Produced Water:

The Next "Title" Wave of Litigation

PART I

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When you think oilfield litigation, what comes to mind? Lease termination disputes, fixed versus floating royalties, oilfield injuries? Maybe your mind goes toward environmental statutes such as the Comprehensive Environmental Response, Compensation, and Liability Act and Resource Conservation and Recovery Act. But what if we told you the next major fight in the oil and gas space has nothing to with oil or gas? What if we told you it would not fall under claims for trespass to try title, breach of contract, negligence, or any of the aforementioned environmental statutes? Rather it would be a constitutional fight over the ownership of one of the oilfield's largest byproducts—water; and instead of trying to shift liability for disposal of that water, we would be fighting over who has to right to own and possess that water.

The fight over produced water has potential to be the next major area of contention in the oil patch, primarily because produced water is a new and unforeseen source of revenue for operators and landowners alike. You cannot drill and complete an oil and gas well without water—lots of it; and you cannot produce oil and gas without also producing water. In the oil and gas industry, water treatment and recycling is improving; fresh water grows scarcer; and regulation of fresh water is increasing. Therefore, until either a legal resolution is achieved or the ability to monetize produced water disappears (unlikely), more and more disputes are certain to arise.

Like many issues in the oil patch, disputes arise not because of anyone's bad acts, but because of the law of unintended consequences. Imagine being there the first time our predecessors decided "1/2 of the usual 1/8" was the best way to describe an oil and gas reservation. Imagine trying to explain to an operator in the early 2000s that, in a few short years, they would be drilling horizontal wells with 3-mile laterals. Now explain to that same operator that one of their greatest liabilities—produced water—would soon produce more than $1 million in revenue per well. No doubt, if we could see disputes in the future, we would advise clients and draft deeds and leases differently today.

What was once considered a liability has now become an asset, but whose asset is it? This series sets out to provide a general overview of how the transition occurred and will examine: (1) what produced water is; (2) the recent legislation surrounding produced water (specifically HB 2767 and HB 3246); (3) the present litigation landscape; and (4) the impending constitutional fight. For San Antonio lawyers who represent clients surrounded by one of the largest and most active shale formations in the world, understanding your landowner clients' rights is essential, and chances are good that the oil and gas lease they signed back in 2010 does not even address what is quickly becoming their largest commodity—water.

Rags To Riches—What Is Produced Water, and Who Actually Owns It?

Generally speaking, produced water is water that comes out of the well with the crude oil during crude oil production. This produced water can include water existing in the shale formation, as well as water injected into the wellbore during production that is now flowing back up the wellbore. But is the produced water existing naturally within the shale formation properly considered groundwater? According to the Texas Water Code, the answer appears to be "yes." Specifically, the Texas Water Code defines groundwater as "water percolating below the surface of the earth,"[1] and under well-established Texas law, that groundwater is part of the surface estate, owned by the surface owner as a vested property right.[2] Nevertheless, until a few years ago, the fight over produced water was not over who "wanted" to take it, but rather over who "had" to take it. This is because produced water contains soluble and non-soluble oil/organics, suspended solids, dissolved solids, and various chemicals used in the production process.

The ratio of produced water to oil varies from well to well and over the life of the well. Generally, this ratio is more than three parts of water per one part of oil, and in some parts of the world can exceed a ratio of twenty to one. Quantifying and defining produced water can be difficult because both flowrate and composition change over the life of the well. It is currently estimated that the United States generates some twenty to twenty-five billion barrels of produced water each year, and now that a market has been established, regulations are increasing, and availability of freshwater is decreasing, it is easy to see how a liability has become an asset.

Traditionally, produced water was treated as a waste byproduct, obligating operators to dispose of it in accordance with applicable disposal requirements. In 2013, the industry standard practice of obligating operators to dispose of produced water (typically by injecting the produced water into a disposal well) was codified by HB 2767.[3] More recently, in 2019, HB 3246 added language which purportedly transferred not only liability, but ownership of the produced water to the operator.[4]

Between 2013 and 2019, however, there were significant shifting economic opportunities with respect to produced water. By 2019, water haulers had already begun monetizing produced water by either dedicating it to companies who treat and sell recycled water, or treating and selling the recycled water themselves. Operators quickly followed suit. By treating and monetizing produced water, a question arose—who is entitled to the proceeds of sale from the produced water? Operators and surface owners both raised their hands. Operators argue that historical practices and the newly enacted HB 3246 support their claims. Surface owners argue that correlative rights and their ownership rights in groundwater support their claims.

Correlative Rights and the Implied Rights Protecting the Surface Estate

While common knowledge for most oil and gas attorneys, the implied doctrines limiting the mineral estates' dominance warrant some discussion at this point.[5] Texas recognizes the in-place ownership of minerals. Prior to severance of the mineral estate, a fee simple owner enjoys proprietary rights and constitutional protections for all resources located within the borders of his property. Like other states, Texas allows severance of the surface and mineral interests. Traditionally, upon severance, the mineral estate possesses the hydrocarbons in place, while the surface estate retains all groundwater. These divisions, though, are always subject to the express terms of the conveying instrument. After severance, the mineral interest owner possesses the dominant interest over the surface estate, but the mineral estate's dominance is limited by four important implied doctrines: (1) the accommodation doctrine; (2) the "reasonable and non-negligent use of the surface" doctrine; (3) the "use, as opposed to ownership" doctrine; and (4) the "use of the surface must benefit the mineral estate" doctrine. For the purposes of this analysis, the most significant implied doctrines are (1) the distinctions between use and ownership; and (2) the implied doctrine that surface use must benefit the mineral estate.

The Implied Right to Use—Not Own—the Surface

Under Texas law, a mineral interest owner holds an implied right of surface *use*, not *ownership*. While a mineral interest owner may use such part, and so much, of the surface as is reasonably necessary to comply with the terms of the mineral lease and effectuate its purpose, the implied right does not grant ownership of the surface to the mineral interest owner.

The Supreme Court of Texas has made this distinction in numerous decisions, often in passing and in the context of defining the implied right of the mineral interest owner. In *Getty Oil*, the court held "the oil and gas estate is the dominant estate in the sense that *use* of as much of the premises as is reasonably necessary to produce and remove the minerals is held to be impliedly authorized by the lease."[6] Similarly, in *Sun Oil*, the court upheld the dominance of the mineral interest owner's rights over the servient, surface estate, but tempered its holding by noting that the implied right was limited to "*use* of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease."[7] In *Brown v. Lundell*[8] and *Humble Oil & Refining Company v. Williams*,[9] the court held, respectively, that the mineral interest owner had the right to "*use* so much of the land . . . as is reasonably necessary to comply with the terms of the lease,"[10] and to "*use* as much of the premises, and in such a manner, as was reasonably necessary to comply with the terms of the lease and to effectuate its purposes."[11]

The Supreme Court of Texas' language is significant for two reasons, each of which represents a significant impediment to widespread acceptance, implementation, and use of water treatment technologies throughout the state. First, the rights of a mineral interest owner are described in the context of use, *not* ownership. In each instance, the Court's recognition of a mineral interest owner's implied right of surface use implicitly recognizes the surface estate owner's ownership of the surface. Second, the Court's language confines surface use to effectuating the purposes of the mineral lease. In so doing, the Court prohibits a mineral interest owner from using the surface in any manner that does not benefit the mineral estate of the subject tract and lands pooled therewith. This latter impediment is discussed in further detail in the following section.

The sale of an asset cannot be divorced from the issue of ownership. That is, one must own something in order to sell it. Since a mineral interest owner's right to water is usufructuary—*giving it a present right of use only*—it cannot sell that which it does not own. Upon the expiration of the mineral lease, and absent language to the contrary, the fee simple determinable interest held by the mineral lessee automatically reverts to the mineral estate owner, and with it all rights, implied or otherwise. Notwithstanding the Court's likely deference toward the reasonably necessary use of water in hydraulic fracturing, mineral interest owners using water treatment technologies to treat wastewater would ultimately be prevented from realizing any economic benefit from the sale of treated wastewater because such wastewater would remain the property of the surface estate owner. Thus, a mineral interest owner must ultimately obtain ownership of water from the surface estate owner in order to sell treated wastewater and derive any economic benefit from the sale.

Without such ownership, mineral interest owners are unlikely to be incentivized to adopt water treatment technologies. Costs expended on such technologies would create no cost or economic benefits for the mineral interest owner, and the implementation of water treatment technologies would yield to less costly disposal well alternatives. Furthermore, recent confirmation in *Edwards Aquifer Authority* that groundwater in place is a vested real property right subject to constitutional protection means that Texas courts would likely not sustain a mineral interest owner's claim to any ownership interest in treated wastewater produced from the surface estate, since denial of the surface estate owner's ownership would give rise to a takings claim akin to that argued in *Edwards Aquifer Authority*.[12]

Surface Use Must Benefit the Dominant Estate

The mineral interest owner's use of the surface is not unlimited, since the implied right of surface use confines use of the surface to that which benefits the mineral estate of the subject tract only and the lands pooled therewith. Absent language to the contrary, a mineral interest owner is prohibited from using the surface of one mineral estate for the benefit of another. Since the purpose of a mineral lease is to enable the mineral interest owner to carry out mineral exploration, production, and development activities on the subject tract, the fee simple owner must have impliedly intended that a right to use the surface pass to the mineral interest owner. It follows, then, that use of the surface cannot be for the benefit of activities or any other purposes that do not benefit the mineral estate of the subject tract.

Texas cases have consistently held the implied right of surface use is limited to that which benefits the mineral estate of the subject tract only. In *Robinson v. Robbins Petroleum Corporation, Inc.*,[13] the mineral interest owner sought to undertake waterflood operations to re-pressure the formation.[14] In doing so, Robbins Petroleum produced saltwater from the surface owned by Robinson, which Robinson acquired subject to the existing Wagoner oil and gas lease.[15] Saltwater produced from the surface, which Robbins Petroleum included in a secondary recovery waterflood unit, was used to drive waterflood operations throughout the entire, field-wide unit, portions of which did not benefit the Wagoner lease.[16] Robinson argued the use of his surface estate was unreasonable to the extent that it benefited other mineral estates within the unit that were not included in the Wagoner lease.[17] The Court agreed. Distinguishing its ruling in *Sun Oil* as applicable only to circumstances where use of the surface was for waterflood operations benefiting a single mineral estate, the Court held:

> Even if the waterflood operation is reasonably necessary to produce oil from premises of the Wagoner lease, it does not follow that the operator is entitled to the use of Robinson's surface for the secondary recovery unit that includes acreage outside the Wagoner lease. . . . Nothing in the Wagoner lease or the reservation contained in Robinson's deed authorized the mineral owner to increase the burden on the surface estate for the benefit of additional lands.

> Robinson, as owner of the surface, is entitled to protection from uses thereof, without his consent, for the benefit of owners outside of and beyond premises and terms of the Wagoner lease. . . .[18]

Likewise, in *TDC Engineering, Inc. v. Dunlap*,[19] a Texas appellate court held that the mineral interest owner had the right to dispose of saltwater in injection wells located on the surface from which the saltwater was produced, but did not have the right, absent language to the contrary, to dispose of such saltwater on land covered by another mineral lease.[20]

Where the express terms of a mineral lease permit pooling of tracts owned by separate surface estate owners, Texas cases have upheld a mineral interest owner's implied right of surface use, but have maintained that such surface use must be for the exclusive benefit of the collective mineral estate. In *Delhi Gas Pipeline Corporation v. Dixon*,[21] the court confirmed that a mineral interest owner's use of the surface was reasonable where the surface was included in a pooled unit as expressly permitted by the terms of the mineral lease. Delhi Gas laid a gas gathering pipeline, a portion of which ran across the surface owned by Dixon, to transport natural gas from a well located on another tract within the unit.[22] In reaching its decision, the court acknowledged that the pipeline served only to transport gas from the well within the unit, and held that the pipeline did not violate Dixon's rights even though transportation of the gas benefited a tract other than his own.[23] In so holding, the court stated that the mineral interest owner had "the right to use as much of the premises as is reasonably necessary to produce and remove the oil, gas, and other minerals [including] the right to use as much of the surface estate as is reasonably necessary to produce oil or gas from a well located on a production unit with which the tract has been unitized."[24]

Similarly, in *Miller v. Crown Central Petroleum Corporation*,[25] the Millers purchased the surface of two tracts subject to an existing oil and gas lease, which permitted the pooling of lands.[26] Following several years of oil production from the formation, Crown Central obtained approval from all mineral interest owners to undertake waterflood operations.[27] Without the Millers' approval, Crown Central buried a pipeline beneath the surface of the Millers' tracts to transport saltwater to another tract included within the waterflood operation.[28] Finding that the language of the mineral lease expressly granted Crown Central the right to pool the Millers' tracts with other lands, the court held there was insufficient evidence to support a finding that Crown Central acted unreasonably, since its use of the surface benefited the mineral estate, as provided by the mineral lease.[29]

Application of this limitation to treated wastewater means that, notwithstanding the implied right of surface use, the use of such wastewater is confined to that which benefits the mineral estate of the subject tract only and lands pooled therewith. This only permits mineral interest owners to take advantage of treated wastewater to hydraulically fracture additional wells or use such wastewater in other oilfield operations so long as it benefits the subject mineral estate and lands pooled therewith. However, the use of treated wastewater would be prohibited and unreasonable to the extent it benefited a tract other than the tract from which it was produced or was used for purposes unrelated to effectuating the mineral lease.[30]

For many years, this legal framework informed the treatment of produced water as wastewater. But as we have already alluded to, in the last decade, the value and utility of produced water has changed dramatically. The next article in this series will explore how the Texas Legislature and courts have addressed the changing dynamics between surface owners and mineral estate owners. ★

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