The Law of Oil and Gas

A CONSIDERATION OF LANDOWNERS' RIGHTS, PARTICULARLY AS DEVELOPED IN CALIFORNIA

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THE LAW of oil and gas is, in many of its aspects, sui generis. Because of the extraordinary characteristics of oil and gas, property rights which govern the ownership and extraction of these minerals from the ground are of exceptional interest to students of law. Oil and gas in their natural state have been variously characterized by the courts as "migratory", "wandering", "fugitive", "fugacious", "fluent", "mobile", "volatile", "furtive", "self-propelling", "self-transmissive", "having a tendency to escape", and so on. They have been likened to animals ferae naturae, to water in its natural state, and to air. These resemblances are for the most part superficial and, in many instances, where courts have relied on the assumed analogy, erroneous conclusions have resulted.

It is desirable at the outset to have a clear understanding of the physical characteristics of oil and gas as they exist in their natural state in the ground. We have seen that their genesis is still a matter of scientific conjecture, though there is wide acceptance of the theory that they are an evolutionary product of marine life deposited and concentrated and chemically altered through geologic time. We have

†This article supplements one which appeared in 30 Calif. L. Rev. 245, dealing with public domain and conservation phases of the law of oil and gas, and deals with the law of property rights in oil and gas in place. Special consideration is given to the California law on the subject. Those who wish to explore the field further should consult Summers' excellent text on "The Law of Oil and Gas" (permanent edition, eight volumes, with pocket supplements).

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1 When an expounder of the law as astute and able as Mr. Justice Frankfurter refers to this subject as presenting "as thorny a problem as has challenged the ingenuity and wisdom of legislatures," we gain some idea of its intricacies and pitfalls. Railroad Commission v. Rowan etc. Oil Co. (1940) 310 U. S. 573; same case on second appeal (1940) 311 U. S. 570.

also observed that, as far as their legal status is concerned, oil and gas in their natural state are minerals and that this conclusion is not affected by conflicting theories as to their genesis.\(^3\)

While no two deposits of oil and gas in the ground are exactly alike, nevertheless, the extensive development of numberless such deposits and the resulting data which has been gathered in the process, enables us to describe with some degree of confidence their physical characteristics. In the overwhelming majority of cases these deposits are found in sedimentary beds of sandstone, shale, and limestone. These beds are usually more or less tilted and sometimes broken and faulted, though much faulting results in the migration and escape of the oil and gas. The oil and gas exist in the interstices of the rock, occupying certain strata, oftentimes referred to as "oil sands" and, depending upon the depth below the surface and other factors, usually are under varying pressure. In some cases, this pressure has been so great that the first wells which penetrated the deposit were so-called "gushers".\(^4\) This pressure is referred to as "reservoir energy" and conservation legislation has been enacted to preserve and put it to its greatest economic use.\(^5\) Oil and gas under pressure have a tendency to rise and come to the surface, but in a natural state they are confined by cappings of impervious strata.\(^6\) Where, as is frequently the case, the pressure is not sufficient to force the oil and gas to the surface, they may be found in solution with each other and with water in such quantities and under such conditions that the recovery of the oil and gas is feasible.

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\(^3\) Ibid. at 247-251.

\(^4\) Prior to the existence of controlling devices which have been perfected in recent years, these "gushers" spouted into the air great geysers of oil which drenched the surrounding country and it was months before some of them were brought under control. This resulted in great waste and oftentimes great injury to adjacent landowners. Similarly, other wells called "gassers" have tapped reservoirs of gas which were under such pressure that gas continued to "blow off" for long periods of time, years in some cases. In fact, in the earlier days of the industry, before gas was used commercially, it was considered unfortunate to encounter gas under great pressure and it was allowed to "blow off", until finally the subjacent oil either flowed or could be pumped to the surface. This tremendous waste of a vital irreplaceable natural resource resulted in the first conservation legislation, designed to make such wastage of gas unlawful.

\(^5\) Colby, \textit{op. cit. supra} note 2, at 269.

\(^6\) "For present purposes it need only be noted that oil in this state is found under layers of rock in a sand or sandstone formation termed a lentille or 'lentil', under pressure caused by the presence of natural gas within the formation .The layers of rock thus form a gas-tight dome or cover for the oil reserve. The oil adheres in the interstices between the sand particles. The natural gas may be in a free state at the top of the dome, but is also in solution with the oil, thus increasing the fluidity of the oil and the ease with which the oil is lifted with the gas in solution when the pressure on the gas is released by drilling into the oil 'sand'. It is estimated that only from ten to twenty-five per cent of the total amount of oil deposited in a reservoir is ultimately recovered, depending on the natural characteristics of the reservoir and the methods employed in utilizing the lifting power of the gas. The importance of gas in the oil-producing indus-
case, the sedimentary rock structure exists in the form of an anticline or dome, the oil and gas normally migrate to the upper portion of such formation. In many fields water exists under hydrostatic pressure in contact with the oil and gas deposit and exerts a pressure known as “water drive”. The oil is then normally found above or surrounded laterally by this stratum of water and, while some of the gas under pressure is contained in the oil itself, the gas usually occupies the highest portion of the confined reservoir.  

try has, therefore, become a question of great concern to the industry itself and to government, to the end that its function may be fully utilized without waste. It fairly appears on this application that, depending on its location in the oil reservoir, the extent of the oil ‘sand’, the degree of pressure within the formation, the amount of oil in the ‘sand’, the amount of gas in solution with the oil, the porosity of the ‘sand’ and other considerations, each oil and gas well has a best mean gas and oil ratio in the utilization of the lifting power of the gas and the production of the greatest quantity of oil in proportion to the amount of gas so utilized, and which may be computed as to each individual well to a reasonable degree of certainty and be regulated accordingly.” People v. Associated Oil Co. (1930) 211 Cal. 93, 106, 294 Pac. 717, 724, quoted with approval in Bandini Co. v. Superior Court (1931) 284 U.S. 8, 16-17.  

An excellent description of the occurrence of oil and gas is the following:  

“Oil and gas occupy the pore spaces between the individual grains or particles in sedimentary rocks. The amount of room which is available for the accumulation of these fluids depends on the unevenness in the pore spaces, the cementing material which fills a portion of the spaces, and the amounts of water which remain there.  

“Essential to the accumulation of these products is a trap, which will be in one of two general forms.  

1. Structural traps are caused by structural deformation of sedimentaries, into anticlinal folding, faulting, etc.  

2. Stratigraphic traps are not marked by deformation of the strata. They are sedimentaries which hold the oil and gas through thinning or lensing out or through a change in lithologic character.  

“Traps of the second class have provided about one-third of the past production of oil and will probably supply more than that proportion in the future. Either type requires a cap or cap rock of some impervious material which serves to prevent upward migration of the fluids.  

“Reservoir. Within the body of the sedimentary, known as the reservoir, the fluids are separated in accordance with their respective specific gravities. The water, being heavier, is below; above it is the oil, usually containing some gas in solution under pressure; above the oil may be a body of free gas, called the gas cap. The interrelationship of these fluids and their control during the exploitation of an old field have a profound effect on the ultimate proportion of oil and gas recovered from the reservoir.  

‘No matter what the form of the occurrence of the oil and gas, whether in lime, or sand or shale, and whether accompanied by water, by gas in varying ratios, or by neither, the only oil which is brought to the surface is that which gains access to the well. Movement of the oil and gas through the interstices between the particles of sand or through the voids in limestones requires force of some kind. This is reservoir energy. It may be the effect of gravity as at Glennpool and Burbank, or the expulsive force of expanding gas that prevails in most new fields during their flush stage; or it may be the drive of the subjacent water. The nature of the force and its control affect the total
Migration of oil and gas under natural conditions is necessarily slow and practically imperceptible, except over considerable geologic time. Oil and gas must travel through rock interstices and in the course of geologic time have attained a balance and collected in the most favorable localities where they are practically static when considered from the human time standpoint. It is only when such oil and gas reservoirs have been artificially penetrated by the drilling of wells into the substrata in which they are found, that any considerable movement or migration of the oil and gas takes place. These physical facts must be kept in mind when we consider the nature of property in oil and gas. Early decisions of the courts have described these deposits as if they were in a continuous state of unrest and migration underground, and have likened them to running water which is constantly changing its location with reference to the surface of the earth over or under which it flows. As a matter of fact, practically all of these deposits of oil and gas are, until disturbed by human agencies, just as static with relation to the enclosing strata in which they are entrapped as are the solid mineral deposits which lie beneath the surface. This failure on the part of some of the pioneer decisions to accurately appraise the true characteristics of these deposits has resulted in building up legal concepts and principles of ownership which, in the light of our present more complete knowledge on the subject, are not as logical and consistent as the reasoning and principles which have been adopted more recently in other jurisdictions. In order to get at the root of this difficulty and give it proper appraisal, it will be helpful to compare oil and gas in their natural state with other objects of property rights which have been treated by the courts as analogous.

Comparison with animals ferae naturae. Deposits of oil and gas, because of their migratory nature and tendency to escape when

recovery of oil from the formation, and the rate or timing of the recovery influences the value of the property.

"Water drive is present in nearly all reservoirs and exerts some influence, either little or big, in the effective reservoir energy. . . .

"Gas is usually present along with the oil and in sufficient volume and pressure to cause its expulsive force to be a chief energy element. This gas occurs either in solution in the oil or above the oil in an accumulation of free gas. As an energy source it differs from water drive in that the amount of gas is limited and declines both in volume and in pressure as a removal of a portion of the oil and gas progresses." PAINE, OIL PROPERTY VALUATION (1942) 58-59. Quotation by permission of the author and John Wiley and Sons, Publishers.

8 See SUMMERS, OIL AND GAS (perm. ed., 1928) §62; THORNTON, OIL AND GAS (1925) §§21, 23.
human agencies furnish the necessary outlet, have, from the very beginning, been likened to wild animals, game, and fish and have been referred to as “minerals ferae naturae”, and “subterranean ferae naturae”. The case most frequently cited on this point is Westmoreland etc. Gas Co. v. DeWitt, where the court said:

“Water and oil, and still more strongly gas, may be classed by themselves, if the analogy be not fanciful, as minerals ferae naturae. In common with animals, and unlike other minerals, they have the power and the tendency to escape without the volition of the owner.”

The court refers to a case decided by it much earlier, as authority for the statement that, as to gas, “its fugitive and wandering existence within the limits of a particular tract was uncertain. . . ” Other cases have adopted this comparison and it has received widespread acceptance. It will be noted that in the Westmoreland case the court, while making the comparison to animals “ferae naturae”, suggests that the comparison might be “fanciful”. Cases relying on the Westmoreland case usually do so without noting this important reservation.

The resemblance of oil and gas to wild animals is only superficial. Their fundamental characteristics are so diverse that it is dangerous to conclude that, because of this admitted “fanciful” resemblance, property rights in each should be based on similar principles. As we have seen, deposits of oil and gas in their natural state are relatively static and they usually migrate and wander only as the result of human intervention. They are deeply buried in the earth and, until disturbed, remain a constituent part of the subsurface of a particular tract of land. They are inorganic and are recognized minerals.

9 Rich v. Doneghey (1918) 71 Okla. 204, 177 Pac. 86.
12 Supra note 10. It is interesting to note that Justice White in his classic and far-reaching opinion in Ohio Oil Co. v. Indiana (1900) 177 U.S. 190, 205, states that in Brown v. Vandergrift “oil and gas were by analogy classed as ‘minerals ferae naturae’”. This is in error because, as we have noted, the court in the early Pennsylvania case only referred to the “fugitive and wandering existence” of gas and said nothing about “minerals ferae naturae”. Justice White evidently had in mind the later Westmoreland case which he had also discussed in his opinion and which, as we have seen, had used the language referred to and had cited the Brown v. Vandergrift case as affording support for this classification.
13 Peoples Gas Co. v. Tyner (1891) 131 Ind. 277, 31 N.E. 59; Townsend v. State (1897) 147 Ind. 624, 47 N.E. 19; Jones v. Forest Oil Co. (1900) 194 Pa. St. 379, 44 Atl. 1074; Lowther Oil Co. v. Miller Co. (1903) 53 W.Va. 501, 44 S.E. 433.
On the other hand, wild animals, until captured, are free to come and go of their own volition. They usually exist on the surface of the earth, fish being the outstanding exception, and their organic character differentiates them from oil and gas in many other ways. Because of this freedom of movement and their evanescent relationship to any particular piece of land, they are properly classified as res nullia, res omnium communes, or publici juris, belonging to no one or property common to all under the control of the state until captured and reduced to actual possession. It is only then that a private property right may attach. Even this capture and resulting private ownership of game and fish is usually unrelated to ownership of any particular piece of land. Fish and game are taken and reduced to possession in the vast majority of cases on lands and in waters that are not owned by the hunters and fishermen who take them, whereas, in the case of oil and gas, not only do these substances, until artificially disturbed, exist in a static condition as a constituent part of the realty, but their extraction and capture is intimately related to and, for the most part, is dependent upon surface ownership of land immediately overlying the deposit, which surface ownership is shared in by a comparatively few individuals.

In the outstanding Ohio Oil Co. v. Indiana case already noted, Justice White (later Chief Justice) with his characteristic incisive logic, clearly recognized this distinction, using the following language:

"If the analogy between animals ferae naturae and mineral deposits of oil and gas, stated by the Pennsylvania court and adopted by the Indiana court, instead of simply establishing a similarity of relation, proved the identity of the two things, there would be an end of the case. This follows because things which are ferae naturae belong to the 'negative community'; in other words, are public things subject to the absolute control of the State, which, although it allows them to be reduced to possession, may at its will not only regulate but wholly forbid their future taking. Geer v. Connecticut, 161 U.S.

14 See Wiel, WATER RIGHTS IN THE WESTERN STATES (3d ed. 1911) §§2, 5; Allen, Things (1940) 28 CALIF. L. REV. 421, 430-431; Blackstone, Commentaries (Jones' ed., 1916) 724, 1242-1243, 1253-1254. Blackstone recognizes a qualified property in what he describes as "things in common" and which arises "propter privilegium". This is analogous to the qualified property in oil and gas which is recognized by the courts and which consists of the exclusive right of the overlying landowner to operate on his surface and reduce them to possession.

15 Ohio Oil Co. v. Indiana, supra note 12, at 208-209. The opinion in this case, decided over forty years ago, is a legal classic and is a splendid example of Justice White's astuteness and complete grasp of the legal principles involved.
519, 525. But whilst there is an analogy between animals *ferae naturae* and the moving deposits of oil and natural gas, there is not identity between them. Thus, the owner of land has the exclusive right on his property to reduce the game there found to possession, just as the owner of the soil has the exclusive right to reduce to possession the deposits of natural gas and oil found beneath the surface of his land. The owner of the soil cannot follow game when it passes from his property; so, also, the owner may not follow the natural gas when it shifts from beneath his own to the property of some one else within the gas field. It being true as to both animals *ferae naturae* and gas and oil, therefore, that whilst the right to appropriate and become the owner exists, proprietorship does not take being until the particular subjects of the right become property by being reduced to actual possession. The identity, however, is for many reasons wanting. In things *ferae naturae* all are endowed with the power of seeking to reduce a portion of the public property to the domain of private ownership by reducing them to possession. In the case of natural gas and oil no such right exists in the public. It is vested only in the owners in fee of the surface of the earth within the area of the gas field. This difference points at once to the distinction between the power which the lawmaker may exercise as to the two. In the one, as the public are the owners, every one may be absolutely prevented from seeking to reduce to possession. No divesting of private property, under such a condition, can be conceived because the public are the owners, and the enacting by the State of a law as to the public ownership is but the discharge of the governmental trust resting in the State as to property of that character. *Geer v. Connecticut*, supra. On the other hand, as to gas and oil, the surface proprietors within the gas field all have the right to reduce to possession the gas and oil beneath. They could not be absolutely deprived of this right which belongs to them without a taking of private property."

He comments on this co-equal right of the adjoining surface owners overlying the deposit of oil and gas, to convert to their own use and possess "a part of the common fund" and states that the legislative power may be exerted to protect the collective owners "by securing a just distribution... and... by preventing waste." He adds,

"This necessarily implied legislative authority is borne out by the analogy suggested by things *ferae naturae*, which it is unquestioned the legislature has the authority to forbid all from taking, in order to protect them from undue destruction, so that the right of the common owners, the public, to reduce to possession may be ultimately efficaciously enjoyed."16

We can readily appreciate from the foregoing analysis, that the

distinction between animals *ferae naturae* and deposits of oil and gas is fundamental, in that in the case of the former, the ownership prior to capture and possession is in the public and common or negative, as one is inclined to view such rights, while in the case of deposits of oil and gas, the owners of surface lands overlying such deposits, as individuals, either own the actual oil and gas which happens at the time to be vertically beneath the surface, on the principle of *cujus est solum*, as some of the courts hold, or, as other courts prefer to describe the legal status, own the exclusive right to reduce such deposits to possession. From the very nature of things, there being no lawful right of access to these deposits other than by owners of the overlying surface, the ownership and enjoyment of these subjacent minerals is confined exclusively to such surface owners or those to whom such owners choose to delegate such authority. There is no public right of ownership common to all as in the case of game and fish. The public has, however, an important interest in the deposits of oil and gas because of their vital character and their general use by the public and may, in its own behalf, control their capture by the lawful owners and also protect these owners as between themselves from any acts of their number which might result in waste or other similar prejudice to their common interest.

17 See Colby, *The Extralateral Right: Shall It be Abolished?* (1917) 5 Calif. L. Rev. 303, 324-326, where the writer discusses the policy of severance of the right to the minerals as distinct from surface ownership. This is a system which has been adopted in various parts of the world. The sovereign or the public, as the case may be, owns the minerals in such jurisdictions.

It is also interesting to note that counsel for the state in Ohio Oil Co. v. Indiana, *supra* note 12, argued that "natural gas, as a subject of property is analogous to animals wild by nature, in that, while in its natural state and before it has been reduced to possession and control *it is the property of the state in its sovereign capacity*". (Italics supplied.) 44 L. ed. 729, 735. A careful reading of the three cases, Westmoreland etc. Co. v. De Witt, *supra* note 10; People's Gas Co. v. Tyner, *supra* note 13; Townsend v. State, *supra* note 13, cited by counsel in support of this statement fails to disclose any justification for this bald statement. The most that can be said is that the courts in those cases likened gas in its natural state to wild animals (which are, prior to capture, admittedly property of the state in its sovereign capacity), and also intimated that the public had an interest in preventing the waste of such an important resource as natural gas. This serves to illustrate the danger of placing too great a reliance on analogies of this sort.

As Justice White said in deciding the Ohio Oil Co. v. Indiana case, in the language already quoted, "analogy" does not constitute "identity" and that, whereas the public has a common right to capture animals *ferae naturae* which are "public property", in the case of natural oil and gas, "no such right exists in the public" for the right to capture is vested exclusively in the collective owners of the overlying surface.

18 Colby, *op. cit. supra* note 2, at 266-270.
Comparison with Waters. Oil and gas in their natural state have most frequently been compared with water. "Water, petroleum oil, and gas are generally classed by themselves as minerals possessing in some degree a kindred nature." The analogy between water, particularly water collected naturally in underground reservoirs, and natural deposits of oil and gas is much closer than that of oil and gas to game and fish. Water, oil and gas are all minerals in a broad sense. They are fluids and, therefore, "fugitive" and "wandering" substances when free to move about. However, oil and gas in their natural condition, confined in the earth subterraneanly and comparatively static, have little resemblance to streams of water which flow naturally on the surface of the earth, the constituent particles of which are constantly changing and passing from the surface of land of one owner on to that of another. Subterranean waters, especially waters collected in underground reservoirs that are practically static, bear a very close resemblance, from the standpoint of property relationships, to similar underground reservoirs of oil and gas. Even here the analogy is not identical because underground reservoirs of water are seldom as static as are underground reservoirs of oil and gas. There is gradual percolation and seepage in the case of water. In time the particles of water will have changed their position relative to the enclosing rocks much more freely than in the case of oil and gas. However, the drilling of wells and penetration of underground reservoirs of each has similar physical results. As they are extracted each has a tendency to migrate underground and any extensive extraction through wells drilled from the surface of one property will eventually draw off and deplete to a greater or less degree the supply originally existing vertically beneath adjoining lands.

19 See 1 WIEL, op. cit. supra note 14, §§30-37 inc., where there is an excellent discussion of the nature of property rights in water, its analogy to animals ferae naturae, and also to oil and gas.

20 Peoples Gas Co. v. Tyner, supra note 13 at 280, 31 N.E. at 60.

21 Water has frequently been referred to as a "mineral ferae naturae". 1 WIEL, op. cit. supra note 14, §§33-34; Ohio Oil Co. v. Indiana, supra note 12. Water being an inorganic substance belongs to the "mineral kingdom", but, like other common inorganic substances, is not a mineral in contemplation of mining law.

22 "The analogy between the subterranean oil and subterranean or percolating waters is, we believe, near complete. . . ." Higgins Oil Co. v. Guaranty Oil Co. (1919) 145 La. 233, 246, 82 So. 205, 211.

Underground reservoirs of percolating water are oftentimes sealed in by an impervious capping of rock and exist under considerable hydrostatic pressure. As a consequence, the penetration of this capping by the drilling of wells results in "artesian flow", very similar in its physical aspects to the so-called "gushers" and "gassers" which result from the penetration of impervious capping confining natural reservoirs of oil and gas.
We may expect, therefore, because of these physical resem-
bblances, to find a similarity in the principles of law governing the
rights to these underground reservoirs, whether of water on the one
hand, or of oil and gas on the other.23

The doctrine of *cujus est solum ejus est usque ad coelum et ad
infernos*, has been so firmly imbedded in our inherited common law
when applied to land ownership, that it was but natural for the courts
to decide that the surface proprietor owned all of the subterranean
water situated vertically beneath his surface and that he had the
right to extract this water without limitation by pumping from wells,
as long as the taking was not malicious, even though much of the
water he pumped migrated from the subsurface of adjoining land
owned by others. The *corpus* of such water was held to be a part of
the soil and real property subject to private ownership.24 The Cali-
ifornia Supreme Court had early held in *Hanson v. McCue*25 that

"Water filtrating or percolating in the soil belongs to the owner of
the free hold—like rocks and minerals found there. . . . The owner
may appropriate the percolations and filtrations as he may choose,
and turn them to profit if he can."

This doctrine was followed in subsequent cases.26 It was supported

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23 The case of *Ex parte Elam* (1907) 6 Cal. App. 233, 91 Pac. 811, illustrates this
similarity. It involved a prosecution under the penalty provisions of an act (Cal. Stats.
1907, p. 122) to prevent waste of artesian water. It accepted, at 236, 91 Pac. at 812,
the doctrine of the Ohio Oil Co. v. Indiana case, *supra* note 12, that "water, oil, gas,
and all fugitive substances held in their natural subterranean reservoirs are exceptions
to the general rule establishing absolute ownership in the proprietor of the surface of all
that lies underneath. . . ." and held, at 237, 91 Pac. at 812, that the ownership of artesian
water is "in the public, or at least that portion of the public who may own the surface
of the soil within the artesian belt" and "subject to a reasonable use only by those
interested therein".

24 2 Wiel, *op. cit. supra* note 14, §§1039–1049. Wiel points out that the leading
English case of *Acton v. Blundell* (1843) 12 Mees. & W. 324, which held that the surface
ownership of land extended to the subsurface "whether it is solid rock or porous ground
or veinous earth, or part soil, part water," was "adopted generally throughout the United
States" but that there was more "recently a trend of decision in America away from
the English rule".

25 (1871) 42 Cal. 303, 309, 10 A. D. 299, 309.

26 Painter v. Pasadena L. & W. Co. (1891) 91 Cal. 74, 82, 27 Pac. 539, 541; South-
ern Pacific Co. v. Dufour (1892) 95 Cal. 615, 617–618, 30 Pac. 783, 784; Gould v. Eaton
(1896) 111 Cal. 639, 644, 44 Pac. 319, 320; City of Los Angeles v. Pomeroy (1899)
124 Cal. 597, 635, 57 Pac. 583, 599; Vineland Irr. Dist. v. Azusa Irr. Dist. (1899) 126
Cal. 486, 494, 58 Pac. 1057, 1059. In the case of *Katz v. Walkinshaw* (1903) 141 Cal.
116, 70 Pac. 663, 74 Pac. 766, hereinafter discussed, the court analyzes the foregoing
cases, and while admitting that there were conflicting views there expressed, concluded,
"it cannot be successfully claimed that the doctrine of absolute ownership is well estab-
by the great weight of American and English authority. However, in time, this doctrine was found inapplicable to underground reservoirs of percolating water in the West where semi-arid conditions exist. Otherwise great hardship might result to owners of these adjoining lands overlying the common source of supply if one of their number were permitted to pump water without limit as to quantity and take it away for use in remote places. In time such owner would acquire a prescriptive right to his excessive use and the owners of adjoining lands would be permanently deprived of their right to obtain a fair share of the water underlying their own surface and so essential to the fertility of their land.

Recognizing the inequity of the common law rule, the Supreme Court of California, in the now famous case of *Katz v. Walkinshaw*, decided in 1903 that the common law doctrine of *cujus est solum* was inapplicable to percolating waters because of climatic conditions. The court in that case said:

"... It is contended that the rule that each landowner owns absolutely the percolating waters in his land, with the right to extract, sell, and dispose of them as he chooses, regardless of the results to his neighbor, is part of the common law, and as such has been adopted in this state as the law of the land... and that, consequently, it is beyond the power of this court to abrogate or change it; ..."

The court answered this argument by stating that

"... the common law by its own principles adapts itself to varying conditions, and modifies its own rules so as to serve the ends of justice under the different circumstances, a principle adopted into our code by section 3510 of the Civil Code: 'When the reason of a rule ceases, so should the rule itself.'"

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28 *Supra* note 26.
29 *Ibid.* at 121, 74 Pac. at 766. Following this line of reasoning based on the maxim: *Cessante ratione, cessat ipsa lex*, the court said: "Whenever it is found that, owing to the physical features and character of this state, and the peculiarities of its climate, soil, and productions, the application of a given common-law rule by our courts tends constantly to cause injustice and wrong, rather than the administration of justice and right, then the fundamental principles of right and justice on which that law is founded, and which its administration is intended to promote, require that a different rule should be adopted, one which is calculated to secure persons in their property and possessions, and to preserve for them the fruits of their labors and expenditures." *Ibid.* at 124, 74 Pac. at 767.
30 *Ibid.* at 123, 74 Pac. at 767. In the first opinion handed down, Justice Temple had said: "The defense, conceding that the water held in the earth is percolating water, relies upon certain decisions, which assert and apply literally the maxim, *Cuijus est*
The case is complicated by the fact that Justice Shaw, who wrote the opinion on a rehearing,\textsuperscript{31} virtually admitted that the decision was a departure from the recognized common law doctrine of \textit{cujus est solum}, while Justice Temple, who wrote the first opinion of the court,\textsuperscript{32} treated the conclusion reached as but a modification of this common law doctrine and insisted that the court was only following a trend which had already been recognized and upheld in many jurisdictions.\textsuperscript{33} There can be little doubt but that the rule announced in \textit{Katz v. Walkinshaw}, referred to as the "correlative rights doctrine,"\textsuperscript{34} is a radical departure from the common law principle of \textit{cujus est solum}.\textsuperscript{35}

When the first \textit{Katz v. Walkinshaw} decision was handed down in 1903 the mining of oil in California was rapidly becoming an outstanding industry. Many prominent members of the legal profession were alarmed and began to speculate as to whether the same doctrine of correlative rights might not be applied by the California courts to the extensive reservoirs of oil then known to underlie great areas of land within the state. The reasoning of the supreme court was to some degree applicable to the situation confronting adjoining owners of lands overlying these "oil pools". The court, in its second opinion set this apprehension at rest, stating that it had been urged by counsel opposing the "correlative rights" and "equitable distribution" theory that,

"...If this rule is the law as to percolating waters, it must for the same reason be the law with regard to the extraction of petroleum from the ground, and, if so, it would entirely destroy the oil development and production of this state, and for that reason also that it is against public policy and injurious to the general welfare."\textsuperscript{36}

Answering this contention, the court said:

"It does not necessarily follow that a rule for the government of

\textit{solum ejus est usque ad inferos. And that water percolating in the ground, or held there in saturation, belongs to the landowners as completely as do the rocks, ground, and other material of which the land is composed, and therefore he may remove it and sell it, or do what he pleases with it.} "\textit{Ibid.} at 140, 70 Pac. at 664.

\textsuperscript{31} \textit{Ibid.} at 120-137, 74 Pac. 766-773.

\textsuperscript{32} \textit{Ibid.} at 138-150, 70 Pac. 664-666.

\textsuperscript{33} See Wiel's complete analysis of the case and subsequent decisions, \textit{supra} note 14, vol. 2, §§1041-1065.

\textsuperscript{34} 67 C. J., pp. 839-840.

\textsuperscript{35} 67 C. J., \textit{ibid.}, referring to this case states that "the rule of the common law, followed in the early (California) decisions has been rejected and a rule adopted that distributes the available supply of water among landowners entitled. . . ."

\textsuperscript{36} \textit{Supra} note 26, at 122, 74 Pac. at 767.
rights in percolating water must also be followed as to underground seepages or percolations of mineral oil. Oil is not extracted for use in agriculture, or upon the land from which it is taken, but solely for sale as an article of merchandise, and for use in commerce and manufactures. The conditions under which oil is found and taken from the earth in this state are in no important particulars different from those present in other countries where it is produced. There is no necessary parallel between the conditions respecting the use and development of water and those affecting the production of oil. Whether in a contest between two oil-producers concerning the drawing out by one of the oil from under the land of the other we should follow the rule adopted by the courts of other oil-producing states, or apply a rule better calculated to protect oil not actually developed, is a question not before us and which need not be considered."

As was pointed out in the earlier article on this subject this right of the individual to operate as he pleases in extracting oil and gas from his own land is being subjected to increasing control and limitation in the interest of the public and of correlative overlying owners. The restriction on unlimited drilling, provision for offset wells, requirement of capping of wells to prevent waste, shutting off water, control of "reservoir energy" and other similar regulations, which have been imposed on the developers of oil and gas lands in recent years, while largely based on public interest, is also founded on equitable principles which operate as between the private interests of the collective owners of adjoining lands overlying the reservoir.

Comparison with Air. There is less resemblance between oil and gas confined in underground reservoirs and air existing above ground. It is true that air and gas have a strong physical resemblance, both being minerals in a broad sense, and, when unconfined, possess great fluidity and migrate extensively and readily. It is also true that the common law doctrine of land ownership extended not only to the depths of the earth, but to the skies above (usque ad coelum). Individual ownership of the air is even less thinkable than individual ownership of the water in running streams. The particles of each are in constant change. Air is consequently logically classified by the early authorities with running water and animals ferae naturae as

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37 Ibid. at 137, 74 Pac. at 772.
38 Colby, op. cit. supra note 2, at 266-270.
39 "... the legislative power ... can be manifested for the purpose of protecting all the collective owners, by securing a just distribution ... and preventing it (the oil and gas) from being taken by one of the common owners without regard to the enjoyment of the others." Ohio Oil Co. v. Indiana, supra note 12, at 210.
belonging to the negative community.\textsuperscript{40} The common law doctrine of land \textit{usque ad coelum} has, in recent years, due to the advent of aviation, been compelled to yield to changing conditions.\textsuperscript{41} This refusal on the part of the courts to be bound as to ownership control of the air by a maxim of law which was only a broad generalization to begin with,\textsuperscript{42} is similar to their departure from that maxim when applied to underground percolating waters already noted.

\textit{Comparison with Other Minerals.} While oil and gas are recognized minerals from the legal standpoint,\textsuperscript{43} they differ from practically all other minerals in a natural state in that oil and gas are capable of extensive migration when their underground equilibrium is disturbed by artificial means.\textsuperscript{44} Therefore, while solid minerals are

\textsuperscript{40} \textit{Wiel, op. cit. supra} note 14, §2.

\textsuperscript{41} That the crossing of land through the air is not a trespass on lands privately owned has been recognized by the codes of all countries. "To retain this doctrine (\textit{usque ad coelum}) in its entirety would be fatal to civil aeronautics." It had been urged that the common law doctrine was so firmly entrenched that it would take a constitutional amendment before aircraft could be operated successfully in this country. However, the courts have applied reason to the situation and have rather consistently held that while an action for trespass and for damages or to abate a nuisance may lie for a material invasion of the air immediately overlying land privately owned, such ownership "is subject to an easement of passage at a height which will not interfere with one's peaceful enjoyment of the land flown over". See \textit{Davis, Aeronautical Law} (1930) ch. III, "Property in the Air Space"; \textit{Blackstone, op. cit. supra} note 14, 734, n. 5; \textit{Faries, Major Problems of Civilian Aviation Law} (1943) \textit{Calif. St. B. J.} 149; Note (1932) 20 \textit{Calif. L. Rev.} 666; 2 C. J. 299 et seq.

Aviation legislation is now pending in Congress designed to concentrate and control civilian flying in federal lands and to develop air transportation. A bill provides for zoning of areas about airports and the abatement of such hazards as towers, smokestacks, transmission poles, windmills and other structures which are a threat to take-off and landing.

The legislature of California has declared "that the government of the State of California has, to the exclusion of all political subdivisions thereof, complete sovereignty of the air space over the lands and waters of the state of California, and hereby reserves complete and exclusive legislative jurisdiction concerning the same." \textit{Cal. Gen. Laws} (1937) Act 151, §10.

\textsuperscript{42} In \textit{Wood v. Moulton} (1905) 146 Cal. 317, 319, 80 Pac. 92, 93, the court states, "... we have modified, to meet our conditions, the harsh and drastic common law maxim. ..."

\textsuperscript{43} \textit{Colby, op. cit. supra} note 2, at 247-251.

\textsuperscript{44} Aside from oil and gas there are few minerals whose physical characteristics permit of extensive migration. Mercury or quicksilver is a liquid metal in its pure state, but in nature is never found in any quantity in liquid form and hence problems of ownership due to migration have not arisen and are not likely to arise. There are, however, various brines, solutions of crystalline bodies of valuable salts of different kinds existing in desiccated desert lake basins of the southwestern United States which, when pumped from wells drilled in these basins, migrate underground toward such centers of extraction. A notable instance is Searles Lake, in San Bernardino County, sometimes
held to be a part of the soil and to belong ordinarily to the surface landowner by virtue of the common law doctrine *cujus est solum*, which is peculiarly applicable to such solid minerals, it does not follow that the same principle should be applicable to subterranean deposits of oil and gas, which substances may migrate from beneath the surface of one piece of land to another adjoining piece of distinct ownership, unlike solid minerals which remain fixed and "in place".

**Summary of Comparisons.** We can safely summarize these comparisons of property rights in oil and gas with rights in things with which oil and gas are usually classified, as follows: There is little resemblance to animals *ferae naturae* except that until captured they referred to as "the lake of 57 varieties," because of the large number of mineral salts there present in crystal form and in solution. The principal method of extraction is to pump the brines for treatment in the refineries. There necessarily results a considerable migration of the brines through the crystalline bodies and muds of the lake bed. Reasoning from the legal principles announced in cases involving oil and gas and percolating waters, it would seem that, in California at least, we have here another situation where the brines until extracted and reduced to possession properly belong to a "negative community".

It is true that water is a mineral in a broad sense, when considered as an inorganic substance, but it is not a mineral within the contemplation of the mining laws, because it does not possess distinctive value in the arts and sciences. It is of such common occurrence that, like ordinary rock, sand, gravel, clay and other inorganic substances which make up a large part of the earth's surface, water is not subject to location or acquisition under the mineral laws. See Lindley, *Mines* (3d ed. 1914) §§92-98.

45 The outstanding exception to common law ownership of solid minerals by virtue of ownership of the overlying surface is that created in the western states by the mining statutes granting the so-called "extralateral right". See Lindley, *op. cit. supra* note 44, ch. III. By virtue of this federal legislation the locator of a lode mining claim on the public domain, if he properly includes the apex of a vein of mineral within the surface boundaries of his location, may follow that vein on its dip or downward course as it extends outside of those boundaries extralaterally beneath the adjoining land of others. The vein on its descent into the earth is legally severed from the surface ownership of such adjoining lands. See Colby, *supra* note 17; (1916) 4 Calif. L. Rev. 437 and (1916) 5 Calif. L. Rev. 18.

Judge Lindley has pointed out that this grant of the right to follow a vein extralaterally beyond the vertical boundaries of a mining claim beneath the surface of adjoining land owned by another is not "repugnant to the common law", because common law attributes of ownership recognize that underlying minerals may be severed from the surface with ownership of the minerals vested in one and the vein in another. "Instead of being in derogation of the common law, this class of grants is in absolute harmony with it." 2 Lindley, *op. cit. supra* note 44, §568. However, there is this distinction, that where minerals are severed under common law rights, the original overlying surface owner does the severing of the minerals situated vertically beneath his land, whereas, in the case of the extralateral right, the government, as the original owner of all the lands involved, makes right to follow the extralateral portion of the vein dependent upon ownership of the apex. This vital relationship between the apex and the dip or extralateral segment of the vein has no counterpart in the common law.
may escape and pass beyond the possibility of possession and ownership. While there is a remarkable physical resemblance between air and gas, their respective places of occurrence and the fact that air is only reduced to physical possession in exceptional cases, gives us little aid except that like fish and game they all belong logically to the negative community. When we compare oil and gas with solid minerals the migratory possibilities of the former automatically differentiate them. As we have seen, the strongest legal resemblance is to water confined naturally in underground reservoirs. The analogy would be complete were it not for the fact that water is not treated as a mineral, so as to be governed by mineral laws, and when captured and brought to the surface has an outstanding value for irrigation and domestic purposes on the very land where it is captured. This has, in many jurisdictions, including California, resulted in closely relating property rights in the underlying water to the land itself. Many jurisdictions, breaking away from the common law maxim, have recognized that, prior to capture, only a negative community property exists as to water, because there is a possibility of its wandering away from control of the overlying land owner. Thus, we see that, where there is a possibility that the things in question may migrate and thus escape eventual reduction to possession by the person who, for the time being, may be in the most favorable position to take them, such things are logically relegated to a negative community and are deemed incapable of private corporeal ownership until captured.46

Property Rights in Oil and Gas. We may safely preface this discussion of property rights in oil and gas in situ with the assumption that they are valuable minerals in every sense of the term, as distinguished from air and water, which are minerals only in a broad sense; that the value of the oil and gas found in the land is not local or common, in the sense that their use is not intimately related to the enjoyment of the land itself, as is the case with water, and, except in...
a very limited degree, are seldom of any use on the land from which
they are extracted. We must also bear in mind the fact that oil and
gas are "fugitive" and "migratory", only when disturbed by human
intervention. As they exist in situ they are relatively static. It is also
essential to keep in mind the fact that, in most instances, the reser-
voirs of oil and gas underlie diverse surface ownerships, so that
there are correlative rights of these owners to take into consideration.
Keeping all these facts in mind we may approach the problem of de-
termining the property rights involved because of the presence of oil
and gas in place with greater assurance that we are in a position to
test the logic of the court opinions which have rendered decisions
affecting this class of rights. Had these courts had, in the first in-
stance, a more complete knowledge of these basic facts and could
they have looked farther into the future, the law on the subject would
not have become as illogical as has been the case and the decisions
in different jurisdictions would not have developed along such diver-
gent lines. In the days of the early decisions, the nature of these hid-
den deposits was not fully understood and the use of oil and gas when
extracted and reduced to possession was comparatively limited. 47 In
those early days of the courts of the eastern states, where this ques-
tion of ownership was first presented, were naturally powerfully in-
fluenced by the ejus est solum doctrine of the common law. Solid
minerals so situated belonged without question to the surface owner.
It was an easy step to apply the same principle to oil and gas. With-
out taking into consideration the possibility that oil and gas might
migrate and be reduced to possession by some other surface owner,
and, overlooking the fact that most things occupying a like status
"must of necessity continue common by the law of nature", 48 many
jurisdictions early announced the rule that the surface owner is the
owner in fee simple of these potentially mobile subsurface deposits
situated vertically beneath his land. This blind reasoning which was
based on an assumed similarity to solid minerals, has resulted in the
rule adopted by the many jurisdictions which have had occasion to
determine the ownership of oil and gas in situ. This has been referred

47 See Dabney-Johnston Oil Co. v. Walden (1935) 4 Cal. (2d) 637, 650-651, 52 P.
(2d) 237, 244. For many years the greatest use of crude petroleum was for the manu-
facture of kerosene and lubricating oil. As was pointed out in Colby, loc. cit. supra
note 2, petroleum has now become the outstanding motive power of the world, pos-
sessing an importance that was not remotely anticipated when the first decisions de-
termining the nature of property rights in oil and gas were handed down.

48 BLACKSTONE, op. cit. supra note 14, at 733.
to as "the doctrine of ownership in place" as distinguished from "the non-ownership rule," which latter rule recognizes no private property right in the corpus of the oil and gas until they have been reduced to possession. It is the exclusive right of the landowner to take oil and gas by drilling from the surface of a particular tract of land which is recognized by this second line of cases as the property right involved.

The Doctrine of Ownership of Oil and Gas in Place. We naturally look to Pennsylvania as the jurisdiction where questions involving the ownership of oil and gas would first arise, for it was there that oil was first "mined" commercially in 1859. The matter was first commented on in the case of Funk v. Haldeman where the court, though uncertain whether oil was a mineral, stated that, "If a mineral, it is part of the land." The determination of this question was, however, unnecessary for the decision in that case. We have already pointed out that this announced conclusion is a non sequitur. Merely because oil is a mineral does not necessarily make it, like solid minerals, part of the land, any more than percolating water, which is a liquid mineral in a broad sense, is part of the land and consequently owned outright by the proprietor of the land surface. The Appeal of Stoughton et al. involved the right of a guardian to dispose of the oil in the ward's land. The court said, "Oil, however, is a mineral, and being a mineral is part of the realty. Funk v. Haldeman, 3 P. F. Smith 229. In this it is like coal or any other natural product which in situ forms part of the land."

In Hague v. Wheeler the defendants were enjoined by the trial court from deliberately allowing gas to escape in the air from an idle well drilled on their property. They had no use for the gas but re-

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49 See a very able discussion of the subject by Moses, The Constitutional, Legislative, and Judicial Growth of Oil and Gas Conservation Statutes (1941) 13 Miss. L. J. 353, 357-359.
50 Ibid. at 355-357.
52 Colby, op. cit. supra note 2, 246, n. 2.
53 See supra note 51, at 249.
54 (1878) 88 Pa. St. 198, 201.
fused to shut the flow off. Their plaintiff neighbor contended that the common reservoir was being depleted with no advantage to defendants and he entered upon their property without permission and capped the well at his own expense. The trial court handed down an able opinion. Judge Cooley was quoted as saying with respect to percolating waters,

"These waters belong to no one until they are collected and they may be appropriated by the one who collects and puts them to use. But though neither proprietor has such right in or control over the water as will enable him to complain of his neighbor's appropriation, does not each owe to the other certain duties of good neighborhood, among which is the duty to abstain from purposely withdrawing the water that may be useful to both, when a use of it is not intended?"  

The trial court then proceeded to establish the thesis that the rights of adjoining owners of oil and gas were not absolute and independent but qualified and correlative.

"These valuable products are obtainable only in connection with the ownership of land and for many purposes are to be regarded as minerals, and as constituting an integral portion of the land itself. [citing the Funk v. Haldeman and Stoughton's Appeal cases above noted]

"But they are not, like coal and iron ore, fixed in their place in the rocks, so that the owner may know his own, protract his lines downwards to mark his boundaries, and take them when he pleases. As water percolates by untraceable rills through the gravel, so these 'minerals ferae naturae,' as they have been aptly called in a recent case, permeate the porous rocks deep in the bowels of the earth, and rush to the surface through any opening made through the imperious cap by which the basin which contains them is sealed. No landowner gets through his wells oil or gas exclusively from his own land; that which saturates his rocks may be lawfully taken by his neighbor through wells on his land, tapping the common reservoir. From the very nature of the case the right of each owner is qualified. It is common to all whose land overlies the basin, and each must of necessity exercise his right with some regard to the rights of the others."

"... The same considerations of natural justice 'which place limits on the use of waters to their usufruct, ...' must of necessity impose qualifications upon the enjoyment of all right of property, which, from the nature of the things possessed, many must enjoy together. ... The common law is a growing tree; its principles must be

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56 See trial court's opinion, ibid. at 331, 27 Atl. 716, 22 L. R. A. 142-144. The editor of L. R. A. (p. 141) refers to the "novelty" of the case and its "unusual interest".

57 Ibid.
continually adapted to new facts, and the changing conditions of modern life.

"... the defendants may lawfully take as much gas as they can get by wells drilled upon their land..." but "All who have proved their ability to obtain gas from that reservoir are interested in common in its preservation, and the reckless waste of it is an injury to all." 58

While this opinion was by the trial court, the intelligence and farsightedness manifested in dealing with the issues there involved have justified presenting it here in such detail. It indicates how close Pennsylvania came, at the outset, to adopting the broader and more progressive line of reasoning which other jurisdictions have since applied to the problem.

The appellate court referred to the "able" opinion of the "learned judge of the court below," and, while recognizing "that the oil and gas are unlike solid minerals, since they may move through the interstitial spaces or crevices in the sand rocks," held that nevertheless "the owner of the surface is an owner downward to the centre... His dominion is, upon general principles, as absolute over the fluid as the solid minerals". 60 The court concluded that, unless the owner violated some "rule of public policy or any positive provision of the written law... his power as an owner is absolute, until the legislature shall, in the interest of the public as consumers, restrict and regulate it by statute". 61 The injunction granted by the trial court was dissolved. This leading case in Pennsylvania is of special interest because the appellate court had the opportunity of following the well considered reasoning and foresighted views of the lower court, but preferred to be bound by "the letter of the law", based on a narrow application of a generalized legal maxim. 62

If the "dominion" 63 which the court emphasizes in the Hague v.

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58 Ibid. at 332-333, 27 Atl. at 716-717.
59 Ibid. at 341, 27 Atl. at 719.
60 Italicics ours. Ibid.
61 Ibid., 27 Atl. at 720.
62 The legislatures of practically all the oil and gas producing states have enacted statutes making waste of gas unlawful. Montana alone has held such legislative control to be unconstitutional as an unauthorized invasion of the individual's right to extract the oil and gas beneath his surface as he sees fit, on the cujus est solum doctrine. See note 125 infra.
63 Blackstone uses the term "dominion" as equivalent to "property". He says: "There is nothing which so generally strikes the imagination, or engages the affections of mankind, as the right of property; or that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the
The Wheeler case as being as "absolute over the fluid as the solid minerals", were to be strictly construed, then, when an adjoining owner began to drain off such underlying oil and gas through operations on his own ground, a cause of action should logically arise in favor of the surface owner whose absolute dominion over the migrating oil and gas was thus invaded and destroyed. No court has held that such extraction of migrating oil from adjoining ground is a violation of any right of ownership or "absolute dominion" of such adjoining owner. On the contrary, wherever the question has arisen, the courts have upheld the taking as being within the lawful rights of the adjoining owners.

In Kelley v. Ohio Oil Co. the court said:

"The right to drill and produce oil on one's land is absolute and cannot be supervised or controlled by a court or by an adjoining land owner."
"Petroleum oil is a mineral, and while in the earth it is part of the realty, and should it move from place to place by percolation or otherwise, it forms part of that tract of land in which it tarries for the time being, and if it moves to the next adjoining tract, it becomes part and parcel of that tract; and it forms part of some tract until it reaches a well and is raised to the surface, and then for the first time it becomes the subject of distinct ownership separate from the realty, and becomes personal property, the property of the person into whose well it came."67

The rule announced in *Hague v. Wheeler*8 that a landowner had absolute dominion over the oil and gas beneath his land was bound, sooner or later, to have its repercussions. In *Jones v. Forest Oil Co.*69 the court said:

"Plaintiff assumes that there is a certain fixed amount of oil and gas under his farm, in which he has an absolute property. True, they belong to him while they are part of his land, but when they migrate to the lands of his neighbor, or become under his control, they belong to the neighbor. . . . [The court quotes from the *Vandegrift* and *Westmoreland* cases.]70 From these cases we conclude that the property of the owner of lands in oil and gas is not absolute until it is actually within his grasp and brought to the surface. If possession of the land is not necessarily possession of the oil and gas . . . possession of the soil for purposes of tillage gives the owner no actual possesson of the oil and gas underlying it."71

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67 Supra note 65 at 328, 49 N.E. at 401. This doctrine received an interesting test in the case of *Barnard v. Monongahela Gas Co.* (1907) 216 Pa. 362, 65 Atl. 801, where adjoining farms were leased by their respective owners to one operating company which drilled on one of the farms a well which drew gas from the other. The owner of the latter brought suit but the court held that he had no remedy as long as the drilling on the adjoining farm and extraction of gas was not fraudulent. He court said, " . . . oil and gas confined in the oil and gas sands of a farm belong to the one who holds title to the farm." But oil and gas are fugitive and the owner of land has a right to drill anywhere he wishes on his own land and the only remedy of the adjoining owner is to go and do likewise. The court admitted that this may not be the best rule, but that it was the only one the legislature and the highest court have given us. Legislation based on the state's police power has since curtailed and regulated this unrestricted right to drill wells. See Colby, *op. cit. supra* note 2, at 269.

68 Supra note 55.

69 (1900) 194 Pa. St. 379, 44 Atl. 1074. It will be noted that the appellate court adopted the opinion of the trial court as its own. Judging from the Pennsylvania reports, this was quite a common practice in that state and might well be followed elsewhere. It would help to lessen the congestion in the appellate courts and stimulate trial judges to prepare opinions that merited adoption. Judging from these adopted opinions the trial judges in Pennsylvania were of considerable legal caliber.

70 Supra notes 10 and 11.

71 Supra note 69, at 383-384, 44 Atl. at 1075.
The theory of this decision, modifying as it does the previously announced rule of absolute ownership of the oil and gas underlying a tract of land and recognizing the right of the adjoining owner to take from the common reservoir without limitation, has been variously referred to as the "theory of qualified ownership"; and "the doctrine of ownership in place". It is a decided retraction from the original declaration of "absolute" ownership and has resulted from the inability of the courts to definitely measure and fix that ownership, because of the fugitive and hidden nature of oil and gas, differentiating them from the solid minerals where such ownership can be determined with absolute and unvarying certainty. Instead of admitting the initial error of holding that the rights of a landowner to oil and gas in his land were identical with his ownership of solid minerals, the courts have adopted the weak and rather illogical alternative of holding that he might lose his "absolute" right to the oil and gas constituting a constituent part of his realty to his neighbor, who, through diligence or chance, might first tap and draw from the common reservoir.

Many jurisdictions have adopted and followed this Pennsylvania rule of ownership of the corpus of the oil and gas while they are physically situated in the subsurface of a particular tract of land, such ownership being subject all the while to termination and defeasance when the oil and gas migrate into adjoining land.

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72 1 Summers, op. cit. supra note 8, 126. Reference is also made to §§61-64 of Professor Summers' comprehensive work.

73 Moses, op. cit. supra note 49, 357-359.

74 "Exact knowledge on this subject is not at present attainable... There is no certain way of ascertaining how much of the oil and gas that comes out of the well was when in situ under this farm and how much under that." Barnard v. Monongahela Co., supra note 67, at 365, 65 Atl. at 802.

"... no one can tell to a certainty from whence the oil, gas, or water which enters the well came, and no legal right as to the same can be established or enforced by an adjoining land owner." Kelly v. Ohio Oil Co., supra note 65 at 328, 49 N.E. at 401.

It would be difficult to better describe things which should logically belong to a "negative community". See Ohio Oil Co. v. Indiana, supra note 12, at 208.

75 Those who are interested in pursuing the inquiry further will find those cases noted in 1 Summers, op. cit. supra note 8, §62. Moses, loc. cit. supra note 49, states that Arkansas, Kansas, Michigan, Mississippi, Montana, New Mexico, Ohio, Pennsylvania, Tennessee, Texas, and West Virginia have adopted the "Ownership in Place Doctrine".

76 We can readily picture a situation where there are numbers of small holdings, such as town lots, overlying an oil and gas field which is being intensively operated, so that the oil and gas are migrating rapidly underground toward the producing wells. A steady flow of oil and gas will be passing underneath these small holdings and, according to the ownership in situ theory, will belong successively to each surface owner who can and never will know what a fortune of "black gold" had come under his dominion and subject to his evanescent "absolute ownership".
The Negative Community Doctrine. This doctrine is sometimes referred to as the "Non-ownership Rule". It proceeds on the theory that since the subterranean oil and gas are necessarily hidden and no accurate and detailed information as to their existence and quantity is obtainable and since they may migrate and are recognized as becoming the property of those who first capture and reduce them to physical possession, that they properly belong to a "negative community", and are common to the limited number of overlying owners who are the only ones in a position to capture them. This doctrine received its first indorsement in Indiana and for that reason has often been referred to as the "Indiana" rule or doctrine. Indiana courts had early (1889) decided that natural gas when captured was property just as much "as iron ore, coal, petroleum or any other of the like products of the earth", but without deciding its property status prior to capture. An Indiana statute of 1891 prohibited the use of natural gas for flambeau lights as "wasteful and extravagant". The case of Townsend v. State decided that this statutory prohibition was a lawful exercise of the police power because the widespread public use of natural gas justified the intervention of the state in behalf of the public interest and the prevention of needlessly wasting gas drawn from a general reservoir liable to be exhausted. The court cited cases upholding the state's right to control the taking of fish in the waters of the state and "likened natural gas and laws regulating the same to wild animals and laws regulating the taking of such animals" and added that the people of the state were far more interested in preventing the needless waste of natural gas than in preventing the taking of fish for certain periods of time. The intimation throughout the opinion was that, until captured, natural gas was not the subject of private ownership, though the court did not, in so many words, so state.

The validity of a later statute which made it unlawful to permit natural gas to escape into the air from any well, was presented in the now famous case of Indiana v. Ohio Oil Co. The court commented

77 This doctrine is best and most authoritatively described in Ohio Oil Co. v. Indiana, supra note 12, at 205-211.
78 Moses, loc. cit. supra note 49.
79 Indiana v. Indiana etc. Oil Co., supra note 51; Jamieson v. Indiana etc. Oil Co. (1891) 128 Ind. 555, 12 L. R. A. 652; Peoples Gas Co. v. Tyner, supra note 13.
80 Ind. Stats. (Burns, 1894) §2316.
81 (1897) 147 Ind. 624, 47 N. E. 19.
82 Ind. Stats. (Burns, 1894) §7510.
83 (1898) 150 Ind. 21, 49 N. E. 809.
on the public interest in such natural gas deposits which constituted "one of the greatest natural resources of the state." It was urged that,

"... the gas in and under the appellee's land is a part of the land, and that it is a reasonable use thereof to mine for the oil therein, even though gas is thereby incidentally wasted by permitting its escape into the open air"; ... [Pennsylvania, Ohio, New York and West Virginia cases were cited.] "to the effect that petroleum is a mineral, and while it is in the earth it is a part of the realty; .... It is therefore argued that natural gas is likewise a part of the land in and under which it is found, and that the owner of the land may and has a lawful right to assert absolute dominion over all that is found in or under his land to the center of the earth, and for an unlimited distance upward from the surface."84

The court commented on earlier cases decided by it and concluded:

"And this court in the same case also likened natural gas and its characteristics as property to fish and the laws regulating the taking thereof. There is no such thing in such laws, either as to wild animals or fish, to the effect that they become the property of the owner of the land on which the animals are found, or in the waters of which the fish are found. And there is no such thing in such laws to the effect that after title has once vested by actual reduction to possession, the same may wander off and vest in someone else. To say that the title to natural gas vests in the owner of the land in or under which it exists to-day, and that to-morrow, having passed into or under the land of an adjoining owner, it thereby becomes his property, is no less absurd and contrary to all the analogies of the law, than to say that wild animals or fowls in 'their fugitive and wandering existence,' in passing over the land, become the property of the owner of such land, or that fish in their passage up or down a stream of water become the property of each successive owner over whose land the stream passes. It is as unreasonable and untenable as to say that the air and the sunshine which float over the owner's land is a part of the land, and is the property of the owner of the land. We therefore hold that the title to natural gas does not vest in any private owner until it is reduced to actual possession, and therefore that the act from which we have quoted is not violative of the constitution, as an unwarranted interference with private property."85

The Supreme Court of the United States, on writ of error,86 confirmed the Indiana court's reasoning.87 The clarity with which Jus-

84 Ibid. at 29, 49 N. E. at 811.
85 Ibid. at 31-32, 49 N. E. at 812.
86 Ohio Oil Co. v. Indiana, supra note 12.
87 Each state may, of course, recognize as controlling any rules governing rights to real property situated within its borders that it may elect to adopt and the Supreme
tice White stated the facts and the legal problems involved is refreshing in contrast to the labored and shortsighted reasoning found in so many of the decisions on the subject. He recognized the common law rule "that ownership in fee of the surface of the earth carries with it the right to the minerals beneath, and the consequent privilege of mining to extract them," but because of "the peculiar character of the substances, oil and gas,\textsuperscript{88}" he thought that, they might "be exceptions to the general principles applicable to other mineral deposits." He discussed the Pennsylvania rule as set forth in the Pennsylvania cases\textsuperscript{89} and compared this with the applicable law as developed by the Indiana courts.\textsuperscript{90} He found that both jurisdictions have announced the same general rule, that the property right to the oil and gas situated beneath the surface is not absolute because the adjoining owner may drain his neighbor's land and lawfully acquire the oil and gas which was formerly situated beneath that surface. In Indiana, however, he recognized that as far as the owner of the surface of the land within the gas field is concerned, "... he has the exclusive right on his own land to seek to acquire them [the oil and gas] but they do not become his property until the effort has resulted

\textsuperscript{88}These differences in physical attributes he describes as follows: "They have no fixed \textit{situs} under a particular portion of the earth's surface within the area where they obtain. They have the power, as it were, of self-transmission. No one owner of the surface of the earth, within the area beneath which the gas and oil move, can exercise his right to extract from the common reservoir, in which the supply is held, without, to an extent, diminishing the source of supply as to which all other owners of the surface must exercise their rights. The waste by one owner, caused by a reckless enjoyment of his right of striking the reservoir, at once, therefore, operates upon the other surface owners. Besides, whilst oil and gas are different in character, they are yet one, because they are unitedly held in the place of deposit." Ohio Oil Co. v. Indiana, \textit{supra} note 12, at 212.

\textsuperscript{89}Ibid. at 203. The opinion quotes from Brown v. Spilman (1894) 155 U.S. 665, 669-670, which arose in West Virginia, and where Pennsylvania cases are cited to the effect that oil and gas "belong to the owner of the land, and are a part of it, so long as they are on it or in it, or subject to his control, but when they escape and go into other land, or come under another's control, the title of the former owner is gone". The Westmoreland case, \textit{supra} note 10, Brown v. Vandergrift, \textit{supra} note 11, Hague v. Wheeler, \textit{supra} note 55, and Jones v. Forest Oil Co., \textit{supra} note 13, cases decided by the Pennsylvania courts are also considered. These cases have been discussed \textit{supra}.

\textsuperscript{90}Ohio Oil Co. v. Indiana, \textit{supra} note 12, at 203. Indiana v. Indiana Oil Co., Jamieson v. Indiana Co., Peoples Gas Co. v. Tyner, and Townsend v. Indiana are all considered. See \textit{supra} note 79.
in dominion and control by actual possession." This distinction from the Pennsylvania rule, where actual corporeal ownership of the oil and gas prior to capture is recognized, he said, was not essential to the decision. Later on Justice White considered both viewpoints by stating that if there be no property in the oil and gas until capture, then there could be no taking of property without compensation, through the operation of the regulatory statute, whereas, on the other hand, if there be a right of property "in and to the substances contained in the common reservoir of supply, then as a necessary result of the right of property, its indivisible quality and the peculiar position of the things to which it relates, there must arise the legislative power to protect the right of property from destruction."  

The Indiana courts were again called on to determine the nature of these correlative rights of surface owners to an underlying field of gas. In Manufacturers Gas Co. v. Indiana etc. Gas Co. an injunction was sought to prevent the defendant company from extracting gas from the common reservoir by pumping devices which would decrease the natural gas pressure underground and permit surrounding salt water to enter the field. The court said that gas resembled the properties of underground waters in some respects, but unlike water was not generally distributed and its uses were few; that the differences were so marked that the same principles could not be applied to both. While in the earlier case of Indiana v. Ohio Oil Co. the court had likened the properties in oil and gas to those in wild animals, it now recognized the distinctions pointed out by Justice White in his opinion in the same case on appeal, and differentiated between the public interest in and sovereignty over wild animals and the fact that the public at large has no access to or right of capture of oil and gas which right rests exclusively with the overlying property owners. The private landowners, as well as the state, have the right to protect these correlative rights from entire destruction.

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91 Ibid. at 208.
92 Ibid. at 210. When we consider that this opinion, recognizing the right of the legislative power to protect all of the collective owners, to secure a just distribution "of their privilege to reduce to possession" and to prevent waste, was handed down over 43 years ago, we have even greater admiration for the profound reasoning of Justice White. It is also interesting to note that in those comparatively early days it was recognized that "the gas . . . serves the purpose of forcing up the oil," now referred to as "the lifting power of gas" or "reservoir energy," and the right of the legislature to regulate this feature upheld. Ibid. at 211. On this point see Colby, op. cit. supra note 2, at 269, n. 99.
93 (1900) 155 Ind. 461, 57 N.E. 912.
94 Supra note 83.
The court went on to say that, "Natural gas in the ground is so far the subject of property rights in the owners of the superincumbent lands, that while each of them has the right to bore or mine for it on his own land, and to use such portion of it as when left to the natural laws of flowage may rise in the wells of such owner.... he may not induce an unnatural flow or otherwise injure the common reservoir. "A right of property in all the surface owners in the gas contained in the common reservoir of supply is recognized...."

Indiana was the pioneer state in adopting the non-ownership view. It was some time before any of the other states accepted that doctrine.

The Rule as Developed in California. California had the advantage of "coming into the picture" of active oil operations much later than was the case with the eastern states. As has been pointed out, while there was desultory mining for oil in California and its existence was known almost as early as the first commercial petroleum development which took place in the east, it was not until the early part of this century that the industry assumed great importance in California. Therefore, the earliest case which involved the problem of the ownership of oil and gas in situ in California was not decided until 1903. In this pioneer case, Acme Oil Co. v. Williams, the forfeiture of an oil lease for failure to diligently comply with its requirements was granted for the following reasons:

"As to the precious metals, fixed in the veins which hold them, they remain intact until extracted.

"Oil, on the contrary, is of a fluctuating, uncertain, fugitive nature, lies at unknown depths, and the quantity, extent, and trend of its flow are uncertain. It requires but a small surface area, in what is known as an oil district, upon which to commence operations for its discovery. But when a well is developed the oil may be tributary to it

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95 Supra note 93 at 469, 57 N. E. at 915.
96 Ibid. at 474, 57 N. E. at 917.
97 THORNTON, op. cit. supra note 8, §24. In Kansas Natural Gas Co. v. Haskell (1909) 172 Fed. 545, the court noted that "the rule of property right in natural gas and oil in all the states save Indiana" was that they "belong to the owners of the land, and are a part of it ..." quoting from Brown v. Spilman, supra note 51. However, largely influenced by the cogent reasoning of Justice White in Ohio Oil Co. v. Indiana, supra note 12, one state after another has come to accept the Indiana rule as better suited to the peculiar migratory character of oil and gas until now Indiana, Illinois, Kentucky, Louisiana, New York, Oklahoma, and California all indorse it. Moses, op. cit. supra note 49, at 353, 358.
98 Colby, op. cit. supra note 2, at 247-252.
99 140 Cal. 681, 74 Pac. 296.
for a long distance through the strata which holds it. This flow is not inexhaustible, no certain control over it can be exercised, and its actual possession can only be obtained, as against others in the same field, engaged in the same enterprise, by diligent and continuous pumping. It is the property of anybody who can acquire the surface right to bore for it, and when the flow is penetrated, he who operates his well most diligently obtains the greatest benefit, and this advantage is increased in proportion as his neighbor similarly situated neglects his opportunity."

The next case which considered the question was *Isom v. Rex Crude Oil Co.* which involved the lease of a city lot which the lessee’s assignee was developing for oil. The court held that “Oil is a mineral, and as a mineral is part of the realty. (*Funk v. Haldeman*, 53 Pa. St. 229) . . . Like the precious metals, therefore, or coal, oil in place is a part of the free hold." The court concluded that since this lease was “merely of the superficies of the soil” removal of the oil was unauthorized waste.

A few years later the question of the taxability as real property of a lessee’s right to extract oil from a tract of land which was also assessed to the landowner-lessee for its other values, arose in the case of *Graciosa Oil Co. v. Santa Barbara.* The court admitted that the lessee “does not own an absolute present title to the oil strata in place,” but added that such a title could be created by severance of the subterranean stratum from the overlying land, while the lease “leaves the title to the oil in the landowners until it is brought to surface.” The court concluded, however, that the lease created an estate for years carrying with it the right to extract oil, which con-

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100 *Ibid.* at 684-685, 74 Pac. at 297. It will be noted that the court in this pioneer case recognized the same distinctions and took the forward looking view that was taken by the trial court in the case of Hague v. Wheeler, *supra* note 55 (but which the Pennsylvania appellate court declined to follow) and which furnished the basis of the decisions of the state and federal courts in Ohio Oil Co. v. Indiana.

101 (1905) 147 Cal. 659, 661, 82 Pac. 317.


103 (1909) 155 Cal. 140, 99 Pac. 483. See also Mohawk Oil Co. v. Hopkins (1925) 196 Cal. 148, 236 Pac. 133; and County of Ventura v. Barry (1929) 207 Cal. 189, 277 Pac. 333, where the taxable character of a leasehold interest in oil and gas lands is further discussed. Anderson v. Helvering (1940) 310 U.S. 404, 407, a case involving a federal income tax, treats oil and gas in place, as wasting assets “like other minerals in place,” and used the phrase “an economic interest” in the oil and gas. See also Helvering v. Bankline Oil Co. (1938) 303 U.S. 362, 367, where the court also refers to this “economic interest”, stating that “the depletion allowance does not depend on any ‘particular form of the legal interest in the mineral content of the land’.”

104 *Graciosa Oil Co. v. Santa Barbara,* *supra* note 103 at 144, 99 Pac. at 486.
stituted a servitude on the land and a chattel real at common law and that the lessee was given the right to extract and remove "a certain part of the substance of the land itself. . . . The strata of oil, or oil bearing sand, constitute, as we have seen, a part of the land which may be the subject of separate ownership."\(^{105}\) The court concluded that the lessee's interest, which "may well be termed a claim to land, although not accompanied by actual physical possession of the subterranean deposit," was taxable as an interest in real property. It will be noted that the court assumes throughout, that the lessor, as surface owner, has actual ownership of the oil in situ until it is reduced to possession by the lessee. It refers to the oil in place as "a certain part of the substance of the land itself. . . ."\(^{106}\) This view of ownership of the oil by virtue of surface ownership received additional support in the case of *Brookshire Oil Co. v. Casmalia Oil Co.*,\(^{107}\) decided the same year, where the court intimated that there was a possibility that a well on adjoining property "spouting large quantities of oil from the same stratum," might have the effect of drawing off "some of the plaintiff's oil . . . to the adjoining land?"

Two years later the Supreme Court, in the case of *Chandler v. Hart*,\(^{108}\) involving a lessee's interest, held: "If oil is found, the lessee is then given a further right,\(^{109}\) which then becomes a vested right in the oil in place, it being while so situated a part of the land. . . ." It is, of course, axiomatic that if a lessee's interest is to be treated as "a vested right in oil in place," the lessor landowner must be the owner of the "oil in place".

For many years, ownership of oil in place appears to have been the accepted doctrine in California.\(^{110}\) The abandonment of this

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\(^{105}\) *Ibid.* at 146, 99 Pac. at 486.

\(^{106}\) *Ibid.* at 145, 99 Pac. at 486.

\(^{107}\) (1909) 156 Cal. 211, 219, 103 Pac. 927, 930.

\(^{108}\) (1911) 161 Cal. 405, 414, 119 Pac. 516, 519.

\(^{109}\) In addition to the right to search for and discover oil.

\(^{110}\) On May 18, 1931, in the case of *Black v. Solano Co.*, 114 Cal. App. 170, 174-175, 299 Pac. 843, 845-846, the Second Appellate District Court held: "Under the ordinary lease, the title to the oil . . . was in the owner of the land, not in the lessees. They, it is true, had an estate for years in the land, with the right to go upon it and prospect for and extract the oil. Until found and severed from the realty it was not theirs and did not become theirs until brought to the surface, when it became personal property. . . . There is here no hint of any attempt to pass title to the oil while it was a part of the realty, . . ." The court cites cases decided by the state supreme court discussed hereabove and adds that until reduced to actual possession, "the oil was, however, potential personal property, and so the subject of a sale (as distinguished from an executory contract to sell)."

The case of *Stone v. Los Angeles* (1931) 114 Cal. App. 192, 200-201, 299 Pac. 838,
ownership in place doctrine and the adoption of the non-ownership theory seems to have had its beginnings in a critical situation in the oil development in California which was accentuated by the discovery and development of the Santa Fe Springs oil field near Los Angeles, California. Gas under great pressure was encountered in the wells drilled and permitted to "blow off", and waste in the air in the short sighted attempt to extract the greatest quantity of oil in the shortest possible space of time. This critical situation was vastly exaggerated because the surface overlying a large area of the field had been subdivided into compartively small city lots. Each of the multitude of lot owners was naturally anxious to "cash in" on the potential supply of "black gold" underlying his particular lot before it was drained off through nearby wells. As a consequence, wells were put down without regard to economic spacing and gas was allowed to escape in vast quantities which, under an orderly and scientific development of the field as a whole, would have been permitted to remain in the ground and thus serve to maintain the "oil-gas ratio" and "reservoir energy" so essential to the highest economic production. This wastage became so flagrant that the state, acting under authority of its "Oil and Gas Conservation Act", brought suit against some forty-three operators, seeking to enjoin this unreasonable waste of natural gas in that field. It was estimated that during the year 1928 seventy-seven billion cubic feet of natural gas was wasted in the air from California fields and that five hundred million cubic feet was the daily wastage in the Santa Fe Springs field alone. This case was appealed to the state supreme court, but certain of the defendants, while the case was still pending in the trial court, sought from the district court of appeal a writ of prohibition.

In this companion case of Bandini Petroleum Co. v. Superior Court [footnotes], decided on the same day by the Fourth Appellate District Court held, quoting from 20 Cal. Juris. 359, that an ordinary oil lease on a royalty basis giving the mere right to extract oil for a term of years, "vests no title in place," "it (the oil) is part of the realty and, in the absence of a special contract to the contrary, belongs to the owner of the ground." Ibid. at 202, 299 Pac. 842. Neither of these district courts of appeal seems to have been aware of the decisions to the contrary in the cases of Bandini Petroleum Co. v. Superior Court and People v. Associated Oil Co., hereafter considered, both decided in 1930, because they are not mentioned, and should have been controlling.

111 Such wells have been termed "wasters".

112 People v. Associated Oil Co., supra note 6, considered hereinafter.

113 Bandini Petroleum Co. v. Superior Court (1930) 110 Cal. App. 123, 293 Pac. 899. The Bandini case was appealed to the Supreme Court of the United States, Bandini Co. v. Superior Court (1931) 284 U. S. 8, the state supreme court having refused to entertain an appeal.
Court the argument was advanced by the operating companies "that they have the same vested right to make use of the gas under their property for the purpose of lifting the oil thereunder that a riparian owner has to make use of the underflow of a stream passing through his property to lift the waters to levels of entry upon his land". The argument presented "the pure legal question whether the owner of the surface is the owner of the gas in place under his soil subject to the right of an adjoining owner to appropriate to himself the title thereto by capture and possession or whether the owner of the surface is vested only with the right to bore for gas and reduce it to possession".

The court did not think this question as vital as was urged by counsel, saying:

"In either event he is the owner of a valuable right. Every owner of the surface has a like interest and right of property, whatever it may be. We think, however, that the better reasoning, on account of the self-propelling or migratory character of natural gas, as well as oil, dictates the conclusion that while in general we may speak of the owner of the surface as being the owner of the gas and oil in place, what we really mean is that he and he alone has the right through his own property to endeavor to reduce the substances to possession; that when they are reduced to possession and then only does he have an absolute and unqualified title thereto. It is argued by petitioners and by some of those who have appeared as amici curiae that the law of California is settled to the effect that the owner of the surface is the owner of the gas and oil in situ. There are some general expressions in the authorities to this effect, particularly in tax cases where assessments have been levied upon a lease giving and granting to the lessee the right to bore for and extract the hydro-carbon substances. But they are not controlling or helpful here."

While the district appellate court did not deem it essential to determine the exact nature of the property right in oil and gas in place, it expressed a definite preference for the view, ultimately adopted by the California courts, that there is no outright ownership of oil and gas in place by reason of surface ownership, but rather that such landowner, though not owning the corpus of the oil and gas in place, has the exclusive right on his own land to capture and reduce to possession such underlying oil and gas.

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114 Supra note 113 at 126, 293 Pac. at 901.
115 Ibid. at 127, 293 Pac. at 901.
116 Ibid.
On appeal the United States Supreme Court\(^{117}\) noted that the case of *People v. Associated Oil Co.*\(^{118}\) involving the same parties and the same subject matter had in the meantime been decided by the California Supreme Court, and went on to state that,

"The District Court of Appeal, in the instant case, approached this question by considering the correlative rights, under the law of California, of surface owners in the same field. The court concluded that under the law of California 'on account of the self propelling or migratory character of natural gas, as well as oil,' the owner of the surface did not have an absolute title to the gas and oil beneath, and could acquire such a title only when he had reduced these substances to possession."\(^{119}\)

The critical case of *People v. Associated Oil Co.*,\(^{120}\) was an action by the State to enforce certain provisions of the "Oil and Gas Conservation Act"\(^{121}\) in order to (1) prevent any natural gas from escaping into the air before the removal of its gasoline content, (2) keep each producing well at its "optimum gas-oil ratio",\(^{122}\) and (3) limit the gas production to a certain schedule. Because of the large number of defendants and the importance of the case to all of the oil producers in the state, it was exhaustively argued, and the court reconsidered, without deciding, the entire question of property rights in oil and gas. The court held at the outset "... the public has a sufficient interest in the preservation of oil and gas to justify legislation to prevent waste thereof...."\(^{123}\) It then took up the argument advanced by the oil companies, that, in California, "the public interest cannot be invoked where the common law as to the nature of the property right in the oil and gas prevails".\(^{124}\) The court stated the rule at common

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\(^{117}\) *Supra* note 113.

\(^{118}\) *Supra* note 6.

\(^{119}\) *Supra* note 113, 284 U.S. at 19. The district court of appeal in the Bandini case hardly went as far as to decide definitely what was the "law of California" on the subject, but rather merely expressed its preference for the "non-ownership until reduced to possession" doctrine as opposed to the "ownership in place" theory, stating that "In either event he (the surface owner) is the owner of a valuable right... whatever it may be". 110 Cal. App. 127, 293 Pac. 901.

\(^{120}\) *Supra* note 6. This was an application for a writ of supersedeas which was denied. The case was again brought up on appeal from an order granting an injunction and reported in 212 Cal. 76, 297 Pac. 536.

\(^{121}\) Cal. Stats. 1915, p. 1404, as amended by Cal. Stats. 1929, p. 923.

\(^{122}\) "Optimum gas-oil ratio" was "defined as the smallest number of cubic feet of gas which can be produced with each barrel of oil from the same well at the same time." *Supra* note 6, at 96, 294 Pac. at 719.

\(^{123}\) Ibid. at 100, 294 Pac. 721. See also Colby, *op. cit. supra* note 2, at 269.

\(^{124}\) Ibid.
law to be that the owner of the land owns everything beneath and above his surface and recognizes oil and gas as part of the realty and belonging to the landowner “so long as they are on it or in it or subject to his control”. In support of this common law rule the court cites a Montana case\textsuperscript{125} and says that “Montana appears to be the one state among the many gas and oil producing states, which has established such a rule of property with reference to gas and oil”.

\textsuperscript{125} Gas Products Co. v. Rankin (1922) 63 Mont. 372, 207 Pac. 993, “where the same rule was applied to gas and oil beneath the surface as to minerals in place, such as coal and ore,” and the California court in People v. Associated Oil Co. adds (211 Cal. 93, 101) that “Montana appears to be the one state, among the many gas and oil producing states, which has established such a rule of property with reference to oil and gas”. \textit{Supra} note 6 at 101, 294 Pac. 721. We do not so interpret the Montana case. An analysis of the opinion in that case will indicate that the Montana court adopted the rule recognized in many states and announced in Brown v. Spilman, \textit{supra} note 1, at 670, that “[Petroleum gas and oil] belong to the owner of the land, and are a part of it, so long as they are on it or in it, or subject to his control, but when they escape and go into other land, or come under another’s control, the title of the former owner is gone. If an adjoining owner drills his own land and taps a deposit of oil or gas, extending under his neighbor’s field, so that it comes into his well, it becomes his property.” The many other authorities cited by the Montana court will bear out this conclusion. The opinion expressly favors the Pennsylvania rule as distinguished from the Indiana rule, which the Montana court mentions as only being in force in Indiana. After the court declares and subscribes to the doctrine announced in the long line of cases following the rule as originally adopted in Pennsylvania, the Montana court does state that, “We can see no distinction between the owner’s property rights to minerals in his land and those pertaining to gas \textit{taken from} the land and reduced to possession.” (Italics ours.) 63 Mont. at 393, 207 Pac. 998. This last quoted statement is evidently what led the California court to assume that Montana was the only state which still recognized such a rule of property. The context of the Montana opinion will indicate, however, that that court recognized that this rule of absolute ownership of oil and gas was only while they were in the land. As a matter of fact, the ownership of gas when “taken from the land and reduced to possession” is as complete as the ownership of solid minerals when situated in the land. Had the California court stated that Montana was the one state that refused to recognize legislative control over the waste of natural gas, it would have appraised the Montana decision more accurately. Even on this point the Montana court endeavored to differentiate the Montana statute from the similar Wyoming statute upheld by the Supreme Court of the United States in \textit{Walls v. Midland Carbon Co.} (1920) 254 U. S. 300, by pointing out that the Wyoming statute applied only to wells “located within 10 miles of any incorporated town or industrial plant,” whereas the Montana statute had no such limitation. The Montana court placed undue emphasis on the \textit{cujus est solum} doctrine and rights of private property, also minimized the power of the legislature to enact legislation designed to promote “the conservation of natural resources of the state,” and decided that this particular statute was “an arbitrary interference with private rights”.

In \textit{People v. Associated Oil Co.} (1931) 212 Cal. 76, 81, 297 Pac. 536, 537, the court gives a more accurate appraisal of the Montana holding by stating that “conservation measures have been approved by the highest courts of the oil and gas producing states, . . . with the exception of Montana . . .”
The court then quotes from *Brown v. Spilman*,\(^\text{126}\) a statement of the common law rule, universally recognized as the most authoritative announcement on the subject, and which accurately expresses the doctrine adopted by the states which adhere to the *cujus est solum* idea.\(^\text{127}\)

The court also quotes from *Acme Oil Co. v. Williams*,\(^\text{128}\) to the effect that oil is of a fugitive nature, uncertain in occurrence and by reason of its migration underground is captured and possessed by those who are most diligent in mining it and adds:

"The same rule would apply to natural gas... The generally accepted view, therefore, is that the property right of the owner or lessee of land in and to the gas and oil beneath the surface is not an absolute one. Such substances, because of their peculiarity in the natural state, partake more of the nature of common property, title to which becomes absolute when they are captured and reduced to possession. Because of their peculiar nature the public has a definite interest in their preservation from waste and destruction. This is true because of their character as natural resources and also because the public interest has attached by virtue of positive statutory law or by court judgment independent of statute. In seven states of the Union legislation making unlawful the unreasonable waste of natural gas has been upheld..."\(^\text{129}\)

The court then discusses the outstanding *Ohio Oil Co. v. Indiana*\(^\text{130}\) decision and states that the holding there was not confined merely to the protection of the correlative rights of adjoining land owners and defines the correlative right:

"... not necessarily as a right to a fixed distributive or proportional share of the oil and gas underlying the surface, which no other owner of the soil overlying the same reservoir may take and use beneficially, but as a coequal right to take whatever of the oil and gas can be captured, so long as waste, as defined by the statute, is not committed."\(^\text{131}\)

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\(^{126}\) *Supra* note 51.

\(^{127}\) This furnishes additional proof of the misconception of the California court in *People v. Associated Oil Co.*, *supra* note 6, of the exact effect of the Montana decision, for the Montana court also quotes with obvious approval, the same statement from *Brown v. Spilman*, *supra* note 51, which the California court says is "the rule universally adopted".

\(^{128}\) *Supra* note 99.

\(^{129}\) Indiana, Kentucky, Wyoming, Oklahoma, Louisiana, Texas and Kansas. Cases from each state cited in *People v. Associated Oil Co.*, *supra* note 6 at 103, 294 Pac. at 722.

\(^{130}\) *Supra* note 12.

\(^{131}\) *Supra* note 6 at 103, 294 Pac. at 722.
The court then quotes from two cases already commented on hereinbefore,\footnote{132 Hague v. Wheeler, supra note 55, and Townsend v. State, supra note 13.} recognizing the interest of the public at large in the conservation of oil and gas and the prevention of waste, and adds:

"Whatever refinements may be suggested as to the definition of the nature of the property right in gas and oil beneath the surface and uncaptured, we are entirely satisfied that the waste of these natural resources may be regulated and the unreasonable waste thereof may be prohibited in the exercise of the police power of the state. . . ."\footnote{133 Supra note 6, at 105, 294 Pac. at 723.}

It will thus be noted that while the court discussed extensively its own holdings and those of various other courts as to "the nature of the property right in oil and gas" \textit{in situ}, and, judging from its comments, apparently favored the "non-ownership" views, it came to no final decision on that point. It merely contented itself with concluding that "whatever refinements may be suggested as to the definition" of that right, there was no question but that the state could prohibit unreasonable waste.\footnote{134 States adopting the doctrine of common law ownership in place as well as those recognizing no private ownership until capture, have upheld statutes prohibiting waste of oil and gas. See note 129 supra.}

In 1932 the United States Circuit Court of Appeals, \textit{In Re Lathrap},\footnote{135 (C.C.A. 9th, 1932) 61 Fed. (2d) 37.} in determining the nature of a royalty interest arising out of an oil and gas lease said:

"According to the weight of authority in California and according to the doctrine repeatedly enunciated by the Supreme Court of the United States, title to oil or gas in place cannot be transferred \textit{in praesenti}. Nor can there be any transfer of such title, either present or prospective, without the accompanying right to go upon the land and extract the oil or gas."\footnote{136 Ibid. at 39.}

After quoting from California cases\footnote{137 People v. Associated Oil Co., supra note 6; Acme Oil Co. v. Williams, 140 Cal. 681, 684, 74 Pac. 296; Graciosa Oil Co. v. Santa Barbara, supra note 103.} the federal circuit court of appeals added:

"The generally accepted view, therefore, is that the property right of the owner or lessee of land in and to the gas and oil beneath the surface is not an absolute one. Such substances, because of their
peculiarity in the natural state, partake more of the nature of common property, title to which becomes absolute when they are captured and reduced to possession. Because of their peculiar nature the public has a definite interest in their preservation from waste and destruction. . . .

"Obviously, if the owner or lessee has no present title to oil in place, he cannot transfer a present title to a 'per cent holder' or to any one else. . . .

"We are aware that language in conflict with the foregoing statements of the law is to be found in the California reports; but we believe that such expressions are not in accord with the sound and authoritative view, both in California and elsewhere."\[^{138}\]

The Supreme Court of California had no further occasion to consider this question until 1933 in the case of Western Oil Co. v. Venago Oil Corp.\[^{139}\] This case involved "percentage units, commonly designated as royalty interests, in the oil, gas . . . to be produced . . . under his lease." The question was what sort of rights were created by an assignment of these units. The court said:

"It is settled law that the lessee under an oil and gas lease acquires no title to the oil and gas in place as part of the realty, but only the right to enter upon the land, drill wells, and reduce the oil and gas to possession. When reduced to possession the oil and gas are personal property and only then can absolute title vest in the lessee."\[^{140}\]

"The decisions of the courts of this state cited by the federal court in the Lathrap case [61 F. (2d) 37] sustain that court's conclusion that neither the owner of oil lands nor the lessee thereof has an absolute title to oil and gas in place as part of the realty, but only a right to prospect for oil and reduce it to possession as personal property."\[^{141}\]

The foregoing quotations will indicate that the California law on the subject, which, under the earlier decisions was strongly influenced by the *cujus est solum* doctrine of absolute ownership while in place, had finally swung completely over to the "non-ownership until reduced to possession" doctrine. Reading between the lines it would appear that the California courts in considering the problems presented in the later cases were strongly influenced by the fact that the common law theory of fee simple ownership of everything while situated vertically beneath the surface is not as easily reconciled with

\[^{138}\] *Supra* note 135 at 40-41. Italics added.

\[^{139}\] 218 Cal. 733, 24 P. (2d) 971.

\[^{140}\] *Ibid.* at 738, 24 P. (2d) at 973.

state control in the interest of collective rights and of the public at large as is the non-ownership or "negative community" theory.

The uncertainty which has surrounded this problem is well illustrated by the fact that, although the Supreme Court of the United States in 1931\(^{142}\) had assumed from the decision of the District Court of Appeal below that the law of California did not recognize full ownership of oil and gas until captured and reduced to possession by the landowner, and the Ninth United States Circuit Court of Appeals in 1932\(^{143}\) had come to the same conclusion, and this had been corrobated by the Supreme Court of California itself in 1933,\(^{144}\) it apparently still remained an open question, for the Supreme Court of California in the case of Callahan v. Martin\(^{146}\) again considered the problem in great detail. It became necessary to determine the exact nature of the property right or interest arising by reason of an assignment of a fractional portion of the landowner's oil royalty reserved by a lease. The court said:

"... The difficulty experienced in defining with exactitude the nature of the assignee's rights is due in part to the fact that the oil industry is of very recent development, while in this country, by statute and judicial precedent, our classification of property as realty or personalty is based on common-law definitions which crystallized in a time when oil interests were not the subject of judicial cognizance.

"Some jurisdictions adhere to the theory that the owner of land has an estate in oil and gas beneath the surface in like manner as he has an estate in the surface; that oil and gas in place beneath the surface of land constitute a part of the land, and as such are real property, may be granted separate and apart from the surface, and

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\(^{142}\) Bandini Petroleum Co. v. Superior Court, supra note 113.

\(^{143}\) See supra note 135.

\(^{144}\) See supra note 139.

\(^{145}\) This view receives additional corroboration from the supreme court itself, because the comparatively recent case of La Laguna Ranch Co. v. Dodge (1941) 18 Cal. (2d) 132, 135, 114 P. (2d) 351, 353, states that the Callahan-Martin case "must be regarded as the starting point in considering the problems" and as establishing "that the owner of land does not have an absolute title to the oil and gas in place as corporeal real property, but rather has the 'exclusive right' to drill for oil and gas upon his premises". Also see People v. Brunwin (1934) 2 Cal. App. (2d) 287, 37 P. (2d) 1072, where the question was raised whether the wrongful extraction of oil from land constituted larceny of real or personal property. The court held that for the purposes of the case the distinction was immaterial but seemed doubtful "of the exact status of crude oil in place". Ibid. at 297, 37 P. (2d) at 1077. And see Payne v. Callahan (1940) 37 Cal. App. (2d) 503, 509, 99 P. (2d) 1050, 1052, where the court said, "The Callahan case [Callahan v. Martin, infra note 146] rejected what has been called the oil in place doctrine. ..." See also Dabney-Johnston Oil Corp. v. Walden, infra note 154.

\(^{146}\) (1935) 3 Cal. (2d) 110, 43 P. (2d) 788.
when so granted vest in the assignee an estate in definite corporeal real property."\textsuperscript{147}

Illustrating this theory, the court quoted from a Texas case which held that oil and gas are minerals lying within the earth's strata "and necessarily are a part of the reality" and that "their conveyance while in place 'is consequently the conveyance of an interest in the reality'.\textsuperscript{148}

Commenting on this theory and attempting to develop "a logical theory appropriate to the facts," the California court said that the Texas court recognized that the landowner, by reason of the

"possibility of escape of oil and gas beneath the surface ... has a defeasible fee in the minerals, an estate subject to being defeated through the escape of oil and gas to other lands. ... the oil and gas in place doctrine ... seems not to take into account the circumstance that the oil actually brought to the surface ... may be not only the oil and gas in place beneath the surface of the assignor's land at the time of the assignment, but also oil drawn off from beneath the surface of other lands.\textsuperscript{149}

A further difficulty with the theory was pointed out, in that this "present transfer of definite corporeal property" may not be "of unlimited duration" and thus might terminate before the oil was exhausted. The court added:

"By reason of these anomalies, as the law relating to oil and gas has developed during recent years, and the relationships arising from dealings in this type of property have been analyzed more closely by the courts, the oil in place doctrine has been rejected by a large number of jurisdictions, and other theories developed, which give due recognition to the fugacious, vagrant nature of oil and other hydrocarbon substances, yet in their logical application protect oil interests as estates in real property. There are intimations of approval of the oil and gas in place doctrine in some of the decisions in this state.\textsuperscript{150}... But other cases unequivocally declare that the

\textsuperscript{147} Ibid. at 115, 43 P. (2d) 791.
\textsuperscript{148} Ibid. at 116, 43 P. (2d) 791, Texas Co. v. Daugherty (1915) 107 Tex. 226, 176 S. W. 717.
\textsuperscript{149} Supra note 146 at 116-117, 43 P. (2d) 791.
\textsuperscript{150} Ibid. at 117, 43 P. (2d) 792. "Graciosa Oil Co. v. Santa Barbara, 155 Cal. 14, 144 (99 Pac. 483, 20 L. R. A. [n.s.] 211) ; Chandler v. Hart, 161 Cal. 405, 414 (119 Pac. 516, Ann. Cas. 1913B, 1094) ; Black v. Solano Co., 114 Cal. App. 170, 174 (299 Pac. 838)." Note that the case of Isom v. Rex Crude Oil Co. (1905) 147 Cal. 659, 82 Pac. 317, is not cited and yet it was the first case to be decided by the California Supreme Court which held that like solid minerals oil was a part of the freehold.
owner of land does not have an absolute title to oil and gas in place as corporeal real property, but, rather, the exclusive right on his premises to drill for oil and gas, and to retain as his property all substances brought to the surface on his land."

The court was of the opinion that an operating lessee for a term of years, or so long as oil shall be produced, "has an interest or estate in real property in the nature of a profit a prendre, which is an incorporeal hereditament, and that the assignee of a royalty interest in oil rights by the landowner also has an interest or estate in real property in the nature of an incorporeal hereditament."

The court then proceeds to justify these conclusions by making a critical examination into real property rights, particularly as they have been determined by California decisions and the Civil Code.

151 Supra note 146 at 117, 43 P. (2d) at 792. "People v. Associated Oil Co., 211 Cal. 93, 101 (294 Pac. 717); Western Oil & Refining Co. v. Venago Oil Corp., 218 Cal. 733, 741 (24 Pac. (2d) 971, 88 A. L. R. 1271); Bandini Petroleum Co. v. Superior Court, 110 Cal. App. 123 (293 Pac. 899); see also, Champlin Refining Co. v. Corporation Commissioner of Oklahoma, 286 U.S. 210 (52 Sup. Ct. 559, 76 L. ed. 1062, 86 A. L. R. 403, 412); McCoy v. Arkansas National Gas Co., 175 La. 487 (143 So. 383, 85 A. L. R. 1271); Rich v. Donaghey, 71 Okla. 204 (177 Pac. 86, 3 A. L. R. 352), with note."

152 Ibid. at 118, 43 P. (2d) at 792.

153 These real property rights and the court's line of reasoning may be summarized as follows: Real property is co-extensive with lands, tenements, and hereditaments. Blackstone calls them "things real". The term is also applied to rights and estates in and to things. "Property" is used in two different senses. It is applied to those external things—the objects of rights, estates, dominion or property. It is also applied to the rights or estates in and to things. Land, the object of rights, is a thing real or real property. Rights or estate of the owner in fee or for life in land is real property. Rights of a lessee in land or real property are not real property, but a chattel real which is personally. A leasehold, though not real property, is an estate in land or in real property. This duality of meaning is important in determining the nature of oil leases and royalty assignments. Things real at common law include lands and tenements and also corporeal and incorporeal hereditaments. Blackstone lists ten incorporeal hereditaments—not all rights to or pertaining to land. A number of common law incorporeal hereditaments persist, recognized as a species of interest in land, or estate in real property. These are rights described as profits a prendre—several as well as common. Where the incorporeal hereditament relates to land it is rather a designation of a certain class of rights in and to land. Rights in and to land, though defined as incorporeal hereditaments, constitute a limited interest or estate in land. If this limited interest is to endure in perpetuity or for life it is a freehold interest, and is real property or real estate as well as an estate in real property. When it is for years, although an interest in land or in real estate, it is not real estate, but a chattel real similar to a lease for years. Incorporeal hereditaments in gross have been recognized as a species of estate in real property in many California decisions. The rights of a lessee under an oil and gas lease present a clear case of a profit a prendre in gross—the right to remove a part of the substance of the land. It is an incorporeal hereditament, an estate in the land—a chattel real if it is to endure for years. The right to receive future rents and oil royalties is an incorporeal hereditament, an interest in land—oil royalties are treated as rents. An assignment of oil royalty by a
In the case of *Dabney-Johnston Oil Corp. v. Walden*\(^{154}\) it was urged that because of the *Callahan v. Martin* decision, assignments of fractional royalty interests by the landowner terminated with the forfeiture of the lease providing for such royalty payments. The supreme court commented on its rejection of the "oil and gas in place theory" and enlarged on its reasoning in the *Callahan-Martin* case as follows:

"... The use of 'oil and gas in place' terminology, which describes an unlimited grant of oil rights as a present transfer of a fee in definite corporeal real property is anomalous. It fails to take into account the fugacious and vagrant nature of oil and other hydrocarbon substances. Oil actually brought to the surface to which the grantee's right attaches may be not only the oil and gas in place beneath the surface of the assignor's land at the time of the assignment, but also oil drawn from beneath the surface of other lands. In our decision in *Callahan v. Martin* we reject the oil and gas in place doctrine, as have many other courts, including the Supreme Court of the United States\(^{155}\) (*Ohio Oil Co. v. Indiana*, 177 U.S. 190 [20 Sup. Ct. 576, 44 L. Ed. 729]), but we find that nevertheless oil rights may be recognized and transferred as interests in real property on other theories which give due recognition to the fugacious character of the substances involved.

"The owner of land has the exclusive right on his land to drill for and produce oil. This right inhering in the owner by virtue of his title to the land is a valuable right which he may transfer. The right when granted is a profit *a prendre*, a right to remove a part of the substance of the land. A profit *a prendre* is an interest in real property in the nature of an incorporeal hereditament. (*Callahan v. Martin*, supra.) Under the usual oil and gas lease the owner confers on the lessee for the term of the lease an exclusive right of profit to drill for and produce oil, the lessee usually returning to the lessor for the privilege granted a rent or royalty measured by a fraction of the oil landowner may be treated as a transfer of an interest in real property. Where the assignment is not limited, but is in perpetuity, the assignee becomes in effect a tenant in common with an assignor who retains an interest in the oil rights and with other assignees of percentage interests. The rights become joint instead of several. Where the holders of undivided interests in oil rights cannot agree, a court of equity may formulate a reasonable plan for development. Where these rights are to endure in perpetuity they are rights of profit *a prendre*—estates in real property and properly described as real property or real estate.\(^{156}\)

\(^{154}\)(1935) 4 Cal. (2d) 637, 52 P. (2d) 237.

\(^{155}\)It is not quite accurate to state that the Supreme Court of the United States has rejected "the oil and gas in place doctrine," for, although in its discussion of the subject it favored that doctrine, yet it could hardly "reject" the doctrine inasmuch as it admitted that each state had the power to determine for itself and select the doctrine which would control in its own jurisdiction, as being of a "local character". *Ohio Oil Co. v. Indiana*, *supra* note 12, at 212.
produced. Or the owner may grant rights which make the grantees cotenants with him and with each other in the right to drill for and produce oil and other hydrocarbon substances. The profit a prendre, whether it is unlimited as to duration or limited to a term of years, is an estate in real property. If it is for a term of years, it is a chattel real, which is nevertheless an estate in real property, although not real property, or real estate. (Callahan v. Martin, supra, pp. 506, 507.) Where it is unlimited in duration, it is a freehold interest, an estate in fee, and real property or real estate. Thus, although the oil and gas in place doctrine is rejected, interests in oil rights which are estates in real property may be granted separate and apart from a grant of surface title. The grantee of the profit has a right to such possession of the surface as is necessary and convenient for the exercise of the profit, but he has no general estate in the surface."156

The court went on to say, that whether the assignment of the right to drill for and produce oil were "characterized as a grant of oil and gas in place or as a grant of a profit a prendre, where it is unlimited in duration" it is "a deed of the mineral fee." No matter what the descriptive terms may be, the legal consequences are essentially the same. The mere rejection of "oil and gas in place terminology" does not prevent the operation of a deed to the mineral fee "which in this state is a right of profit a prendre."

The court added:

"The failure of those who are dealing in oil rights to precisely describe the nature of the interests granted is due in part to the recent development of the oil industry. The law pertaining thereto is still in a formative stage. An analysis of the nature of oil interests which may be created involves an application of the common-law rules which crystallized before there were extensive dealings in subsurface fugacious substances. In the several jurisdictions in this country there is a contrariety of description as to the nature of these interests, and in a single jurisdiction, as in this state, there are conflicting expressions as to the description of oil interests. (See Callahan v. Martin, supra.) It is not surprising, in view of the lack of a definite terminology descriptive of these interests, that those who are dealing in oil interests have difficulty in describing the interests transferred, and that ambiguous and uncertain instruments are presented to the courts for analysis. Such instruments must be construed as a whole in the light of the circumstances under which they were executed and the expressed intent of the parties at that time."157

156 Supra note 154 at 648-650, 52 P. (2d) at 242-243.
157 Ibid. at 650-651, 52 Pac. (2d) at 244. There follows at 654-657, 52 P. (2d) at 245, an interesting discussion of the rights of assignees of "percentages" or fractional royalty interests who are, if that intention appears, deemed to be cotenants with coequal rights in the mineral estate. See on this point Domestic & Foreign Pet. Co. v. Long (1935) 4 Cal. (2d) 547, 51 P. (2d) 73.
That the owner of land in California does not have an absolute title to the oil and gas in place as corporeal real property, but rather the "exclusive right" to drill for them on his own premises, is further confirmed by more recent decisions.\(^{158}\)

It will be noted that the great majority of the cases which have discussed the nature of rights in oil and gas in place have involved leases of oil lands. The legal complexities which are inherent in the landowner's rights in oil and gas are vastly multiplied when we come to consider the nature of the property rights growing out of and dependent upon basic land ownership rights. The landowner leases his land for oil and gas mining purposes to others who, in turn, may sublease and transfer "percentages" or fractional interests in the oil recovered. The landowner himself may dispose of fractional interests in the oil and gas recovered by him from his land or, if he leases the land, in the royalty interest reserved to himself as a consideration. Since the nature of these leasehold rights and of the assigned rights and royalties, including "overriding royalty interests"\(^{159}\) is more or less dependent upon the character of the basic right or primary property in the gas and oil, we are confronted with additional perplexities.

\(^{158}\) La Laguna Ranch Co. v. Dodge, supra note 145, 135, 114 P. (2d) 353; Tanner v. Title Ins. Co. (1942) 20 Cal. (2d) 814, 819, 129 P. (2d) 383, 386. The latter case presented an unusual situation. Adjoining landowners, some of whom were owners of city lots, had entered into a community oil lease, whereby they "pooled" their interests and their holdings were to be developed jointly. They were to share, according to the acreage owned by each, in the entire proceeds of the oil produced. It was held that each co-lessee had transferred to his co-lessees an incorporeal hereditament in gross, which was distinct from the royalty interest retained in oil produced from his own premises, that such hereditament did not follow the conveyance of the lessor's land, and that the grantee of one of the lots included in the lease had no right to any royalty in oil produced from other lots. Community development of small surface holdings is the only economic procedure in cases of this sort. The great drawback is that in advance of intensive drilling and development there is no certainty as to the extent or areas of greatest concentration of the hidden wealth.

On this subject of community development see a very able recent article, Moses, Some Legal and Economic Aspects of Unit Operations of Oil Fields (1943) 21 TEx. L. Rev. 748.

\(^{159}\) An "overriding royalty" is defined as "a fractional interest in the gross production of the oil and gas, in addition to the usual royalties paid to the lessor". 3 SUMMERS, op. cit. supra note 8 at 517. At one time the California courts held that assignments of such interests "transferred personal property of which the lessee had potential possession" but these cases are no longer "controlling in view of the abolishment of the 'potential possession' doctrine in California". La Laguna Ranch Co. v. Dodge, supra note 145, at 136, 114 P. (2d) 353. See also an interesting discussion of "overriding royalties" contained in a comment in (1938) 26 CALIF. L. REV. 480 [by Lawrence F. Kuechler]; see also Note (1942) 30 CALIF. L. REV. 200; Payne v. Callahan, supra note 145. See 3 SUMMERS, loc. cit. supra note 72, where the California law is discussed.
when dealing with these secondary rights. It would be far beyond the scope of this article to attempt to discuss them all in such limited space. It would take at least a volume to adequately cover the subject. Leases of oil and gas lands are of infinite variety and the character of the rights created by each lease depends largely on the wording of the particular instrument.\textsuperscript{100}

Reverting for the moment to the basic problem we have been discussing, the case of Railroad Commission v. Rowan etc. Oil Co.,\textsuperscript{101} decided by the Supreme Court of the United States, involved a proration order of the Texas Commission regulating the development of the East Texas oil field, which order, it was claimed, operated unfairly and inequitably. Mr. Justice Frankfurter voiced the sentiment of the courts which have dealt with these complex and intangible situations by saying:

"Underlying these claims is as thorny a problem as has challenged the ingenuity and wisdom of legislatures. In major part it was created by the discovery of vast oil resources and by their development under rules of law fashioned in the first instance by courts on the basis of analogies drawn from other fields of the common law. In Texas, according to conventional doctrine, the holder of an oil lease 'owns' the oil in place beneath the surface. Lemar v. Garner, 121 Tex. 502; 50 S. W. 2d 769; Stephens County v. Mid-Kansas Oil & Gas Co., 113 Tex. 160; 254 S. W. 290; 1 Summers, Oil and Gas (2nd ed.), p. 16. But equally recognized is the 'rule of capture'\textsuperscript{102} which subjects the lessee's interest to his neighbors' power to drain his oil away. Therefore, to speak of ownership in its relation to oil, is to imply a contingency of control not applicable to ordinary interests in realty. See Ely, The Conservation of Oil, 51 Harv. L. Rev. 1209, 1218-22. Each leaseholder, that is to say, is at the mercy of all those who adjoin him, since oil is a fugacious mineral, the movements of which are not

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3 Lindley, \textit{op. cit. supra} note 44, §862; Note (1937) 25 Calif. L. Rev. 230. See also Callahan v. Martin, \textit{supra} note 146, which considers in great detail the nature of the lessee's interest in an oil and gas lease in California; Payne v. Callahan, \textit{supra} note 145, at 509-510, 99 P. (2d) 1053, where California cases are cited. For a detailed discussion of the legal interest created by oil and gas leases see 1 Summers, \textit{op. cit. supra} note 8, c. 7. The California law on the subject is presented \textit{ibid.}, §866.

101 (1939) 310 U. S. 573; same case on second appeal (1940) 311 U. S. 570.

102 The use of the phrase "rule of capture" in contradistinction from the "ownership in place" doctrine is not a particularly happy choice. The "law of capture" has been defined by Summers (\textit{op. cit. supra} note 8, vol. I, 135) as the right of the landowner to take oil and gas from his own land, even though some of it comes from his neighbor's land. As Professor Summers points out, this right may be exercised "regardless of the particular analogy, or theory of property interest in oil and gas upon which such decisions were based...." Therefore, the right of capture exists independently of the "ownership in place" or "non-ownership" doctrines for it is recognized by each.
\end{footnote}
confined by the artificial boundaries of surface tracts. This gap between the geological nature of the oil pool and the formal surface rights of the lessees is frequently bridged by the drilling of 'offset wells' at the boundary of each surface tract, so that owners may protect themselves against the exercise of one another's capture rights. Partly to mitigate the undesirable consequences of this unsystematized development, the oil-producing states, Texas among them, have enacted conservation laws with appropriate administrative mechanisms to control drilling and production. The general scheme of the Texas statute is not challenged. Its constitutionality is here settled. Champlin Refining Co. v. Commission, 286 U.S. 210.\textsuperscript{163}

Slant drilling, which is the drilling of an oil well so that, though started and continued to varying depth in and beneath the land under control of the operator, it finally departs from the perpendicular so far as to enter and extend into the oil strata of adjoining land far beneath the surface of the latter. Though it is recognized by all the authorities that,

"Every person has the right to drill wells on his own land and take from the pools below all the gas and oil that he may be able to reduce to possession, including that coming from land belonging to others; but ... subject to the reasonable exertion of the power of the State to prevent unnecessary loss, destruction or waste,"\textsuperscript{164}

the courts are equally unanimous in holding that it is a trespass for such well to penetrate the subsurface of the land of another.\textsuperscript{165} Sub-

\textsuperscript{163} Supra note 161, at 579. In the last cited case [Champlin Refining Co. v. Commission (1931) 286 U.S. 210, 233] Justice Butler stated: "In Oklahoma, as generally elsewhere, land owners do not have absolute title to the gas and oil that may permeate below the surface." In view of the wide acceptance of the Pennsylvania rule the foregoing interpolated statement is not justified.

\textsuperscript{164} Supra note 161.

\textsuperscript{165} A. E. Bell Corp. v. Bell View Oil Synd. (1938) 24 Cal. App. (2d) 587, 595-596, 76 P. (2d) 167, 176. A comment by Allen H. Barr discusses this "new type of trespass" and resulting measure of damages in (1939) 27 CALIF. L. REV. 192. See also Payne v. Callahan, supra note 145, at 511, 99 P. (2d) 1053. The court in the last cited case advances the query as to whether, in view of the Callahan v. Martin holding that the landowner did "not have an absolute title to oil and gas in place," it was meant that the landowner "had no lawful interest in the oil under the surface" until capture. \textit{Ibid.} at 510, 99 P. (2d) at 1053. The court thought the Callahan v. Martin case should not be so construed, but thought that, "on proper occasion it may be necessary to further clarify the quoted statements in Callahan v. Martin (sufficient for that case) . . . by going into greater detail and greater exactness of definition". \textit{Ibid.} at 511, 99 P. (2d) 1053. The court refers to the suggestion in 27 \textit{CALIF. L. REV.} that the landowner might have a qualified ownership in the subsurface oil, subject, of course, to defeasance if drawn off to other land, which qualified ownership would ripen into full ownership when reduced to possession. There would seem to be little doubt but that the court, in Callahan v. Martin, by deciding against the ownership in place doctrine had no inten-
ject to offset, set back, and similar state regulations for drilling wells, the oil operator may freely and lawfully drain oil and gas from beneath his neighbor's subsurface, but he may not lawfully positively invade such subsurface with any of his operations in the attempt to facilitate the capture of oil and gas from such adjoining ground.

CONCLUSION

After this rather cursory survey of the law as developed in various jurisdictions, the following observations seem to be warranted.

At the outset, when these "thorny" problems were presented to the courts for decision, knowledge of the physical occurrence of oil and gas was in its infancy. Neither did the courts at that time remotely anticipate the overwhelming importance in human affairs that these natural resources would assume. Without giving the subject very searching analysis, these courts found the solution comparatively easy by holding that these minerals should be treated as solid minerals had been and by applying the maxim *ejus est solum*, the long recognized cornerstone of the common law of real property. For general purposes this maxim had served excellently well and had afforded an easily applicable and logical measure for most private rights in land. However, like all such generalizations, it is unwise to apply them too literally and to all situations. The physical impossibility of determining "who owns what" when it comes to measuring and allocating the property in these hidden deposits of oil and gas, especially when they have been disturbed by human intervention and are in a state of flux, should have given the courts pause and caused them to recognize that property so situated and liable to escape capture by the surface owner in whose land they happen to be for the time being, properly belongs to a negative community, the property of no one until captured and reduced to physical possession, and for which holding there was ample precedent.

Summers construed Callahan v. Martin and Dabney Corp v. Walden, as so holding, for he cites these cases (*op. cit. supra* note 8, vol. I, 346-347) as authority for the statement that "In California and Oklahoma, where the courts adhere to the view that *a landowner has a property interest in oil and gas under his land* but does not own them in the sense that he owns the surface or solid minerals...." (italics added) A conveyance creating a separate interest in the oil and gas does not give ownership of the oil and gas, but an interest in the nature of a *profit a prendre*. 
The doctrine of absolute ownership and dominion of everything situated vertically beneath easily measured and identified surface areas was, as we have seen, accepted in many jurisdictions, even though some of the judges in those jurisdictions had foresight enough to point out and anticipate its shortcomings. It was not long before the absolute ownership theory had to be modified because it ran head on into the irreconcilable fact that this subterranean property over which the surface owner was said to have "absolute dominion" was being rapidly captured and possessed by adjoining owners who, theretofore, had had no title to it on any conceivable theory except that of the possibility of future fortuitous capture. The courts which had adopted the ownership in place doctrine were then forced to modify their first impressions and admit that while the ownership was still absolute as long as the oil and gas had not migrated and remained beneath a particular tract, it was nevertheless a qualified ownership, in that title to such absolutely owned oil and gas might be lost to another, without legal redress, if that other person happened to be more diligent or fortunate in prosecuting his mining operations. This qualified ownership doctrine, of necessity, thus came to recognize and accept one of the fundamental features of the negative community or non-ownership doctrine—namely, that, after all, the oil and gas lawfully belongs to those who have the ability and first capture them. With this fundamental modification of the ownership in place theory, the two theories, for most practical purposes, are not as far apart as they started out to be. As noted, many states have followed Pennsylvania's lead and still cling to the ownership in place theory.

With Indiana first to announce the negative community property theory, an almost equal number of states have broken away from the rigid common law concept and now accept the non-ownership rule. This is all the more remarkable, because, not so long ago, Indiana was recognized as alone in adopting that view. However, the "inherent cogency of that reasoning," to use the descriptive words of Justice White in another case, and also Justice White's own forceful and convincing presentation of the doctrine in Ohio Oil Co. v. Indiana, have more latterly influenced many other jurisdictions to fall in line with Indiana.

California furnishes the outstanding example. There is no gainsaying the fact that for upwards of thirty years (1903 to 1933) the courts of California were more or less definitely committed to the

168 Farrell v. Lockhart (1908) 210 U. S. 142, 146.
Pennsylvania view. There were some expressions to the contrary, but, taken as a whole, the law on the subject as expounded in the California decisions predominantly favored the ownership in place idea. It speaks well for the progressiveness of the California Supreme Court that, when confronted with the unpardonable wastage that was taking place in the newly discovered fields of oil and gas in Southern California, it reviewed the entire subject in extenso, treating it as if it were a matter of first impression. After having had the advantage of surveying the entire field of the law on the subject, it selected that viewpoint which seemed to it best adapted to and consistent with the critical situation confronting it. Justice White's masterly opinion in Ohio Oil Co. v. Indiana had much to do with the final result, as it has had in other jurisdictions where this and similar questions have arisen. No one will claim that the non-ownership doctrine is perfect. Its adoption has compelled the California courts to revise many of their previously announced decisions and theories regarding property rights of lessees of oil and gas lands and the rights of assignees of percentage and royalty interests, but a consistent body of law on these subjects is now being developed, largely because the recently accepted fundamental theory of ownership applicable to these fugacious and migrating substances conforms more nearly to their true physical character.

167 The California Supreme Court had already taken a similar progressive attitude toward property rights of overlying owners where subterranean percolating waters were involved, as has already been noted. In Katz v. Walkinsbaw, that court, reasoning along similar lines regarding a subject of property with similar physical characteristics, came to an identical conclusion respecting the nature of such rights.