



Locke Lord's High Noon Knowledge Series

Produced Water

The Next Big Wave in E&P

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Roadmap

- Produced Water and Natural Gas – The More Things Change The More They Stay The Same
- Perspective is Everything – Differing Views of Produced Water Disposal
- Cost and Risk Allocation Generally
- Pricing Models
- Dedication
- Title
- Environmental Issues

Produced Water and Natural Gas

The More Things Change The More They Stay The Same

- Produced water gathering and disposal bears many of the same hallmarks of the early days of the natural gas industry
 - Waste product
 - Byproduct of crude oil exploration and production
 - No intrinsic value
 - Poses an operational and logistical constraint on mineral exploitation
 - Little or no existing infrastructure
 - Producer has little or no incentive to deal with the problem other than to facilitate its mineral program

Perspective is Everything

Differing Views of Produced Water Disposal

- Currently there are two fundamentally different and in some respects incompatible views of the produced water gathering and disposal industry
- The “Midstream” model
 - Alignment with the midstream crude and gas business model
 - Gatherer takes drilling risk (i.e., whether Producer will drill/develop) based on acreage dedication
- The “Services” model
 - Gathering and disposal are “pay as you go” services
 - Gatherer assumes drilling risk and market risk

Cost and Risk Allocation

- In the “Midstream” model:
 - Dedication provides some measure of protection for Gatherer’s capital
 - Producer is “captive” and to the extent that Producer’s drilling program is active, Gatherer has some assurance of recovery of and on capital
 - In some instances Producer is subject to a minimum volume or “take or pay” which provides Gatherer with levelized revenue stream
 - Project finance pricing model, e.g. $P = FP + VC$, where $FP = \text{capital cost, including IRR} + \text{fixed O\&M}$, and $VC = \text{variable O\&M, fuel}$

Cost and Risk Allocation (cont'd)

- Same approach taken with new Receipt Points, i.e. often a combination of “halo” for required Gatherer capex without direct reimbursement plus IRR hurdle rate on additional capital
- May take the form of upfront payment or adjusted rates
- Restrictions on assignment in line with standard GGPA type provisions
- Gatherer retains skim oil

Cost and Risk Allocation (cont'd)

- In the “Services” model:
 - Gathering and disposal seen as commodity services
 - Gatherer capital has little or no protection as Producer may insist on “pay as you go” mode – Gatherer revenue stream may not be levelized
 - Same approach taken with new Receipt Points, i.e. Gatherer required to construct new Receipt Points “on the come,” or “halo” may be expanded
 - Producer views dedication/controls on assignment as unduly burdensome on higher value crude acreage
 - Producer retains skim oil

Dedications in the “Midstream” Model

Roadmap for Dedication and Assignment Considerations

- Dedication déjà vu: Are you sure we aren't gathering hydrocarbons?
 - Tried and tested: If it ain't broke...
 - Produced water gatherers have the same concerns as oil and gas gatherers when crafting dedication provisions
 - “What's in it for me?”
 - Know what's in your dedication
 - “What do I have to lose?”
 - Releases from dedication
 - *Sabine* and covenants running with the land

Dedications in the “Midstream” Model

“What’s in it for me?”

- The dedication is the economic basis of the water gathering agreement for the Gatherer – Know what you’re getting. And when in doubt, add it to the dedication provision.
 - Dedicated interests – generally limited to operated interests
 - Include “Affiliates” as of Producer operators
 - Require successor operators to take operatorship subject to your dedication
 - Prior dedications – Tell me what I’m not getting: Schedule the particulars.
 - Life of lease versus fixed term dedication – How long are we dancing?
 - Subsequently-acquired interests – Icing on the cake or critical to the base economics?
 - Exclusions from the dedication – Plans for recycling? What’s in it for me?

Dedications in the “Midstream” Model

“What do I have to lose?” Releases from the Dedication

- Just because you have it doesn't mean you keep it:
 - Well connects – Must I connect everything? Consequences of failures to connect?
 - Distant wells. Uneconomic wells.
 - Again: “What's in it for me?” If it's on my dime to connect, I need data and time to evaluate and build.
 - Temporary Releases and Trucking – Can I truck? Must I truck? Who pays?
 - Permanent Releases
 - How long do I have to make things right?
 - What if it's not my fault? Releases for Force Majeure and Producer breach...
 - Can I truck to save the Dedication?

Dedications in the “Midstream” Model

“What do I have to lose?” *Sabine* and Covenants Running with the Land

- *Sabine* déjà vu: If it works for gas it will probably work for water (But it may not work for gas...)
- Four elements under Texas law for a covenant to run with the land:
 1. “Touches and concerns” the land
 2. Relates to a thing in existence, such as a tangible piece of property, or specifically binds the parties and their assigns
 3. Original parties to the covenant intend for it to run with the land
 4. Successors to the burden have notice

Say it like you mean it: Expressly state 1-3. File a memorandum.

Title And Why It Matters, or Not

- Up to this point the business of produced water has been limited to gathering and disposal
- Increasingly, the advent of large scale fracking has helped create robust demand for water, including recycled water
- Recycled water provides an additional revenue stream to recover gathering and disposal infrastructure capital
- Whereas title to produced water has not hitherto been an issue of contention, it is increasingly becoming so

Title Issues in Texas

- Producer's rights *vis a vis* produced water
- Producer's transfer of produced water to a wastewater recycler
- Producer's duty to account for such transfer
- Gatherer's ownership over produced water
- Legal challenges to such ownership

Producer Rights to Produced Water

- A mineral lease provides the Producer with, *inter alia*, the right to produce the minerals
- Under Texas law water is part of the surface estate and the mineral lease itself does not provide rights to water*
- The Producer's rights over the mineral estate, which under Texas law is the dominant estate, gives the Producer the right to use "as much of the premises as is reasonably necessary to comply with the terms of the lease." *Getty Oil Co. v. Jones*, 470 S.W.2d 618, 624 (Tex. 1971)

Transfer of Produced Water

- Once the Producer obtains produced water, it must determine what to do with it
- Historically, Producers would inject produced water into disposal wells, but increased fracking now presents another option: selling to wastewater recyclers
- But this raises the question of how a Producer can transfer something it never owned in the first place, i.e. that a mineral lease does not purport to transfer of surface rights to the Producer

Transferring Produced Water

- The answer is somewhat unclear; Texas law treats produced water as a waste product with little to no commercial value
- A mineral lessee has an implied right to dispose of produced water. *Brown v. Lundell*, 344 S.W.2d 863, 866-67 (Tex. 1961)
- The question remains, does this right to dispose of produced water (via an injection well) also allow the Producer to transfer title to the operator of the well?

Transfer/Sale of Produced Water

- When a Producer purports to transfer or sell produced water it creates a potential legal issue around the legality of the transfer
- If produced water is effectively monetized as part of the gathering and disposal process, yet another legal question is raised, i.e. around whether there is an accounting due to the owner of the surface estate

Conversion

- A person commits an offense if he unlawfully appropriates property with intent to deprive the owner of property. Tex. Penal Code Ann. § 31.03(a)
- “unlawfully” means, among other things, “without the owner’s effective consent”
- Unclear if in the preceding examples the surface estate owner has given “effective consent”

Legislative Solution

- Attempting to address this concern, the Texas legislature enacted Chapter 122 of the Natural Resources Code in 2013 which:
 - Grants title over produced water to any person receiving it “for the purpose of treating the [water] for a subsequent beneficial use.” Tex. Code Ann. § 122.002(1).
 - Permits that person to effectively transfer produced water to others with clear title. § 122.002(2).
 - Limits the liability of that person if treating produced water for future oil and gas production. § 122.003.

Problem Solved? Maybe

- Arguably, Chapter 122 involuntarily transfers ownership from the surface owner to a waste recycler
- Can the surface owner successfully challenge the operation of this statute?
- Unclear, but multiple causes of action may be available to a surface owner:
 - Regulatory taking without just compensation
 - Conversion of property

Best Practices (For Now)

- In the absence of clear answers, the contractual response is:
 - Clear conveyance of title: “*all rights, title and interest in and to . . .*”
 - Conveyance of title as explicit consideration
 - Warranty of title: “*free and clear of liens, encumbrances and claims*”
 - Indemnity and release to support title warranty

Regulatory Status of Produced Water

- An “oil and gas waste”
- Though exempt from regulation as a “hazardous waste,” it still is regulated as a “solid waste”
- As an “oil and gas waste,” produced water is subject to greater regulation than raw water
 - At the well site
 - **During transportation**
 - At the place of ultimate disposition
- Except as related to siting issues, regulation is almost exclusively driven by state and local laws, rather than Federal laws
- In Texas, the Railroad Commission has jurisdiction over produced water

Common Methods of Management

- Onsite disposal wells
- Off-site disposal locations
 - Means of transportation
 - Hauler
 - Pipeline
 - Means of disposal
 - Off-site disposal wells
 - Wastewater treatment plants
- Re-cycling and re-use

Delivery of Produced Water to a Carrier

- Hauler – In Texas, a person who transports oil and gas waste for hire by any method other than by pipeline shall not haul or dispose of oil and gas waste off a lease, unit, or other oil or gas property where it is generated unless such transporter has qualified for and been issued an oil and gas waste hauler permit by the Railroad Commission. 16 TAC 3.8(f)(1)
 - Must provide Commission with list of vehicles
 - Must have Motor Carrier Registration from TxDOT

Delivery of Produced Water to a Carrier

- Pipeline – in Texas, a Railroad Commission permit is not necessary for a produced water pipeline
- But compare North Dakota
 - Underground produced water gathering line requires a 7-day notice of intent to construct
 - Bond must be obtained and approved
(North Dakota Administrative Code § 43-02-03)
- Pipelines carrying only produced water are not subject to federal pipeline jurisdiction

Delivery of Produced Water to a Carrier or Receiver

- Yet, in Texas, under 16 TAC 3.8, pipelines still have responsibilities:
 - No carrier may knowingly utilize the services of a second carrier to transport oil and gas wastes if the second carrier is required by this rule to have a permit to transport such wastes but does not have such a permit
 - No carrier may knowingly utilize the services of a receiver to store, handle, treat, reclaim, or dispose of oil and gas wastes if the receiver is required by statute or commission rule to have a permit to store, handle, treat, reclaim, or dispose of such wastes but does not have such a permit
 - Any person who plans to utilize the services of a carrier or receiver is under a duty to determine that the carrier or receiver has all permits required by the Oil and Gas Division to transport, store, handle, treat, reclaim, or dispose of oil and gas wastes

Storage of Produced Water

- Pits – in most jurisdictions, require permits. In Texas, those permits are obtained from the Railroad Commission.
- Tanks
 - In Texas, storage of produced water in a tank does not require a permit from the Railroad Commission
 - Some states require permits for the storage of produced water in tanks
 - E.g. – except for small low volume facilities, New Mexico requires permits for surface waste management facilities that receive oil field waste for collection, treatment or storage. NMAC § 19.15.36.8

Storage of Produced Water

- Tanks may nevertheless emit air pollutants requiring air authorizations, which in Texas are obtained from the Texas Commission on Environmental Quality (TCEQ). Lead time may be significant.
 - Produced water contains low concentrations of hydrocarbons containing volatile organic compounds (VOCs)
 - At sites, particularly, with high throughput and large volumes of water, VOC emissions from produced water tanks can be significant, potentially triggering permitting and emission control requirements
 - Only certain types of tanks are well suited to handle the back pressure that comes from the installation of emission controls. Bolted and fiberglass tanks frequently are not well suited and may require replacement.

Siting Issues Remain Relevant

- Will construction/installation of the pipeline affect wetlands or waters of the United States? US Corps of Engineers (COE) permits may be required
 - Permits affecting waterways for which the COE has dredging/maintenance responsibility may require separate real estate authorization in addition to wetlands/US waters permits
- Federal actions, which can include obtaining federal permits, trigger the need to evaluate endangered/threatened species and historical or cultural resources impacts
- Pipelines under federal, state or local government-owned property usually require authorizations from Bureau of Land Management, General Land Office (in Texas), ports, etc.
- In Texas, activities that disturb stream bed materials in perennial streams or streams more than 30 feet wide may require a Marl, Sand, Gravel, Shell or Mudshell Permit from the Texas Parks and Wildlife Department

Takeaways

- Produced water is a regulated oil and gas waste
- Regulation is driven mostly by state and local laws
- Although Texas and many states do not strongly regulate produced water gathering systems, some states, including North Dakota, do
- Produced water pipelines have duties in Texas to confirm the Railroad Commission authorizations of any vehicle haulers or disposal locations to which they deliver
- Transfer locations, terminals, or tank farms may require separate permitting, including air permits or pit permits
- Pipeline siting considerations remain relevant

Q&A



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