

**MEMORANDUM**

**TO:** Locke Mountain Ranch POA

**CC:** File L0017-00001

**FROM:** Adam Davenport

**DATE:** March 18, 2014

**RE:** Colorado Oil and Gas Conservation Commission  
Setbacks, Pipeline Rules, and Water Sampling  
Requirements

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**Introduction and Background**

The Colorado Oil and Gas Conservation Commission (“COGCC”) regulates the production of oil and gas in this state through a set of binding rules regarding production and exploration activities. This memo provides a brief summary of applicable COGCC setback, fencing, and pipeline construction rules. The relevant portions of the COGCC Rules are reproduced and discussed below, followed by a discussion of their applicability to property owners within Locke Mountain Ranch and their relevance to terms of the surface use agreement we are preparing.

**Rule 100: Definitions**

The Rules define “Building Unit” as a Residential Building Unit; and every five thousand (5,000) square feet of building floor area in commercial facilities or every fifteen thousand (15,000) square feet of building floor area in warehouses that are operating and normally occupied during work hours.

In turn, the Rules define “Residential Building Unit” to mean a “building or structure designed for use as a place of residency by a person, a family, or families. The term includes manufactured, mobile, and modular homes, except to the extent that any such manufactured, mobile, or modular home is intended for temporary occupancy or for business purposes.”

Finally, as pertinent to this memo, High Occupancy Building Unit is defined as any operating public school, nonpublic school, nursing facility, hospital, life care institution, correctional facility (that regularly serves 50 or more persons), and any child care center.

### **Rule 603: Statewide Minimum Setbacks**

Rule Series 603 provides for statewide location requirements for oil and gas facilities, drilling, and well servicing operations. Rule 603(a)(1) states in part that “[a]t the time of initial drilling, a Well shall be located not less than two hundred (200) feet from buildings, public roads, major above ground utility lines, or railroads.”

Rule 603(a)(2) states that “[a] well shall be located not less than one hundred fifty (150) feet from a surface property line.” Rule 603(a)(2) also contemplates that this setback may not be feasible in some circumstances and provides for a procedure that would allow a well to be drilled within 150 feet from a surface property line. “The Director may grant an exception if it is not feasible for the Operator to meet this minimum distance requirement and a waiver is obtained from the offset Surface Owner(s). An exception request letter stating the reasons for the exception shall be submitted to the Director and accompanied by a signed waiver(s) from the offset Surface Owner(s). Such waiver shall be written and filed in the county clerk and recorder’s office and with the Director.” Rule 603(a)(2).

### **Rule 604: Setbacks for Residential Structures**

In addition to the statewide minimum setbacks provided in Rule 603, Rule 604 provides larger setbacks within several delineated zones, all measured from the proposed oil or gas well to occupied structures: “Exception Zone Setback”; “Buffer Zone Setback”; “High Occupancy Buildings”; and “Designated Outside Activity Areas.”

Rule 604(a)(1): Exception Zone Setback: The “Exception Zone” is the area from 0-500 feet from the proposed well. If there is a Building Unit in the “Exception Zone” Rule 604(a)(1) provides that no well or production facility shall be constructed unless certain mitigation measures are first completed.

Urban Mitigation Areas: The Rules define “Urban Mitigation Areas” as an area where there are at least twenty two Building Units or one High Occupancy Building Unit within 1,000 foot radius of the proposed well or where there are at least eleven Building Units or one High Occupancy Building Unit located within any semi-circle of the 1,000 foot radius.

Rule 604 provides that if drilling is to take place in an Urban Mitigation Area, the operator must first obtain a waiver to drill from each Building Unit Owner within five hundred feet of the proposed well, comply with certain notice requirements, and provide for certain site specific mitigation measures (described below). Rule 604(a)(1)(A).

Non-Urban Mitigation Areas: All areas that do not fit the definition of “Urban Mitigation Area” are considered “Non-Urban Mitigation Areas.” An operator may not drill a well in the Exception Zone that is within a Non-Urban Mitigation Area unless the operator complies with certain notice requirements and provides site specific mitigation measures. In sum, the only difference between an Urban Mitigation Area and Non-Urban

Mitigation Area is that the operator does not need to obtain a waiver to drill the proposed well from Building Unit owners within five hundred feet of the proposed well.

Rule 604(a)(2): Buffer Zone Setback: Rule 604(a)(2) provides that “no Well or Production Facility shall be located one thousand feet (1,000) or less from a Building Unit until the Operator [provides] site specific mitigation measures.

Rule 604(c)(2): Site Specific Mitigation Requirements: If a proposed well is to be located in either an Exception Zone or a Buffer Zone, Rule 604 requires site specific mitigation measures. Examples of these site specific mitigation measures include:

- Noise: Operations of pipelines, gas facility installation or maintenance, or the use of a drilling rig are subject to the maximum permissible noise levels for Light Industrial Zones (70 dB)
- Closed Loop Drilling Systems and Green Completions
- Traffic Plans and Leak Detection Plans
- Multiwell Pads and Berm construction specifications

Rule 604(a)(3): High Occupancy Buildings: Rule 604(a)(3) provides that “no well or production facility shall be located one thousand feet (1,000) or less from a High Occupancy Building Unit without Commission approval following Application and Hearing.”

Rule 604(a)(4): Designated Outside Activity Areas: Rule 604(a)(4) provides that “no Well or Production Facility shall be located three hundred fifty (350) feet or less from the boundary of a Designated Outside Activity.” The Rule further provides that “the Commission, in its discretion, may establish a setback of greater than three hundred fifty (350) feet based on the totality of circumstances.”

### **Rule 604: Fencing Requirements**

Rule 604(c)(2)(M) provides that “[u]nless otherwise requested by the Surface Owner, well sites constructed within Designated Setback Locations, shall be adequately fenced to restrict access by unauthorized person.” In addition, Rule 1002(a) provides additional fencing requirements when livestock are present in the operations area.

### **Rule 1101: Pipeline Regulations**

Pursuant to Rule 1101(c)(1) “all installed pipelines shall have cover sufficient to protect them from damage.” The Rule provides a specific depth of cover but only when the pipeline is located across “crop land.” “On crop land, all pipelines shall have a minimum cover of three (3) feet.” Rule 1101(c)(1). “Crop land” is defined as “lands which are cultivated, mechanically or manually harvested, or irrigated for vegetative agricultural production.”

## **Rule 609: Statewide Groundwater Baseline Sampling and Monitoring**

Sampling Locations: Rule 609(b) provides that “initial baseline samples and subsequent monitoring samples shall be collected from all Available Water Sources, up to a maximum of four (4), within a one-half (1/2) mile radius of a proposed Oil and Gas Well, Multi-Well Site, or Dedicated Injection Well.”<sup>1</sup> If there are more than four Available Water Sources within ½ mile radius of a proposed well, the Rules provide that the operator may select four sources to sample based on several criteria including proximity, type of water source (domestic water well preferred), orientation of sampling locations (downgradient and upgradient preferred), and condition of water source. Rule 609(b)(1)-(5). An operator may seek an exemption from the groundwater testing requirements of Rule 609 if no Available Water Sources are located within ½ mile radius of the proposed well, the only Available Water Sources are determined to be unsuitable for testing (no tap or other physical impediment), or if the owners of all Available Water Sources refuse to grant access for testing. Rule 609(c)(1)-(4).

All sampling under the Rule is to be conducted “within [the] 12 months prior to setting conductor pipe in a Well or the first Well on a Multi-Well Site, or commencement of drilling on a Dedicated Injection Well. Rule 609(d)(1).

Subsequent Monitoring: Rule 609 provides that the operator is to provide subsequent testing after drilling activities have commenced. Specifically, Rule 609(d)(2) states that “[o]ne subsequent sampling event shall be conducted at the initial sample locations between six (6) and twelve (12) months, and a second subsequent sampling event shall be conducted between sixty (6) and seventy-two (72) months following completion of the Well or Dedicated Injection Well, or the last Well on a Multi-Well Site.” However, if the well turns out to be a dry hole, the well is “exempt from subsequent monitoring sampling under this subpart d.” Rule 609(d)(2). In lieu of the sampling described above, an operator may rely on groundwater testing available from public sources previously conducted in the area, subject to certain criteria. Rule 609(d)(3).

Sampling Procedures and Analysis: Rule 609(e)(1) provides that “sampling and analysis shall be conducted in conformance with an accepted industry standard.” In addition, a model “Sampling and Analysis Plan” is provided on the COGCC website and sampling and analysis in conformance with the COGCC Plan is “deemed to satisfy the requirements of [the Rules.]”<sup>2</sup> Rule 609(e)(1). The Rules provide a detailed list of water constituents for which the operator must conduct initial testing, including pH, specific conductance, total dissolved solids (“TDS”), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO<sub>3</sub>), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), “other elements” (barium, boron, selenium, and strontium), total petroleum hydrocarbons (“TPH”), and BTEX

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<sup>1</sup>“Available Water Source” is defined as “a water source for which the water well owner, owner of a spring, or a land owner, as applicable, has given consent for sampling and testing and has consented to having the sample data obtained made available to the public, including without limitation, being posted on the COGCC website.”

<sup>2</sup> The COGCC Model Sampling and Analysis Plan can be found online at [http://cogcc.state.co.us/RR\\_HF2012/Groundwater/FinalRules/Model\\_SAP\\_05012013.pdf](http://cogcc.state.co.us/RR_HF2012/Groundwater/FinalRules/Model_SAP_05012013.pdf)

compounds (benzene, toluene, ethylbenzene and xylenes). Rule 609(e)(2). The Rules provide that subsequent testing is to include TDS, dissolved gases, major anions, major cations, alkalinity, BTEX compounds, and TPH.

Sampling Results: Rule 609(f) provides that “[c]opies of all final laboratory analytical results shall be provided to the [COGCC] and the water well owner or landowner within three (3) months of collecting the samples.” Once submitted, the COGCC is to make the results of the testing “available publicly by posting on the Commission’s web site or through another means announced to the public.” Rule 609(f)(1).

No Presumption of Liability: Rule 609(g) provides that the results of the testing or any change in the level of any constituent tested “shall not create a presumption of liability, fault, or causation against the owner or operator of a Well, Multi-Well Site, or Dedicated Injection Well who conducted the sampling, or on whose behalf sampling was conducted by a third-party.”

### **Application to the Locke Mountain Ranch**

Regardless of which setback zone is ultimately applicable to Austin’s drilling operations in Locke Mountain Ranch, 500 feet is the minimum setback required by COGCC Rule 604. However, Rule 604 allows an operator to drill a well within 500 feet if certain mitigation measures are taken, it is therefore recommended that the surface use agreement provide for at least a 500 foot setback. In addition, Austin is required by Rule 604(c)(2)(M) to provide fencing adequate to prevent entry by unauthorized individuals. The Rule does not specify the type of fencing or location, therefore the Locke Mountain Ranch POA should consider providing these types of specifications in the surface use agreement.

Rule 1101 does not provide a specific depth to which all pipelines shall be buried (unless located on “crop land”), therefore it is recommended that the surface use agreement contain a provision requiring pipelines to be buried to a specific depth.

Finally, the groundwater testing provisions we have written into the surface use agreement for the Locke Mountain Ranch POA are in addition to the testing regime contained in COGCC Rule 609. Specifically, the provisions of the surface use agreement insure that the domestic wells located on the property being drilled will be tested before and after drilling activities.