Water and The Petroleum Landman*

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Water under and above the ground, to be retained in its natural state or used for the more efficient production of the oil, has become of peculiar concern to the petroleum landman. It has been said that oil and water will not mix; but, to the oil man, the conflicting claims and complaints of farmers, ranchers, manufacturers, and municipalities are now so much a part of operations in the field that it seems the two products never were separated.

In the past, there has been apparant recognition in industry, government, and the courts of the vital role oil and gas and all of their various by-products play in the state and national economy, security, and defense. In general, in Texas and the adjoining states, there has been a better understanding of the problems confronting the operator and producer, and of the necessity for protecting his legal right to the use of the surface, soil, water, gas, and the like, essential to the enjoyment of the actual grant of the oil. However, water has now become the product with romance.

It is water that catches the attention of the press and the populace, and, in turn, the courts. Growth of municipal population and industry has contributed to this present interest in the subject. But it is the comparatively recent growth of irrigation farming over large areas which produce much of the oil and gas, particularly in West Texas, the Panhandle of Oklahoma, and the eastern part of New Mexico, that has focused attention upon the use of water in oil field operations. In fact, it is the present or expected scarcity of water in these areas that has put the high premium on water and water supplies, and has resulted in increased litigation to determine the correlative rights of claimants. It has, therefore, become necessary that the conflicting claims of the parties be determined by the courts upon recognized rules of property law and precedence, without prejudice flamed by either the outraged cries of the farmers' lawyers or such discourses as Rachel Carson's Silent Spring, which launched more than three thousand articles, one hundred legislative bills, and a score of investigations of all kinds of claimed and imagined pollution of air and water.

With this situation at hand, it is right and proper that those who take part in the production of oil and gas give consideration to some of the pertinent water law.

OWNERSHIP OF THE WATER

Classifications

Waters are subject to various types of classification, depending upon whether they are surface or subsurface, riparian, appropriative, percolating, etc. Recognition of these classifications is important because of the differing legal rights of the respective owners of lands under which these particular kinds of water are found.

A riparian owner is generally thought of as one on or across whose land there is a natural stream, river, lake, or pond. Riparian rights are those rights which such owner has to the use of the water from such stream, river, lake, or pond.

"Appropriative rights," or the statutory right to appropriate water, has reference to the acquiring of a vested right to receive a definite quantity of water from a natural watercourse or other body of water under, and by reason of, a state statute. An appropriative right is different from a riparian right, in that the appropriative right is created by virtue of statute, and, generally, as between appropriators; the first in time in acquiring such right is the first in right to the water. This is the priority fixed by statute.

Of prime importance to the oil man are the underground or subterranean waters which flow

in unknown or undefined channels. These are referred to as "percolating waters." In absence of evidence or proof of the matter, all underground waters are presumed to be percolating waters. These so-called percolating waters are those most often used for oil field operations, and are most often subjected to the claims of wrongful taking or pollution by irate surface owners.

Water as Realty

Water is ordinarily regarded as constituting a part of the land in or upon which it is found. It is treated as realty or real property rather than personal property. This treatment of water and water rights applies to percolating water, riparian water, and water appropriated under statute. In other words, conveyances and leases of water concern "realty" or real estate, as do oil and gas leases and conveyances.

Conveyances — Rights of User

Private rights in water — whether riparian, appropriated, or percolating — are subject to sale, conveyance, and transfer. In addition to the conveyances of water by deeds, leases, and permits, the right to use water can be, and often is, expressly granted in the usual oil and gas lease; where not expressly granted, it is implied.

Because such rights in water are interests in real property, they ordinarily can be transferred only by an instrument in writing. Thus it can be seen that a verbal (parol) contract to sell or furnish water to an oil and gas operator will not be enforceable because it is not in writing. Such contracts — licenses or permits — should be obtained in writing.

Conveyances and contracts relating to water rights concern realty, and can be recorded. They should, therefore, be recorded in the proper records of the county where the land and water are located. And when any material amount of money is being paid for water or the right to use it, examination of the county records is as necessary and advisable as if oil or gas were being acquired.

A riparian owner can contract to supply water for any proper use, so long as he does not thereby harm his fellow owners. At common law, ownership of riparian rights and water was inseparable from ownership of the land; that is, such water rights could not be conveyed to one who did not own land to which the stream or body of water was appurtenant. However, the general rule in the majority of the states is that riparian rights may be separated from the ownership of the land to which they are appurtenant, either by a deed, other grant, or reservation in a conveyance of the land. This rule is apparently followed by the Texas courts, which have held that in a proper case a riparian owner can sell his riparian rights without selling his land, or he can dispose of his land and reserve his riparian rights.

On the other hand, a grant or reservation of the riparian right to use water for irrigation purposes on nonriparian land has been held a wrongful consumption of the water supply. Such a reservation or grant, though effective as between the immediate parties to such grant, will not be binding to the other riparian owners along the stream wherever it is detrimental to their water supply. This rule may well apply to any attempt by an oil operator to purchase water from a riparian owner to use on nonriparian lands, or in a unit comprised in whole or in part of nonriparian lands.

This right to sell or convey is given to those persons having possession of appropriated waters, provided the prices charged are reasonable and the terms of their contracts are fair.

It is thus seen that the different kinds of water can be acquired, subject to the rules of conveyance and to some limitations of use.

Of particular interest to the oil man are the rights to the percolating waters recognized in law. There are two generally recognized rules. Under the common-law, or English, rule, these waters are regarded as belonging to the owner of the land itself, like the soil and minerals found there. In the absence of malice, such an owner may drill for, produce, and take such waters, and make whatever use he pleases of them. He may take and use all of the percolating water, regardless of the fact that his use cuts off the flow of such waters to adjoining lands and, in fact, deprives those other lands of such water. The landowner can take such waters in whatever quantities he pleases, and, if the taking draws all the water from his neighbor's well, there is no liability — it is just too bad for the neighbor.

The Texas Supreme Court appears firmly

committed to the English, or common-law, rule. It has taken this position in **City of Corpus Christi v. City of Pleasanton.** There, a water supply district had four large water wells drilled upon land it owned, with the water pumped or flowing into an adjacent river bed, transported through the beds of the river and a canal, over 118 miles to the City of Corpus Christi. There was evidence that, at times, as much as 63 to 74 per cent of the water discharged in the river and canal escaped through evaporation and seepage, and never reached its destination to be put to beneficial use. The court discussed the English rule and the so-called American rule, and said:

> "With both rules before it, this Court, in 1904, adopted, unequivocally, the 'English' or 'Common' Law rule. . . . "It thus appears that under the common-law rule adopted in this state an owner of land could use all of the percolating water he could capture from wells on his land for whatever beneficial purposes he needed it, on or off of the land, and could likewise sell it to others for use off of the land and outside of the basin where produced, just as he could sell any other species of property."

This English rule is also followed by the courts of Connecticut, Georgia, Idaho, Illinois, Kansas, Kentucky, Maine, Massachusetts, Mississippi, Montana, Missouri, Nevada, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, Wisconsin, and Wyoming.

The second, or other, rule is known as the rule of "reasonable use," the rule of correlative rights, or the American rule. Under this rule, the landowner has the right only to a reasonable and beneficial use of the waters upon his land, or its percolations, for some useful purpose connected with his occupation and enjoyment. This "reasonable use" theory does not prevent the use of the waters in agriculture, irrigation, or oil production, when being used on the land itself. In other words, the landowner may pump or draw such water without liability to his neighboring landowners when proper for the natural and legitimate use or improvement of his land, although the underground waters of the neighboring properties may thus be interfered with, diverted, or taken. The American rule is applied in the States of Alabama, California, Florida, Hawaii, Indiana, Iowa, Michigan, Minnesota, Nebraska, New Jersey, New York, Oklahoma, Tennessee, Utah, Washington, and West Virginia.

In **Canada v. Shawnee,** the Oklahoma court held that a municipality, which had purchased a tract of land adjoining plaintiff's farm, could not pump so much water from wells on its land for sale to its inhabitants as would deprive the plaintiff-landowner of the percolating waters under his farm, thereby causing irreparable injury to such farm. This is followed in the later case of **City of Stillwater v. Cundiff.** It would thus appear that in Oklahoma an oil operator cannot pump and take water from wells on one tract of land for use on another tract where such taking would deprive the owner of adjoining tracts of the percolating water under his farm and thereby cause irreparable injury to such farm.

Salt Water

The law fixing the ownership of fresh water in Texas, at least, is not too difficult to determine and explain. At times, it may be called a mineral or "one of the minerals," but it has not been treated as a mineral included within the clause "oil, gas, and other minerals" of the mineral deeds, or of the oil, gas, and minerals leases. This is not to say that the fresh water on or under the premises described in the deed or lease cannot be used for the oil and gas production operations on that premises. It is to say that the fresh water is generally treated as being owned by the surface owner or one who holds title to such water under an express grant, reservation, lease, permit, or license.

On the other hand, what is salt water? Is it a "mineral"? Is it to be treated as a mineral within the "oil, gas, and other minerals" clause of the mineral conveyance or reservation or the oil and gas lease?

There are two Texas cases in which this question is raised and decided:

In **Cain v. Neumann,** the Texas Court of Civil Appeals held that the production of salt water and brine was such production of minerals as to continue an oil, gas, and minerals lease in force after the expiration of its primary term. In that case, it was shown that there was an oil, gas, and minerals lease of 1918; the lessee commenced drilling operations and found some oil, which was soon exhausted, and some sulphur,

which was commercially produced until 1935. After the sulphur production ceased, the lessee commenced producing salt by injecting water into a saltwater and brine deposit, and production of the salt continued. The court held that the lease was held in force by the production of the salt and brine, saying: "Salt, an admitted mineral, has been continuously produced on the 3100-acre tract. The base lease is thereby continued in force."

It can be argued that this is not a novel holding because salt has long been defined as a sodium chloride (NaCl), a widely distributed compound used by man from time immemorial as a seasoning and a necessary ingredient of food for most mammals. And in **State of Texas v. Parker,** the Texas Supreme Court declared:

> "It is apprehended that by no one in any way familiar with the elementary principles of chemistry and mineralogy, would salt be classed otherwise than as a mineral substance. So far as we are informed it is so regarded by all classes — the common people as well as those having special learning upon the subject.
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> "By the use of the terms 'all mines and mineral substances,' the convention (Constitutional Convention of 1866) must have intended to include salt lakes, springs, etc., as well as gold, silver and copper mines."

In **Ambassador Oil Corp. v. Robertson** and **Blackwell Zinc Co. v. Robertson,** the Texas Court of Civil Appeals held salt water to be a mineral. The Supreme Court wrote an opinion in the case, but did not discuss this question. In the case, there was an "oil, gas and other minerals" lease. There was a taking of the salt water from the Cambrian sand below the oil formation, and the water was used for waterflooding of an entire unit. The Court of Civil Appeals held this use of the salt water to be permissible, declaring:

> "It is our opinion that salt water is a mineral within the meaning of the phrase 'oil, gas and other minerals' as used in the leases held by Climax and within the meaning of the word 'minerals' used in the deed from Mrs. Bright to Robertson conveying the land but reserving the 'minerals.'"

When this case was before the Supreme Court on the application for writ of error of petitioner Robertson, there were numerous amicus curiae briefs filed with the court, complaining of this particular holding that salt water was a mineral. Articles have been written in the law reviews, and talks have been made to attorneys and landmen, vehemently attacking the holding and attempting to ridicule the idea that an oil, gas, and minerals lease could be held by production of the salt water. It is not known — and no attempt is here made — to forecast the final holding of the Supreme Court on the question. The fact remains that there are two decisions of the Texas Courts of Civil Appeals directly in point.

RIGHT OF USER OF THE WATER

Right to Use for Drilling or Similar Operations

The grant of the oil and gas by lease carries the right to use so much of the premises in a manner reasonably necessary to comply with the terms of the lease and effectuate its purposes. The same thing is true of a grant or reservation of oil and gas in a deed. The mineral owner (lessee) is the owner of the dominant estate. The surface owner (lessor) is the owner of the servient estate.

As owner of this dominant estate, the mineral owner has the legal right to use so much of the surface of the land — presumably including the water aboveground and underground — as is reasonably necessary in his operations, to the exclusion of the surface owner. The mineral owner has the right and privilege to go on the surface of the land and do all things necessary and incidental to the drilling of the wells and the production of the oil and gas. The surface owner is entitled to recover damages from the mineral owner only for wanton or negligent damage or destruction of the land (or water) or for use of more land (or water) than is reasonably necessary. These or similar statements have been made time after time by the courts of the various states.

In **Guffey v. Stroud,** the Texas court declared that the grant of the oil also carried with it a grant of the right-of-way, surface, soil, water, gas, and the like, essential to the enjoyment of the actual grant of the oil. Other Texas courts

have gone even further, stating that the mineral lessee possesses the "exclusive right" to use as much of the leased premises as is reasonably necessary in the operations in drilling for and producing the oil and gas.

The courts of Kansas, Oklahoma, South Carolina, and Texas have held that a lessee can use such water as is reasonably necessary in his operations.

In **Stradley v. Magnolia Petroleum Co.**, the mineral and surface estates had been severed. It was held in an action by the surface owner that the lessee of the mineral owner had the right to use as much of the surface, including the water, as was necessary for drilling and producing the oil. The Texas court declared:

> "The testimony shows that the Magnolia went upon the land and drilled a water well for the purpose of securing water to drill an oil well, prospect for and develop its mineral rights. They obtained the water from this well which they used in drilling and operating for oil on the lease. . . .
> "It is unnecessary for us to determine whether water is a mineral since we believe that the reservation in the deeds by implication retained to the Southwest (owner of the mineral estate) the right to use the amount of water from the land reasonably necessary to enable it to develop the mineral rights; this it sold and transferred to the Magnolia."

In a Montana case, the United States Court of Appeals for the Ninth Circuit followed this Texas case, stating that there is "abundant authority for the proposition that the owner of mineral rights is entitled to take from the land and use that amount of water which is reasonably necessary for the exploitation of the mineral rights."

In this connection, a Kentucky court distinguished water used off the premises from that used for lease operations. It held that a lessee could use water for waterflooding but had to pay damages for water taken and used off the leased premises. An Oklahoma court, on the other hand, has held that a lessee could not, for either purpose, use water impounded by the lessor in an artificial pond for agricultural use. And another Oklahoma court has apparently held against the use of fresh water off the premises.

Pressure Maintenance and Waterflooding Operations

The right of the dominant mineral owner to use water produced from the land for full enjoyment of the mineral estate has been held to include water used to aid oil production. This should and, it is believed, does include a lease pressure maintenance or waterflood project.

Texas courts have explained the advisability and necessity for waterflooding. One recent case, specifically involving a waterflood operation, was **Miller v. Crown Central Petroleum Corp.** The surface owners there complained that pipelines being used for waterflooding and laid across their land constituted an undue burden on their surface estate. The Texas court said:

> "The Millers own only the surface. Their title to the surface was acquired after execution of the oil and gas leases and with both actual and constructive knowledge of the rights of the owners of the minerals and royalties. . . .
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> "Because the leases did not specifically grant the right to conduct the water-flooding program, appellants say that the fact that the minerals were leased is immaterial. This cannot be true. . . .
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> "The leases required the lessee to reasonably develop the leased premises. In the absence of a provision to the contrary, such a lease carries with it the implied covenant of the lessee to use diligence in the production of oil and grants the right to use any means reasonably necessary to accomplish that end."

In **Miller v. Crown Central,** the court cited **Stradley v. Magnolia Petroleum Co.**, for the proposition that the mineral owner, as an incident of that ownership, has "all the rights necessary for the profitable production of minerals and that in determining such rights the court should take into consideration the purposes for which the lease was executed." And in **Miller v. Crown Central,** the court approved this statement from an article in the "Texas Law Review":

> "It may be assumed that the right to water flood as an efficient producing method, exists under the terms of the usual oil and gas lease whether or not any specific mention thereof is made in the lease."

Another waterflood case in Texas is **Gulf Oil Corp. v. Walton,** wherein the El Paso court held that the right to conduct a waterflood operation was inherent in the dominant mineral estate: "Under its lease, the appellant had the right to waterflood this property, and that right carried with it the further right to do it in the manner, and on the locations, thought most feasible by its experts."

An early case holding the secondary recovery methods were "operations" inherent in ownership of the oil estate was **Utilities Production Corp. v. Carter Oil Co.,** where the federal court declared:

> "The repressuring of wells is as much an operation of the oil lease as the use of any other device for the lifting of the oil and the extracting of the oil from the oil sand. Such a use is clearly comprehended within the rights bestowed upon the oil lessee as an operation of the lease. . . .
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> "The repressuring of wells for the purpose of increasing production is an incident to operation, as that term must necessarily comprehend the drilling of the wells and the producing of the oil therefrom. . . .
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> "It is urged that repressuring of oil wells was not employed at the time defendant obtained its oil leases, and that the use of residue gas for repressuring of wells was not contemplated. This contention is not sound. The leases for both oil and gas were granted by the Osage Tribe for royalties upon the oil and gas produced from the lands. Improved methods of drilling and producing are necessary for the successful operation of the leases, and it was undoubtedly within the contemplation of the parties to the leases that improved and modern methods should be used for the production of oil from the lands which would be advantageous to both the lessor and the lessee. This proposition has been sustained by many authorities."

This right to use water for waterflooding was expressly recognized by the federal court in **Tidewater Oil Co. v. Penix.** In that case, the oil and gas lease was executed in 1912. The surface owners contended that waterflooding was unknown at the time of the execution of the lease and should not later be permitted. The court said:

> "The Court finds that by the general terms of the original Oil and Gas Lease, the Lessee not only had a right, but had a duty, to waterflood the premises for the recovery of oil for the benefit of the mineral owners should it be determined by a prudent operator to be profitable. The Court further finds that even though secondary recovery by way of waterflooding was not specifically agreed to between the parties in 1912, the Lease itself is broad enough to authorize the lessee to waterflood the premises for secondary recovery of oil and that such operations must be carried on in a manner not to use any more of the surface than is reasonably necessary."

In **Holt v. Southwest Antioch Sand Unit, Fifth Enlarged,** the Oklahoma Court held that the lessee had the right, as against the surface owner, to use so much of the salt water produced from the premises as was reasonably necessary for production of the minerals including the use of such water for secondary recovery of oil produced off the premises, within a unit which included the premises. The court said:

> "Here plaintiff alleged that defendant was using the water 'to increase the amount and life of production of oil and gas' and that 'the manner of use of the same is and was to force the salt water into and against the producing oil pool and to force the oil to the bottom of the well and thus force the same to the surface.' It would be difficult to conceive of a use of the water more essentially a part of the operation of mining and removing the petroleum minerals from under said lands."

The latest Oklahoma decision on the question appears in **Merritt v. Corporation Comm'n,** decided in February, 1968. The Corporation Commission had issued its order, with the proviso that the unit operator should "have free use of surface or subsurface water from the Unit area for Unit operations, including the right to drill water supply wells." The unit operator proposed taking fresh water from the plaintiff's land and transporting same to other leases within the unit area for the purpose of injecting it

in a repressuring flood program. The court held that the Oklahoma Constitution and statutes had not conferred upon the Corporation Commission, either expressly or by necessary implication, the jurisdiction or power to authorize such appropriation and use of fresh water for injection into the unit.

The latest Texas decision on the question is **Sun Oil Co. v. Whitaker.** There, the oil and gas lessee, Sun Oil Company held a lease which provided: "Lessee shall have free use of oil, gas, coal, wood and water from said land except water from Lessor's wells for all operations hereunder." The surface owner threatened to prevent, and was preventing, the drilling of wells to the underground Ogallala fresh water formation. The lessee sought temporary and permanent injunctions to restrain the surface owner from interfering with its operations and its proposed use of the fresh water for pressure maintenance and secondary recovery operations. The trial court refused the application for temporary injunction. On appeal from such order, the Court of Civil Appeals affirmed the trial court's judgment, saying that when the lease was executed, waterflooding wasn't known or practiced in the area, the water the lessee proposed to use was the only source of domestic and irrigation water, the formation was a closed, isolated reservoir with insignificant replacement, and the water wells which the lessee desired to drill would take part of the water in the formation, ultimately consuming a large part of it, and interfering with the surface owner's production of such water from his wells for irrigation of his farm. The court said that when the phrase of the lease, "all operations hereunder," was applied to the rights of the parties, its meaning was "ambiguous," and the trial court had correctly admitted parol evidence pertaining to the conditions and circumstances under which the lease was executed to explain its meaning. The court held it had been shown that the parties to the lease did not intend to include the free use of the fresh water for waterflooding, and that, therefore, no injunctive relief would be granted the lessee.

This holding of the Court of Civil Appeals in the **Sun Oil Company** case was, in effect, rendered moot by the supreme court. The supreme court granted the application for writ of error, took the case, and heard arguments. However, the court then held that it appeared that issues concerning possible statutory "waste" might be in the case, and, inasmuch as they had not been presented, argued, or decided in either of the lower courts, the cause would have to be sent back to the district court for trial.

This question will have to be decided. It will have to be decided by the courts.

REGULATION BY THE STATE AND GOVERNMENTAL AGENCIES

Texas Statutes

The legislatures of the various states have now stepped into the picture. Various statutes controlling the use of water are now in effect.

In Texas, the Railroad Commission and the Texas Water Rights Commission have been given various statutory duties and responsibilities. It appears that the Legislature has meant to include within the jurisdiction of the Railroad Commission all matters (including use of water, fresh and salt), involving or relating to exploration for, drilling for, and production of oil and gas. However, the statutes outlining the status and duties of the Water Rights Commission are broadly written, and the courts may hold the oil and gas operators subject to the rules and regulations of that agency.

The Texas statutes can be mentioned, as follows:

Article 6005. Plugging Abandoned Wells: This statute was broadened extensively in 1965. The burden is placed upon the operator to properly plug the well in accordance with the Railroad Commission's rules and regulations. If he does not do so, the landowner must plug the well. If the operator fails to plug the well, and the landowner steps in and plugs or replugs it, he is given a cause of action against the operator for all reasonable costs and expenses incurred by him. If the Commission finds that the well was not properly plugged, it may order the work redone by the operator, or, in turn, the landowner. If the Commission cannot secure the plugging of the well by either operator or landowner, and plugs the well itself, its cause of action is first against the operator, then against the landowner, with each collection of expenses and costs to be secured by liens upon the oil and gas, the leasehold, and the land itself.

Article 6014. Waste: In this statute, "waste" is defined to include the operation of an oil well with an inefficient gas-oil ratio, the drowning with water of any stratum capable of producing oil or gas, permitting any natural gas well to burn wastefully, etc. It is declared that the production, storage, and transportation of oil or gas, in such manner or under such conditions as to constitute waste are unlawful and are prohibited.

In this statute, no particular mention is made of the use of water, and it is not believed that the statute concerns water or its use.

Article 6029a. Rules and Regulations; Drilling Exploratory Wells; Abandoning Wells; Pollution Prevention: This statute has been on the books since 1955. It provides that the Railroad Commission shall make and enforce rules, regulations, and orders in connection with the drilling of exploratory wells, the production of oil or gas, and the abandonment and plugging of wells, to prevent pollution of streams and public bodies of surface water of the state, and of any subsurface water strata capable of producing water suitable for domestic or livestock use, or for irrigation of crops, or for industrial use. The Commission may require the execution and filing of a bond by any operator preparing to drill a well or connect it to a pipeline, on condition that he plug and abandon the well in accordance with all laws of the State of Texas, as well as the rules, regulations, and orders of the Commission.

Article 6029b. Salt Water Hauler's Permit Act: Formerly, there was no statutory restriction on the hauling (or dumping) of salt water from the oil wells or the saltwater disposal pits. In 1967, the Legislature passed this act, requiring each person who transports salt water for hire to have a permit to haul and dispose of the water. Before issuing the permit, the Railroad Commission must be satisfied that the hauler has means of disposing of the water, and it shall require a $5,000 bond, conditioned on the payment of full damages to any person who may acquire a judgment against such hauler for damages done to his property by the hauler's improper hauling, handling, or disposal of the salt water.

Article 7477. Texas Water Rights Commission Act: The Texas Water Rights Commission was created to take over the duties and jurisdiction of the Texas Water Commission and the Board of Water Engineers.

The Commission is given the duty of receiving, administering, and acting upon all applications for permits, or amendments thereto, to appropriate any of the public waters; and has the responsibility of administering proceedings for cancellation and forfeiture of permits for appropriation of public waters, issued under any of the statutes of the state.

Note that this statute pertains to "public waters" — not underground, percolating water.

Article 7621d-1. Texas Water Quality Act of 1967: The Texas Water Quality Board was created and given the responsibility of enforcing the provisions of the act, which is to control in largest part the protection of the quality of the water within the state. "Waste" is defined with particularity, and "pollution" is defined and prohibited.

The act provides that "pollution" means any discharge or deposit of waste into, or adjacent to, the waters of the state, or any act in connection therewith which will cause such waters to be unclean, noxious, odorous, impure, contaminated, or otherwise affected to such extent that they are rendered harmful, detrimental, or injurious to public health, safety, or welfare. It also provides that the Board shall adopt, prescribe, promulgate, and enforce rules and regulations reasonably required to effectuate the provisions of the act, including rules governing procedure and practice before the Board, all for the purpose of establishing and controlling the quality of the waters.

Any operator proposing to discharge salt water or other waste into any of the waters of the state must beware of this statute, and probably must secure permit or authority hereunder.

Article 7880-3c. Underground Water Conservation Districts: For some years, there have been Texas statutes providing for the creation and operation of water control and improvement districts, and of underground water conservation districts. This article is the particular statute governing the creation and operation of the districts, formed for the control and protection of underground water in particular areas. It is provided that such districts may be created for the conservation, preservation, protection, recharging, and prevention of waste of the underground water of "an underground water reservoir or

subdivision thereof, fixed and designated by the State Board of Water Engineers." It is provided that no petition for the creation of such a district shall be considered unless the area to be included therein is coterminous with an underground water reservoir or subdivision thereof theretofore defined and designated by the Board.

When such an Underground Water Conservation District is properly formed and confirmed, it is empowered to formulate and enforce rules for the purpose of conserving, preserving, and protecting the underground water; to prevent waste; to require permits for the drilling, equipping, completion and spacing of wells; and to develop comprehensive plans for the efficient use of the underground water of the reservoir.

In this statute, there is a specific statement that nothing in it shall be construed as applying to wells drilled under permits granted by the Railroad Commission for oil, gas, sulphur, brine, or any of them — or for any other purpose. Of further interest to the oil operator is the provision that nothing in the act shall authorize or permit the Underground Water District to require a permit for the drilling or producing of a water well drilled, completed, and equipped so that it will not produce in excess of 100,000 gallons per day of underground water.

Railroad Commission Rule

In addition to the statutes, of special interest to the producer of oil, with which water is produced, is the present Rule 8(a) of the Commission (formerly Rule 20). This rule broadly provides that there shall be no pollution of underground water.

The rule is given controlling effect by the Court of Civil Appeals in **Gulf Oil Corp. v. Alexander.** There, the undisputed evidence had established that Gulf's disposal of the salt water was wholly in conformity with the conduct of such business in the oil field, and there was no evidence establishing negligence in its usual sense. The court said:

> "Appellee pleaded and proved that Rule 20 as promulgated by the Railroad Commission of Texas makes the following requirement with reference to the disposal of salt water:
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> > 'Fresh water, whether above or below the surface shall be protected from pollution, whether in drilling, plugging or disposing of salt water already produced.'
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> "It is apparent this rule specifically prohibits the pollution of fresh water by the disposal of salt water without any reference to negligence. Since appellant admits, as established by the undisputed record, that it polluted appellee's fresh water strata with salt water, appellant is liable for such pollution by reason of its violation of Rule 20 above set forth."

In response to the application for writ of error filed by Gulf, the Texas Supreme Court affirmed the decisions of the district court and the Court of Civil Appeals, but refrained from writing upon the question concerning the effect of Rule 20 (now Rule 8(a)).

The producer of oil who would dispose of the salt water or other refuse should take due cognizance of this Commission regulation against pollution. If the rule be given its full effect, no proof of ordinary negligence is necessary; the surface owner need only prove pollution of the fresh water supply of his irrigation well as a result of the operator's disposal of the salt water or other refuse.

RESPONSIBILITY FOR WRONGFUL LOSS OR POLLUTION

Time after time, it has been declared and held — by the courts of Texas, Oklahoma, and adjoining states, as well as by the federal courts — that the oil and gas lease carries with it the right to use so much of the lease premises as reasonably necessary to comply with the terms of the lease and to effectuate its purposes by the production of the oil and gas. Further, the lease operator is not liable to the lessor for damages done to the surface — by salt water or otherwise — unless the damages proximately result from negligence.

In numerous decisions, the Texas courts have said they will not apply the rule of absolute liability. In **Turner v. Big Lake Oil Co.,** a case involving escape of salt water from surface ponds onto an adjoining tract, the Texas Supreme Court discussed at length the English case of **Rylands v. Fletcher** (generally considered the case fixing the doctrine of absolute liability), and declined to accept such a rule for Texas. In the

1960 decision in **Humble Pipeline Co. v. Anderson,** the Texas Court of Civil Appeals held that oil from a pipeline break, seeping underground to nearby land, was not sufficient to establish liability without proof of negligence. There are many other Texas cases with somewhat similar factual situations; and all purport to follow the rule requiring proof of negligence before liability.

Some states have legislation dealing specifically with liability for the escape of salt water and deleterious substances above the surface of the land. The Oklahoma statute fixes absolute liability and disregards negligence. The Oklahoma courts have applied this statute when damages were aboveground.

Insofar as pollution of underground fresh water or fresh-water strata is concerned, to considerable extent, the Texas courts have departed from the theory of **Turner v. Big Lake Oil Co.** In some of these pollution cases, it has been said that the pollution of the freshwater supply gives rise to the cause of action for damages by reason of the rules of the Railroad Commission. In other such cases, the decisions have been based upon findings of common-law negligence. Regardless of the theory of law upon which such liability has been based, in practically all cases tried up to this time, the lease operator using earthen pits for the disposal of salt water and other refuse has been held liable.

It was the **Gulf Oil Corp. v. Alexander** case, tried in Levelland, Texas, which gave rise to the many suits in Texas in which the claim is made for damages by reason of pollution of underground fresh water. In that case, Alexander owned a 372-acre farm adjoining the lease operated by Gulf. It was proved that the freshwater strata underlying the plaintiff's farm and supplying his irrigation well was polluted by the seepage of salt water from a saltwater disposal pit constructed and used by Gulf. The plaintiff recovered judgment for $22,320. Although the evidence showed that Gulf's method of disposing of the salt water was the universal method of disposal in the oil fields in that territory, and Gulf's disposal of the salt water was wholly in conformity with the conduct of such business in that field, the Supreme Court said that there was evidence of negligence and affirmed the trial court judgment for the plaintiff.

The other holding made in the **Alexander** case, which does harm to the defense of such suits, is that the two-year statute of limitation applicable to the cause of action for pollution of the subsurface strata of water does not begin to run until it is discovered by the landowner that the water has been polluted. The Court of Civil Appeals there said the limitation ran from the time the pollution became apparent or should have been discovered by due diligence on the part of the landowner. The Supreme Court did not comment upon such holding, but, in upholding the money judgment for the plaintiff, effectively disregarded the two-year statute of limitation pleaded and strenuously argued by Gulf.

The Oklahoma courts also have said they refuse to impose strict liability (liability without fault) where the damage has been done underground. In the case of **Larkins-Warr Trust v. Watchorn Petroleum Co.,** involving the accidental escape of salt water through a ruptured casing in an oil well — followed by migration of the salt water into the neighbor's producing well with consequent damage — the Oklahoma court specifically refused to apply the rule of absolute liability, and held that the owner of the damaged well could not recover unless he proved negligence. In both **Cities Service Oil Co. v. Merritt** and **Ross v. Fink,** the Oklahoma court again held that for there to be liability for subsurface damages, negligence must be established. However, in a 1962 decision, **Gulf Oil Corp. v. Hughes,** the Oklahoma court permitted recovery of damages for underground injury, on the basis of "a private nuisance." In a 1965 decision, **Norman v. Greenland Drilling Co.,** it permitted recovery of damages for such underground injury on the theory of res ipsa loquitur.

With these later decisions applying the theories of "res ipsa loquitur" and "public nuisance," it would appear that the Oklahoma landowner who sustains damages by reason of underground injury to his property can establish liability and recover damages as often and as easily as such an owner can in Texas.

In connection with these suits for damages for aboveground and underground injuries, it must be remembered by the Texas operator that joint and several liability has been imposed on operators contributing to any extent to the pollution. The Texas courts have permitted the claimant to sue either one or all of the operators,

and to proceed to judgment against any one of them separately, or against all of them in one suit, with each defendant liable for the entire damages, and with all of the defendants jointly liable for the entire damages.

It can thus be seen that, in this kind of suit, the best defense — and, in many cases, the only defense — for the lease operator is to prove that his operations did not contribute to the pollution; i.e., first, to establish that he did not put any salt water in an earthen unlined pit, or, second, to prove that the pit in which he placed his salt water was not on, and at such a distance from, the plaintiff's land that no salt water therefrom could possibly reach the plaintiff's land.

CONCLUSION

The surface owner and the mineral owner, the oil lessee and the royalty owner, the farmer and the rancher, the manufacturer and the businessman are all involved in the continued economic development and well-being of the various industries of this country. The operations and property interest of one of them are no more important than those of the others. Their respective legal rights and titles, and their continued freedom to contract and convey, are entitled to equal protection from the courts. This rule of law applies to both water and to oil, and to the owners and users of each. In other words, water suitable for the domestic, municipal, and industrial needs of the country is one of the most important natural resources, and it is entitled to protection. So is oil entitled to protection and production.

The problem of pollution of underground water from unlined saltwater and refuse disposal pits is being solved. In some parts of the country, pits can be used without creating any problems involving freshwater supplies. Where pits cause trouble, the operators are converting to the use of injection wells.

With respect to the use of fresh and salt water for injection into the oil-bearing formations, it has been estimated by respectable authority that a maximum production from secondary recovery of 96 billion barrels of additional oil can be obtained. The necessity for wringing from the earth every such recoverable barrel of oil should be recognized by all; and it has been recognized by the Congress of the United States and all governmental agencies.

The ratio of the number of barrels of water injected for waterflooding to each barrel of oil recovered varies, depending upon the extent of depletion, the characteristics of the reservoir, etc., and will range anywhere from four-to-one up to thirty-to-one; and as much as 50 per cent of this water can be recycled so that the total amount consumed is considerably less than the amount taken for such injection. In this connection, it is well to remember that the economic worth of water depends upon the use to which it is put. For example, it has been estimated that, for agriculture, cotton has an approximate gross value of $60 per acre-foot of water, grain sorghum, $40, and wheat, $30. The value of water for municipal use varies considerably, averaging in the neighborhood of 25 cents per thousand gallons; assuming this figure, an acre would be worth approximately $80. Using similar calculations and assuming a recovery ratio of one barrel of oil with a gross price of $2.50 to $3 to each 15 barrels of water, the value of the use of water for production of oil can be seen. Admittedly, these figures are approximate, but they give a broad indication of the relative economic value for each type of use of water.

Citing another example, approximately 96 to 98 per cent of the water produced from the Ogallala formation in a 48-county area of west Texas is used for irrigation, with most of the remainder used for municipal and industrial purposes. Projected needs of the oil industry for this Ogallala water, for use in waterflood operations in this area, establish that such waterflooding will cause no significant change in the relative use of the water by the various groups. These projections indicate that the use of Ogallala water by the petroleum industry will not exceed six-tenths of one percent of the total supply of such water. This ultimate total usage by the oil industry represents only about one-fourth of the total Ogallala water currently produced in one year. The total use of this water by the petroleum industry for its waterflood will shorten the projected forty-year life of the Ogallala water supply by only about three months. These figures are impressive.

The oil industry must diligently protect oil

and water, and must put them to beneficial use. To protect water and properly save his segment of the petroleum industry from liability for damages, the petroleum landman must learn something of the legal rights and responsibilities of the industry relative to this water.

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