KENTUCKY

I. Administration

- Agency regulating oil and gas exploration/production: <u>Division of Oil and Gas</u>, 300 Sower Blvd , Frankfort, KY 40601. Phone: (502) 573-0147. Fax: 502-564-4245
- 2. Contact for regulatory updates: Dennis Hatfield, Director.
- 3. 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.
- 4. Agency regulating air emissions: <u>Department for Environmental Protection</u>, Division of Air Quality.
- 5. Agency regulating water quality: <u>Department for Environmental Protection</u>, Division of Water.

II. License

- 1. License required: License required to operate gathering/flowlines. <u>KRS</u> 353.500, 805 KAR 1:190(3).
- 2. Conditions of license: \$100.00 license renewable each year.

III. Bond/Surety

KRS 353.590

- 1. Purpose of surety: For compliance purposes.
- 2. Plugging and restoration: For plugging only (pre-June 2019); for plugging and site reclamation post June 2019.
- 3. Compliance bond required: Yes.
- Types of surety accepted: Cash, Letter of Credit, Surety & Certificates of Deposit.
- 5. Conditions of bond:

a. Amount per well (shallow well):Effective for all permits issued after 6/27/19, shallow well bonding cost is \$2 per foot.

Amount per well (deep well):

Vertical deep wells – \$25,000 Horizontal deep well – \$40,000

Oil & Gas Conservation Commission may establish a higher amount

 Amount of blanket bond: New amounts for all new blanket bonds post 6/27/2019 (all prior blanket bonds still grandfathered at old rates)

For shallow wells:

\$20,000 for 1- 25 wells \$50,000 for 26 - 100 wells \$200,000 for 101 - 500 wells \$300,000 for 501 to 1000 wells Over 1000 wells, additional bonding is required at the same additive tier levels as shown above

For deep wells:

1 to 10 vertical deep wells - \$200,000 1 to 10 horizontal deep wells - \$320,000

No regulations at this time

1. Leasing method: N/A

2. Notice method: N/A

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

4. Qualification of the bidder: N/A

5. State statutes: N/A

Maximum acres: N/A

7. Royalty rates: N/A

8. Agency in control of leasing: N/A

IV. Setbacks

- What rules/regulations/policies does your jurisdiction have in regard to well setbacks from private residences and/or other habitable structures for use by humans or animals? Wells are required to be 150 feet from any structure unless the operator receives a waiver from the structure owner. 805 KAR 1:030.
- 2. Are there other sources of information on this matter that you could identify? N/A

V. Spacing

KRS 353.610 and 353.620 (shallow wells) 805 KAR 1:100 (deep wells)

- 1. Spacing requirements:
 - a. Density:

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 deep) - 400 feet between wells and 200 feet from mineral boundary. Oil well (coal areas and wells in non-coal area between 2000 feet and 6000 feet) - 660 feet between wells and 330 feet from mineral boundary.

Gas well - 1,000 feet between wells and 500 feet from mineral boundary for gas wells less than 6,000 feet deep. Varies with depth and geographic area.

- 1. Exceptions: Yes, KRS 353.620.
 - a. Basis: For tracts that are so situated that they have no drillable site.
 - b. Approval: By notice, then hearing if any objections.

VI. Pooling

KRS 353.630

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

VII. <u>Unitization</u>

KRS 353.630

- 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%

VIII. <u>Drilling Permit</u>

KRS 353.570 KRS 353.580 KRS 353.590

- 1. Permits required 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: No.
- 2. Permit fee:
 - a. Drilling:

Shallow wells (0' to 6000') - \$350

Vertical Deep Wells: 6001'-7000' TVD - \$500 7,001 or deeper TVD - \$600

Horizontal Deep Wells

10,000' or less TMD - \$5,000 10,001' or greater TMD - \$6,000 For multilateral - \$500 for each lateral

Additional horizontal wells on same pad: 10,000 TMD or less - \$3,000 10,001 TMD or more - \$4000

- b. Seismic drilling: None.
- c. Recompletion: None.
- d. Plugging and abandoning: None.
- 3. Require filing report of work performed: Yes, KRS 353.660.
- 4. Sundry notices used: No.

IX. <u>Vertical Deviation</u>

KRS 353.739 805 KAR 1:200 805 KAR 1:140

1. Regulation requirement:

- a. For directional and horizontal wells and all wells drilled in areas of active coal mining.
- b. Filing of survey required: Yes.
- c. Format of filing: Electronic or paper.

X. Casing and Tubing

KRS 353.080 KRS 353.100 KRS 353.550 805 KAR 1:020

- 1. Minimum amount required:
 - a. Surface casing: Yes, at least 30 feet below deepest fresh water.

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

XI. <u>Hydraulic Fracturing</u>

KRS 353.6603 KRS 353.6604 KRS 353.6605 KRS 353.6606

The Kentucky Department of Environmental Protection may have rules regarding flowback waste water, tanks & surface discharge.

- 1. Permitting: No requirements
 - a. Before drilling: N/A
 - b. Before fracing: N/A
 - c. How long before: N/A
- 2. Reporting requirements: KRS 353.660.
 - a. Where reported: All completion methods are reported on the Affidavit of Well Log and Completion Report.
 - b. When reported: Well Log and Completion Report due 90 days after reaching total depth.
- 3. Source water requirements: N/A
- 4. Mechanical integrity: N/A

- a. Cementing log required:
- b. Pressure testing:
- c. Pressure monitoring:
- d. Blowout preventer required:
- 5. Disposal of flowback fluids:
 - a. Retaining pits:
 - b. Tanks:
 - c. Approved discharge to surface water:
 - d. Underground injection:
- 6. Chemical disclosure requirement:
 - a. Mandatory: Yes, for horizontal wells using more than 80,000 gallons of water, chemical, and proppant combined for any stage or 320,000 gallons total
 - b. Where disclosed: FracFocus.org
 - c. When disclosed (pre-fracing, post-fracing, both): within 90 days after treatment
 - d. Time limit to disclose: 90 days after treatment
 - e. Information required to be disclosed:

Operator's name; date of the high-volume horizontal fracturing treatment; county in which the well is located; API number for the well; well name and number; longitude and latitude of the wellhead; true vertical depth of the well; total water volume used; each chemical additive used in the fracturing treatment, including the chemical abstract service number added, if applicable; maximum concentration, in percent by mass, of each chemical intentionally added to the base fluid, if applicable; and total amount of proppant used, if applicable.

- f. Trade secret protection: Yes
- g. Required disclosure to health/emergency personnel: Yes

XII. <u>Underground Injection</u>

KRS 353.592 805 KAR 1:110

Agencies that control the underground injection of fluid by well class:
Division of Oil and Gas

XIII. Completion

KRS 353.660

- 1. Completion report required:
 - a. Time limit: 90 days after completion of drillings.
 - b. Where submitted: Division of Oil and Gas, 300 Sower Blvd , Frankfort, KY 40601
- 2. Well logs required to be filed:
 - a. Time limit: 90 days.
 - Where submitted: Division of Oil and Gas, 300 Sower Blvd , Frankfort, KY 40601
 - c. Confidential time period: Yes, upon request for one year maximum.
 - d. Available for public use: Yes.
 - e. Log catalog available: Yes, at the Kentucky Geological Survey.
- 3. Multiple completion regulation: No authorization required.
 - a. Approval obtained: N/A
- 4. Commingling in well bore: No authorization required.
 - a. Approval obtained: N/A

XIV. Oil Production

KRS 353.010

- 1. Definition of an oil well: 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: N/A

b. Witness required: N/A

- 3. 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: No.
- 4. Bottom-hole pressure test reports required: Only if such test is run by operator.
 - a. Periodical bottom-hole pressure surveys: No.
- 5. Commingling oil in common facilities: No requirements.
- 6. Measurement involving meters: No requirements.
- 7. Production reports: 805 KAR 1:180
 - a. By lease: Yes.
 - b. By well: Yes.
 - 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.

XV. Gas Production

KRS 353.010

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 Requirements

a. Time interval: N/A

b. Witness required: N/A

4. Bottom-hole pressure test reports required: Only if run by operator.

a. Periodical bottom-hole pressure surveys: No.

5. Commingling of gas in common facilities: No Requirement.

6. Measurement involving meters: No Requirement.

7. Production reports: 805 KAR 1:180

a. By lease: Yes.

b. By well: Yes, to the Division of Oil and Gas.

c. Time limits: By February 28 of following year to the Department of Revenue. By April 15 of following year to the Division of Oil and Gas.