Underground Gas Storage: Opposing Rights and Interests

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UNDERGROUND GAS STORAGE: OPPOSING RIGHTS AND INTERESTS

I. Introduction

Demand for natural gas has increased during the past twenty years to a level where pipeline companies cannot transport enough gas to meet the needs of their customers during periods of peak use usually occurring during cold weather. During the summer months, on the other hand, pipeline companies transport more gas than needed, and this situation resulted in an inefficient gas transport system which decreased a pipeline company's return on its investment. To remedy this situation, pipeline companies utilize a system of gas storage. During the summer months the companies transport the surplus gas to underground storage reservoirs where it is injected and stored until the next winter. This process permits the pipeline to operate at a higher efficiency level, resulting in higher returns on investments and in lower gas prices. The process also increases availability during the winter months.1

The advent of new industrial procedures is usually accompanied by unforeseen legal problems. The courts must sift through the novel issues and solve problems without the aid of precedent or statutory assistance until legislatures have time to react to problems created by the new procedure. The purpose of this article is to report how courts have resolved the principal issues involved in the underground storage of gas; to examine relevant statutes that have been enacted; and to address additional problems that remain undecided.

Three parties have differing interests in the underground storage of natural gas. First, storage companies (usually pipeline companies) are concerned with the problems of applying for and receiving permission to conduct storage operations from state regulatory agencies. They must also acquire all the necessary rights from landowners and mineral interest owners, and take measures to protect their stored gas from conversion. Second, landowners and mineral owners are concerned with receiving adequate compensation for transferring their respective rights to the storage company and they must protect their interests in any remaining

minerals outside of the storage reservoir. Third, the state has an interest
in the production of existing minerals, if any, and in insuring the
availability of an adequate supply of gas in times of peak use. The
interest of these parties are interrelated and must be balanced against
each other to reach the most equitable solution. It is in this atmosphere
of balancing interests that the varying problems inherent in the under-
ground storage of natural gas will be discussed.

II. Rights To Depleted Sand

The storage company that wishes to store natural gas or other fluids
in a depleted underground formation must first determine who owns
the rights to that formation and what those rights are. The persons
who may have potential storage rights in a depleted reservoir include
the land surface owner, the mineral interest owner, the royalty owner,
and the reversionary interest owner. Obviously, if the storage company
conducts storage operations without first acquiring the right to do so
from the proper owner, the company would commit a trespass and
could be held liable and enjoined from continuing storage operations.
A major dispute in the past has been whether the land surface owner
or the severed mineral interest owner had the right to lease the depleted
underground reservoir for the storage of fluids. The determination of
this issue is extremely important to the storage company because they
want to be certain that they are leasing storage rights from the proper
party. If the company leases storage rights from the mineral interest
owner or the land surface owner and the courts determine that the other
party had sole right to lease underground storage rights, the company
would then either owe the other party damages for the underground
trespass or may even lose title to the illegally stored gas.

There are two clear lines of decisions concerning the issue of leasing
storage rights. Under the first approach the proper party lessor is the

2. Id.
3. Id. at 54.
4. Unquestionably, if the gas storage company legally injects gas under Louisiana
land pursuant to La. R.S. 30:22(D) (Supp. 1986), see infra note 36 and accompanying
text, the gas storage company should retain title to the gas. However, the use of the
word "may" in that statute gives the commissioner discretion in appropriate situations
to decline to issue an order stating that the injected gas is the property of the injector.
Without that order, general Louisiana law would control and this illegally injected gas
should be treated the same as native gas—not owned by anyone until reduced to possession.
If the rights to remove minerals form the depleted reservoir reverted back to the landowner
when no more minerals were recoverable, the landowner should then own the right to
produce the illegally injected gas when the commissioner does not issue a La. R.S. 30:22(D)
order. If the mineral owner still had rights to the depleted reservoir, he should have the
right to produce this gas.
mineral owner, while under the second approach the proper party lessor is the landowner. The first approach originates in Kentucky. In Hammonds v. Central Kentucky Natural Gas Co., an early decision, the Kentucky Court of Appeals held that a land surface owner was not entitled to compensation for storage of gas in a reservoir under her land without her authorization. The court reasoned that natural gas resembled a wild animal, and was ferae naturae. Once captured, the gas is owned by the captor; but when released back into the ground for purposes of underground storage, the gas regains its freedom and is no longer owned by anyone. Therefore, the plaintiff could not maintain her action against the storage company because the gas under the plaintiff's property no longer belongs to the defendant.

Several years later, and after much criticism of the Hammonds decision, the Kentucky Court of Appeals again considered this issue in Central Kentucky Natural Gas Co. v. Smallwood. This case involved a dispute between surface owners and mineral interest owners over who had rights to lease underground reservoirs for gas storage. The mineral interest owner had leased his interest (which included the right to store gas in underground formations), but there had never been any drilling or production. The lease was kept alive by rental payments. The lessee, through injection operations on other lands, stored gas in a formation that extended into lands that were covered by the lease. The lease provided for payments to the lessor for the storage of gas in the leased land. The court was faced with determining to whom compensation was due for the underground storage of this gas. The court recognized that the rule in England was that the mineral owner has the exclusive right to the possession of underground space containing or formally containing oil or gas and has the use of the space for all purposes, but that in the United States the rule seemed to be different. Here, the landowner still owned the formation. However, the court concluded that in light of the fugitive nature of oil and gas, the fact that there was still some native gas in the formation, along with the Hammonds theory, that the injector of gas loses title thereto upon injection, the mineral owner still had rights to the once again productive sand and that he was entitled to lease it and obtain the rental payments for the gas storage.

These two cases establish the mineral owner's authority to lease the underground storage rights to depleted reservoirs in Kentucky. The Kentucky courts seem to hold to this reasoning due to their determination that ownership of natural gas is lost upon injection.

Other jurisdictions have not followed Kentucky's lead and instead have determined that the landowner has the right to lease underground

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5. 75 S.W.2d 204 (Ky. Ct. App. 1934).
7. Discussed infra text accompanying notes 31-45.
storage reservoirs. After Hammonds, but before Smallwood, the Oklahoma Supreme Court, in Sunray Oil Co. v. Cortez Oil Co., said that “being the owner of the land [a surface owner] has the right to use the surface and substrata of her land as she sees fit, or permit others so to do, so long as such use does not injure or damage other persons.” This case dealt with the injection of salt water, instead of natural gas, into underground reservoirs; but the same reasoning should apply to either situation.

Several years later, a similar result was reached in Tate v. United Fuel Gas Co., where a landowner sued a gas storage company for conducting storage operations on and under his land without obtaining a lease from him. The landowner had bought the land subject to a reservation of all minerals except clay, sand, or surface minerals (except those necessary to operate for oil and gas). The issue was whether the mineral interest owner had reserved storage rights by the language in the deed or whether the landowner had acquired the storage rights. The court held that the deed had not reserved to the mineral interest owner the rights to the depleted underground reservoir; therefore, the surface owner had acquired the underground storage rights and consequently had the exclusive right to lease those rights. Absent the wording in the lease, the underground stratum may have been considered to be a “mineral” under the terms of the lease and, thus, reserved in the sale of the land. This would have given the mineral interest owner the right to lease the underground stratum.10

A case not dealing with the right to lease a depleted stratum for storage purposes but having implications concerning this issue arose several years later in a Texas court of civil appeals. The issue addressed in Atlantic Refining Co. v. Bright & Schiff was whether the surface owner or the mineral owner had the authority to give a proposed lessee permission to directionally drill a well through the surface owner’s land that would bottom under adjacent land. The drilling would necessarily proceed through strata in which the mineral interest owner owned minerals in place. If the mineral interest owner also owned the strata, it follows that the proposed lessee would have to lease the right to drill through this strata from the mineral interest owner. Also, if the mineral interest owner owned the strata for this drilling purpose, the implications are that he would also own it for the purpose of leasing the right to store natural gas there. The court, however, determined that the land surface owner had the exclusive right to give the proposed lessee per-

8. 188 Okla. 690, 698, 112 P.2d 792, 795 (1941).
10. Scott, supra note 1, at 59.
mission to directionally drill through the subsurface strata; therefore, it
would also appear that he would have the right to lease subsurface
storage rights. Thus far, no Texas case has directly addressed this issue.
However, in *Humble Oil & Refining Co. v. West* the court made it
clear that the fee owner had the right to use underground strata for
storage purposes and that royalty owners could not enjoin them from
doing so. Admittedly, this does not determine the issue when the con-
troversy is between the landowner and the mineral owner, however, the
same reasoning may be applied by analogy to show that the landowner
may have the exclusive right to lease storage rights in Texas. In *West*,
the Texas Supreme Court cited a federal Court of Claims case, *Emeny
v. United States*, where the federal government, as holder of all lease-
hold rights, was prevented by the landowner from using an underground
formation for the storage of helium, based on the reasoning that the
surface owner owned the underground formation. By citing this case,
the court, it can be argued, adopted the concept that the surface estate
included the right to lease the depleted formation.

In *Ellis v. Arkansas Louisiana Gas Co.* the storage company leased
the right to store gas in an underground depleted formation from the
owners of the severed minerals. They then leased the right to lay pipelines
and construct an injection well from the surface land owner. The surface
owner challenged the right of the owner of the severed minerals to lease
the underground storage rights. The court held that the surface owner,
not the mineral owner, had the right to lease subsurface storage rights.
The court said that mineral owners have nothing to lease once the
minerals have been depleted. However, in this case, the storage company-
had been continually storing gas longer than the statutory period required
for prescription (fifteen years), and therefore it had acquired the right
to store the gas.

In *Southern Natural Gas Co. v. Sutton* a Louisiana Court of
Appeals treated the issue as already having been decided. There was no
historical treatment of the issue; and it was disposed of in one short
sentence: "[s]urface ownership, however, includes the right to use the
reservoir underlying the [land] for storage purposes."

These cases reveal a trend towards giving surface owners the exclusive
to lease depleted underground strata for the storage of fluids.

12. 508 S.W.2d 812 (Tex. 1974).
17. Id. at 671.
The thinking of legal scholars has also shifted toward the same conclusion. In 1957 an early commentator stated:

The better view, it is submitted, would regard the mineral owner as holding the principal storage rights in the stratum. The surface owner ought to receive no compensation unless the storage company wants the right to utilize the surface in some way that would not be regarded as a reasonable use if it were by a normal mineral owner.\(^\text{18}\)

About ten years later, however, another writer took the opposite view of the same issue, stating that a grant of minerals is not a grant of the stratum they are locked in; therefore the surface owner owns the stratum and has the right to lease storage rights in it.\(^\text{19}\)

This shift in both case law and legal thinking seems to coincide with an increase in the overall knowledge of the character of minerals. During the developing stages in the oil and gas industry, it was long thought that oil and gas flowed and migrated beneath the earth's surface.\(^\text{20}\)

If this were true one might conclude that the depleted reservoir may one day be refilled by one of these migrating fluids. The mineral owner, thus, would have an interest in the depleted strata for if these strata were filled with storage gas or other fluids it would prevent any native fluids from re-entering the strata. For this reason, in the past it was recommended that storage companies acquire the interests of mineral owners as to any remaining oil or gas and also as to any future migrating minerals.\(^\text{21}\)

With this limited knowledge, it is understandable how the courts and scholars sought to protect the mineral owner's rights in the depleted strata. We now realize that minerals are locked in non-permeable container-like formations\(^\text{22}\) and do not freely flow through underground rivers, making it unnecessary to protect a mineral owner's interest in a depleted reservoir. It is not going to refill absent a geological event connecting two underground reservoirs. Since the surface owner owns the land "from core to crust"\(^\text{23}\) it only makes sense that he, rather than the mineral owner, owns depleted reservoirs. The "container" in which minerals are locked should not be considered a part of the mineral estate.

19. Scott, supra note 1, at 59.
20. See, e.g., Stamm, supra note 18.
21. Id.
22. See Stamm, supra note 18 and accompanying text, where the author speaks of reservoirs "locking in" minerals.
23. Scott, supra note 1, at 59.
III. Rights To Unrecovered Gas and Oil

When gas or other fluids are sought to be stored in underground reservoirs, those reservoirs usually contain a small amount of native gas or oil. There also may be native oil and/or gas found in other reservoirs either above or below the depleted reservoir that is sought to be used for storage. These situations create two important issues. First, if there is gas or oil remaining in the proposed storage reservoir, is the storage company obligated to pay the owner of the interest in that oil or gas its value according to the total amount there, or the value based only on the recoverable amount? Second, can a person who has the right to store gas in a depleted reservoir prevent the mineral owner from recovering other minerals from separate reservoirs either above or below the storage reservoir?

In Southern Natural Gas Co. v. Sutton,24 the owners of small fractional interests in the rights to recover and produce natural gas were entitled to compensation for the value of the recoverable gas and condensate. The storage company was the only party introducing evidence as to the value of the recoverable minerals; therefore, this uncontroverted evidence established the value to be paid to the mineral interest owners. For reasons later explained, it is very important that a mineral interest owner establish some uncertainty as to how much recoverable oil or gas is present in the proposed storage reservoir.25

In West v. Humble Oil & Refining Co.,26 an oil company seeking to utilize an underground reservoir for storage of natural gas unilaterally determined the amount of gas remaining in the reservoir. The company then paid or offered to pay all of the royalty owners their share of the estimated remaining volume. The appellate court granted the royalty owners an injunction and stated that the storage company could not use the underground reservoir for storage purposes until all of the native gas had been produced. The storage company appealed and the Texas Supreme Court held that the royalty owners could not prevent the storage company from using the reservoir to store gas—the storage company owned the reservoir. However, the court imposed upon the storage company the burden of establishing the amount of recoverable gas in the reservoir, and the company was required to pay the royalty owners their share of that amount. The court stated that when injected gas commingles with native gas the injector has the burden of proving the share which is due to the royalty owners when the gas is recovered and produced. If they cannot do this, the loss must fall on the injector,

25. See infra note 29 and accompanying text.
and it would owe royalty on all gas produced from the storage project.\textsuperscript{27} The court then remanded the case to determine if the storage company could prove the \textit{recoverable} amount of gas in the reservoir. On remand the storage company admitted that it could not determine the \textit{recoverable} amount of gas, but it could prove the maximum amount of gas that could possibly have remained in the reservoir and offered to pay royalty based on that amount. The court approved this method, holding that the storage company had met its burden by determining the \textit{maximum} amount although it had been ordered to determine the \textit{recoverable} amount.\textsuperscript{28}

The evolution of the \textit{West} case demonstrates the great importance that creating doubt as to the remaining amount of gas has in fixing the value to be paid to mineral interest owners. If doubt exists, the mineral interest owners, under the reasoning used in \textit{West}, will either be entitled to payment on the \textit{maximum} amount of gas in the reservoir, if that amount can be determined, or to royalty payments on \textit{all} of the gas extracted from the storage reservoir.

The second issue, whether or not a storage company can prohibit exploration for naturally occurring gas or oil above or below the storage reservoir, was dealt with in \textit{Storck v. Cities Service Gas Co.}\textsuperscript{29} In \textit{Storck} landowners had executed a fifty year gas storage lease with an agreement that they would not conduct operations above the base of the storage strata leased. The landowners then executed a mineral lease to a company that sought to explore for and produce oil from a separate reservoir above the storage reservoir. When the lessee asked the storage company for permission to conduct operations above their storage project, the storage company refused. The court examined the lease and concluded that a provision in a storage lease prohibiting oil and gas production from non-storage strata was against public policy since it discourages exploration for and production of sources of energy. The storage lessee did not acquire the oil and gas or any rights thereto upon leasing a lower stratum for storage. If the lessee is really intent on prohibiting potentially damaging operations around his storage area, he should acquire the rights to all the oil and gas under the property when leasing the storage rights. Then if oil or gas is discovered above or below the storage reservoir, the storage company can conduct recovery operations in a manner that will not interfere with the storage operations. An outright purchase of those mineral rights in states that allow ownership of minerals separate from the land would accomplish this desired result.

\textsuperscript{27} Humble Oil and Refinery Co. v. West, 508 S.W.2d 812 (Tex. 1974).


\textsuperscript{29} 575 P.2d 1364 (Okla. 1974).
However, in Louisiana the storage company will not be able to tie up indefinitely the rights to native oil or gas above or below the storage reservoir. A "purchase" of minerals in Louisiana merely creates a servitude which entitles the purchaser to search for and produce the minerals, and this servitude prescribes in ten years absent a good faith attempt to either search for or produce the minerals. The storage company might attempt to lease the rights to produce all minerals and provide delay rentals for the right not to produce them. This or any similar type of lease is faced with the same challenge as the lease in Storck and because of their inhibitory effect on the production of oil and gas, these leases may be found to violate public policy.

IV. Ownership of Injected Gas

The problems concerning ownership of injected gas are closely related to those already discussed in parts II and III of this article. If the injector loses ownership of the gas upon injecting it into the storage formation, anyone else with the right to produce from that formation can do so (unless they have given up their right to produce by contract or in the storage lease). Likewise, if the injected gas somehow causes damage, the injector cannot be held liable because he has lost ownership of the gas, and therefore, it was not his gas that caused the damage. If, on the other hand, the injector does not lose title to the gas upon injection, no one else can produce his gas, and he will be liable for any damage that the gas may cause.30 Also, if the injected gas strays into formations that are not under the leased premises, the injector would owe compensation to the landowner,31 and if compensation is not paid, the landowner should be able to enjoin any continuing subsurface trespass.32

There are two established lines of decisions on the issue of ownership and a third concept, which is somewhat of a combination of the other two, is emerging. The first theory has already been mentioned in the previous discussion of Hammonds v. Central Kentucky Natural Gas Co.33 There the court took the view that injected gas becomes ferae naturae and is no longer owned by the injector. This relieved the injecting company from the obligation to pay a landowner for the use of subsurface strata underlying her land when the injector's gas strayed into it. However, because the gas under her land has no owner, it is assumed that she could produce it freely—a matter that was not dealt with in

31. Scott, supra note 1, at 54.
32. Id.
33. 75 S.W.2d 204 (Ky. App. 1934).
the decision. The same court, again in Smallwood, stated that there is no distinction in the title to gas once recovered and released for subterranean storage and native gas before its initial recovery.

White v. New York State Natural Gas Corp. exemplifies the second theory. In this case the production from the White well had fallen off substantially, and the well was barely operating at a profit when production suddenly increased dramatically. This increase in production mysteriously coincided with the commencement of storage operations on nearby property. The landowner claimed the right to continue to fully produce from the White well, and the storage company countered with the argument that all of the native gas had been produced and that this renewed production was gas that had migrated from their adjacent underground storage pool. The court held that title to natural gas, once having been reduced to possession, is not lost by injection into an underground storage reservoir. The storage company could recover from those producing their injected gas under the theory of conversion upon proving that it was their gas being produced. One way of proving this is by comparing chemical properties of the stored gas with those of the native gas. This method only works when the two gases have not mixed for then the resulting mixture will have properties unlike either of the two component gases, and a third type of gas is created. This concept is important when considering the third concept of ownership of stored gas.

The third theory, the "combination theory," of ownership, recognizes that ownership of the gas is not lost when the gas is injected into clearly defined reservoirs containing no recoverable natural gas. In this situation the ownership of the gas is not subject to question because it is easily identifiable when there is no native gas for the injected gas to mix with or when there is only a small amount of unrecoverable native gas. If native gas remains in recoverable amounts in the reservoir when storage gas is injected, the resulting mixture is a third form of gas. The mineral owner is entitled to compensation for the native gas in the reservoir, but now "his" gas has been transformed and is unidentifiable from the storage gas. Since the confusion of goods is the fault of the storage company, it is only fair that they should bear the burden of undoing their damage. If they are able to determine the amount of recoverable native gas in the storage reservoir (or the maximum amount of native gas), they can pay the mineral interest owners their share and can retain ownership of the new mixture of gas. If they cannot make

34. 252 S.W.2d 866 (Ky. Ct. App. 1952) (stating that there is no distinction in the title to gas once recovered and released for subterranean storage and native gas before its initial recovery).
this determination, the third mixture gas becomes *ferae naturae*, and the storage company may lose the right to produce the gas or may have to pay royalty on all of the mixed gas produced. Remember, in *Exxon Corp. v. West* the mineral lessee/storage company mixed storage gas with native gas without purchasing rights to the native gas beforehand. The court held that if they could not determine the recoverable amount of native gas (or the maximum amount), they would have to pay royalty on all gas produced from the storage area just as if the title to the stored gas had been lost. It follows that if the storage company was not also the mineral lessee, it would not even have the right to produce the mixed gas. If the storage company leased only the right to store gas in the reservoir, they may have to pay the mineral owner the value of the recoverable mixed gas before re-commencing storage operations.

If there is no mixture of storage gas and native gas or if the injector acquires rights to the remaining native gas, there is no question that in Texas the injector does not lose title to the injected gas. In *Lone Star Gas Co. v. Murchison*, the court followed *White* instead of *Hammonds* and determined that ownership of the injected gas was not lost. In *Lone Star* a storage company injected gas into a reservoir underlying lands where it had leased storage rights. The gas migrated through the reservoir to a part underlying some unleased land. The mineral fee owner of the unleased land drilled into the reservoir and began producing the stored gas. The court determined these actions constituted a conversion of the injector’s gas since title was not lost by injection. Presumably, the storage company would then have to either pay for the right to store the gas under the unleased land or refrain from doing so.

In *West Edmund Salt Water Disposal Association v. Rosecrans*, the Oklahoma Supreme Court stated that salt water was *ferae naturae* when it commingled with existing salt water in a subsurface formation and migrated under plaintiff’s land displacing valuable minerals. The salt water injector was not liable for damages resulting from this displacement as the offending salt water was not owned by him. Applying this same rationale to injected gas, it follows that if injected gas mixes with native gas such that the resulting mixture is no longer identifiable as the injected gas, ownership to the injected gas is lost.

A lower Oklahoma court distinguished *West Edmund* in *Ellis v. Arkansas Louisiana Gas Co.* when it held that ownership of injected gas was not lost upon injection when, (1) it did not mix with any native gas, and (2) the boundaries of the reservoir were capable of determination.

38. 204 Okla. 9, 226 P.2d 965 (1950).
With the jurisprudence in mind, the legislatures of Louisiana, Oklahoma, and Texas established that generally, the injecting storage company owns the injected gas. Louisiana Revised Statutes (La. R.S.) 30:22(D) provides that "the commissioner issue any necessary order providing that all natural gas which has previously been reduced to possession, and which is subsequently injected into an underground storage reservoir shall at all times be deemed the property of the injector. . ." However, the statute is careful to point out that if the project is not an approved underground storage reservoir, the injector shall have no right to the injected gas. This is a slight modification of the "non-ownership" theory that exists in Louisiana. That theory is now limited, at least for storage purposes, to native gas that has not been reduced to possession and subsequently re-injected. By leaving the issuance of a La.R.S. 30:22(D) order to the discretion of the Commissioner, the legislature has given him the power not to issue such an order and to let the courts decide the ownership of injected gas. A particularly appropriate situation for him to exercise this discretion is when injected gas mixes with native gas. The court could then decide the ownership of the mixed gas in light of *West Edmund* and *Ellis*, and where royalty payments for production of the native gas are at issue, the court may decide to place the burden of proving the volume of the remaining native gas on the injector as was done in *West*.42

The above quoted Louisiana language follows almost verbatim the language of the earlier Oklahoma statute dealing with the subject of ownership of injected gas.43 The corresponding Texas statute similarly states: "All natural gas in the stratum condemned which is not native gas, and which is subsequently injected into storage facilities is personal property and is the property of the injector. . ." These states all start with the basic principle that injected gas is the property of the injector. When, if ever, the courts will decide not to apply that principle is yet to be determined.

V. Consequences of the Ownership Theory

The determination of the ownership of injected gas carries with it a determination of rights and liabilities of the storage company and the landowner as well. As discussed in the beginning of section IV, if the injector retains title to injected gas, he may be liable for damages caused by his gas, while if he loses title upon injection the injected gas would

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41. Id.
42. 508 S.W.2d 812 (Tex. 1974).
be subject to recovery by others. Since it appears that, generally, the ownership of gas is not lost upon injection, except possibly in Kentucky, unless the injected gas can no longer be identified, it would seem to follow that the storage company would be liable for any damage caused by the escape of the injected gas. However, in *Tidewater Associated Oil Co. v. Stott,* a Texas recycler injected dry gas into a producing formation, and it travelled through the formation and displaced wet gas under premises not owned by the injector. The adjoining mineral owner was denied recovery for damages caused by this displacement. A somewhat similar situation arose in the Oklahoma case, *West Edmund Salt Water Disposal Association v. Rosecrans,* where salt water was injected and it mixed with native salt water causing damage to an adjoining mineral owner. There the adjoining mineral owner likewise was denied recovery. Following this line of reasoning, some scholars espoused a "negative rule of capture:"

What may be called a "negative rule of capture" appears to be developing. Just as under a rule of capture a landowner may capture oil or gas which may migrate from adjoining premises to a well bottomed on his own land, so also may he inject into a formation substances which may migrate through the structure to the land of others, even if this results in the displacement under such land of more valuable with less valuable substances (e.g., the displacement of wet gas by dry gas). The law on this subject has not been fully developed, but it seems reasonable to suggest the qualification that such activity will be permitted, free of any claim for damages, only if pursued as part of a reasonable program of development and without injury to producing or potentially producing formations.

Shortly after this theory was proposed the Texas Supreme Court, in *Railroad Commission of Texas v. Manziel,* denied an attempt by an adjoining mineral owner to enjoin water injection on nearby premises. He claimed that the water would trespass under his land and would cause premature loss of production from his wells. The court held that the technical rules of trespass did not apply to underground migration of injected fluids which were injected *pursuant to a Commission order* authorizing secondary recovery.

While none of these cases dealt with injection of gas for storage purposes, the reasoning would appear to be the same. Therefore, if injected storage gas migrated off of the leased premises and displaced

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45. 159 F.2d 174 (5th Cir. 1946), cert. denied, 331 U.S. 817 (1947).
47. I Williams & Meyers, Oil and Gas Law § 204.5, at 60 (1984).
48. 361 S.W.2d 560 (Tex. 1962).
other more valuable minerals, or caused other damages, application of
the "negative rule of capture" would indicate that the injector would
not be liable. This line of reasoning, however, seemed to stop there,
and the more recent cases have not hesitated to hold an injector of
fluids liable when the fluid causes damage off the leased premises.

The Oklahoma Supreme Court retreated in *West Edmund Hunter
Lime Unit v. Lillard* from their earlier position espoused in *Rosecrans*
where they allowed an adjoining mineral owner to recover damages
resulting from injection of salt water on neighboring premises. In *Lillard*
the salt water migrated through the formation and prevented the neigh-
boring owner from removing casing. The damages he was allowed to
recover included the cost of the casing and the extraordinary costs
associated with shutting off the flow of the injected water onto his
premises. Because of evidentiary problems, he was prevented from re-
covering for any loss of well productivity.

The Texas courts have not yet reconsidered their position on this
matter, but courts from several other states have followed the Oklahoma
court's reasoning.

The Nebraska Supreme Court in 1969 dealt with this issue in *Baum-
gartner v. Gulf Oil Corp.*, where the plaintiff refused to join a unitized
secondary recovery operation where water was injected to increase pro-
duction. The court allowed him to prove his damages that were caused
by the injected water entering formations beneath the surface of his
land and to recover for the harm caused by the injection process just
as if there had been no unitization. This case shows the importance of
unitizing all of the premises that may be affected by the storage op-
eration.

In *Tidewater Oil Co. v. Jackson* a federal appellate court upheld
an award of compensatory damages resulting from an operator's flooding
of adjoining producing wells in Kansas.

A theory of nuisance was used to recover damages in an Oklahoma
case where the injection was pursuant to an Oklahoma Corporation
Commission authorization and caused damage to adjoining wells. In *Young v. Ethyl Corp.*, the United States Eighth Circuit Court of

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49. 265 P.2d 730 (Okla. 1954).
52. Greyhound Leasing & Financial Corp. v. Joiner City Unit, 444 F.2d 439 (10th Cir. 1971); Gulf Oil Corp. v. Hughes, 371 P.2d 81 (Okla. 1962) (imposing liability on injector of saltwater for contaminating fresh water supply), compare this with the Texas Supreme Court's decision in Railroad Commission of Texas v. Manziel, 361 S.W.2d 560 (Tex. 1962) where the court refused to hold an injector liable when the injection was pursuant to a valid administrative authorization.
53. 521 F.2d 771 (8th Cir. 1975).
Appeals concluded that the injection of salt water into wells on adjoining land dissolved valuable bromide under the plaintiffs' land. The court said this was a trespass and applied the "mild" rule for good faith trespass in awarding damages. The Arkansas Supreme Court later followed the federal courts' reasoning in *Jameson v. Ethyl Corp.* There the court said:

A determination that a trespass or a nuisance occurs through secondary recovery processes within a recovery area would tend to promote waste of such natural resources and extend unwarranted bargaining power to minority landowners. On the other hand, a determination that the rule of capture should be expanded to cover the present situation could unnecessarily extend the license of mineral extraction companies to appropriate minerals which might be induced to be moved from other properties through such processes and, in any event, further extend the bargaining power of such entities to reduce royalty payments to landowners who are financially unable to "go and do likewise" as suggested by Ethyl.55

The court resolved this problem by concluding that reasonable and necessary secondary recovery processes should be permitted but that when this process depletes minerals from adjoining lands or causes any special damage to those lands the injector will be held liable.

Thus, the trend in recent cases is to hold the injector liable for damage to unleased premises caused by injection of fluids. It is thus extremely hazardous to engage in injection of storage gas in the absence of unitization of all premises which may be adversely affected by the injection. Other consequences of the ownership theory have previously been discussed and will not be repeated here.56

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54. 271 Ark. 621, 609 S.W.2d 346 (1980). A consequence of the theory that injected gas is still owned by the injector is that the gas cannot be extracted by others. If another party does extract the gas it will constitute a conversion.
55. Id. at 626, 609 S.W.2d at 351.
56. One consequence of the theory that injected gas is still owned by the injector is that the gas cannot be produced by others. If another party does so, it will amount to a conversion. See *White*, 190 F. Supp. at 342; and the discussion supra, text accompanying notes 30-44. Injected gas mixing with native gas in the storage formation or elsewhere also presents problems. It is normally required that a storage formation be entirely or substantially depleted before storage operations can be conducted therein. If there is any remaining native gas it should be accounted for and the rights to that gas acquired prior to engaging in any storage operation. If this is not done, a mixture will result between the injected gas and remaining native gas. As discussed supra, note 29 and accompanying text, the injector has the burden of proving how much of this gas is his and of differentiating his gas from the native gas. If the injector cannot do this, there results a confusion of goods. When there is a confusion of goods the person responsible for the
VI. Statutory Authority to Acquire Storage and Related Rights

A gas pipeline company or other enterprise that desires to conduct an underground gas storage operation must acquire the rights to do so from the holders of those rights. There are essentially two methods of doing this: (1) reach an agreement with the holders of the desired rights and acquire them through a contract, or (2) when no agreement can be reached, the company can acquire the desired rights from the holders by the power of eminent domain. Clearly the first method is the most desirable as there will be fewer hard feelings. However, all too often the parties cannot reach an agreement, and in those situations the storage company must resort to expropriation. The law of contracts regulates the relationship arising when the parties reach a contractual agreement; therefore, contractual disputes will not be discussed here.

This section deals with the statutory right of a storage company to acquire the rights needed to conduct storage operations while a later section deals specifically with the problems incurred when exercising that right. Also discussed in the following sections are the problems which occur in determining what rights the storage company needs to acquire.

The power to expropriate storage and related rights by a private storage company must be granted by statute. A storage company must first determine whether to undertake expropriation under federal statute or under state statute.

Federal authority to expropriate storage rights is granted by the Natural Gas Act. That act states in pertinent part:

When any holder of a certificate of public convenience and necessity cannot acquire by contract, or is unable to agree with the owner of property to the compensation to be paid for, the necessary right-of-way to construct, operate, and maintain a pipe line or pipe lines for the transportation of natural gas, and the necessary land or other property, in addition to right-of-way, for the location of compressor stations, pressure apparatus, or other stations or equipment necessary to the proper operation of such pipe line . . . it may acquire the same by the exercise of the right of eminent domain. . . .

The wording does not clearly include storage rights among those rights that may be expropriated. However, the broad language "or other stations or equipment necessary for the proper operation of such pipeline" has been construed to include storage rights. The federal district court in Natural Gas Pipeline Co. v. Iowa State Commerce Commission stated: "In our opinion... the Natural Gas Act, 15 U.S.C. § 717f(h) grants the powers of eminent domain for the acquisition and construction of underground storage facilities for natural gas." It should be noted that a "certificate of public convenience or necessity" is required and can be obtained from the Federal Energy Regulatory Commission (FERC) upon a finding that the applicant is able and willing to do what he proposes to do and to conform with the provisions of the Natural Gas Act.

In addition to this federal authorization to expropriate, storage companies are, many times, given approximately the same powers by state statutes, although there may be additional requirements included. State statutes for Louisiana, Texas, and Oklahoma will be examined. The additional requirements added by these states should only apply when the storage company elects to use state condemnation procedures, and they do not apply to federal procedures due to the Interstate Commerce and Supremacy Clauses of the United States Constitution.

**Louisiana**

The power of a storage company to expropriate storage rights in Louisiana is given by La. R.S. 30:22 which provides in part:

Prior to the use of any underground reservoir for the storage of natural gas and prior to the exercise of eminent domain by any person, firm or corporation having such right under laws of the state of Louisiana, and as a condition precedent to such use or to the exercise of such rights of eminent domain, [the commissioner must make certain findings].

The wording of this statute plainly indicates that the person desiring to exercise the power of eminent domain must have a right to do so that is granted under some other "laws of the state of Louisiana." This power is given to a storage company by La. R.S. 19:2(5) provided that

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60. Id. at 159.
the storage company is a "domestic or foreign corporation created for the piping and marketing of natural gas."65 This power is also conditioned on nonagreement as to the price to be paid for the desired storage rights by the owner and storage company. In Mid-Louisiana Gas Co. v. Sanchez66 these two statutes were read together to mean that a pipeline company had the implied authority to expropriate above ground and underground property rights for gas storage purposes.

Oklahoma

In Oklahoma a storage company that cannot agree with owners and that desires expropriation must first get a certificate from the commission stating certain findings of the commission.67 The storage company must then file a petition in district court that states their purpose, describes the property rights desired and the property, and lists the owners of those rights. The storage company must also attach the certificate that was obtained from the commission. The commission must make several determinations before issuing the required certificate:

Any natural gas public utility may condemn for its use for the underground storage of natural gas any subsurface stratum or formation in any land which the commission shall have found to be suitable and in the public interest for the underground storage of natural gas, and in connection therewith may condemn such other interests in property as may be required adequately to examine, prepare, maintain and operate such underground natural gas storage facilities . . . .68

The judge then determines if the storage company should have the power of eminent domain.69 The statute goes on to list several limitations on the right to expropriate. By using the wording, "such other interests in property as may be required" the Oklahoma statute is broader in language than the Louisiana statute and is also more far sighted. Plainly, there are peripheral rights that need to be acquired along with the right to store gas in underground strata. Such peripheral rights may include: (1) the right to use the surface for storage operations; (2) the right to acquire rights to existing native oil or gas in the desired strata; (3) the right to lay pipelines; (4) the right to monitor gas flow through, or out of, the storage strata; (5) the right to drill through land and producing formations to reach the storage reservoir; and (6) any other necessary rights.

66. 280 So. 2d 406 (La. App. 4th Cir. 1973).
Texas

The state of Texas has recently enacted a comprehensive body of legislation dealing with underground gas storage.\(^{70}\) A storage company desiring to exercise the power of eminent domain must first obtain an order from the commission (which is obligated to make certain findings). After receiving the commission's order approving the storage facility, the storage company can proceed to condemn "any subsurface sand, stratum, or formation for the underground storage of natural gas, condemning all mineral and royalty rights as are reasonably necessary for the operation of the storage facility . . . and the storer may condemn any other interests in property that may be required . . . ."\(^{71}\) This right is subject to several limitations and provisions, but like the Oklahoma statute, it provides for condemnation of any necessary peripheral rights along with the right to acquire use of the subsurface strata for storage.

It would be desirable for Louisiana to have a provision similar to the Oklahoma and Texas provisions allowing expropriation of all necessary rights to prevent Louisiana courts from having to stretch the wording of existing statutes to cover expropriation of these peripheral rights.

VIII. Problems with Expropriation of Underground Storage Rights

Several problems can occur when the power of eminent domain, either through federal or state procedures, is exercised. When no agreement can be reached between the storage company and the holders of rights that need to be acquired and the storage company resorts to condemnation, the atmosphere becomes hostile, and the parties take adversarial positions. Legal problems inevitably result. By far, the most important and most frequently recurring of these problems is deciding the value of the rights to be expropriated. There are several approaches taken in determining the value of storage rights in an underground formation. Some jurisdictions use a before and after market value test. Others rely on comparable values in other storage projects and at least one jurisdiction has found that the rights had no value at all. The general rule for arriving at the value of rights to be expropriated is that: "as in eminent domain, it is generally the owner's loss and not the taker's gain that should determine the compensation, and therefore it should not be based on the value of the land to the condemnor for gas storage purposes."\(^{72}\) A discussion of representative methods of valuing the storage rights, beginning with the older cases and ending

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\(^{72}\) 27 Am. Jur. 2d, Eminent Domain § 348.
with newer ones, should aid in understanding the appropriate method of valuation.

In *Peoples Gas Light and Coke Co. v. Buckles* the trial court excluded the landowners' evidence of land value based on its use for underground storage purposes and awarded them twenty-five dollars per acre for storage rights. The Illinois Supreme Court affirmed, stating that there was no taking of the fee or damage to the surface involved. The taking was that of an easement and the measure of damages was based upon a diminution of the fair market value of the property. The court found that there was no market value for the storage right itself, reasoning that since the plaintiff was the only person who had been granted the certificate needed to condemn storage rights and everyone else was precluded from doing so. Thus, there could be no "leisurely sale from a willing seller to a willing buyer" which is needed to establish market value.

The Illinois Supreme Court addressed the valuation matter again two years later in *Midwestern Gas Transmission Co. v. Mason.* There the court held that evidence proffered by landowners to establish that the highest and best use of the land was as a gas storage reservoir had been properly excluded at trial; thus, the only remaining evidence as to the value of the storage right was that offered by the storage company showing that these rights were valueless; and the court awarded no compensation for the taking of those rights.

A Michigan Court of Appeals took a somewhat more enlightened view on the subject several years later in *Consumers Power Company v. Allegan State Bank.* There the gas company had acquired rights from seventy-five percent of the owners of the surface area and from seventy-five percent of the owners of the rights in the underground strata; and the company brought suit for condemnation of the rest. The trial court awarded the owners of the remaining rights $479,000 collectively, which amount was reduced to $170,000 by a probate court because of improper expert testimony as to the value. The court of appeals reversed this reduction saying that it was proper for the court to consider both the market value of the formations and the fact that this value was enhanced due to the fact that the formations formed a natural container and were exceptionally adapted and available for use as a gas storage reservoir. The court also said that "[s]imilar sales and purchases on the open market without benefit of condemnation . . . could be used as proper comparables as a basis for an opinion on market value."

73. 182 N.E.2d 169 (Ill. 1962).
76. Id. at 750, 174 N.W.2d at 592.
In *Mid-Louisiana Gas Co. v. Sanchez* a Louisiana appellate court considered the value of the residual gas in the reservoir, the particular adaptability of the property, and the broad comparison with the value paid for the storage rights in other fields when valuing expropriated storage rights. These factors were also used in *Trunkline Gas Co. v. Rawls*, and the court also concluded that where there was only a "remote possibility" that native gas could be commercially producible, this factor should still be given some consideration in valuing the underground strata. The court also said that it was proper to consider the detrimental effect a storage area would have on oil and gas exploration which might occur at greater depths. The court rejected the plaintiff/storage company's "market value" approach which only compared sales the plaintiff had consummated in the area that was under the threat of condemnation, because no consideration was given to the special suitability of the property or to residual native gas.

An excellent discussion on the subject of expropriation of storage rights is found in *Southern Natural Gas Co. v. Poland*. There the court said:

Natural gas marketing companies do not enjoy quicktaking expropriation power such as is enjoyed by the Department of Highways, but first must establish in an expropriation action, the public and necessary purpose to be served by the expropriation (LSA-Constn. Art. 1, § 4), the approval of the Commissioner of Conservation (LRS 30:22(B), and that good faith negotiation has been conducted with the owner for acquisition of the property (LRS 19:2(5)). After these prerequisites have been established the amount of just compensation under LSA Constn. Art. 1, § 4 is to be judicially determined.

The court noted that there were three distinct rights taken: the right to recoverable gas and condensate, the servitude of use of the surface, and the storage rights in the underground reservoir. The court expressly rejected the proposition that some compensation may be due for unrecoverable native gas or oil.

It is submitted that what may be unrecoverable today may not be so tomorrow. If methods are developed making some of the remaining unrecoverable gas now recoverable will the courts permit recovery of this newly recoverable gas by the person from whom the rights to the remaining oil and gas were expropriated? Probably not. At that point there may be a "taking" for which just compensation is due. It is for

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77. 280 So. 2d 406 (La. App. 4th Cir. 1973).
78. 394 So. 2d 1250 (La. App. 2d Cir. 1980), cert. denied, 400 So. 2d 904 (1981).
80. Id. at 660.
this very reason that the Trunkline rationale, providing compensation for the "remote possibility" that native resources could become commercially recoverable, should be followed. The mineral interest owners would be compensated for the loss of a "hope of future production," and if similar production later becomes feasible, the storage company will not have to further compensate the owners.

What constitutes a judicial determination of just compensation as required by Article 1, Section 4 of the Louisiana Constitution is a matter of some ambiguity. The commissioner is required, prior to use of an underground reservoir for storage purposes, to determine: "[W]hether or not such reservoir is fully depleted of the original commercially recoverable natural gas and condensate content therein. If the commissioner finds that such reservoir has not been fully depleted, the commissioner shall determine the amount of remaining commercially recoverable natural gas and condensate content of such reservoir." This evaluation ensures that those who have an interest in the remaining minerals but cannot afford independent studies as to their quantity are apprised of this information. It can also serve as a check on the storage company to ensure that it does not withdraw more gas than it injects. Its apparent purpose, however, would seem to be to put into operation La. R.S. 30:22(B)(i) which prohibits storage operations if any native minerals remain. The commissioner's evaluation cannot, however, be binding on the court in an expropriation hearing to determine the amount of just compensation to be paid for the storage rights taken. This would conflict with the judicial determination requirement of the Louisiana Constitution. The report is relevant and if all other evidentiary requirements are met, it may be admissible as evidence, but it should in no way be binding on the court.

In Arkansas Louisiana Gas Co. v. Latham the owners of rights in subsurface strata asked:

that the Commission's order be limited by a suitable restriction to clearly indicate that the finding to the effect that "there is no recoverable native gas in the reservoir" is for the purpose of the proceedings before the Commission and is not to be used in derogation of the landowners' rights to seek compensation for an amount and value of native gas under the provisions of Article 2, Sec. 24 of the Oklahoma Constitution.

83. 650 P.2d 49 (Okla. 1982).
84. Id. at 50.
The court agreed and restricted the use of the Commission order. The procedures in Oklahoma are similar to those used in Louisiana; therefore, the same result should follow.

The landowners, in an expropriation proceeding required to be held in the parish where the property is located, should be able to introduce any and all evidence which they have to establish the value of the property expropriated. This should not be considered a collateral attack on the commissioner’s findings prohibited by La. R.S. 30:22(C), since those findings should be considered merely evidence and should not be binding on the court in an expropriation suit. If the landowners attacked the order “for purposes of proceedings before the commissioner,” as indicated in Latham, the attack would have to be made at the domicile of the commissioner, but this is not the case when determining just compensation in a condemnation suit. The findings of the commissioner in Louisiana are not made to determine the issue of just compensation, nor can they be, as that is prohibited by the Louisiana Constitution. The landowners do not have the same incentive to oppose a commissioner’s finding that is required to be made when a storage company is seeking permission to store gas as they do when their rights to their property are being taken.

There is a wide range of values to be placed on the property rights condemned when comparing the holdings of the Illinois and the Louisiana courts. Obviously, the higher the value that the courts place on the expropriated rights, the more satisfied the landowners will be and the better the long term relations between the storage company and the landowners will be. The closer that the courts get to the lower (Illinois) end of the scale the more hostile the parties will become, and long term relations will probably suffer. The difference in a fair price and one less than fair is so slight when compared to the overall cost of implementing storage operations and the fact that this slight increase can readily be passed on as costs by the pipeline company should favor the courts awarding just compensation toward the more liberal end of the scale.

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86. La. R.S. 30:12(A)(2) (Supp. 1986); but see Jordan v. Sutton, 424 So. 2d 305 (La. App. 1st Cir. 1982).
87. See Jordan v. Sutton, 424 So. 2d 305 (La. App. 1st Cir. 1982), where the storage company had already spent 97 million dollars before acquiring all of the landowners’ rights.