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THE OIL AND GAS LESSEE'S RIGHT TO GEOPHYSICAL EXPLORATION: INCIDENTAL OR EXCLUSIVE?

I. INTRODUCTION

It is a common misunderstanding of many lessees that when an oil and gas lease is executed, the lessee acquires an exclusive right to perform geophysical exploration along with the exclusive right to perform drilling and related operations on the leased land. The courts which have addressed the issue of whether a lessee has the exclusive right to perform geophysical exploration by virtue of the executed oil and gas lease have tended to hold that such a right is non-exclusive.1 This Comment will explore and analyze the arguments presented by advocates on both sides of the issue, as well as the rationale of the courts in applying a non-exclusive standard to the lessee's right to geophysical exploration. Additional considerations will be discussed in order to more fully analyze the non-exclusive standard.

II. GEOPHYSICAL EXPLORATION AND SUBSURFACE TRESPASS

Geophysical operations include the detection and measurement of the subsurface characteristics of a particular tract by obtaining direct information describing the subsurface structure.2 Geophysical exploration is designed to accomplish the same objective as exploratory drilling — to collect geological information necessary to determine the advisability of commencing actual drilling operations on the leasehold

2. 1 E. KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS § 12.7, at 278 (1962). Geophysical exploration has also been defined as:

[the] search for geologic structures favorable to the accumulation of petroleum by means of geophysical devices. By use of one or more of such devices, geophysicists seek to arrive at a picture of subsurface conditions. The gravity meter measures the gravitational pull of subsurface rocks, revealing on occasion disconformities and structural traps. The magnetometer measures the magnetic attraction of iron contained in various types of rock, from which it is sometimes possible to locate a subsurface structure. Perhaps the most commonly used geophysical device is the seismograph, which measures shock waves reflected and refracted by subterranean rock layers. From this data is plotted a contour map indicating the presence (if any) of structural traps.

H. WILLIAMS & C. MEYERS, OIL AND GAS TERMS 175 (1964).
estate. The seismograph is the most prevalent instrument used in geophysical exploration, and a seismograph survey is often the first endeavor of the oil and gas operator following the decision to explore an area for oil and gas. Information is obtained from below the earth's surface by sending vibrations into the formations rather than actually penetrating the formations with drilling equipment as is required when using exploratory drilling.

While the modern geophysical exploration methods are replacing the more costly preliminary drilling operations, the modern methods require sophisticated interpretation of the data obtained by experts, and the ultimate conclusion that a valuable deposit of minerals is present in the structure may often be reached only through actual drilling. Because of the interest and support of oil companies, the technology of geophysical exploration is advancing rapidly. The higher costs of drilling and exploration that are associated with the more difficult geographic targets are requiring greater reliance on geophysical data. This has also lead to an emphasis on perfecting data gathering and interpre-

3. In seismographic operations, a shot hole is drilled, and a charge of dynamite is detonated in the hole. This generates acoustic waves which travel downward and outward from the shot point and are reflected back to the surface from interfaces within the sediments of the earth. These reflected signals are picked up by the seismograph and are recorded by means of an oscillograph. The depth and location of the shot holes vary widely; they may be located several hundred feet apart and may vary in depth from 30 feet to 300 feet, depending on surface and subsurface conditions. A structural map, covering a wide area which normally includes numerous tracts of land, is prepared from the results obtained from the seismograph work.


4. Id.


The geophysical data, which are nothing more than refraction or reflection curves and wiggles on a grid, of themselves and alone do not constitute legal facts. A chart or log is not a picture or reproduction, nor does it constitute in itself knowledge or information. Expert and scientific men alone must interpret. Moreover, the grid is susceptible of multiple and diverse interpretations even by the experts. Most seismographs present a whole rainbow of colors from which the geophysicist... selects the shade or tint to his liking. Therefore, even when there are full and complete detailed disclosures from a particular tract of land, the end result is no more than an expert interpretation which forms the basis of a prediction. A wrongful prediction as to nature's doings, such as a weather forecast, has never appealed to the most litigious-minded. The final result, then, does not reach a higher legal status than that of a mere opinion. Again, the opinion relates to the presence or absence of a possible container for such things of value. The geophysical opinion is always a prophecy. It is not a mathematical conclusion nor even a statistician's reasoned judgment. Its correctness or reliability can never be determined other than by actual drilling.

Id. at 316.
tion techniques. These developments have renewed the concerns of lessees regarding their rights to geophysical exploration under their leases.

A geophysical trespass can occur in several different fashions. Where a non-lessee explorer receives permission from the landowner and then conducts tests of the lands for the possibility of oil and gas, an action may be brought by a lessee, who holds a valid mineral lease, for geophysical trespass. The basis for such an action is that this explorer, a stranger to the lease, has obtained valuable information which the mineral lessee claims is his exclusively. The issue in such cases is whether this lessee has an implied exclusive right to perform geophysical exploration where the right is not specifically stated in the lease. In these cases, most courts have held that the lessee has no cause of action against this explorer.

Another type of geophysical trespass occurs when the operator actually trespasses upon the landowner’s property and performs geophysical operations without permission. In these cases, damages are usually awarded for any surface damages that the operator has caused. A variation of this type of trespass takes place when the operator performs geophysical operations on adjacent property or performs the operations along the perimeters of the property without actually committing trespass. Here, the operator sets off a detonation on one side of the property which transmits vibrations through the ground which are received on the opposite side. The operator can obtain information about the underlying formations without a physical trespass upon the land. A trespass is difficult to prove in these instances, but surface damages may be allowed.

Subsurface trespass is the drilling of a well bottomed on the land

9. In Tinsley v. Seismic Explorations, 239 La. 23, 117 So. 2d 897 (1960), the court still denied a cause of action to a lessee who owned a lease with an exclusive right to geophysical exploration. See infra notes 80-91 and accompanying text.
10. See Hawkins, supra note 6 at 315.
11. In Kennedy v. General Geophysical Co., 213 S.W.2d 707 (Tex. Civ. App. 1948), upon refusal of the landowner to allow geophysical operations to be performed on his land, the geophysical company performed the tests in close proximity to the land in question. The court sustained the trial court's findings that there was no trespass and no evidence of any damage to the physical structure either to the surface or subsurface to entitle the landowner to recover nominal or actual damages.

Perhaps the result would have been different had the landowner proven that from the information obtained from the adjacent lands, the formation of his land would also be known. The court, however, refused to take judicial notice of the scientific fact that the slope, dip, or trend of a
of a different lease, although the surface location of the well is on the operator's own lease. Subsurface trespass should be distinguished from geophysical trespass. Both forms of trespass involve a disturbance in the surface with a taking of something from another's lease. Subsurface trespass involves the taking of oil and gas, while geophysical trespass involves the taking of valuable geophysical information.

The remedies provided, however, are not reconcilable. In the case of a subsurface trespass, the usual measure of the damages is the value of the oil or gas which has been wrongfully taken without setoff for drilling and operational costs. Conversely, some courts have held that there is no remedy for the party who has been injured by the geophysical trespass. Even though a valuable property right is involved,

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given subsurface formation continues with the same slope past the last point definitely known. \textit{Id. at} 710-11.

Similarly, in Phillips Petroleum Co. v. Cowden, 241 F.2d 586 (5th Cir. 1957); \textit{aff'd on rehearing}, 256 F.2d 408 (5th Cir. 1958), the court refused to recognize that there had been a geophysical trespass except to that portion of the landowner's property which had actually been trespassed upon by the defendant conducting the seismic operations. \textit{Id. at} 588. Damages were awarded based upon the landowners contention that from the shots on this 81.8 acres and the data received the information could be correlated with geological information from other sources so as to permit interpretations as to the entire property. \textit{Id. at} 589.

The court of appeals held that the landowner could only be compensated for that part of their property that was "occupied" by the exploration. \textit{Id. at} 593. The case was remanded to the trial court for a determination of the number of acres actually occupied by the trespass. \textit{Id. at} 594. \textit{See generally} \textit{Note, Oil and Gas: Improper Geophysical Exploration--Filling in the Remedial Gap}, 32 OKLA. L. REV. 903 (1979).

12. \textit{See generally} H. WIL LiAMS & C. MEYERS, OIL AND GAS LAW § 227 (abr. ed. 1975). The trespass occurs when there is an unauthorized entry upon the land of another. Although the intent of the driller of the well is immaterial to the commission of the trespass, the element of good or bad faith may be crucial to the recovery of costs. \textit{Id.}


14. \textit{See}, e.g., Union Oil Co. v. Mutual Oil Co., 19 Cal. App. 2d 409, 65 P.2d 896 (1937). If oil or gas is captured, it is the property of the owner of the mineral rights in the land where the well was bottomed. \textit{Id.}

15. \textit{See} I. E. KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS § 12.7 (1962). "The purpose of geological and geophysical operations is to determine the characteristics of the underground structures, with particular reference to characteristics which are favorable to the possible presence of oil or gas." \textit{Id. at} 278. In Layne Louisiana Co. v. Superior Oil Co., 209 La. 1014, 26 So. 2d 20 (1946), the court stated, "[i]t is a well-known and accepted fact . . . that the right to geophysically explore land for oil, gas or other minerals is a valuable right. Large sums of money are annually paid landowners for the mere right to go upon their land and make geophysical and seismograph tests." \textit{Id. at} 22.


17. It should be noted that there is a right of recovery against an operator who enters the land of another without permission and prospects for oil and gas by geophysical techniques. \textit{See} Phillips Petroleum Co. v. Cowden, 241 F.2d 586 (5th Cir. 1957); \textit{aff'd on rehearing}, 256 F.2d 408 (5th Cir. 1958). Although damages were awarded in Cowden, it must be recognized that a necessary element of the geophysical trespass is actual surface trespass. Accordingly, the right protected was that of the landowner to acquire information regarding the subsurface structure of his land
these courts have refused to protect a lessee or landowner who has not inserted the word "exclusive" in his lease.\textsuperscript{18}

III. TRADITIONAL JUDICIAL TREATMENT OF THE ISSUE

A relatively recent case which sets forth many of the basic problems in this area is \textit{Ready v. Texaco}.\textsuperscript{19}

The plaintiff, \textit{Ready}, held oil and gas leases upon which the defendant \textit{Texaco} conducted geophysical exploration using seismographic techniques. \textit{Texaco} conducted these operations without consent, authorization or compensation to the plaintiff.\textsuperscript{20} The lessor of the property was the Bureau of Land Management of the United States Department of the Interior. A letter from the Bureau introduced into evidence\textsuperscript{21} stated that no permit or license was required to conduct seismographic exploration.\textsuperscript{22} The Bureau did state that "we believe the right to perform seismographic operations on leased land is primarily a private matter between the oil and gas lessees and the party wishing to do seismographic operations."\textsuperscript{23}

The basic issue was whether the leases granted \textit{Ready} the exclusive right to geophysical exploration. \textit{Ready} argued that the lease, when reasonably interpreted, granted the exclusive right to the lessee. In the alternative, \textit{Ready} contended that such a right was incidental to and implicit in a lease to drill for oil.\textsuperscript{24} \textit{Texaco} argued that because the lease did not specifically grant an exclusive right, such a right could not be read into the lease.\textsuperscript{25}

The relevant provisions of the United States' lease stated "[t]he lessee is granted the exclusive right and privilege to drill for, mine, extract and dispose of all the oil and gas deposits . . . in the lands leased."\textsuperscript{26} The court, after reviewing the case law related to this

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\textsuperscript{18} Alphonzo E. Bell Corp. v. Bell View Oil Syndicate, 24 Cal. App. 2d 587, 76 P.2d 167 (1938).
\textsuperscript{21} \textit{Id.}
\textsuperscript{22} \textit{Id.}
\textsuperscript{23} \textit{Id.} at 983, 84.
\textsuperscript{24} \textit{Id.} at 984.
\textsuperscript{25} \textit{Id.} \textit{See supra} note 18 and accompanying text.
\textsuperscript{26} 410 P.2d at 984. The relevant provisions of the Wyoming lease are as follows: "lessee. . . does hereby grant and lease to the lessee the exclusive right and privilege to drill for, mine,
point, concluded that while the lessee has an implied right to conduct geophysical exploration, the right was not exclusive.\textsuperscript{27} The basis for the decision was that "implied covenants are not favored by the law and will not be interpreted to exist unless from the language employed in the instruments such implication is indispensable in the effectuation of the intention of the parties."\textsuperscript{28}

Notwithstanding the Ready's argument that the drilling of a 300 foot deep seismic well should be within the exclusive right to drill granted by the lease, the court determined that the parties did not intend such a meaning. Since Ready could not demonstrate such an intention of the parties and since the lessee could still perform the basic purpose of the lease, the summary judgment granted to Texaco at trial was affirmed.\textsuperscript{29}

By its narrow focus on implied covenants the court overlooked an integral element of the plaintiff's argument. The right of geophysical exploration is a valuable property right,\textsuperscript{30} and the defendant obtained this right without the consent of or compensation to the lessee. The court's rationale would leave this property right without proper ownership, to be claimed freely by any passing explorer. The result reached in Ready, which is frequently cited, is that the lessee will not be able to recover damages for geophysical trespass unless the lease expressly provides that the right to geophysical exploration is exclusive in the lessee.\textsuperscript{31}

IV. ARGUMENTS FOR AN EXCLUSIVE RIGHT

Although courts, such as in Ready, have held that the exclusive

\begin{itemize}
    \item extract, remove and dispose of all of the oil and gas and other kindred hydrocarbon deposits. . . in or under the following land." \textit{Id.}
    \item \textit{Id.} See supra note 18 and accompanying text.
    \item \textit{Id.} at 986. This may be true as a general principle of contract law, but according to E. Brown, "implied covenants (in oil and gas leases) . . . are . . . favored by the law. This principle is exactly the opposite of that applied to contracts generally . . ." E. BROWN, LAW OF OIL AND GAS LEASES § 16.01 at 16-4 (1973). Although the most discussed implied covenants are those that impose a greater duty on the lessee, there should be no cause for alarm to infer an implied covenant giving the lessee the exclusive right to geophysical exploration. An exclusive right would help to further the intention of the parties in developing the lease, which after all is the reason that the contract was entered in the first place. \textit{Id.}
    \item 410 P.2d at 987.
    \item 410 P.2d at 985; see, e.g., Phillips Petroleum Co. v. Cowden, 241 F.2d 586, 590. ("There can be no doubt that in Texas the right to explore for oil and minerals is a valuable property right that can be legally protected."); Franklin v. Arkansas Fuel Oil Co., 218 La. 987, 51 So. 2d 600 (1951); Picou v. Fohn Oil Co., 222 La. 1068, 64 So. 2d 434 (1953); Wilson v. Texas Co., 237 S.W.2d 649 (Tex. Civ. App. 1951).
    \item 410 P.2d at 984.
\end{itemize}
right to geophysical exploration must be stated in the lease, both economic and comparative arguments can be made for an implied exclusive exploration right. Both arguments are based on the underlying purpose of the lease; the production of oil and gas.

A. Economic Justification

To promote the production of oil and gas, the lessee's investment in the lease must be protected. Publication or indications by a third party of the results of geophysical exploration could have several effects. Depending upon the explorer's reaction, the market value of the land could rise or fall. If the trespasser's reaction is negative the lessee could be discouraged from making additional investments to develop the lease. A possible result is that the primary purpose of the lease, which is the development of oil and gas, could be frustrated.

Because of the expense involved, it is conceivable that by granting a lessee the exclusive rights to geophysical exploration, cooperation between the lessee and other lessees in the area would be promoted. At some point reciprocity could become a beneficial resource. For example, if Exxon and Texaco are engaged in exploratory operations on adjacent fields covering a wide acreage, it would be economically beneficial for only one of them to engage in geophysical exploration over the entire field and the data obtained could be shared, along with the expense of the exploration. While currently the companies have little incentive to cooperate, if the exploring company were required to obtain permission before conducting exploration along borderline areas,

32. See M. Merrill, Covenants Implied in Oil and Gas Leases §1 at 16 (2nd. ed. 1940). Due to the magnitude of the investment required and the uncertainty, in the absence of exploration, as to the existence of these minerals under any particular tract, exploration for and development of such accumulations almost never is undertaken by the owner of the surface. Instead, he grants the exclusive right of exploitation to others by an instrument commonly denominated an oil and gas lease, receiving, as his chief compensation for the right thus granted, a royalty in the event that oil or gas is found and produced. Id.

33. See Hull, Oil and Gas Lessee v. Seismograph Licensee, 21 Okla. B.J. 1503, 1504 (1950). The seismograph operations may give rise to unwarranted speculations in mineral properties, and its movements are carefully watched, as a favorable presumption arises. Conversely, the opposite effect may occur after a seismographic party has left an area, raising levels of suspicion, and in practical effect, condemning the land. Id.

34. Id. "[T]he interests of the lessor and lessee are concurrent, both being directed toward the development of lessor's property. . . ." Id. at 1510. Therefore, an oil and gas lease cannot be held indefinitely for merely speculative purposes without development. If a lessee believes a third party's seismographic report is accurate, and that there is actually no oil or gas on the land, the primary purpose of the lease has been defeated, and therefore, the lease should terminate. Id.

35. See McRae, Granting Clauses in Oil and Gas Leases: Including Mother Hubbard Clauses, 2d Ann. Inst. on Oil and Gas Law 44, 73 (1951).
the companies would be encouraged to cooperate.\textsuperscript{36} By reducing overall expenses and by obtaining a broader picture of the entire area the primary purpose of the lease, the production of oil and gas, should be furthered.\textsuperscript{37}

B. Liability for Exploratory Drilling

In \textit{Humble Oil and Refining Co. v. Kishi},\textsuperscript{38} the defendant Humble had allowed its lease to expire.\textsuperscript{39} Upon hearing of a discovery of oil upon an adjoining tract, Humble entered upon its former leasehold and began drilling operations.\textsuperscript{40} The result was a dry hole, and operations subsequently ceased.\textsuperscript{41} Before the defendant’s entry, the value of the leasehold was $1000 per acre.\textsuperscript{42} This value was destroyed by the discovery that there was no oil.\textsuperscript{43} Because the landowner could have rightfully bargained with another lessee for this right, had the defendant not deprived him of the opportunity to do so, the court held Humble liable for the speculative value of the lease.\textsuperscript{44}

The basis of this remedy is that the exclusive right to enter upon the land and drill wells thereon is a property right which the law protects.\textsuperscript{45} In order to secure desirable leases, lessees have instituted the practice of bidding against each other by offering a lessor a cash bonus for the lease.\textsuperscript{46} Where the competition is great, lessees often agree to pay to lessors many thousands of dollars by way of a bonus in order to secure a desirable lease.\textsuperscript{47} \textit{Kishi} suggests that destruction of the speculative value of property is a right which will be protected from invasion by trespassers.

In the same manner, a favorable or unfavorable geophysical report can affect the leasing value of the land. An unfavorable report can

\begin{itemize}
\item \textsuperscript{36} \textit{Id.} at 74.
\item \textsuperscript{37} See S. Kuntz, A TREATISE ON THE LAW OF OIL AND GAS § 55.1, at 136 (1978). “When the lessor and lessee enter into an oil and gas lease, it is for the fundamental purpose of providing for the exploration, development and operation of the leased premises for the mutual profit and advantage of both the lessor and lessee.” \textit{Id.}
\item \textsuperscript{38} 276 S.W. 190 (Tex. Civ. App. 1925), aff’d on rehearing, 291 S.W. 538 (Tex. Civ. App. 1927).
\item \textsuperscript{39} 276 S.W. at 190.
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.} at 191.
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item 3A W. Summers, \textit{The Law of Oil and Gas} § 586, at 70-71 (1958).
\item \textsuperscript{47} \textit{Id.} at 71.
\end{itemize}
destroy the landowner’s speculative value, yet the geophysical trespasser is protected from liability court decisions. These mutually opposed results can only be reconciled by characterizing the purpose of drilling operations as primary and the purpose of geophysical operations as secondary to the ultimate purpose of the development of the leasehold estate. The *Ready* court viewed the right of geophysical exploration as secondary, and saw no compelling reason to hold it exclusive. The fault with this reasoning is that both operations are paramount to the same objective, and both should therefore be held as exclusive. There appears to be no reason for courts to single out this right, which is so closely related to the right to drill, as non-exclusive.

V. ARGUMENTS FOR A NON-EXCLUSIVE RIGHT

Several courts have addressed the issue of whether an exclusive right to conduct geophysical exploration should be implied as a matter of law when the language of an oil and gas lease does not expressly so state. Clearly, the weight of authority is that such a right should not be implied.

The first case to address this issue was *Shell Petroleum Corporation v. Puckett*. Puckett had leased a tract of land for “the sole and only purpose of mining and operating for oil and gas and of laying pipe lines and of building tanks, power stations and structures thereon to produce, save and take care of said products.” He sued Shell for conducting geophysical exploration on the tract. Shell denied having conducted any exploration. Shell also contended that since the terms of the lease did not grant Puckett the exclusive right to conduct geophysical exploration, he lacked standing to sue.

The court of civil appeals reversed the lower court without deci-
ing whether Puckett had such a right.\textsuperscript{56} It did, however, comment in
dicta that the right to conduct geophysical exploration was incidental to
the right to extract oil.\textsuperscript{57} The court stated that if Puckett had the right
to conduct geophysical exploration, Shell's exploration did not deprive
him of that right.\textsuperscript{58} The court's view was that if any injury had oc-
curred, it was to the land. The owners of the land would then have
standing to bring suit.

While not expressly so stating, the court adopted the position that
the right to conduct geophysical exploration was not exclusive to the
lessee.\textsuperscript{59} The court failed to appreciate the argument that the value of a
lease is influenced by the degree of uncertainty pertaining to the exist-
ence of oil and gas in the leasehold.\textsuperscript{60} To the extent that an individual
is allowed to conduct geophysical exploration without the consent of
the lessee, the lessee's bargaining power is affected. It is the reduction
of this uncertainty which has a value. By allowing Shell to reduce its
uncertainty regarding the lease without payment, the court in effect al-
lowed Shell to take this value from the lessee without compensation.

\textit{Wilson v. Texas Co.}\textsuperscript{61} indicated that the parties to an oil and gas
lease can establish that the right to geophysical exploration can be ex-
clusive to the lessee. Wilson, the landowner and lessor, sued the Texas
Company for surface damages and geophysical trespass.\textsuperscript{62} The grant-
ing clause had provided, "lessor . . . has granted . . . unto said lessee
. . . the exclusive right to prospect, explore, by use of core drills or
otherwise . . . [for] oil . . ."\textsuperscript{63} The court held that when a property
owner has executed an oil and gas lease which grants the exclusive
right to prospect and explore, the property owner would no longer pos-
sess any right which could be violated by geophysical exploration.\textsuperscript{64}
The court noted in dicta that the right to geophysical exploration was a

\textsuperscript{56} Id.
\textsuperscript{57} Id.
\textsuperscript{58} Id.
\textsuperscript{59} Id.
Its (a seismograph party) appearance in a community has, on occasion, given rise to
unwarranted speculation in mineral properties, and its movements are carefully watched
for indications as to the direction in which oil activity may proceed. In some cases . . .
the absence of leasing activity has had the effect of condemning the market value of the
properties surveyed. . . . (I)t is not difficult to realize that litigation could arise over
destruction or threatened destruction of speculative values . . .
\textsuperscript{Id.}
\textsuperscript{61} 237 S.W.2d 649 (Tex. Civ. App. 1951).
\textsuperscript{62} Id.
\textsuperscript{63} Id. at 650.
\textsuperscript{64} Id.
valuable property right entitling the holder to damages for unauthorized invasion. It would therefore appear that the right rests with the fee simple holder until exclusively granted to another party.

A practical consideration supporting the non-exclusive view is that any other rule would impair progress in exploration. An exclusive right would require the explorer to obtain consent from all the owners of fractional leasehold interests as well as from the landowner. The difficulties and expense in doing so would be enormous. Because of the importance of the oil and gas industry to the Southwest and the importance of lessening the United States' dependence upon foreign oil sources, this consideration is a strong one. If there were no liability for conducting geophysical exploratory operations, those operators who have been deterred from exploring by the fear of excessive liability would be free to proceed.

In Mustang Production Co. v. Texaco, the United States District Court of Kansas considered whether an oil and gas lease which expressly granted the lessee the right to conduct geophysical exploration on the leased acreage impliedly granted an exclusive right. The court held that the right was non-exclusive and noted that, "there is no inherent inconsistency in granting different persons the right to conduct geophysical exploration, because they need not interfere with each other's activities, just as the game animal that can only be eaten once can be photographed innumerable times." The court's reasoning was based on the actual effect of the operation. It reasoned that as oil and gas can be recovered only once, the right to recover it must be exclusive. However, other activities, such as the laying of pipeline, can be conducted numerous times without any interference with the lessee's operation and are therefore considered non-exclusive. The court's error was in classifying geophysical exploration as an activity which does affect the lessee. As the information gained by the exploration becomes more widespread and available, fewer individuals will be interested in purchasing the right to conduct their own exploration. The right to geophysical exploration would then decrease in value each time it is exercised.

65. Id. See supra note 30 and accompanying text.
66. See Hull, supra note 33 at 1511.
67. Id.
68. 549 F. Supp. 424 (D. Kan. 1982). This case raised the issue of whether a lessee's rights are exclusive or non-exclusive for the first time in Oklahoma.
69. Id. at 425.
70. Id. at 426.
VI. DAMAGES FOR INVASION OF EXPLORATION RIGHTS

The most logical measurement of damages would be the value of the right to explore, together with compensation for wrongful acts damaging the land itself.\(^1\) The value of the right to explore can be determined by looking to the amount paid on nearby lands for this right.\(^2\) Exploration permits are regularly bought and sold and have a market value in spite of the fact that this value is based on speculation.

Although the value of the information may be disputed,\(^3\) the right to obtain that information is not, and it is that right which should be valued, not the ability to construe the data or the accuracy of the information received.\(^4\)

There are several other methods that the courts have used to calculate damages for the wrongful use of geophysical exploration.\(^5\) One method is unjust enrichment on a quasi-contractual basis.\(^6\) This is premised on the theory that the third party has obtained an unjust benefit from its wrongful acts. The knowledge of the geological formations under the surface is useful in determining whether adjacent land is valuable. This party thereby may have saved himself considerable expense by avoiding the purchase of a worthless lease.

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\(^1\) See Brown, supra note 3, at 65-69; 1 KUNTZ, supra note 15, at 278-85.

\(^2\) See Shell Petroleum Corp. v. Scully, 71 F.2d 772, 774 (5th Cir. 1934); Franklin v. Arkansas Fuel Oil Co., 218 La. 987, 51 So. 2d 600 (1951).

\(^3\) See Angelloz v. Humble Oil & Refining Co., 196 La. 604, 199 So. 656 (1940). In an action against a company engaged in exploring for oil to recover for trespassing on plaintiff's lands and disseminating information acquired by a geophysical test thereon, resulting in depreciation of the leasing value of the lands, the court held that an award to the plaintiffs of $7,500 was not an abuse of discretion. The court considered evidence of various offers to plaintiff before the survey and their inability to lease the lands thereafter. Id. at 660.


While geophysical data may not be legal facts and are susceptible of multiple and diverse interpretations even by experts... the information obtained is highly valuable to the person or corporation making the tests and may enhance or impair the marketability of the mineral owner's interest...

Id. See McRae, supra note 13, at 79.

\(^5\) See Shell Petroleum Corp. v. Puckett, 29 S.W.2d 809, 810 (Tex. Civ. App. 1930) (measure of damages is the market value of the right to explore for minerals on the land); Phillips Petroleum Co. v. Cowden, 241 F.2d 586, 593 (5th Cir. 1957), aff'd on rehearing, 256 F.2d 408 (5th Cir. 1958) (damages are awarded for the reasonable market value of only that part of the property "occupied" by the exploration); Wilson v. Texas Co., 237 S.W.2d 649, 651-52 (Tex. Civ. App. 1951) (amount of actual damage sustained must be proven with specificity).

\(^6\) 1 A. CORBIN, CORBIN ON CONTRACTS § 19, at 46 (1963). "A quasi-contractual obligation is one that is created by the law for reasons of justice, without any expression of assent and sometimes even against a clear expression of dissent." Id. at 46. "The measure of recovery... is generally the amount of the unjust enrichment of the defendant." Id. at 50. Since this is generally the measure of recovery in cases of restitution for mistakes, duress and certain voluntary benefits, this alternative remedy is very frequently described as quasi-contractual in nature. Id.
Improper geophysical exploration can be analogized to the theft of trade secrets. This line of reasoning compares the interest of an inventor in restricting the disclosure of his trade secret to the owner of valuable mineral rights in controlling the testing of his property. The concern here is with the economic consequences which follow exploratory activity. In the speculative industry of oil and gas, the property owner should be permitted to engage in commercial dealings without the threat of harmful geophysical information from his own land impairing his bargaining power.

VII. Recent Judicial Treatment

In *Tinsley v. Seismic Explorations*, the plaintiff, the mineral lessee, alleged that the defendant entered upon the land and conducted seismographic explorations without his consent and approval. While the landowner had given the defendant permission, the plaintiff alleged that he held the exclusive right to geophysical information. The plaintiff alleged as damages that the information obtained by defendant in conducting the seismographic operations constituted a trespass on his leasehold rights, and therefore he was entitled to his total leasehold investment.

77. See Note, Oil & Gas: Improper Geophysical Exploration—Filling in the Remedial Gap, 32 Okla. L. Rev. 903, 910 (1979). The “test” applied in the trade secrets cases is first to determine whether the plaintiff has such an interest in the information or process as would entitle him to protection against its improper acquisition, and if so, whether the means employed by defendant are objectionable. Id. Assuming yes to the 1st and 2nd questions, it appears that some protection should be accorded to the wronged party. *Id.*

78. See Restatement (Second) of Torts §757 (1939). This section provides that liability will follow from the use or disclosure, without privilege, of another persons trade secret if it was obtained by improper means.

79. See *Brown*, supra note 3 at 66. But cf. *Martel v. Hall Oil Co.*, 36 Wyo. 166, 253 P. 862 (1927). The Plaintiff was allowed only nominal damages because, “whatever value the rights of plaintiff had were purely speculative,” and speculative damages are not recoverable. *Id.* at —, 253 P. at 864.

A further analogy can be made to one who rents any type of personal or real property for a specified period of time. One who rents, an apartment, for example, reasons this lease to be exclusive for all purposes. If the lessor of the apartment were to subsequently give a third party the right to enter the leased premises, the lessee would consider that his rights had been invaded and demand compensation from this stranger. An even stronger argument can be made if the same third party did not have permission from the landowner, but merely trespassed onto the leased premises, photographed the architecture or furnishings of the apartment, and then used these photographs to his benefit. The third party has ultimately received a benefit. The lessee has been injured and common sense prevails in reasoning that there should be compensation. It follows that this should be the reasoning applied to a lessee, who is in virtually the same situation, except that the rights are under an oil and gas lease.

81. *Id.* at —, 117 So. 2d 898.
82. *Id.*
The trial judge awarded Tinsley $840 in damages, representing the lessee's total leasehold investment.\(^83\) The court of appeals affirmed,\(^84\) holding that the lessee by virtue of his executed mineral lease became the exclusive owner of the right to conduct seismic tests. The court determined that this right is a real property right, giving the plaintiff, lessee, the right of bringing an action in tort for trespass to recover damages.\(^85\)

The Louisiana Supreme Court reversed the court of appeals, holding that a lease is not in essence a real right.\(^86\) The court set a three-part standard which must be met before a lessee may recover from an independent third party.\(^87\) This standard provides that it must appear that the lessee: became vested with the exclusive right to conduct geophysical surveys on the subject property under the contract of lease; that such right is protected against invasion by the timely recordation of the lease; and that the damages claimed to have been sustained are established by the evidence.\(^88\)

The court found that the plaintiff had met the first two elements of the standard but failed to prove actual damages suffered by him to a degree of certainty.\(^89\) Although the court conceded and recognized the well-known and accepted fact that “the right to geophysically explore land for oil, gas or other minerals is a valuable right. . .”\(^90\) the court denied recovery for a lack of proof as to damages. Therefore, the lessee must be able to prove a specific amount of damages in order to be able to recover.

The Tinsley decision further illustrates the hesitation of the courts to grant damages to a lessee for geophysical trespass from a third party, who has obtained the landowner’s consent to conduct the operations. The court conceded that the lessee had the exclusive right of exploration, but eluded the issue of the trespass upon this lessee’s right by the defendant, by centering most of the opinion on the lessee’s ability or right to protect his interest in the lease, and by concluding that this

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\(^83\) \textit{Id.}  
\(^85\) 111 So. 2d 837.  
\(^86\) 239 La. at –, 117 So. 2d at 902.  
\(^87\) \textit{Id.} at 903.  
\(^88\) \textit{Id.}  
\(^89\) \textit{Id.}  
\(^90\) \textit{Id.} at 899 (quoting from Layne Louisiana Co. v. Superior Oil Co., 209 La. 1014, 26 So. 2d 20, 22 (1946)).
right was merely personal.\footnote{239 La. at —, 117 So. 2d at 897-901.}

A. The Right to Surface Damages

The right to geophysical surveys may be questioned by a landowner whose primary complaint is the injury, actual or fancied, which will be inflicted upon his land from multiple exploratory efforts. If the landowner is subjected to a more burdensome use of the surface than is normal, he usually will be compensated for the damages to his land.\footnote{See 4 KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS § 49.4, at 243 (1972).} He will not, however, be able to prevent a reasonable exercise of this right.\footnote{See Brown v. Lundell, 162 Tex 84, 344 S.W.2d 863, (1961). “We agree that the owner-operator of the lease has the right to use so much of the land, both surface and subsurface, as is reasonably necessary to comply with the terms of the lease contract and to carry out the purposes and intentions of the parties. . . . It does not follow, however, that the operator may use either the surface or the subsurface in a negligent manner so as to damage the landowner.” Id. at 865.} This is because the lessee, as the mineral owner, has the right to search for, develop and produce oil and gas from the premises.\footnote{See Yates v. Gulf Oil Corp., 182 F.2d 286 (5th Cir. 1950); Shell Petroleum Corp. v. Scully, 71 F.2d 772 (5th Cir. 1934); Getty Oil Co. v. Jones, 470 S.W.2d 618 (Tex. 1971); Wilson v. Texas Co., 237 S. W.2d 649 (Tex. Civ. App. 1951).} In doing so the lessee has an implied easement to use the surface of the land as is reasonably necessary to obtain the minerals conveyed in the lease.

In \textit{Lloyd v. Hunt Exploration, Inc.},\footnote{430 So. 2d 298 (La. Ct. App. 1983).} a landowner recovered against an exploration company for alleged seismic trespass. The defendant claimed that the landowner had given him verbal permission to conduct seismic tests, however, the landowner denied this. The defendant’s crew had damaged a fence on the property which allowed the plaintiff’s livestock to escape, although they were subsequently recovered.\footnote{Id. at 299.} After dynamite charges were set off, the plaintiff’s pond would no longer hold water. The plaintiff and his children sued, seeking damages for mental distress, the dry pond, and for general damages.\footnote{Id.}

The court of appeals allowed the landowner $868 for his dry pond and the costs of repairing four fenceposts as well as for labor expended by him to repair his fence and round up his cows.\footnote{Id. at 302.} However, the court denied the award to the plaintiff’s children, for mental anguish, as an abuse of discretion by the trial court. The plaintiff’s mental distress
damages were reduced from $2,900 to $1,000.\textsuperscript{99} Because the lessee in the instant case had given the defendant permission to conduct the survey, no claim was made for the value of the information obtained. However, the defendant was held liable to the landowner for the damages suffered by him as a direct and proximate result of the seismic blasts.\textsuperscript{100}

Damages were denied, however, in \textit{Yates v. Gulf Oil Co.}\textsuperscript{101} Yates, an heir of the original lessor, sued the lessee claiming that the lessee owed him fifty dollars for each seismograph hole drilled upon his land. The seismographic method had not been in use at the time the lease was prepared in 1924, and the lease contained no express privilege for the lessee to go upon the lands for the purpose of exploring for oil and gas.\textsuperscript{102} The issue became whether the lessee had an implied use of the surface for geophysical explorations. The court noted that the lessor had an implied obligation to allow the lessee to make reasonable and appropriate efforts to develop the oil possibilities of the leased lands.\textsuperscript{103} In so doing, the lessee should not be prohibited from taking advantage of recent developments of science in exploring for, or producing, the minerals covered by the lease.\textsuperscript{104}

The inference which can be drawn from recent cases and others is that there is a good possibility that the lessor can hold the lessee liable for any surface damages that accrue from the geophysical exploration. Reasonable damages will be awarded in most cases. The courts will simply not allow a lessee to make unreasonable use of the lessor’s surface, and this principle applies whether or not the lessee’s right is held to be exclusive.

\textbf{VIII. CONCLUSION}

The solution available to the lessee is elementary; simply insert an exclusive clause into the lease.\textsuperscript{105} This would eliminate costly litigation, as well as isolating the right in the lessee. The question of this

\textsuperscript{99} Id. at 301.
\textsuperscript{100} Id. See also Shell Petroleum Corp. v. Scully, 71 F.2d 777 (5th Cir. 1934), where the landowner was compensated for the wrongful appropriation of his right to explore, following defendant’s detonation of two explosive charges located on Scully’s (plaintiff’s) land. The court held that Scully was entitled to full indemnity for his loss, and to be placed in as near as the same condition which he would have occupied had he not suffered the injury complained of. Id. at 775.
\textsuperscript{101} 182 F.2d 286 (5th Cir. 1950).
\textsuperscript{102} Id. at 288.
\textsuperscript{103} Id. at 289.
\textsuperscript{104} Id.
\textsuperscript{105} See Brown, supra note 3, at 62.
Comment would then become moot. The lessee would then be free from worry and interference by third parties and would be the sole person who could grant permission for geophysical exploration. For lessors who wish to retain the right of geophysical exploration, they may expressly reserve the right in the lease. This would make it plain that the right of the lessee is non-exclusive.

To recapitulate, there are valid arguments on both sides of this issue. The lessee has thus far received only a disregard for the property or leasehold right involved in his contract with the landowner. Despite the recognition of this right by courts, it has proven vulnerable to trespass by third parties, who dwell within a haven of refuge from the courts. The lessee stands to lose a great deal if the right to geophysical exploration is considered merely incidental. The lessee has negotiated for and entered into a business transaction with the lessor, and a third party who has no rights or obligations under that contract should not be allowed to infringe upon this relationship. Exploratory operations serve more than an incidental purpose and the right to conduct such operations should be protected when the results are so crucial to the evaluation of a lease. It is inequitable to allow a stranger to the contract to obtain this valuable information without compensation to the landowner or lessee.

The non-exclusive view can be supported by looking at the nature of geophysical reports. A geophysical report is subject to diverse interpretations which are entirely conjectural until confirmed by commencing drilling operations. Thus, the value of the report is speculative. Because it is difficult to determine exactly what has been gained by this explorer or lost by the lessee, the courts are reluctant to find liability.

At least one commentator\(^{106}\) has suggested that the courts may be in the process of modifying this harsh position. However, until a more equitable rule is adopted, a lessee should protect himself by inserting a clause in the contract granting him the exclusive right to geophysical exploration.

\[N. \text{ Suzanne Lomenick}\]

\(^{106}\) See 1 E. Kuntz, A Treatise on the Law of Oil and Gas \$ 12.7, at 278 (1962).

"[N]othing definite can be concluded except that there appears to be a growing but as yet undefined notion that a wrong is committed if the explorer deliberately projects shock waves through the land of another and picks them up on another side for the purpose of obtaining information regarding the subsurface structures of such land."

\[Id. \text{ at } 284.\]