



A Primer on Oil and Gas Regulation in Texas: Spacing, Density, Permits, Exceptions

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Professional landmen are often called upon to play roles that go beyond their customary duties of buying, selling, leasing and curative, especially when working for a small independent operator or a startup with a lean budget. One responsibility that landmen often acquire is that of a regulatory analyst. Overcoming regulatory barriers to operations and production — like obtaining permits and seeking rule exceptions — requires not only expertise in regulatory matters, but also a detailed knowledge of the features of your land. When the time comes to wade

into the regulatory waters, a healthy working knowledge of the laws and rules governing such matters can save unnecessary delay and frustration in drilling and completing a well.

This article summarizes some of the Texas Railroad Commission rules, guidelines and procedures most frequently encountered by land professionals, and it provides some practical advice for working through common regulatory problems. Specifically, this article discusses the regulatory systems pertaining to spacing, density and proration rules, with special attention to recent

developments in the regulation of horizontal drilling. Additionally, this article addresses the regulatory process of permitting and completing a well, including the basics of permit exceptions and protested permits.

Spacing Rules



Among other goals, the commission is charged to prevent waste of natural resources and protect correlative rights of owners over common oil and gas reservoirs.¹ The commission does this in part by regulating the proximity of wells to



Side Notes

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| <p>1 - See <i>Tex. Nat. Res. Code</i> §§85.045, et seq., 86.011, et seq. (Vernon 1993); <i>Railroad Commission v. Shell Oil Co.</i>, 380 S.W.2d 556 (Tex. 1965).</p> <p>2 - 16 <i>Tex. Admin. Code</i> §3.37(a)(1).</p> <p>3 - 2 Ernest E. Smith & Jacqueline Lang Weaver, <i>Texas Law of Oil & Gas</i> §9.3(A) (2d ed. 2000); see 16 <i>Tex. Admin. Code</i> §40(a); see Brian R. Sullivan, P.E., <i>Rule 37: Any Well Drilled in Violation of this Rule Shall be Plugged</i>, 22nd Annual Advanced Oil, Gas, and Energy Resources Law Course, Chapter 6 (Sept. 30, 2004-Oct. 1, 2004).</p> <p>4 - <i>H.G. Sledge Inc. v. Prospective Inv. & Trading Co.</i>, 36 S.W.3d 597 (Tex.</p> | <p>App. — <i>Austin</i> 2000, <i>pet. denied</i>; see <i>Sullivan</i>, <i>supra</i> note 3.</p> <p>5 - 16 <i>Tex. Admin. Code</i> §3.11(a).</p> <p>6 - <i>Id.</i> at §3.11(b).</p> <p>7 - <i>Id.</i> at §3.11(c).</p> <p>8 - <i>Id.</i> at §3.11(d).</p> <p>9 - <i>Id.</i> at §3.38(a)(2).</p> <p>10 - <i>Id.</i> at §3.38(a)(3).</p> <p>11 - <i>Id.</i> at §3.40(d).</p> <p>12 - <i>Id.</i> at §3.38(b)(2)(A).</p> <p>13 - <i>Smith & Weaver</i>, <i>supra</i> note 3, at §10.1(B)(2).</p> <p>14 - 16 <i>Tex. Admin. Code</i> §3.39(a).</p> <p>15 - <i>Smith & Weaver</i>, <i>supra</i> note 3, at §9.3(B).</p> |
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each other. Spacing rules set the minimum distance between your well and (a) the boundary lines of adjacent tracts and (b) other wells on your lease. “Lease line” spacing under Statewide Rule 37 prohibits the location of a well nearer than 467 feet from “any property line, lease line or subdivision line.”² “Between-well” spacing under Rule 37 prohibits location of a well nearer than 1,200 feet from “any well completed in or drilling to the same horizon on the same tract or farm.” As such, between-well spacing does not apply as between wells located on different leases and/or producing from different fields. Rule 37 applies to all oil and gas wells in Texas to the extent it has not been pre-empted by special field rules.

A “property line” for lease-line spacing purposes is any tract boundary over which the ownership of mineral or working interest differs from that of your lease or pooled unit, even in the smallest degree.³ Pooling erases property lines between unit tracts, but nonjoinder of any mineral or working interest owner in any pooled unit tract will create a property line. Although a difference in ownership of royalty or overriding royalty will technically create a subdivision, the commission follows a policy that owners of such interests, being nonpossessory revenue-only interests, are not entitled to notice of Rule 37 spacing exceptions. This commission policy has been upheld in Texas courts based in part on the rationale that such owners’ interests are aligned with and represented by their respective operators or lessees, who are entitled to notice under Rule 37.⁴

Rule 11 requires that “[a]ll wells shall be drilled as nearly vertical as possible by normal, prudent, practical drilling operations.”⁵ In issuing drilling permits, the commission generally assumes vertical wells will be drilled vertically, i.e., the surface location will be the same as the bottomhole location. However, as any engineer will tell you, vertical wells are never truly vertical. If not carefully monitored, side-tracking or unintentional deviations

may cause your well to bottom at an irregular location, or even off-lease. To control for deviations, the commission requires an “inclination” survey for most new vertical wells, which reports downhole locations at regular intervals along the wellbore (Form W-12).⁶ If the incline of the wellbore is so large as to be potentially off-lease, the commission requires a “directional” survey, which is a more detailed (and expensive) downhole survey that will determine whether the bottomhole location actually violates spacing rules.⁷ If so, the well will require a spacing exception.

Of course, some wellbores are intentionally deviated for various reasons, such as directional wells. Rule 11 provides additional permitting rules for intentionally deviated wells, which generally require more preliminary filings.⁸ Directional wells require a directional survey to ensure that they reach their target bottomhole location.

Density and Proration Rules



In addition to spacing, the commission controls well locations using density and proration rules, which are designed to prevent clustering of wells and overproduction of the common reservoir. Density and proration are related concepts under commission rules but should be carefully distinguished. Density regulates the minimum amount of acreage to be assigned to a well for issuance of a drilling permit, known as a “drilling unit.”⁹ Proration regulates the volume of oil or gas that may be produced from a completed well, known as an “allowable.” A “proration unit” is the productive acreage assigned to a well to obtain an allowable and is typically the same size and shape as the well’s drilling unit.¹⁰

Acreage that is committed to a drilling and/or proration unit for an existing well may not also be assigned to a new well completed in the same field or reservoir.¹¹ A landman should be familiar with the density and proration rules applicable to his lease in order to maximize developable acreage.

Under Statewide Rule 38, the drilling unit size for wells subject to statewide rules is 40 acres, though special field rules may set different density requirements.¹² For vertical wells, proration units are purely a creation of special field rules; although they are subject to production volume limits under statewide rules, they are technically not assigned proration units.¹³

A drilling or proration unit generally

must be composed of contiguous acreage.¹⁴ Otherwise, a drilling unit may be most any shape, provided it contains the minimum acreage and does not violate spacing rules. However, special field rules for some vertical wells prescribe a “diagonal” rule, which usually requires that the length of the unit not exceed twice the width in order to prevent formation of long, awkwardly shaped units.¹⁵

After a lease is drilled to density, there often remains unassigned “surplus” acreage that is not big enough to support a regular drilling unit. Rule 38 allows surplus acreage to be drilled if it is at least half the size of a regular drilling unit, among other requirements; field rules often contain similar provisions.¹⁶ Also note that some special field rules prescribe a “standard” unit size with the option to form larger units, often with the benefit of an increased allowable; however, an operator may not drill on substandard acreage in exchange for a reduced

allowable, as allowed in some other jurisdictions.¹⁷ But, as with spacing, density compliance is often achieved by pooling to obtain sufficient acreage.

Density rules become especially important when applied to the terms of an oil and gas lease. Pooling authority in a lease is often limited by the size of the well unit prescribed or permitted for the field by applicable “governmental authority.”¹⁸ Similarly, a lease may contain a retained acreage provision, Pugh clause or continuous development program that can effect a partial lease severance based on the acreage minimums required by the commission. If so, density rules will be a crucial factor in the development plans for the lease.

The commission’s actual methods and criteria for assigning allowables are highly technical and beyond the scope of this article, but a brief summary is helpful. The top allowable for a statewide field is governed by a “yardstick” formula under Rule 45, which is then allocated among the wells in that field. Allowables may be further limited by market demand for the sake of price stability; however, the commission has not done this since 1973.¹⁹ The top allowable for a field may be increased by proving at hearing that the maximum efficiency rate or “MER” for the field is higher than the yardstick, meaning it can be produced at a higher rate without causing waste.²⁰

Proration for gas wells is more complex than for oil due in part to the challenges of transportation and marketing, but it generally follows the same principles.²¹ Allowables for horizontal wells are controlled by formula under Statewide Rule 86, unless pre-empted by special field rules.²² Note that not all wells are subject to proration; some fields are exempt or classified “open-flow,” meaning they have effectively no restriction on production volume.²³

designed to ensure that oil and gas wells are drilled at regular locations in compliance with applicable rules. Commission rules state that “[o]perations of drilling, deepening, plugging back, or reentering shall not be commenced until the permit has been granted” by the commission.²⁴

The commission maintains an online filing system for permitting wells and also publishes guidance to walk you through the steps of obtaining a permit. You can find a general checklist for the permitting and compliance process on the commission’s website.²⁵ The process begins by submitting a drilling permit application (Form W-1) accompanied by a well location plat, as well as a certificate of pooling authority (Form P-12) if the well is in a pooled unit. Guidance for submitting data and forms for the drilling permit application can also be found online.²⁶

The commission’s online application system will walk you through entry of the required data, including survey and acreage information, measured distances from adjacent tracts and nearby wells and target producing zones. It will also help identify any necessary rule exceptions; however, note that if you are drilling a horizontal well under special field rules, you may have to identify such exceptions due to system limitations, which requires careful review of the field rules for your well. Most active fields today use special field rules, though statewide rules may still apply in wildcat areas. Highly productive areas often have several sets of field rules, each tailored to a particular productive zone, geological feature or development technique. You can research the applicable rules for your field on the commission’s website.²⁷

Upon completion of the new well, the commission requires submission of completion report forms to gather data such as producing depths and formations, wellhead pressure, production potential test results and the attributes of the produced hydrocarbons.²⁸ This data is used to classify the well as oil or gas and make determinations about safety and environmental requirements, among other uses.



- 16 - 16 Tex. Admin. Code §3.38(c).
- 17 - See *Jones v. Killingsworth*, 403 S.W.2d 325 (Tex. 1965); see *Smith & Weaver*, *supra* note 3, at §9.3(B).
- 18 - See *id.*
- 19 - *Smith & Weaver*, *supra* note 3, at §10.1(B).
- 20 - *Id.* at §10.3(C).
- 21 - *Id.* at §10.4(A).
- 22 - 16 Tex. Admin. Code §3.86(d)(5).
- 23 - *Id.* at §3.45(c); *id.* at §3.31(j).
- 24 - 16 Tex. Admin. Code §(3.5(c)).
- 25 - Oil & Gas Filing Checklist from Prospect to Production, <http://www.rrc.state.tx.us/forms/forms/og/checklist.php>.
- 26 - Drilling Permits Online Filing User’s Guide, <http://www.rrc.state.tx.us/forms/publications/dp-manual/index.php>.
- 27 - Oil & Gas Field Information Query, <http://webapps.rrc.state.tx.us/DP/initializeFieldSearchAction.do>.
- 28 - Gas well completions are governed by Statewide Rules 28 and 31 (Forms G-1, G-5, and G-10) and oil wells by Rules 16 and 51 (Forms W-2 and W-10).
- 29 - 16 Tex. Admin. Code §3.11.

The Permitting and Completion Process



The commission enforces spacing, density and proration regulations in part by issuing drilling permits

The completion data also determines the allowable for your well, if applicable (Form P-15). Also, an inclination report is required for all new wells, which reflects wellbore deviations that may require a downhole directional well survey (Form W-12).²⁹

Note that this is merely a brief summary of some of the permit and reporting requirements applicable to most wells. The commission requires a host of other forms and reports that are beyond the scope of this article, some of which require multiple submissions or regular reporting throughout the life of a well. Even after the well is online and in compliance, failure to submit required filings or otherwise comply with the terms of the permit may result in a violation letter from the commission, which if ignored may lead to heavy fines and possibly a plugging order.

Also keep in mind that every well is different than the last. Permitting and compliance for some wells can be

relatively easy, especially if you have already completed similar wells in the same field; others are a nightmare from beginning to end. The landman responsible for a well's regulatory compliance should proactively research the commission rules and guidance materials and contact the commission regularly to ensure all bases are covered for the new well.

Rule Exceptions



A variety of circumstances may arise that prevent you from drilling at a regular location. Factors such as geology, surface conditions or the size and features of the lease may force you to drill too close to a property line or even off-lease. Regulatory problems are often unanticipated, such as when title examination reveals an unexpected mineral strip or subdivision or an old survey error results in noncompliance.

Even when you have found a regular location, spacing and density rules can

create a very small drilling target such that even a minor location error or unintentional wellbore deviation can result in a spacing exception. For example, imagine a vertical well drilled in the center of a 40-acre square tract under statewide rules: A spacing violation would occur if that well location were moved only 244 feet toward a property line. Even more alarming, a spacing violation would also occur if that well location were moved off-center a mere 120 feet, or 1/50 of a mile, toward a well centered on an adjacent 40-acre drilling unit. With such a slim margin for error, knowing how to identify and resolve a spacing exception is crucial to the process of completing the well.

If a spacing or density violation cannot be avoided, the drilling permit will require an exception. This process begins by submitting a "service list" with names and addresses of affected parties in adjacent tracts known as "offsets," which include: (a) the designated operator under all existing oil and gas

