



Chapter 14

Horizontal Wells: Technical and Legal Issues

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§ 14.01. Introduction.

This chapter is written to discuss certain legal issues associated with horizontal drilling and production. The issues include:

- Which ownership estate can authorize drilling?
- Which ownership estate can grant surface and subsurface easements?
- How do you allocate production among owners?
- What is the impact of the new horizontal technology on “implied” covenants?
- What size should a drilling or spacing unit be?
- What regulatory issues should be considered?

In connection with the foregoing, there are some basic concepts to keep in mind. First, the modern rule of capture is a doctrine of non-liability, conveying no rights other than non-liability for draining adjoining tracts.¹ A person has the right to produce and save all production from a wellbore bottomed on his lands or tract, and accordingly, may drain any adjacent tracts. The only remedy or defense to drainage in this “free enterprise” theory is for the adjoining tract to do the same. Texas and other states have modified the rule of capture with a comprehensive regulatory scheme which includes well spacing and density requirements, pooling (voluntary or forced), and production allowables (today largely open flow) to promote efficiency and to maximize production.

Second, most oil and gas lease forms and state regulatory schemes were designed for vertical wells. Legal issues, including those related to trespass,

¹ Ernest E. Smith & Jacqueline Lang Weaver, *Texas Law of Oil and Gas* § 1.1 (2d ed. 2002).

arise because the horizontal drainhole crosses lease lines and production is not attributable to the specific tract underlying the tract on which the surface location of the well is situated. There is a dearth of case law dealing with legal issues related to the drilling of and producing from horizontal wells, including the application of oil and gas law to traditional leases used when horizontal wells are drilled.

Finally for regulatory bodies, the critical issue is to design their rules to encourage the efficient development and production from horizontal wells.

§ 14.02. Lease Issues.

In drilling horizontal wells, there are a variety of potential problems with the typical oil and gas lease that can give a lessee problems when pooling and allocating production such as “the implied covenants,” lease limitations on pooling (antidilution clauses) or the spacing requirements normally tied to vertical wells (such as 40 or 80 acres per well). The term “pooling” refers to the aggregation of small tracts in order to create a legal location and obtain a permit to drill under applicable state or federal spacing rules.² These problems are amplified by key factual differences in the formations accessed by horizontal versus vertical wells. Because of the highly fractured nature of the oil and gas formations for which horizontal drilling is used, drainage does not exist in the traditional sense. While vertical wells typically drain in a radial pattern (at least theoretically), horizontal wells often drain small narrow formations which are fractured. The implied covenant claims, which will be discussed later, include those covenants to prevent drainage and to reasonably develop the lease.

[1] — Pooling and Antidilution Clauses.

Many leases have either no pooling clauses or antiquated clauses which were drafted without consideration of horizontal drilling. Pooling clauses permit a lessee to pool or join the lessor’s acreage with other adjacent acreage to form a spacing unit. An antidilution clause typically requires that unless

² Williams and Myers, *Oil & Gas Law 2006* at Vol. 6 § 901.