principal production of which, at the mouth of the well, is gas, as defined by the Wyoming Conservation Law. Chapter I, Section 2(u).
2. Pressure base 14.73 psia @ 60 degrees F.
3. Initial potential tests: Yes. Form 3 and 10 through 13.
 - (a) Time interval: When necessary.
 - (b) Witness required: Supervisor's discretion.
4. Statewide allowable: No.
 - (a) Pool allowable: Occasionally, in order to maintain reservoir pressure.
 - (b) Well allowable: Yes, in order to maintain reservoir pressure or prevent waste.
 - (c) Exempt allowable: No.
5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: They can be.
6. Commingling of gas in common facilities: Considered administratively on application. Adequate measuring and testing must be assured.
7. Measurement involving meters: No.
8. Production reports:
 - (a) By lease: No.
 - (b) By well: Yes.
 - (c) Time limit: 30 days after production.

Water Disposal

1. State agencies that control disposal of produced salt water: The Wyoming Oil and Gas Conservation Commission regulates underground disposal and single lease evaporation pits. Chapter IV, Sections 1 and 5. The Department of Environmental Quality regulates the surface discharge of oil field water.

Unitization

1. Compulsory unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:

- (a) Working interest: 80%.
- (b) Royalty interest: 80%.

At the least, the above minimum percentage can be reduced by the Commission to 75%, providing that unitization negotiations have been underway for nine months or longer between the parties involved.

Taxation

Gas severance tax = 6.0%
 Gas ad valorem tax = 5.9% to 7.7%
 Total gas tax burden = 11.9% to 13.7%

Oil severance tax = 6.0%
 Oil stripper well tax = 4.0%
 Oil ad valorem tax = 5.9% to 7.7%
 Total oil tax burden = 9.9% to 13.7%

1. Tax collecting agency: Department of Revenue and Taxation, 122 W. 25th Street, Cheyenne, WY 82002; County Assessors' offices; Oil and Gas Conservation Commission.
2. How tax is computed: Severance tax - 6.0% for oil and gas; 4.0% for oil stripper well. Administration of stripper well now allows an operator to count the injection wells and producing wells in determining daily lease totals. Ad Valorem tax - an average of 5.9 to 7.7%, depending on the school district where the production is located. Conservation tax - a maximum of .0008 of a mill, Chapter III, Section 44. The current conservation tax mill levy is .0002 of a mill.
3. Exemptions or exceptions:
 - (a) Oil produced from wells that have been shut in for two years will have severance tax reduced to one and one half (1.5) for 5 years. This is effective January 1, 1995 with no sunset.
 - (b) Natural gas which is vented or flared under the authority of the Wyoming Oil and Gas Conservation Commission and natural gas which is consumed or reinjected prior to sale for the purpose of maintaining, stimulating, processing, transporting or producing crude oil or natural gas on the same lease or unit from which it was produced has no value and is exempt from taxation.
4. Name of tax: Severance, Conservation Tax.
5. Statutory citation: Wyoming Statutes (republished) Sections 39-6-302, 39-6-303.

Land Leasing Information

1. Leasing Method: Public Auction - no sealed bids sale; open oral bid - if no bid is received - offer the lease over the counter at 1st come 1st served basis.
2. Notice Method: Advertise the sale in the newspapers in the Rocky Mountain area.
3. Minimum bidding \$ (per acre): \$1.00/acre bonus.
4. Qualification of the bidder: A U.S. Citizen, 19 years of age minimum, and as a corporation, qualified by the Secretary of State to do business in Wyoming.
5. State Statutes: WY ST § 36-6-101 and General Chapter 6 Rules of the Board of Land Commissioners.
6. Maximum acres: 640 acres.

7. Contact: Harold D. Kemp
Hkemp@missc.state.wy.us
Phone: (307) 777-7331

Note: Wyoming holds 4 sales per year, always on the day after the federal oil and gas lease auction in Cheyenne.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Wyoming Oil and Gas Conservation Commission, P.O. Box 2640, Casper, WY 82602. Phone: (307) 234-7147.
2. Relevant Statute/Regulations: Rule 404(J.).
3. Scope:
4. Licensing:
5. Cleaning Equipment:
6. Disposal of Waste: Rule 404(J.) - Dispose of produced water, tank bottoms and other miscellaneous solid waste in a manner which is in compliance with the Commission's rules and other state, federal, or local regulations.
7. Subsequent Use of Equipment:
8. Subsequent Use of Materials:
9. Release/Sale of NORM-Contaminated Land:
10. Projected Volume of stored NORM in the State:
11. Respondent: Janie Nelson
12. Regulating Agency: Department of Environmental Quality, Water Quality Division, 122 W. 25th St., Herschler Bldg., 4W, Cheyenne, WY 82001. Phone: (307) 777-7082.
13. Relevant Statute/Regulations: Chapter 1, Section 22, Water Quality Rules and Regulations. Applied to NPDES permits.
14. Scope: Class 1 and 2 waters not to exceed radiological limits established on the most recent Federal Primary Drinking Water standards published by EPA. Class 3 and 4 waters radium-226 concentration shall not exceed 60pci/l.
15. Licensing: NPDES individual permit.
16. Cleaning Equipment:
17. Disposal of Waste:
18. Subsequent Use of Equipment:
19. Subsequent Use of Materials:
20. Release/Sale of NORM-Contaminated Land:
21. Projected Volume of stored NORM in the State:

22. Respondent: Maggie Davison

ALBERTA

Administration

1. Provincial agency: Alberta Energy and Utilities Board, 640-5th Avenue SW, Calgary, AB T2P 3G4, Telephone: (403) 297-8311, Fax: (403) 297-7336

The Alberta Energy and Utilities Board (EUB) is an independent, quasi-judicial agency of the Government of Alberta with responsibility to regulate Alberta's energy resources and utility sectors. Although the EUB is responsible to the Alberta Minister of Energy, it makes its formal decisions independently and in accordance with the various Acts and Regulations.

The EUB is responsible for the policy and direct administration of the following statutes: *Alberta Energy and Utilities Board Act, Coal Conservation Act, Energy Resources Conservation Act, Hydro and Electric Energy Act, Gas Resources Preservation Act, Oil and Gas Conservation Act, Oil Sands Conservation Act, Pipeline Act, Public Utilities Board Act, Turner Valley Unit Operations Act* with consequential regulations. The Board has rate regulation responsibilities under the *Electric Utilities Act*, the *Gas Utilities Act* and other legislation that specifically empowers the Board to carry out certain functions.

2. Docketing procedure: The Board determines whether a particular application should be set down for a hearing based on submissions from potentially affected parties.
 - (a) Emergency orders: The EUB has emergency powers to protect public safety and the environment pursuant to its legislation.
 - (b) Notice: Notice of Proceeding is issued, pursuant to the Alberta Energy and Utilities Board Rules of Practice (AR 101/2001).

Administrative Fees and General Assessment

The EUB is funded through a government grant and an administrative fee imposed on the industry. The administrative fee, collected from each sector regulated by the EUB, reflects the EUB's estimated operating costs associated with regulating that sector (*Alberta Energy and Utilities Board Act, Public Utilities Board Act* and the *Oil and Gas Conservation Act*).

The legislation authorizing the EUB to levy the administrative fee in the oil and gas, oil sands, electric generation, and coal sectors provides for the application of a late-payment penalty of 20 percent on any portion of the fee that remains unpaid after the deadline date. In the case of a failure to pay an invoice or late-payment penalty, the EUB can initiate action to close producing facilities. Late-payment penalties for the utilities sector will apply as stipulated in the Public Utilities Board Act.

Oil and gas and oil sands invoices for administrative fees are sent to and payable by the operator. For conventional wells and oil sands schemes, "operator" means the company that files well production and/or injection/disposal data with the Petroleum Registry. If the operator fails to pay the fee, the licensee is responsible for payment of the invoiced amount plus any penalty.

Spacing

1. Spacing requirements: Part 4 "Drilling Spacing Units and Target Areas" Oil and Gas Conservation Regulations (AR 151/71).
 - (a) Density: gas well- 1 well per section per pool, unless otherwise authorized by the Board.
 - (b) oil well- 1 well per quarter section per pool, unless otherwise authorized by the Board.
 - (c) Special rules for specified area of province and for specified zones- density: gas wells- 4 wells per section per pool for wells above the Manville Formation and 2 wells for wells producing from the Manville Formation

- Oil well- 2 wells per quarter section per pool for wells producing from the Manville Formation
- (d) Lineal: Interval distances dictated by target area provisions which are set out in section 4.030 and schedule 13.
- (e) Under special rules interval distances are set out in section 4.030 (2.1).

2. Exceptions:

- (a) Basis: The need for additional wells to improve recovery.
- (b) Approval: Issued by Spacing Unit Order.

Pooling

1. Authority to establish voluntary: Unitization- Section 79 of the *Oil and Gas Conservation Act*, RSA 2000 Chapter 0-6.
2. Authority to establish compulsory pooling: Well basis- Section 80 of the *Oil and Gas Conservation Act*, RSA 2000 Chapter 0-6.

Drilling Permit

1. Require permits for:

- (a) Drilling a producing or service well: Section 11 of the *Oil and Gas Conservation Act*, RSA 2000 Chapter 0-6 and Directive 56 “*Energy Development Applications and Schedules*” September 2005 version; Part 3 “*Licensing of Wells*” Oil and Gas Conservation Regulations (AR 151/71)
- (b) Seismic drilling: not applicable
- (c) Recompletion: section 3.010 of the Oil and Gas Conservation Regulations (AR 151/71)
- (c) Plugging and abandoning: Sections 3.012 and 3.013 of the Oil and Gas Conservation Regulations require the licensee to conduct abandonment, casing removal, zonal abandonment’s and plug backs in accordance with the current edition of the Alberta Energy and Utilities Board (EUB) *Directive 20: “Well Abandonment Guide”* (August 2003) Provides regulatory requirements for licensees abandoning wells in Alberta. Includes the minimum requirements for the licensees to follow for:
 - developing open and cased-hole abandonment programs
 - removing surface casing
 - performing remedial cementing
 - locating cement plugs
 - testing for surface casing vent flows and gas migration

2. Permit fee:

- (a) Drilling: not applicable
- (b) Seismic drilling: not applicable
- (c) Recompletion: not applicable

3. Require filing report of work performed: Directive 59 “*Well Drilling and Completion Data Filing Requirements*” 3rd edition May 2001 (Revised October 2002).

Vertical Deviation

1. Regulation requirement:
 - (a) When is directional survey necessary? When a deviation occurs from the vertical.
 - (b) Filing of survey required? Yes, pursuant to Section 6.030 of the Oil and Gas Conservation Regulations (AR 151/71)

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: Directive 8 “*Surface Casing Depth Minimum Requirements*” (October 1997) Outlines surface casing depth requirements in accordance with the Oil and Gas Conservation Regulations. Directive 10 “*Minimum Casing and Design Requirements*” (September 1990) Sets out casing design requirements according to S. 6.080 of the Oil and Gas Conservation Regulations.
 - (b) Production casing: Directive 10 “*Minimum Casing and Design Requirements*” (September 1990, under revision) sets out casing design requirements.
2. Minimum amount of cement required:
 - (a) Surface casing: Directive 9 “*Casing Cementing Minimum Requirements*” (July 1990) Outlines casing cementing requirements in accordance with the Oil and Gas Conservation Regulations.
 - (b) Production casing: Directive 9 “*Casing Cementing Minimum Requirements*” (July 1990) Outlines casing cementing requirements in accordance with the Oil and Gas Conservation Regulations. Directive 10 “*Minimum Casing and Design Requirements*” (September 1990, under revision). Sets out casing design requirements according to the Oil and Gas Conservation Regulations. Directive 51 “*Injection and Disposal Wells-Well Classifications, Completions, Logging and Testing Requirements*” (March 1994): Clarifies completion, logging testing, monitoring and application requirements for injection and disposal wells. This directive also specifies procedures and practices designed to protect the subsurface environment, including all usable groundwater and hydrocarbon-bearing zones.
 - (c) Setting time: Directive 9 “*Casing Cementing Minimum Requirements*” (July 1990) Outlines casing cementing requirements in accordance with the Oil and Gas Conservation Regulations.
3. Tubing requirements:
 - (a) Oil wells: Section 6.101 of the Oil and Gas Conservation Regulations AR (151/71).
 - (b) Gas wells: not applicable

Completion

1. Completion report required: Directive 59 “*Well Drilling and Completion Data Filing Requirements*” (June 2004). The directive contains information with respect to completing and filing operations information for the following:
 - drilling a new well
 - performing a workover
 - re-entering an existing well
 - initial completion of a new well
 - completion of a new zone

- abandoning a zone in a well

Directive 37: “*Service Rig Inspection Manual*” (February 2006) refers to requirements found in Directives, numerous Interim Directives and Informational Letters and Part 6 of the Oil and Gas Conservation Regulations (AR 151/71).

- (a) Time limit: 30 days
- (b) Where submitted: EUB: Submission is done electronically through DDS (Digital Data Submission)
2. Well logs required to be filed: Section 11.140 of the Oil and Gas Conservation Regulations (AR 151/71)
 - (a) Time limit: Within 30 days of finished drilling date
 - (b) Where submitted: Information Collection and Dissemination Group, EUB, Phone (403) 297-2581
 - (c) Confidential time period: 1 year- Section 12.150 of the Oil and Gas Conservation Regulations (AR 151/71).
 - (d) Available for public use: Yes, in both paper and electronic format but subject to confidentiality provisions.
 - (e) Log catalog available: Database entitled “Log Well Subsystem”
3. Multiple completion regulation: Sections 3.040, 3.050, 3.051 and 3.060 of the Oil and Gas Conservation Regulations (AR 151/71) and Part 15 “Certain applications” Oil and Gas Conservation Regulations (AR 151/71).
 - (a) Approval obtained: Section 3.050 of the Oil and Gas Conservation Regulations (AR 151/71).
4. Commingling in well bore: Sections 3.040, 3.050, 3.051 and 3.060 of the Oil and Gas Conservation Regulations (AR 151/71), Part 11 of the Oil and Gas Conservation Regulations (AR 151/71)- new commingling rules as of November 2006 & Directive 65 “*Resources Applications for Conventional Oil and Reservoirs*”. The resource applications for which this directive applies are divided into units as follows:
 - 1) Equity: ratable take, common purchaser, common carrier, common processor, compulsory pooling and special spacing.
 - 2) Conservation: enhanced recovery scheme (gas cycling, waterflood, immiscible gas flood, miscible flood), enhanced recovery project, enhanced recovery recognition and good production practice, concurrent production, and pool delineation and ultimate reserves.
 - 3) Production Control: commingled production, good production practice (primary depletion pools), gas-oil ratio penalty relief, special maximum rate limitation and gas allowable
 - 4) Disposal/Storage: disposal (water and waste), acid gas disposal, and underground gas storage
 - 5) Corporate Changes: change in the name of the holder of an EUB approval and change in holder of an EUB approval

- (a) Approval obtained: If needed- Commingling Order (MU Order)

Oil Production

1. Definition of an oil well: Oil and Gas Conservation Regulations (AR 151/71) section 1.020(2) (12)
2. Potential tests required: No testing required.
 - (a) Time interval: not applicable

- (b) Witness required: not applicable
- 3. Alberta allowable: Part 10 “Production Rates and Accounting” Oil and Gas Conservation Regulations (AR 151/71), Part 15 “Central Applications” Oil and Gas Conservation Regulations and Directive 65 “Resources Applications for Conventional Oil and Gas Reservoirs”.
 - (a) Pool allowable: Maximum Rate Limitation (MRL) assigned at the pool level
 - (b) Well allowable: MRL is administered on a well basis
 - (c) Exempt allowable: Where a pool or well has been granted Good Production Practices (GPP) or Special MRL or GOR penalty relief.
- 4. Maximum gas-oil ratio: Part 10 “Production Rates and Accounting” Oil and Gas Conservation Regulations (AR 151/71), Part 15 “Central Applications” Oil and Gas Conservation Regulations and Directive 65 “Resources Applications for Conventional Oil and Gas Reservoirs” June 2000 (currently being revised).
 - (a) Provision for limiting gas-oil ratio: GOR penalties applied to oil wells not on GPP
 - (b) Exception to limiting gas-oil ratio: GPP or GOR penalty relief
- 5. Bottom-hole pressure test reports required:
 - (a) Periodical bottom-hole pressure surveys: Pressure Survey Schedule associated with Directive 40 “*Pressure ad Deliverability Testing Oil and Gas Wells-Minimum Requirements and Recommended Practices*”
- 6. Commingling oil in common facilities: Directive 7 “*Production Accounting Handbook*” (May 2001)
- 7. Measurement involving meters: Part 14 “Measurement” Oil and Gas Conservation Regulations (AR 151/71) and Directive 17 “*Measurement Requirements for Upstream Oil and Gas Operations*” (Released: February 1, 2005)
- 8. Production reports: Part 12 “Records and Reports” Oil and Gas Conservation Regulations (AR 151/71) and Directive 7 “*Production Accounting Handbook*”
 - (a) By lease: not applicable
 - (b) By well: Electronic submission to the Petroleum Registry of Alberta
 - (c) Time limit: Monthly

Gas Production

- 1. Definition of a gas well: Oil and Gas Conservation Regulations (AR 151/71), section 1.020(2) (8).
- 2. Pressure base 101.325 Kpa @ 15 degrees C.
- 3. Initial potential tests: Section 11.102 of the Oil and Gas Conservation Regulations (AR 151/71) and in accordance with Directive 40 “*Pressure ad Deliverability Testing Oil and Gas Wells-Minimum Requirements and Recommended Practices*” (3rd edition 1999) Comprehensive guide designed as a handbook on oil and gas well testing.
 - (a) Time interval: Refer to Directive 40.
 - (b) Witness required: not applicable
- 4. Provincial allowable:

- (a) Pool allowable: Section 10.300 of the Oil and Gas Conservation Regulations (AR 151/71) and Directive 65 “Resources Applications for Conventional Oil and Gas Reservoirs”.
 - (b) Well allowable: Section 10.300 of the Oil and Gas Conservation Regulations (AR 151/71) and Directive 65 “Resources Applications for Conventional Oil and Gas Reservoirs” June 2000 (currently being revised).
 - (c) Exempt allowable: Gas wells are typically exempt from allowables unless off-target.
5. Bottom-hole pressure test reports required:
- (a) Periodical bottom-hole pressure surveys: Pressure Survey Schedule associated with Directive 40 “*Pressure and Deliverability Testing Oil and Gas Wells-Minimum Requirements and Recommended Practices*” (May 2004).
6. Commingling of gas in common facilities: Directive 7 “*Production Accounting Handbook*” (May 2001).
7. Measurement involving meters: Part 14 “Measurement” Oil and Gas Conservation Regulations (AR 151/71) and Directive 17 “*Measurement Requirements for Upstream Oil and Gas Operations*” (Released: February 1, 2005)
8. Production reports: Part 12 “Records and Reports” Oil and Gas Conservation Regulations (AR 151/71)
- (a) By lease: not applicable
 - (b) By well: Electric submission to the Petroleum Registry of Alberta
 - (f) Time limits: monthly

Underground Injection

1. Provincial agencies that control the underground injection of fluids: Alberta Environment and the EUB: For the EUB, please refer to Directive 51 “*Injection and Disposal Wells-Well Classifications, Completions, Logging and Testing Requirements,*” (March 1994): Clarifies completion, logging, testing, monitoring and application requirements for injection and disposal wells. Specifies procedures and practices designed to protect the subsurface environment, including all usable groundwater and hydrocarbon-bearing zones and Directive 65 “*Resources Applications for Conventional Oil and Gas Reservoirs*” June 2000.

Unitization

1. Compulsory unitization of all or part of a pool or common sources of supply: No compulsory utilization.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: not applicable
 - (b) Royalty interest: not applicable

Taxation

Gas severance tax = 0%
 Gas ad valorem tax = 0%
 Gas Royalty= 5% to 35%
 Total gas tax burden = 5% to 35%

Oil severance tax = 0%
 Oil ad valorem tax = 0%

Oil Royalty= 0% to 40%
 Total oil tax burden = 0% to 40%

1. Tax collecting agency: Alberta Energy
 9945-108 Street, 7th Floor
 Edmonton, Alberta
 T5K 2G6
 Tel: (780) 427-7425
 Fax: (780) 422-8731
2. How tax is computed: Gas royalty rate is dependent on well productivity, gas price and pool discovery date. Oil royalty rate is dependent on well productivity, oil price, oil density and pool discovery date. Please visit website at www.energy.gov.ab.ca for specific formulas to calculate royalty rates.
3. Exemptions or exceptions: Otherwise Flared Solution Gas Royalty Waiver Program
 Sulphur Emission Control Assistance Program
 CO2 Projects Royalty Credit Program
 Third Tier Exploration Oil Royalty Holiday Program
 Horizontal Re-entry Oil Royalty Reduction Program (being phased out)
 Enhanced Oil Recovery Royalty Relief Program
 Experimental Conventional Oil Projects Program
 Reactivated Oil Well Holiday Program
 Low Productivity Oil Well Program
 Innovative Energy Technologies Program
4. Name of tax: Crown royalty on crude oil and natural gas production.
5. Statutory citation: Natural Gas Royalty Regulation, 2002 (AR 220/2002).
 Petroleum Royalty Regulation (AR 248/1990).

Land Leasing Information

1. Leasing Method: Public posting with sealed bid system. As of June 28, 2006 all bid submissions must be made through the Electronic Transfer System.
2. Notice Method: Determined by policy and set out in Information Letters
3. Minimum bidding \$ (per acre): \$1.00 per acre for a lease and \$0.50 per acre for a license.
4. Qualification of the bidder: Companies must be registered to conduct business in Alberta. Individuals and companies must be registered as Alberta Energy clients. Bidding clients require an Electronic Transfer System account and must be set up for electronic funds transfer.
5. Provincial Statutes: Mines and Minerals Act (M-17 RSA 2000)
 Mines and Minerals Administration Regulation (AR 262/1997)
 Petroleum and Natural Gas Tenure Regulation (AR 263/1997)
 Crown Mineral Registration Regulation (AR 264/1997)
6. Maximum acres: 9,600 acres in the Plains Region (15 sections)
 20,480 acres in the Northern Region (32 sections)
 23,040 acres in the Foothills Region (36 sections)
7. Contact: Retha Purkis, Manager of P&NG Agreement Sales at (780) 422-9426 or Retha.Purkis@gov.ab.ca

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: The EUB, together with the stakeholders, is in the process of developing specific NORM requirements. Until such time as these requirements are developed, the EUB recommends that any handling, treating or disposal of NORM material generally follow the guidelines established by the NORM Committee document. Copies of the NORM guidelines may be obtained from:
 Alberta Human Resources and Employment
 9th Floor 10808 - 99th Avenue
 Edmonton, Alberta, Canada T5K 0G5
 Telephone: (780) 415-0612, Fax: (780) 427-5698
2. Relevant Statute/Regulations: not applicable
3. Scope: not applicable
4. Licensing: not applicable
5. Cleaning Equipment: not applicable
6. Disposal of Waste: not applicable
7. Subsequent Use of Equipment: not applicable
8. Subsequent Use of Materials: not applicable
9. Release/Sale of NORM-Contaminated Land: not applicable
10. Projected Volume of stored NORM in the State: not applicable
11. Respondent: not applicable

NEWFOUNDLAND AND LABRADOR ONSHORE

Administration

1. State agency: Department of Natural Resources, Government of Newfoundland and Labrador, P. O. Box 8700, St. John's, Newfoundland, Canada A1B 4J6. Phone: (709) 729-2920; Fax (709) 729-0059.
2. Docketing procedure: N/A
 - (a) Emergency orders:
 - (b) Notice:

Bond

1. Compliance bond required: *Petroleum Drilling Regulations*, Section 14(a) and 14(b)
2. Conditions of bond:
 - (a) Amount per well: Determined on well by well basis; irrevocable Letter of Credit or cash deposit.
 - (b) Amount of blanket bond: Cdn. \$10 million operators extra expense insurance

Spacing

1. Spacing requirements: Not applicable; based on approved development plan.
 - (a) Density: Not applicable; based on approved development plan.
 - (b) Lineal: Not applicable; based on approved development plan.
2. Exceptions: Under review. (Current practice does not involve spacing units).
 - (a) Basis: Under review.
 - (b) Approval: Under review.

Pooling

1. Authority to establish voluntary: *Petroleum Regulations*. As per approved development plan
2. Authority to establish compulsory: N/A

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: *Petroleum Drilling Regulations* – Drilling Program approval; Authority to Drill a Well. *Petroleum Regulations* “Permittee has right to....drill and test for petroleum”.
 - (b) Seismic drilling: *Exploration Survey Regulations*
 - (c) Recompletion: *Petroleum Drilling Regulations*

- (d) Plugging and abandoning: *Petroleum Drilling Regulations*
- 2. Permit fee:
 - (a) Drilling: \$1000 issuance fee for Exploration Permit.
 - (b) Seismic drilling: \$100 per seismic exploration survey licence.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
- 3. Require filing report of work performed: Yes.

Vertical Deviation

- 1. Regulation requirement:
 - (a) When is directional survey necessary? During the drilling of a well at intervals not exceeding 150 m.
 - (b) Filing of survey required? Yes.

Casing and Tubing

- 1. Minimum amount required:
 - (a) Surface casing: Not less than 150 m.
 - (b) Production casing: At least 25% of the hole is cased during all drilling operations.
- 2. Minimum amount of cement required:
 - (a) Surface casing: 30% greater than the estimated annular volume or if estimate is based on a reliable caliper log, at least 10% greater than estimated annular volume.
 - (b) Production casing: 30% greater than the estimated annular volume or if estimate is based on a reliable caliper log, at least 10% greater than estimated annular volume.
 - (c) Setting time: In no case less than 6 hours; 12 hours minimum unless acceptable testing shows compressive strength of at least 3500 kilopascals.
- 3. Tubing requirements:
 - (a) Oil wells: Regulations being developed.
 - (b) Gas wells: Regulations being developed.

Completion

- 1. Completion report required:
 - (a) Time limit: Within 21 days of the rig release date in respect of the well.
 - (b) Where submitted: Dept. of Natural Resources, Petroleum Resource Development Division.
- 2. Well logs required to be filed:

- (a) Time limit: Submit by the most rapid and practical means.
 - (b) Where submitted: Department of Natural Resources, Petroleum Resource Development Division.
 - (c) Confidential time period: 2 years after rig release date in the case of an exploration well, or 60 days after rig release date in the case of a development well.
 - (d) Available for public use: As part of the Final Well Report.
 - (e) Log catalog available: List of final well reports.
3. Multiple completion regulation:
 - (a) Approval obtained: Regulation being developed.
 4. Commingling in well bore:
 - (a) Approval obtained: Regulation being developed.

Oil Production

Note: Production and Conservation Regulations for onland production are being developed. In the interim, oil production is based on approved development plan as required in the *Petroleum Regulations*.

1. Definition of an oil well: To be included in new regulations.
2. Potential tests required:
 - (a) Time interval: See note above.
 - (b) Witness required: See note above.
3. Statewide allowable:
 - (a) Pool allowable: Not applicable.
 - (b) Well allowable: Not applicable.
 - (c) Exempt allowable: Not applicable.
4. Maximum gas-oil ratio:
 - (a) Provision for limiting gas-oil ratio: See note above.
 - (b) Exception to limiting gas-oil ratio: See note above.
5. Bottom-hole pressure test reports required:
 - (a) Periodical bottom-hole pressure surveys: See note above.
6. Commingling oil in common facilities: See note above.
7. Measurement involving meters: See note above.
8. Production reports:

- (a) By lease: See note above.
- (b) By well: See note above.
- (c) Time limit: See note above.

Gas Production

Note: Production and Conservation Regulations for onland production are being developed. In the interim, gas production is based on approved development plan as required in the *Petroleum Regulations*.

1. Definition of a gas well: See note above.
2. Pressure base _____ psia @ _____ degrees F. See note above.
3. Initial potential tests:
 - (a) Time interval: See note above.
 - (b) Witness required: See note above.
4. Statewide allowable:
 - (a) Pool allowable: N/A
 - (b) Well allowable: N/A
 - (c) Exempt allowable: N/A
5. Bottom-hole pressure test reports required:
 - (a) Periodical bottom-hole pressure surveys: See note above.
6. Commingling of gas in common facilities: See note above.
7. Measurement involving meters: See note above.
8. Production reports:
 - (a) By lease: See note above.
 - (b) By well: See note above.
 - (c) Time limits: See note above.

Underground Injection

1. State agencies that control the underground injection of fluids: Department of Natural Resources.

Unitization

1. Compulsory unitization of all or part of a pool or common sources of supply: As per approved development plan.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: As per approved development plan.

- (c) Royalty interest: As per approved development plan.

Taxation

Gas severance tax = Under review
 Gas ad valorem tax = Under review
 Total gas tax burden = Under review

Oil severance tax = Royalty Regime – onshore only
 Oil ad valorem tax = Royalty Regime – onshore only
 Total oil tax burden = Royalty Regime – onshore only

1. Tax collecting agency: Royalty collected by the Department of Natural Resources.
2. How tax is computed: Generic Onshore Royalty Regime. Based on value of production to a threshold and then a percentage of net profits from the field.
3. Exemptions or exceptions: 2 million barrel royalty holiday.
4. Name of tax: Basic royalty, net royalty.
5. Statutory citation: *Petroleum and Natural Gas Act*.

Land Leasing Information

1. Leasing Method: Work commitment (or as noted by the Minister in Request for Bids)
2. Notice Method: Request for Bids. Published in newspapers and by press release.
3. Minimum bidding \$ (per acre): None (or as noted by the Minister in Request for Bids)
4. Qualification of the bidder: As noted in Request for Bids (Deposit of 20% of work commitment)
5. State Statutes: *Petroleum and Natural Gas Act, Petroleum Regulations*
6. Maximum acres: 40,000 ha
7. Contact: Fred Allen, Director (A), Policy and Strategic Planning. Phone: (709) 729-2778.

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: Dept. of Environment, Government of Newfoundland and Labrador
2. Relevant Statute/Regulations: *Provincial Environmental Protection Act*.
3. Scope: Province wide.
4. Licensing: Storage only.
5. Cleaning Equipment: None.
6. Disposal of Waste: Restricted.
7. Subsequent Use of Equipment: None.

8. Subsequent Use of Materials: No re-use.
9. Release/Sale of NORM-Contaminated Land: Not applicable.
10. Projected Volume of stored NORM in the State: Steel leak proof containers: length (40ft) x height (9ft:6inch) x width (6ft:2inch)
11. Respondent: Sam El-Gohary, Pollution Prevention Division, November 24, 2003.

REPUBLIC OF GEORGIA

Administration

1. State agency: State Agency for the Regulation of Oil and Gas Resources of Georgia (SAROGR), 45, Kazbegi Avenue, Tbilisi, Georgia 380077. Phone: (99532) 253311, 253399; Fax: (99532) 253311.

The Regulations do not prescribe the specific steps an Investor must undertake in order to achieve the desired result. Instead, they clearly state goals and objectives that must be achieved, such as safe conduct of oil and gas operations, conservation of oil and gas resources, protection of the environment and such.

The Regulations provide basic guidelines of conduct, set principal criteria for Investor's performance and it will be up to the Operator to decide how it will go about achieving the stated goal. However, all Investors are obliged to comply with the international standards.

2. Docketing procedure: Each Operator who receives a notice of probable violation from SAROGR may respond by: (1) Correcting condition that is a probable violation within the time specified in the notice of violation and paying any fine or penalty assessed in a final administrative decree; (2) Attempting to resolve any disputed issue or issue related to probable violation through correspondence or discussions with Agency personnel; or (3) Filing a written request for a hearing.

Within five (5) business days of receipt of a request for hearing or a complaint, the Head of the Agency shall designate an employee of the Agency. In the event that there is no employee of the Agency who is qualified to serve as a Dispute Resolution Representative the Head of the Agency may appoint an independent, qualified and unbiased person who is not an employee of the Agency as Dispute Resolution Representative to serve as the Dispute Resolution Representative for the matter, and assign a case number to the matter. No employee who has been materially involved in the investigation of the alleged violation or the preparation of the notice may be designated as a Dispute Resolution Representative. The Dispute Resolution Representative shall establish a schedule for the filing of all motions, completion of discovery procedures, and any preliminary hearings. Motions and discovery shall be conducted in a manner conforming to the Code of Civil Procedure Code.

- (a) Emergency orders: Nothing contained in the Regulation shall prevent or delay the Head of the Agency from issuing administrative decrees or taking other action permitted by law to order the emergency suspension or cessation of Oil and Gas Operations that, in the opinion of the Head of the Agency, are necessary to protect life, health, property, or the environment from imminent harm.
- (b) Notice: If the Agency determines that a probable violation of these Regulations has occurred, the Head of the Agency or the proper designee shall prepare and deliver to the Operator's principal office in Georgia a written preliminary notice of violation containing at least the following information:
 - The Agency's case number and other designation of the notice;
 - The date, location, and specific nature of the probable violation;
 - A reference to the specific Regulation asserted by the Agency to have been violated;
 - A specific time period in which any violation shall be corrected
 - The amount of fines or penalties that the Agency proposes to assess for a violation and the amount proposed to be assessed if the probable violation is not corrected;
 - The name and telephone number of an Agency employee to be contacted for further information;
 - The method by which the notice of probable violation may be contested under this Chapter, including the time periods within a contest must be filed.

If a Person served with a notice of probable violation does not respond in one of the ways set out in this section within thirty (30) days, the Head of the Agency may enter an administrative decree finding that the violation has occurred and setting penalties.

Bond

1. Compliance bond required: Yes. The Agency may require an Operator to furnish a bond or bonds that guarantees compliance with the obligations under a Contract and these Regulations that are related to the abandonment or decommissioning of oil or gas facilities, including the abandonment of wells, removal of platforms, restoration of any lands or surface waters adversely affected by Oil and Gas Operations and clearance of equipment and facilities from the Contract Area within the following period.
 - (a) Forty-five (45) days after a proposed Plan is approved the Agency, or
 - (b) One hundred and twenty (120) days after the effective date of these Regulations for any existing Contract pursuant to which a Plan has been previously approved.
2. Conditions of bond: The Operator furnishes and maintains an area-wide bond in an amount agreed to by the Agency issued by a qualified surety and conditioned on compliance with all the terms and conditions of all Contracts held by the Operator within Georgia.
 - (a) The Operator is required by its Contract to establish, or the Agency accepts the establishment of an abandonment account in lieu of such bond pursuant to Article 31 of the Regulations, or
 - (b) The Agency accepts a third party guarantee or letter of credit in lieu of such bond pursuant to Article 32 of the Regulations.

Spacing

1. Spacing requirements: No. In the Appraisal Plan the operator should provide information on the approximate location of each appraisal well, including surface location, bottom hole location and proposed total well depth field, upon completion.

Pooling

1. Authority to establish voluntary: Yes. The Agency may approve an application for Joint Development of a Oil and Gas Reservoir(s) if Joint Development (a) is likely to promote or expedite Oil and Gas Operations, (b) is likely to conserve natural resources or protect the rights of adjacent Operators with respect to a common Oil and Gas Reservoir.

Prior to undertaking any activities pursuant to a proposed Joint Development Plan, an application for Joint Development must be submitted to, and approved by, the Agency pursuant to the Oil and Gas Regulations, and the applicable provisions of the Oil and Gas Law and any Contract.

2. Authority to establish compulsory: Yes. The Agency may, either on its own initiative or upon the application of an Operator, require Joint Development of a single, continuous and common Reservoir if (a) Joint Development is required to conserve natural resources or protect the rights of adjacent Operators with respect to such Reservoir, and (b) the Oil and Gas accumulation in such Reservoir extends across the boundary of a Contract Area or License into the area which comprises a separate Contract Area or License.
3. Procedure for Notice of Compulsory Joint Development: The Agency shall provide a written notice of the proposed Joint Development to all interested Operators.

The Operators shall have one hundred and eighty (180) days after receipt of such notification to submit a voluntary Joint Development Plan to the Agency.

If the interested Operators and Contractors fail to submit a voluntary Joint Development Plan within the specified time period, the Agency may provide all such parties with written notice of its intent to proceed under paragraphs 3, 4, 5 and 6 of article 109 of the Regulation and shall invite the Operators affected to submit proposed Joint Development Areas for its consideration.

The Agency may refer the matter to an Independent Dispute Resolution Representative who shall proceed as set forth in Chapter LXX and LXXI of the Regulations, or if all Operators agree, the Agency may proceed to hold a Hearing.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well: Yes.
 - (b) Seismic drilling: No (included in seismic permit).
 - (c) Recompletion: Yes.
 - (d) Plugging and abandoning: Yes.
2. Require filing report of work performed: Yes.

Vertical Deviation

1. Regulation requirement:
 - (a) When is directional survey necessary? During the drilling.
 - (b) Filing of survey required? Yes. Should be filed in the Drilling Completion Report.

Casing and Tubing

1. Minimum amount required: No. Regulation includes only general requirements: "The Operator shall case all wells with a sufficient number of strings of casing and use a sufficient quality and quantity of cement on each string of casing in a manner necessary to prevent release of fluids from any stratum through the wellbore, prevent communication between separate strata, protect underground sources of fresh, potable water or water used for hydro-therapeutic purposes and geothermal resources from contamination, support unconsolidated sediments, and otherwise provide a means of control of the formation pressures and fluids."
 - (a) Surface casing:
 - (b) Production casing:
2. Minimum amount of cement required: No. If there are indications of inadequate cementing, the Operator shall evaluate the adequacy of the cementing operations in accordance with International Oil Field Practice. If the evaluation indicates inadequate cementing to the extent that the requirements of 1 of Article 80 are unlikely to be achieved, the Operator shall re-cement or take other remedial action as required according to International Oil Field Practice.
 - (a) Surface casing:
 - (b) Production casing:
 - (c) Setting time: Not more 24 hours.
3. Tubing requirements: No specific predefined requirement. Operator shall: (a) ensure that all tubing has the necessary strength and pressure integrity and is otherwise suitable for its intended use, and (b) conduct integrity testing in the event of prolonged operations. All wells shall be completed with tubing installed unless an exception to such requirement has been approved by the Agency.
 - (a) Oil wells:
 - (b) Gas wells:

Completion

1. Completion report required: Yes.
 - (a) Time limit: The report should be submitted within 1, 5 month.
 - (b) Where submitted: SAROGR
2. Well logs required to be filed: Yes.
 - (a) Time limit: 1.5 month.
 - (b) Where submitted: SAROGR
 - (c) Confidential time period: 5 years.
 - (d) Available for public use: Yes.
 - (e) Log catalog available: No
3. Multiple completion regulation:
 - (a) Approval obtained: Yes.
4. Commingling in well bore:
 - (a) Approval obtained: Yes.

Oil Production

1. Definition of an oil well: Not
2. Potential tests required: Yes.
 - (a) Time interval: On the case by case basis.
 - (b) Witness required: Yes.

Statewide allowable: Yes. According to the Regulations. (1) Oil and Gas Reservoirs shall not be produced in excess of the Maximum Efficient Rate as defined and averaged in a relevant Plan or modification thereto. (b) An initial Maximum Production Rate for each well shall be proposed in any relevant Plan by Operator taking into account such factors as limitations imposed by well and surface equipment, san production, gas-oil and water-oil ratios, location of perforated intervals, prudent operating practices, and the Operator's ability to transport and market any produced Oil and Gas. Wells shall not be produced in excess of the Maximum Production Rate. Subject to Article 5 of the regulation, a revised Maximum Production Rate may be periodically proposed by the Operator and submitted to the Agency for approval. The mathematical sum of all the Maximum Production Rates may exceed the Maximum Efficient Rate as defined in paragraph

3.
 - (a) Pool allowable:
 - (b) Well allowable:

- (c) Exempt allowable: Yes.
- 4. Maximum gas-oil ratio: To be defined by Operator and approved by the Agency.
 - (a) Provision for limiting gas-oil ratio: Not.
 - (b) Exception to limiting gas-oil ratio: Not.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: Should be included in Operator's Plan.
- 6. Commingling oil in common facilities: An Operator may apply to commingle hydrocarbons produced from different Reservoirs within a common wellbore. Applications for downhole commingling shall include the following information: (1) geologic and reservoir engineering data, (2) a schematic diagram of well equipment and completion techniques, (3) other pertinent well information and (4) description of measures to be taken to prevent Waste of Oil and Gas.

The applications shall be approved where the commingled production will not reduce the Ultimate Economic Recovery of Oil and Gas from any Reservoir(s) so produced but, instead, will promote the conservation of Oil and Gas. Such Applications may be disposed of by approval of the Agency, without hearing or upon hearing pursuant to title XIII of 13 of the regulation.
- 7. Measurement involving meters: Yes.
- 8. Production reports: Yes.
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: Monthly; Annual.

Gas Production

- 1. Definition of a gas well: Not
- 2. Pressure base _____ psia @ _____ degrees F.
- 3. Initial potential tests: To be defined case by case basis.
 - (a) Time interval:
 - (b) Witness required:
- 4. Statewide allowable: Same as in case of Oil.
 - (a) Pool allowable:
 - (b) Well allowable:
 - (c) Exempt allowable:
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Periodical bottom-hole pressure surveys: To be determined by the Operator.

6. Commingling of gas in common facilities: Same as in case of Oil.
7. Measurement involving meters: Yes.
8. Production reports: Yes.
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limits: Monthly; Annual.

Underground Injection

1. State agencies that control the underground injection of fluids: SAROGR and Ministry of Environment Protection.

Unitization

1. Compulsory unitization of all or part of a pool or common sources of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization: Not.
 - (a) Working interest: Not.
 - (b) Royalty interest: Not.

Taxation

Gas severance tax = from 5 to 10% (usually 5% for onshore and 7% for offshore).
 Gas ad valorem tax = usually it is a 20% by the Tax Law of Georgia, but for the Oil and Gas Operations there are special tax exemptions for the acting companies.
 Total gas tax burden = N/A

Oil severance tax = 5 from 5 to 10% (usually 5% for onshore and 7% for offshore).
 Oil ad valorem tax = usually it is a 20% by the Tax Code of Georgia, but for the Oil and Gas Operations there are special tax exemptions for the acting companies.
 Total oil tax burden = N/A

1. Tax collecting agency: Ministry of Finance through it's Tax Departments.
2. How tax is computed: In accordance to the Georgian Tax code by appropriate tax agencies.
3. Exemptions or exceptions: Yes.
4. Name of tax: Customs Duties; Company Property Tax; Land Tax; Excise Tax; Advertisement Tax; Economic Tax; Tax on Ownership of Motor Vehicles; Tax on Transfer of Motor Vehicles; Tax on entering Motor Vehicles into the Territory of Georgia; Tax on Pollution of the Environment and Harmful Substances, other Taxes.
5. Statutory citation: Tax Code - Economic Tax, Part 14, Chapter 48, Article 273 Closure 32; Movables - Part 8, Chapter 26, Chapter 26, Closure 166-V; VAT - Part 3, Chapter 14, Article 101-111.

Land Leasing Information

According to Article 20 of the Oil and Gas Law - On the basis of License for Usage of Oil and Gas Resources and relevant Agreement issued by the Agency, the Agency shall simultaneously issue a permit on usage of Land Allotment to Investor prepared by the State Department of Land Management of Georgia.

In the event the land required for Oil and Gas Operations belongs to an individual or legal entity (which is not the State), then Investor prior to signing Agreement shall conclude an agreement with the landowner for the exclusive usage of the required land for the entire period of the Agreement. Investor shall submit such agreement to the Agency for concluding Agreement in accordance with rules established by the Agency.

The Agency is invested with the right to appeal to court for Eminent Domain. The Agency shall prepare and adopt rules and normative acts that shall govern the exercise of the power of Eminent Domain.

1. Leasing Method:
2. Notice Method: Not.
3. Minimum bidding \$ (per acre): Not.
4. Qualification of the bidder: Not.
5. State Statutes: Yes.
6. Maximum acres: Not limited but for the producing well is 360 m².
7. Contact: SAROGR

Naturally Occurring Radioactive Material (NORM)

1. Regulating Agency: SAROGR and Ministry of Environment Protection.
2. Relevant Statute/Regulations: Oil and Gas Regulations.
3. Scope:
4. Licensing: Not required.
5. Cleaning Equipment: Yes.
6. Disposal of Waste: Yes, prior to undertaking any Oil and Gas Operations, Operators shall submit an Oil and Gas Waste Disposal Plan as a part of Environmental Protection Plan to the Agency for approval. No disposal of Oil and Gas Waste shall take place unless an Operator obtains an Oil and Gas Disposal Permit from the Agency.
7. Subsequent Use of Equipment: Yes.
8. Subsequent Use of Materials: Yes.
9. Release/Sale of NORM-Contaminated Land: Not.
10. Projected Volume of stored NORM in the State: Not.
11. Respondent:

NOTE: The section on Federal and Indian land and offshore is in two parts. The first section covers onshore exploration and production; the second section commences on page US-5 and covers the Outer Continental Shelf.

BUREAU OF LAND MANAGEMENT (BLM)
ONSHORE OPERATIONS
FEDERAL AND INDIAN LAND (Except Osage)

Administration

1. Agency: Director, Bureau of Land Management, 1849 C Street, Washington, D.C. 20240.
2. Docketing procedure: Do not hold hearings as such. Appeals can be made.
 - (a) Emergency orders: Yes.
 - (b) Notice: The Director, Bureau of Land Management, is responsible for oil and gas orders and notice to lessees and operators.

Bond

1. Compliance bond required: Yes.
2. Conditions of bond: As provided for in regulations. (Varies by land category.)
 - (a) Amount per well: Do not have per well bond.
 - (b) Amount of blanket bond: Federal leases - adjustable, minimums are \$10,000 per lease, \$25,000 per State, \$150,000 nationwide. Indian leases - variable \$1,000 to \$8,000 per lease, \$15,000 per state, \$75,000 nationwide.

Spacing

1. Spacing requirements: No minimum.
 - (a) Density: Set by appropriate District Manager in cooperation with the state.
 - (b) Lineal: Set by appropriate District Manager.
2. Exceptions: Yes.
 - (a) Basis: For good cause where not prohibited by law.
 - (b) Approval: From appropriate District Manager.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes - Not normally invoked.

Drilling Permit

1. Require permits for:
 - (a) Drilling a producing or service well? Yes.

- (b) Seismic drilling: No.
 - (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
2. Permit fee: None required.
 - (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: Yes.

Vertical Deviation

1. Regulation requirement: No.
 - (a) When is directional survey necessary? All directionally drilled wells.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:
 - (a) Surface casing: As conditions warrant.
 - (b) Production casing: As conditions warrant.
2. Minimum amount of cement required:
 - (a) Surface casing: Cemented to surface.
 - (b) Production casing: As conditions warrant.
 - (c) Setting time: No.
3. Tubing requirements:
 - (a) Oil wells: No.
 - (b) Gas wells: No.

Completion

1. Completion report required: Yes.
 - (a) Time limit: 30 days after completion.
 - (b) Where submitted: Appropriate District Office.

2. Well logs required to be filed: Yes.
 - (a) Time limit: 30 days after well completion.
 - (b) Where submitted: Appropriate District Office.
 - (c) Confidential time period: Yes, if requested, until lease expires.
 - (d) Available for public use: No.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes.
 - (a) Approval obtained: Application to appropriate District Manager.
4. Commingling in well bore: Yes.
 - (a) Approval obtained: Application to appropriate District Manager.

Oil Production

1. Definition of an oil well: Classified by completion as to oil or gas production. No formal definition between oil wells or gas wells.
2. Potential tests required: No, not generally.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
3. Statewide allowable: No. State allowables usually honored.
 - (a) Pool allowable: N/A.
 - (b) Well allowable: N/A.
 - (c) Exempt allowable: N/A.
4. Maximum gas-oil ratio: No, but can be established by appropriate District Manager.
 - (a) Provision for limiting gas-oil ratio: As established.
 - (b) Exception to limiting gas-oil ratio: By discretion of appropriate District Manager.
5. Bottom-hole pressure test reports required: Yes, as requested.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling oil in common facilities: Yes.
7. Measurement involving meters: Yes.
8. Production reports:

- (a) By lease: Yes. (By each operator on the lease.)
- (b) By well: Yes.
- (c) Time limit: By the 15th of second month following the production month.

Gas Production

1. Definition of a gas well: Classification by completion as to oil or gas production. No formal definition between oil wells and gas wells.
2. Pressure base 14.73 pisa @ 60 degrees F.
3. Initial potential tests: No.
 - (a) Time interval: N/A.
 - (b) Witness required: N/A.
4. Statewide allowable: Generally use applicable State schedules.
 - (a) Pool allowable: N/A.
 - (b) Well allowable: N/A.
 - (c) Exempt allowable: N/A.
5. Bottom-hole pressure test reports required: Yes, when requested by appropriate District Manager.
 - (a) Periodical bottom-hole pressure surveys: No.
6. Commingling of gas in common facilities: Yes, by discretionary authority of appropriate District Manager.
7. Measurement involving meters: Yes.
8. Production reports:
 - (a) By lease: Yes. (By each operator on the lease.)
 - (b) By well: Yes.
 - (c) Time limit: By the 15th of the second month following the production month.

Water Disposal

1. Agencies that control disposal of produced salt water: BLM and EPA.

Unitization

1. Unitization of all or part of a pool or common source of supply: Yes.
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: Not established, but must protect the rights of all interest owners.

- (b) Royalty interest: Same as (a) above.

MINERALS MANAGEMENT SERVICE OUTER CONTINENTAL SHELF OPERATIONS

Administration

1. Agency: Director, Minerals Management Service, 1849 C Street, Washington, D.C. 20240.
2. Docketing procedure: Do not hold hearings as such. Appeals can be made.
 - (a) Emergency orders: Yes. The appropriate Regional Director is responsible for Notices to Lessees and Operators.
 - (b) Notice: 30 days minimum.

Bond

1. Compliance bond required: Yes. Issuance of lease \$50,000.
2. Conditions of bond: Surety bond of \$50,000; Exploration Plan approval \$200,000; Development and Production Plans and Development Operations Coordination Documents approval \$500,000.
 - (a) Amount per well: On lease basis.
 - (b) Amount of blanket bond: \$300,000, \$1 Million, or \$3 Million. Final Rule published on August 27, 1993, (58FR 45255).

A final rule was published on 5/22/97 (62 FR 27948) to establish December 8, 1997 as a deadline for every lessee to comply with the bond coverage requirements.

Spacing

1. Spacing requirements: Yes. Approval of Regional Supervisor needed.
 - (a) Density: As required for drainage protection, optimum position on structure and for avoidance of unnecessary wells.
 - (b) Lineal: Not less than 500' from property line unless prior approval of Regional Supervisor.
2. Exceptions: Yes.
 - (a) Basis: By letter of no objection from offset properties.
 - (b) Approval: Regional Director.

Pooling

1. Authority to establish voluntary: Yes.
2. Authority to establish compulsory: Yes.

Drilling Permit

MMS has revised forms to alleviate redundant reporting and clarify other permit and reporting requirements (see 67 FR 536090). The revisions are also needed for the ongoing transformation to an "E-Forms Permit and Report Process". NTL 2004-G10 (Effective Date June 1, 2004) implements the eWell Permitting and Reporting System. A final rule on Oil and Gas Drilling Operations was published February 20, 2003 (64 FR 2660) and became effective March 24, 2003.

1. Require permits for:
 - (a) Drilling a producing or service well? Yes.
 - (b) Seismic drilling? Yes.
 - (c) Recompletion? Yes.
 - (d) Plugging and abandoning? Yes.
2. Permit fee:
 - (a) Drilling: None.
 - (b) Seismic drilling: None.
 - (c) Recompletion: None.
 - (d) Plugging and abandoning: None.
3. Require filing report of work performed: Yes.
 - (a) Application for Permit to Modify; or
 - (b) Well (Re)Completion Report; or
 - (c) Notice of Intent/Report of Well Decommissioning; or
 - (d) End of Operations Report; or
 - (e) Well Activity Report.

Vertical Deviation

1. Regulation requirement: Yes.
 - (a) When is directional survey necessary? For directional wells at intervals not exceeding 500' prior to, or upon setting surface or intermediate casing, liners, and at total depth. (100' when angle changes are planned.) For vertical wells, at intervals not exceeding 1000'.
 - (b) Filing of survey required? Yes.

Casing and Tubing

1. Minimum amount required:

- (a) Surface casing: Yes.
 - (b) Production casing: No.
2. Minimum amount of cement required:
- (a) Surface casing: Yes.
 - (b) Production casing: Yes.
 - (c) Setting time: Eight hours for conductor casing; all others require 12 hours.
3. Tubing requirements: Yes.
- (a) Oil wells: As needed.
 - (b) Gas wells: As needed.

Completion

1. Completion report required: Yes.
- (a) Time limit: Within 30 days after completion.
 - (b) Where submitted: District Supervisor.
2. Well logs required to be filed: Yes.
- (a) Time limit: Within 30 days after completion.
 - (b) Where submitted: Regional office.
 - (c) Confidential time period: Considered proprietary data.
 - (d) Available for public use: No.
 - (e) Log catalog available: No.
3. Multiple completion regulation: Yes.
- (a) Approval obtained: Regional Supervisor.
4. Commingling in well bore: Yes.
- (a) Approval obtained: Regional Supervisor.

Oil Production

1. Definition of an oil well: Completed in oil reservoir or in oil reservoir with an associated cap.
2. Potential tests required: Yes. MMS-126, Well Potential Test Report. New form numbers as published on March 16, 1994. (59FR 12161)
- (a) Time interval: Within 30 days of the date of first continuous production.

- (b) Witness required: When required by Regional Supervisor.
- 3. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
- 4. Maximum gas-oil ratio: No.
 - (a) Provision for limiting gas-oil ratio: Yes. If high GOR would affect ultimate recovery.
 - (b) Exception to limiting gas-oil ratio: Yes. After application.
- 5. Bottom-hole pressure test reports required: Yes.
 - (a) Within 3 months after the date of first continuous production.
 - (b) Periodical bottom-hole pressure surveys: Yes. On annual basis.
- 6. Commingling oil in common facilities: Yes.
- 7. Measurement involving meters: Yes.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: By the 15th of the second month following the production month.

Gas Production

- 1. Definition of a gas well: A well completed in a gas reservoir or in the gas cap of an oil reservoir with an associated gas cap.
- 2. Pressure base 14.73 psia @ 60 degrees F. (15.025 psia in the Gulf of Mexico).
- 3. Initial potential tests: Yes.
 - (a) Time interval: Initial, 30 days after pipeline connection; semiannually thereafter.
 - (b) Witness required: When required by Regional Supervisor.
- 4. Statewide allowable: No.
 - (a) Pool allowable: No.
 - (b) Well allowable: No.
 - (c) Exempt allowable: No.
- 5. Bottom-hole pressure test reports required: Yes.

- (a) Periodical bottom-hole pressure surveys: Yes. On annual basis.
- 6. Commingling of gas in common facilities: Yes.
- 7. Measurement involving meters: Yes.
- 8. Production reports:
 - (a) By lease: Yes.
 - (b) By well: Yes.
 - (c) Time limit: By the 15th of the second month following the production month.

Water Disposal

- 1. Agencies that control disposal of produced salt water: MMS and Environmental Protection Agency.

Unitization

- 1. Compulsory unitization of all or part of a pool or common source of supply: Yes. Director may you and other lessees to unitize operations as deemed necessary. Final rule on unitization published on 2/5/97 (62 FR 5329).
- 2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
 - (a) Working interest: N/A.
 - (b) Royalty interest: N/A.

Oil Spill Financial Responsibility

- 1. Financial evidence required: Yes, for any offshore facility with the potential of an oil/gas condensate spill of 1,000 barrels or more. This amount may be reduced for high risk areas.
- 2. Types of financial evidence acceptable: Self-insurance (based on audited annual financial statements), indemnification by another corporation in their corporate family (based on self-insurance procedures), property and casualty insurance, surety bonds, or some combination of these.
- 3. Types of offshore facilities requiring coverage: Those used for: exploring for (including geological exploration), drilling for, or producing oil on the outer continental shelf, state coastal waters (including bays or estuaries) seaward of the line of ordinary low water; or transporting oil across these waters from facilities engaged in exploration, drilling, or production.
- 4. Amount of required financial evidence:
 - (a) From \$35 million to \$150 million on the outer continental shelf.
 - (b) From \$10 million to \$150 million on state coastal waters seaward of the line of ordinary low water.
- 5. Basis for certification: On a lease basis, which includes pipeline right-of-ways as a type of lease, to a Designated Applicant selected by the Responsible Parties (i.e., Lessees for leases, and Owners and Operators for pipelines).

A final rule was published on 8/11/98 (63 FR 42699) to establish October 13, 1998, as the effective date of the rule and April 8, 1999, as the deadline for compliance.

Fixed and Floating Platforms and Structures

1. Definition of facility
 - (a) All installations permanently or temporarily attached to the seabed on the OCS.
 - (b) Includes any vessel used to transfer production from an offshore facility.
 - (c) Used for drilling, well completion, well workover, or production operations.
 - (d) All installations that emit or have the potential to emit any air pollution from one or more sources.
2. Platforms and Structures
 - (a) General requirements- design, fabricate, install, use, maintain, inspect, and assess all platforms and related structures on the OCS so as to ensure their structural integrity for the safe conduct of drilling workover, and production operations.
 - (b) Submit application and obtain approval before platform installation, major platform modification, major repair, platform conversion, or MODU conversion.

A final rule was published on 7/19/05 (70 FR 41556) .

New Fees

A final rule published on July 19, 2007 (71 FR 40904) established new fees to process certain plans, applications and permits. See table below:

SERVICE FEE TABLE

Service – processing of the following:	Fee amount	30 CFR citation
Change in Designation of Operator.	\$150	§ 250.143
Suspension of Operations/Suspension of Production (SOO/SOP) Request.	\$1,800	§ 250.171
Exploration Plan (EP).	\$3,250 for each surface location, no fee for revisions.	§ 250.211
Development and Production Plan (DPP) or Development Operations Coordination Document (DOCD).	\$3,750 for each well proposed, no fee for revisions.	§ 250.241(e)
Deepwater Operations Plan.	\$3,150	§ 250.292(p)
Conservation Information Document.	\$24,200	§ 250.296(a)
Application for Permit to Drill (APD; Form MMS-123).	\$1,850 Initial applications only, no fee for revisions.	§ 250.410(d); § 250.411; § 250.460; § 250.513(b); § 250.515; § 250.1605; § 250.1617(a); § 250.1622
Application for Permit to Modify (APM; Form MMS-124).	\$110	§ 250.460; § 250.465(b); § 250.513(b); § 250.515; § 250.613(b); § 250.615; § 250.1618(a); § 250.1622; § 250.1704(g)

Service – processing of the following:	Fee amount	30 CFR citation
New Facility Production Safety System Application for facility with more than 125 components.	\$4,750 A component is a piece of equipment or ancillary system that is protected by one or more of the safety devices required by API RP 14C (incorporated by reference as specified in § 250.198). (Additional fee of \$12,500 will be charged if MMS deems it necessary to visit a facility offshore; and \$6,500 to visit a facility in a shipyard).	§ 250.802(e)
New Facility Production Safety System Application for facility with 25–125 components.	\$1,150 (Additional fee of \$7,850 will be charged if MMS deems it necessary to visit a facility offshore; and \$4,500 to visit a facility in a shipyard).	§ 250.802(e)
New Facility Production Safety System Application for facility with fewer than 25 components.	\$570	§ 250.802(e)
Production Safety System Application – Modification with more than 125 components reviewed.	\$530	§ 250.802(e)
Production Safety System Application – Modification with 25–125 components reviewed.	\$190	§ 250.802(e)
Production Safety System Application – Modification with fewer than 25 components reviewed.	\$80	§ 250.802(e)
Platform Application – Installation – under the Platform Verification Program.	\$19,900	§ 250.905(k)
Platform Application – Installation – Fixed Structure Under the Platform Approval Program.	\$2,850	§ 250.905(k)
Platform Application – Installation – Caisson/Well Protector.	\$1,450	§ 250.905(k)
Platform Application – Modification/Repair.	\$3,400	§ 250.905(k)
New Pipeline Application (Lease Term).	\$3,100	§ 250.1000(b)
Pipeline Application – Modification (Lease Term).	\$1,800	§ 250.1000 (b)
Pipeline Application – Modification (ROW).	\$3,650	§ 250.1000 (b)
Pipeline Repair Notification.	\$340	§ 250.1008 (e)
Pipeline Right-of-Way (ROW) Grant Application.	\$2,350	§ 250.1015
Pipeline Conversion of Lease Term to ROW.	\$200	§ 250.1015
Pipeline ROW Assignment	\$170	§ 250.1018
500 Feet From Lease/Unit Line Production Request.	\$3,300	§ 250.1101
Gas Cap Production Request.	\$4,200	§ 250.1101
Downhole Commingling Request.	\$4,900	§ 250.1106
Complex Surface Commingling and Measurement Application.	\$3,550	§ 250.1202(a); § 250.1203(b); § 250.1204(a)
Simple Surface Commingling and	\$1,200	§ 250.1202(a); § 250.1203(b);

Service – processing of the following:	Fee amount	30 CFR citation
Measurement Application.		§ 250.1204(a)
Voluntary Unitization Proposal or Unit Expansion.	\$10,700	§ 250.1303
Unitization Revision.	\$760	§ 250.1303
Application to Remove a Platform or Other Facility.	\$4,100	§ 250.1727
Application to Decommission a Pipeline (Lease Term).	\$1,000	§ 250.1751(a) or § 250.1752(a)
Application to Decommission a Pipeline (ROW).	\$1,900	§ 250.1751(a) or § 250.1752(a)