

# Oil and Gas Drainage

by William Patric and Peter Kakela, Department of Resource Development

***"If I think my oil & gas is being drained by a neighbor's well; can I stop it?" The answer is: "Usually, but not always ..."***

The issue of drainage is often raised by landowners involved in leasing oil and gas rights. But while drainage questions can prove complex and may present significant problems, its occurrence without compensation is rare in Michigan. In essence, this is because if unleased landowners believe a neighboring well is drawing hydrocarbon resources away from their property, they will take steps to get their acreage leased and commence their own extraction effort. And if the land is already under lease, legal provisions generally ensure that the lessee (leasing petroleum company) not allow drainage loss; usually requiring that a new well be drilled to prevent such drainage by an adjacent producing unit.

This bulletin explains the general concept of drainage and shows how lessors (owners of oil and gas rights who enter into a lease) are normally protected from such problems. The exceptions to this rule, where landowners have no recourse from drainage losses, will also be discussed.

## The Rule of Capture

Unlike solid minerals, it is because oil and gas flow through rock formations (like water through sand), that drainage can become an issue. Thus, it is possible for one well to pump oil or gas away from an adjacent tract. Such an occurrence is entirely legal, based on the common law concept known as "The Rule of Capture", which specifies:

... the owner of a tract of land acquires title to the oil and gas which he produces from wells on his land, though part of the oil and gas may have migrated from adjoining land (1).

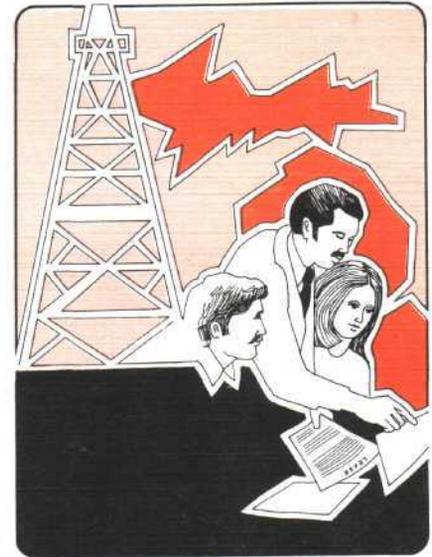
The rule of capture has developed, in part, because the original ownership of these shifting resources is nearly impossible to establish, and therefore assessing appropriate compensation to possible previous owners becomes even harder. Thus, oil, and to a greater extent gas, are

... in common with animals, and unlike other minerals; they have the power and tendency to escape without the volition of the owner ... They belong to the owner of the land, and are part of it, so long as they are on or in it, and are 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 (2).

Therefore, it is up to landowners to protect their mineral interests by getting their property leased and developed. In most cases this is not difficult, for if such land is near a new oil or gas discovery and still not leased, several oil company representatives are likely to be interested in leasing this "prime" acreage.

## Offset Wells

It is one thing to get land leased, but quite another thing to initiate drilling on that land in order to physically remedy a drainage problem. If



competing parties have leased adjacent tracts, your lessee should be eager to capture a portion of the returns.

But what happens when the same lessee holds the leases on adjoining tracts? Where one pool underlies several different lease units, it is obviously cheaper for the lessee and the oil company he represents to drill as few wells as possible to develop the pool. What ensures that the other lessors in the pool will be able to reap some of the returns from production? Michigan courts recognize an implied covenant in any oil and gas lease "... to protect the leased premises against drainage by wells on adjoining lands." As J. A. Domalgalski explains in the *Michigan State Bar Journal*:

... with the underlying purpose of the oil and gas lease as its basis, the courts, in carrying out the intent of the parties, have developed [this] concept which implies certain duties ... not specifically covered by the express provisions of the oil and gas lease (3).

This covenant results in the mandatory provision of "offset wells" by lessees on any production unit which is part of a producing hydrocarbon pool. These offset wells, drilled according to Department of Natural Resources spacing orders, are wells drilled on locations adjacent to units already producing, thereby "offsetting" drainage caused by the original well. It is this legal duty to drill offset wells that typically

provides the physical remedy to protect any leased landowner from drainage.

### Production Units and Drainage

Regulations have been established to reduce questions as to whether a given tract of land is geologically connected to a productive pool. The Department of Natural Resources establishes production units that are usually 40 to 80 acres in size, but sometimes as large as 640 acres. Only one well can be drilled on a production unit, but all parties owning leased rights within that unit share proportionately in any oil and gas produced. The size of production units is based on local geology and effective withdrawal of the resources. Usually production units are large enough to prevent any unjust drainage from land outside the unit for most of the geological formations in Michigan. (See *Oil and Gas Facts #1* for additional information on the "pooling" of lands to develop production units.)

In cases where a leased tract borders a producing pool and drainage claims are questioned, it is the landowner's responsibility to prove that losses are occurring.<sup>1</sup> Bringing a convincing claim to court against the financial resources and geologi-

cal expertise of the petroleum company holding the lease may be very difficult.

State law does offer an opportunity to petition the Supervisor of Wells with drainage grievances. As provided in Act 197, P.A. 1959, any interested lessor "... may file petition with the supervisor requesting an order for the unit operation of a pool ... or parts thereof" (4). Among other things, the petition must include "... a recommended plan of unitization applicable to the proposed unit area which the petition considers fair, reasonable, and equitable" (5).

Where landowners do appear to have credible arguments in such disputes, "the little guy" has been known to receive the benefit of the doubt, thereby requiring his lessee to drill an offset well. It is also possible that economic compensation may be agreed to as opposed to the drilling of an expensive well that may prove only marginal.

### Unpreventable Drainage

There have been cases in Michigan where landowners, clearly in

<sup>1</sup>When the State of Michigan leases state-owned mineral-rights, it is not required to prove drainage, but has reserved the right to require lessees to either drill an offset well, commence payment of commensurate royalties within 60 days, or surrender that portion of the lease suspected of being drained. This is language built into the state's lease.

contact with a producing pool of oil or gas, have not been able to lease such acreage and, being unable to afford the costs of drilling a well themselves, have had a valuable resource drained from beneath their property. Such situations have arisen where the vast majority of the acreage in a producing field is leased, but a small portion of the field (five acres, for example) didn't fall within a production unit.

To the unleased landowner experiencing the consequences of the rule of capture, the financial loss associated with this drainage will seem high. But to a lessee representing an oil company — the returns on the cost of drilling a well into a tiny portion of the developed field would prove only marginal at best. Then, the landowner has no remedy available to the discouraging drainage problem, but this is a rare circumstance. It can generally be stated that the "laws" of either the courts or economics will usually mitigate problems of oil and gas drainage.

### References

1. Domalgalski, J. Andrew, "Oil and Gas Lessee's Rights and Duties", *Michigan State Bar Journal*, March 1970, p. 16.
2. *Ibid.*
3. *Ibid.*
4. State of Michigan Act 197, P.A. 1959, 319.354.
5. *Ibid.*

MICHIGAN STATE UNIVERSITY



MSU is an Affirmative Action/Equal Opportunity Institution. Michigan 4-H — Youth educational programs and all other Cooperative Extension programs are available to all without regard to race, color, national origin, or sex.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, East Lansing, MI 48824.

This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by the Cooperative Extension Service or bias against those not mentioned. This bulletin becomes public property upon publication and may be reprinted verbatim as a separate or within another publication with credit to MSU. Reprint cannot be used to endorse or advertise a commercial product or company.

1P-5M-3:82-UP Price 15 cents. Single copy free to Michigan residents.

O-13541