

## Chapter 13

# Overview of Pooling and Unitization Affecting Appalachian Shale Development

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## § 13.01. What Are Pooling and Unitization?

### [1] — Oil and Gas Title and the Rule of Capture.

From the initial developments of commercial oil and gas production, legislatures and courts have faced significant challenges in developing a comprehensive legal framework to address various questions regarding ownership of oil and gas. Commercial development of oil in the United States began in 1859 with the first producing well drilled by Colonel E.L. Drake in Titusville, Pennsylvania.<sup>2</sup> By that time, the rules that determined ownership of coal and similar hard-rock mineral deposits which formed strata beneath the surface of the land, were relatively well-evolved.<sup>3</sup> However, both oil and gas possess characteristics inconsistent with the traditional notions of “ownership in place” (or *in situ* ownership) applied to coal and other hard-rock minerals.<sup>4</sup> Oil and gas are fluid, and migrate from areas of high pressure to areas of lower pressure within the reservoir, or pool, where they are found.<sup>5</sup> These natural characteristics led to near-universal adoption of the “rule of capture” by courts of various producing states as the standard to determine oil and gas ownership.

The “pure” rule of capture<sup>6</sup> was elucidated by the Supreme Court of Pennsylvania in its seminal 1889 decision, *Westmoreland & Cambria Natural Gas Co. v. De Witt*.<sup>7</sup> In *De Witt*, the court analogized oil and gas in their

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<sup>2</sup> See Bruce M. Kramer and Owen L. Anderson, “The Rule of Capture — An Oil and Gas Perspective,” 35 *Envtl. L.* 899, 900 (2005)(citing J.E. Brantley, *History of Oil Well Drilling* 153 (1971)).

<sup>3</sup> See *Brown v. Spilman*, 155 U.S. 665, 669-70 (1895).

<sup>4</sup> See *id.*

<sup>5</sup> See *id.*

<sup>6</sup> The rule as stated in this paragraph is described as the “pure rule of capture,” as distinct from the version of the rule that includes a “correlative rights” component, requiring due respect for the rights of others owning an interest in the common pool. This component was, in varying forms, incorporated into the jurisprudence of a number of producing states, including Indiana, Kentucky, and later, West Virginia and Texas. For a discussion of cases involving this component, and its evolution, see Bruce M. Kramer and Owen L. Anderson, “The Rule of Capture — An Oil and Gas Perspective,” 35 *Envtl. L.* 899, 911-25 (2005).

<sup>7</sup> *Westmoreland & Cambria Natural Gas Co. v. De Witt*, 18 A. 724 (Pa. 1889).

natural state to wild animals, or “*minerals ferae naturae*,” roaming beneath the surface of the earth.<sup>8</sup> The court held that title to land does not necessarily constitute ownership of the oil and gas beneath it.<sup>9</sup> In theory, the oil and gas underlying a tract of land belong to the landowner.<sup>10</sup> However, when they migrate to other areas and are captured and reduced to possession by another owner, title vests in the captor and thereby extinguishes that of the prior owner.<sup>11</sup> This reasoning was endorsed by the U. S. Supreme Court in *Brown v. Spilman*, wherein the Court stated:

Petroleum gas and oil are substances of a peculiar character, and decisions in ordinary cases of mining, for coal and other minerals which have a fixed *situs*, cannot be applied to contracts concerning them without some qualifications. They belong to the owner of the land, and are part of it, so long as they are on it or in it, or subject to his control, but when they escape or go into other land, or come under another’s control, the title of the former owner is gone. If an adjoining owner drills his own land and taps a deposit of oil or gas extending under his neighbor’s field, so that it comes into his well, it becomes his property.<sup>12</sup>

In essence, the rule of capture provides that “[t]he owner of a tract of land acquires title to the oil and gas which he produces from wells drilled thereon, though it may be proved that part of such oil or gas migrated from adjoining lands.”<sup>13</sup> Therefore, it is largely a rule of self-help under which landowners, suffering from potential drainage, were not awarded a share in

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<sup>8</sup> See *id.* at 725.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Spilman*, 155 U.S. at 669-70 (citing *Brown v. Vandergrift*, 80 Pa. 142, 147 (1875); *Westmoreland & Cambria Natural Gas Co. v. De Witt*, 18 A. 174 (Pa. 1889)).

<sup>13</sup> See Robert E. Hardwicke, “The Rule of Capture and Its Implications as Applied to Oil and Gas,” 13 *Tex. L. Rev.* 391, 393 (1935)(quoting *Eliff v. Texon Drilling Co.*, 210 S.W.2d 558, 562 (Tex. 1948)).

neighboring wells because they were deemed to have the ability to prevent drainage and protect their interest by drilling their own well.

Once a producing well had been drilled, the rule of capture motivated landowners in the area to protect their potential oil and gas assets by rushing to drill on their own land.<sup>14</sup> Because oil and gas naturally exist in underground reservoirs or pools that often underlie numerous separately owned tracts, the rule of capture left a landowner with two options: he could either drill on his own land to take possession of the oil and gas and thereby perfect ownership; or, he could sit by while neighbors drilled wells that would likely drain those resources. As a practical matter, this meant that in order to ensure recovery of his fair share of production from the “common pool,” each owner needed to drill as many wells on his property as quickly as possible.<sup>15</sup> The resultant race to produce led to excessive well density, substantial over-drilling, and waste, which included undue surface waste, waste of economic resources, and waste of oil and gas reserves through premature depletion.<sup>16</sup>

While the consequences of this frenzied production were manifested in virtually every producing state, they are perhaps best illustrated by the events surrounding the famed oil well at Spindletop.<sup>17</sup> Captain Anthony F. Lucas and his drilling team struck oil in the Spindletop salt dome near Beaumont, Texas, on January 10, 1901.<sup>18</sup> The initial “black plume” that shot from Spindletop soared to twice the height of the drilling derrick, and the well set a world record of roughly 800,000 barrels of oil within the first

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<sup>14</sup> See Rance L. Craft, “Comment: Of Reservoir Hogs and Pelt Fiction: Defending the *Ferae Naturae* Analogy Between Petroleum and Wildlife,” 44 *Emory L.J.* 697, 700 (1995).

<sup>15</sup> See Phillip E. Norvell, “Prelude to the Future of Shale Gas Development: Well Spacing and Integration for the Fayetteville Shale in Arkansas,” 49 *Washburn L.J.* 457, 459 (2010).

<sup>16</sup> See *id.* at 459-60.

<sup>17</sup> See Craft, 44 *Emory L.J.* at 701 (1995).

<sup>18</sup> *Id.*

nine days of production.<sup>19</sup> A wave of speculators soon followed, and by the end of 1901 there were 440 wells on the 125-acre hill where Spindletop sat.<sup>20</sup> New wells continued to be drilled as “close together as physically possible,” and 1,000 wells had been drilled around Spindletop by 1904.<sup>21</sup> However, only 100 of these wells produced oil at a rate of more than 10,000 barrels a day.<sup>22</sup> Captain Lucas lamented over the consequences of this rush to produce, stating that “[t]he cow was milked too hard, and moreover she was not milked intelligently.”<sup>23</sup>

## [2] — Traditional Concepts of Well Spacing.

The rule of capture yielded results during the early days of oil and gas development that were not contemplated or desired by its authors. In response, various producing states enacted oil and gas conservation statutes near the turn of the Twentieth Century to curb excessive drilling and protect correlative rights.<sup>24</sup> A primary feature of many conservation laws was the imposition of spacing requirements, which limited the number of wells that could be drilled within a specified acreage.<sup>25</sup> It is against this backdrop that

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<sup>19</sup> See *id.* (citing Walter Rundell, Jr., *Early Texas Oil: A Photographic History 1866-1936* 36-37 (1977)).

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* (citing Richard O'Connor, *The Oil Barons: Men of Greed and Grandeur* 81 (1971)).

<sup>22</sup> *Id.* (citing O'Connor, at 85).

<sup>23</sup> *Id.*

<sup>24</sup> See 1 Bruce M. Kramer & Patrick H. Martin, *The Law of Pooling and Unitization* § 2.02 (LexisNexis Matthew Bender 2010).

<sup>25</sup> See Bruce M. Kramer, “Compulsory Pooling and Unitization: State Options in Dealing with Uncooperative Owners,” 7 *J. Energy L. & Pol’y* 255, 258 n.10 (1986) (citing R. Sullivan, *Handbook of Oil and Gas Law* 285 (1955)). This chapter identifies other principal methods of oil and gas conservation, including (1) Drilling Operations — The regulation of procedures used in drilling and completing wells; (2) Maximum Efficient Rate — Limiting production to the maximum efficient rate (MER) of the well based on its geological capabilities; and (3) Prorating — Limiting the amount of oil and gas that can be sold from each well within a common source of supply or reservoir and allocating that amount between the various wells that are producing from that common source.