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SIXTY MINUTES WITH AN OILNGASSER

Thomas A. Daily
SIXTY MINUTES WITH AN OILNGASSER¹

AN OVERVIEW OF OIL AND GAS LAW

BY THOMAS A. DAILY²

INTRODUCTION AND CAVEAT

About thirty years ago my partner, Jim West, needed help. Jim was one of Arkansas’ first and finest oil and gas lawyers. He was a very busy man when, without much warning, a minor oil boom banged. “Oil and Gas,” actually gas, had been a component of the Fort Smith economy most of that century but, for the first time, there was more oil and gas work to do than even Jim could keep up with.

I had learned to read abstracts and write title opinions addressed to banks making mortgage-secured loans, but I was not exactly filling the firm’s coffers with gold. I was underemployed, at least by Jim West’s standards. That gentle man’s executive decision that day changed my life, but I would not know that until much later. I probably was not his first choice for the assignment. More likely, I was his only hope.

My new job was to create a “division order” title opinion covering a recently completed gas well. The project required allocating the cash proceeds of the sale of gas from that well among all entitled owners within its drilling and production unit, a 640 acre governmental section. I was to read thousands of pages of the thirty or so abstracts which the client had borrowed from landowners, covering every separate tract in the section, as well as a giant supplemental abstract bringing all of those abstracts up

¹A weird bird.

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to date. I then was to then write a title opinion covering the whole unit, complete with schedules setting out every owner’s right to receive proceeds. Those were to be in decimal form, rounded to a mere eight decimal places. All those decimals, when added together, had to perfectly total the number one\textsuperscript{3} – no more, no less.

It took about three weeks but, miraculously, I got it done. Finishing that job afforded the same sense of perverse satisfaction that comes from a successful jail break. Still, it was a job which I was paid to do. Indeed, I was paid noticeably better than I was then accustomed. I wanted to be paid like that again; Pavlov in action. Meanwhile, the zookeepers were ecstatic. A rare oilingasser egg had hatched.

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That was a long time ago. I have been doing all aspects of oil and gas legal work ever since. Today I do almost nothing else. In thirty years I’ve learned about half there is to know. I suspect that sobering truth is the reason I do not have a lot of competitors. The learning curve for this job will take a lifetime, if I live a long and mostly productive life.

These days, I spend a lot of time presenting CLE articles on complex mineral law
subjects to audiences of oil and gas lawyers, landmen, division order analysts, geologists, petroleum engineers, geophysicists and other industry professionals. This is not one of those. Instead, we will stay on a basic level and try to provide mainstream lawyers with some guidance when mineral law considerations appear.

Here is a word of warning. Don't try this at home, at least before you have more training. Any overview is, by definition, overly simplistic. There are a lot more rules than we have time for, and there are many exceptions to the few rules which we do have time to cover. There are even plenty of exceptions to those exceptions. Still, we must start somewhere. To begin with, oil and gas are “minerals.”

WHAT IS A MINERAL?

4Landmen are oil and gas industry professionals who have legal or paralegal training in oil and gas property law. Some, but certainly not all, landmen are attorneys. Most belong to a national professional association, the American Association of Petroleum Landmen (A.A.P.L.). A.A.P.L. sponsors a C.L.E. program which, if successfully completed (there is a difficult test), degrees a landman as a Certified Professional Landman (C.P.L.). Many landmen, including some of the most successful, are women. Landmen deraign title. They also prepare and negotiate oil and gas leases and other oil and gas contracts.

5Division Order Analysts are landmen (many belong to A.A.P.L. (some are C.P.L.'s)) who specialize in royalty disbursement issues such as conveyancing and rules of descent and distribution. Their industry-specific professional organization is the National Association of Division Order Analysts (N.A.D.O.A.).

6Geologists are scientists who understand (or at least theorize about) the history of the earth’s crust and subsurface. Based upon their knowledge, instinct and serendipity, geologists identify and map the potential subsurface reservoirs of oil and/or gas.

7Petroleum engineers are scientists who are experts in the science of drilling and completing wells (drilling engineers) and measuring reservoir characteristics such as storage, volume and oil and/or gas in place (reservoir engineers).

8Geophysicists are scientists who use seismology (sonic imaging) to obtain, interpret and map seismic geological information.
That seems like a simple enough question. According to Webster “mineral” means:

...a solid homogeneous crystalline chemical element or compound that results from the inorganic processes of nature; broadly: any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground...9

Legally, though, more is often required. Everything within the earth is not mineral. Dirt is not. Neither is ordinary rock, even if usable as building stone or construction material.10 In order to constitute a mineral, a substance must not only have some commercial value, it must be “rare or exceptional.” Thus, an exclusion of insurance coverage for “minerals ownership” in a title insurance policy does not exclude the right to remove limestone from the land.11

Both mineral and non-mineral substances within the earth may be owned separately from the surface. A grant or reservation of coal or of oil and gas will cause those minerals to be owned differently from the surface. Indeed, such a grant or reservation of other things like “sand and gravel” or “limestone,” even though those are probably not minerals, will create separately owned severed estates as to those substances.

Were that not complicated enough, those severed estates can be further subdivided into components which can themselves be separately owned. For example,


10Southern Title Ins. Co. v. Oiler, 268 Ark. 300, 595 S.W.2d 681 (1980).

11Id.
a mineral owner may convey a “royalty interest,” while retaining the “executory right” to that interest. The “executory right” owner has the right to develop the mineral interest, or to execute oil and gas leases, binding both owners, and to receive all of the lessor’s benefits from such leases, except for the conveyed royalty. Also, different minerals can be differently owned. The oil and gas owner may be different from the coal owner. Both of these may be different from the bauxite owner, and so forth.

Most of Arkansas’ mineral severance cases did not involve such grants or reservations of specific substances. Rather, they involved generic grants or reservations of “minerals.” For such a generic grant or reservation to effectively sever a particular mineral substance, that substance must have been commonly recognized in legal and commercial usage to be valuable as a mineral at the time and place of its grant or reservation.

You just read a statement of the Arkansas Strohacker doctrine, named after the case of Missouri Pacific R. R. Co., Thompson, Trustee v. Strohacker, which held that deeds executed in 1892 and 1893 in Miller County reserving “all coal and mineral deposits” did not reserve natural gas, which became recognized to be a commercially extractable mineral in Miller County several years later. The court said:

If the reservations had been made at a time when oil and gas production, or explorations, were general, and legal or commercial usage had

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12 Also called a “non-participating interest.”

13 One which does not name the substance specifically, as “all coal and mineral deposits” when the substance at issue is natural gas.

14 202 Ark. 645, 152 S.W.2d 557 (1941).
assumed them to be within the term 'minerals,' certainly appellant should prevail.\textsuperscript{15}

* * *

In most of the decisions holding that oil and gas were included in reservations of minerals, there were circumstances denoting such intent; and, where purposes of the parties can be ascertained from a writing or from general customs, and effect can be given such intentions without impinging a settled rule of law, it should be done.\textsuperscript{16}

The Arkansas Court has reaffirmed *Strohacker* repeatedly as it adjudicated natural gas ownership throughout the state on an apparent county-by-county basis.\textsuperscript{17} It has applied the doctrine to other minerals, as well.\textsuperscript{18} “What is a mineral?” is a very complicated question indeed.

**PROBLEMS WITH SEVERING MINERALS - CAN YOU SAY “DUHIG”?**

Listen carefully. Here is the situation. Your client, McDonald, has a farm and on that farm he has some gas. Actually, technically, McDonald owns the surface of the farm but only one-half of the oil, gas and other minerals. The other one-half mineral interest is a severed mineral interest belonging to the descendants of one B. C. Lee, a carpetbagger who made a swing through Arkansas during the depression, buying

\textsuperscript{15}Missouri Pacific R.R. Co., Thompson, Trustee v. Strohacker, supra 202 Ark at 650.

\textsuperscript{16}Missouri Pacific R.R. Co., Thompson, Trustee v. Strohacker, supra. 202 Ark at 653.

\textsuperscript{17}Brizzolara v. Powell, 214 Ark. 870, 218 S.W.2d 728 (1949) (Johnson County); Stegall v. Bush, 228 Ark. 632, 310 S.W.2d 251 (1958) (Union County); Singleton v. Missouri Pacific RR Co., 205 F.Supp. 113 (W.D. Ark. 1962) (Pope County); Ahne v. The Reinhart & Donovan Co., 240 Ark. 691, 401 S.W.2d 565 (1966) (Logan County).

mineral interests from the impoverished natives for next to nothing.

McDonald decides to sell the farm, finds a buyer, Wilson, and hires you to draft the deed. He wants to retain his interest in the minerals. Watch out. There is a trick to this. Remember, one-half of the minerals already belongs to Lee. If your warranty deed reads: "But it is expressly agreed and stipulated that the grantor hereinafter retains an undivided one-half interest in and to all mineral rights or minerals of whatever description in the land," you have a problem – a Duhig problem. In 1940 the Texas Supreme Court decided the landmark case of *Duhig v. Peavy-Moore Lumber Co.* That decision established the famous *Duhig* Rule. The deed quoted above purports to grant a greater mineral interest than can be conveyed, because of Lee's prior mineral reservation. Under the *Duhig* rule the warranty prevails over the reservation. Lee has one-half of the minerals. You have helped McDonald convey the other one-half mineral interest to Wilson. One-half plus one-half equals one whole. McDonald has reserved nothing. In order to effectively reserve the one-half mineral interest not owned by the Lees, McDonald needed to reserve all of the minerals or, alternatively, to reserve a one-half interest "in addition to previously reserved minerals."

The Arkansas Supreme Court adopted the *Duhig* Rule in *Peterson v. Simpson.* Different explanations exist for the *Duhig* Rule. In Arkansas, however, the

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19 McDonald.

20135 Tex. 503, 144 S.W.2d 878 (1940).

21 And warrants.

22286 Ark. 177, 690 S.W.2d 720 (1985).
reasoning is clear. The rule derives from the warranty. The Arkansas court specifically said so in Peterson, distinguishing its prior holding in Hill v. Gilliam that Duhig was inapplicable in the context of a quit-claim deed.

**THE OIL AND GAS LEASE - WHAT YOU GIVE AND WHAT YOU TAKE**

The most important oil and gas instrument is a document called an "Oil and Gas Lease." That document defines the relationship between a mineral owner and the prospector whose risk capital and expertise will find and produce oil and/or gas from the property. The oil and gas lease is poorly named. It is more than a mere lease. It is a conveyance of a determinable fee in the mineral estate, conditioned upon the timely establishment of commercial production and the continuation of that production. It is a complicated document. Let us examine its typical provisions:

1. **The Granting Clause:** That Lessor, for and in consideration of the sum of Ten and more Dollars ($10.00 & more) in hand paid, and of the covenants and agreements hereinafter contained to be performed by the Lessee, does hereby grant, demise, lease and let unto said Lessee the hereinafter described land, for the purpose of carrying on geological, geophysical and other exploration work, and the drilling and operating for, producing and saving all of the oil, gas, and other hydrocarbons, within all that certain tract of land, together with any reversionary rights therein, situated in the County of ______________, State of Arkansas, and described as follows:

   containing ____________ acres, more or less, and also, in addition to the above-described land, any and all strips or parcels of land, other than those constituting regular governmental subdivisions, adjoining or contiguous to the above described land

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23 284 Ark. 383, 682 S.W. 2d 737 (1985).

24 The lessor, also called the "royalty owner."

25 The lessee, also called the "working interest owner."
and owned or claimed by Lessor, all of the foregoing land being hereinafter referred to as "leased premises." It is the intention of the Lessor herein that the Leased premises cover and include all land owned or claimed by Lessor in the above numbered governmental section or sections together with any and all accretions thereto whether or not herein accurately and completely described.

Note the broad extent to which that granting clause authorizes surface operations. That will become important later in this article. Also, note the "Mother Hubbard" language in the description of the "leased premises." It is intended to protect the lessee when its landman incorrectly describes the lessor's tract. Given the state of record title in many parts of Arkansas, that is not uncommon.

2. The Term Clause: This lease shall remain in force for a primary term of ________ years and as long thereafter as oil, gas or other hydrocarbons are produced from said leased premises or from lands pooled therewith.

Potentially, an oil and gas lease has two terms, the primary term and the secondary term. If the lessee establishes commercial production during the primary term, the lease will continue in force indefinitely until production ceases. The life of the lease after the primary term is called its secondary term.

An Arkansas statute limits, somewhat, the extent to which non-productive lease lands can be held along with productive lease lands:

(a) The term of an oil and gas, or oil or gas, lease extended by production in quantities in lands in one (1) section or pooling unit in which there is production shall not be extended in lands in sections or pooling units under the lease where there has been no production or exploration.

(b) This section shall not apply when drilling operations have commenced on any part of lands in sections or pooling units under the lease within one (1) year after the expiration of the primary term, or within one (1) year after the completion of a well on any part of lands in sections or pooling units under the lease.
(c) The provisions of this section shall apply to all oil and gas, or oil or gas, leases entered into on and after July 4, 1983.26

This statute is poorly drafted and thus ambiguous. Still, its apparent intent is to require the lessee to drill at least one well per year after the expiration of the primary term, until all lands covered by the lease have been explored.

Also, “production” sufficient to perpetuate the lease must be in commercial paying quantities.27 A lessee may not hold a lease for speculative reasons by producing his well at a loss.

3. **The Oil Royalty Clause:** Lessee shall deliver, free of cost, to Lessor at the well or to the credit of Lessor in the pipeline to which the well may be connected, the equal one-eighth (1/8) part of all oil and other liquid hydrocarbons produced and saved from the leased premises or, at the Lessee’s option, to pay Lessor for such one-eighth (1/8) royalty the market price at the well for such oil and other liquid hydrocarbons of like grade and gravity prevailing on the day such oil and other liquid hydrocarbons are run from the lease stock tanks.

4. **The Gas Royalty Clause:** Lessee shall pay Lessor one-eighth (1/8) of the proceeds received by Lessee at the well for all gas (including all substances contained in such gas) produced from the leased premises and sold by Lessee. If such gas is used by Lessee off the leased premises or used by Lessee for the manufacture of casing head gasoline or other products, Lessee shall pay Lessor one-eighth (1/8) of the prevailing market price at the well for the gas so used.

Both royalty clauses are appropriate because oil and gas are marketed differently. Oil is difficult to transport. Thus, it is usually sold to the local refinery. The refiner often buys the shares of both the lessor and lessee and pays each separately. Most gas is sold through a network of interstate pipelines to purchasers located far

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away. The identity of those purchasers changes frequently so it is impractical for the
purchasers to pay the royalty. Thus, in gas sales, the lessee sells the entire product
and then accounts to the lessor for her royalty.

The 1/8 royalty is sometimes negotiable. Typically a lessor is paid a cash bonus
to sign the lease. If the lessor is willing to accept a smaller bonus, she may be able to
get a 3/16 or 1/6 royalty. If she will forego the bonus altogether, she may be able to get
1/4.

5. The Shut-In Clause: If a well capable of producing gas or gas and gas-condensate
in paying quantities located on the leased premises (or on acreage pooled or
consolidated with all or a portion of the leased premises into a unit for the drilling or
operation of such well) is at any time shut in and no gas or gas-condensate therefrom is
sold or used off the premises or for the manufacture of gasoline or other products,
nevertheless such shut-in well shall be deemed to be a well on the leased premises
producing gas in paying quantities and this lease will continue in force during all of the
time or times while such well is so shut in, whether before or after the expiration of the
primary term hereof. Lessee shall use reasonable diligence to market gas or gas-
condensate capable of being produced from such shut-in well but shall be under no
obligation to market such products under terms, conditions or circumstances which, in
Lessee’s judgment exercised in good faith, are unsatisfactory. Lessee shall be
obligated to pay or tender to Lessor within 45 days after the expiration of each period of
one year in length (annual period) during which such well is so shut in, a royalty of One
Dollar ($1.00) per net royalty acre retained hereunder as of the end of such annual
period; provided that, if gas or gas-condensate from such well is sold or used as
aforesaid before the end of any such annual period, or if, at the end of any such annual
period, this lease is being maintained in force and effect otherwise than by reason of
such shut-in well, Lessee shall not be obligated to pay or tender, for that particular
annual period, said sum of money. Such payment shall be deemed a royalty under all
provisions of this Lease. Such payment may be made or tendered to Lessor or to
Lessor’s credit in the ______________________ Bank at ____________________________ or its
successors, which Bank and its successors are the Lessor’s agent and shall continue
as the depository for any and all sums payable under this Lease regardless of changes
of ownership in said land, or in the right to receive royalty hereunder. Royalty
ownership as of the last day of each such annual period as shown by Lessee’s records
shall govern the determination of the party or parties entitled to receive such payment.
Since gas can only be transported by pipeline, it is sometimes impossible to begin selling immediately from a new well. Pipeline problems or market conditions can also cause suspension of sales from older wells. Under those circumstances there has been concern\textsuperscript{28} that there is lack of "production" required to perpetuate the lease into a secondary term. The Shut-In Clause solves that problem for the Lessee.

6. **The Pooling Clause**: Lessee hereby is given the right, at its option, at any time and whether before or after production, to pool for development and operation purposes all or any part or parts of leased premises or rights therein with any other land in the vicinity thereof, or with any leasehold, operation or other rights or interests in such other land so as to create units of such size and surface acreage as Lessee may desire but containing not more than forty-five (45) acres; provided, however, a unit may be established hereunder containing not more than 640 acres plus 10% acreage tolerance if unitized only as to gas rights or only as to gas and gas-condensate, except that units pooled for oil or oil and gas or for in conjunction with the repressuring, pressure maintenance, cycling and secondary recovery operations or any one or more of same may be formed to include not more than 320 acres. If at any time larger units are required under any then applicable law, rule, regulation or order of any governmental authority for the drilling, completion or operation of a well, or for obtaining maximum allowable from any contemplated, drilling or completed well, any such unit may be established or enlarged to conform to the size specified by such law, rule, regulation or order. Each unit shall be created by Lessee's recording a Declaration of Pooling containing a description of the unit so created, or by order of the Arkansas Oil and Gas Commission.

Operations on any part of any lands so pooled shall, except for the payment of royalties, be considered operations on leased premises under this lease, and, notwithstanding the status of a well at the time of pooling, such operations shall be deemed to be in connection with a well which was commenced on leased premises under this Lease. The term "operations" as used herein shall include, without limitation, the following: Commencing, construction of roadways, preparation of drillsite, drilling, testing, completing, reworking, recompleting, deepening, plugging back, repressuring, pressure maintenance, cycling, secondary recovery operations, or the production of oil or gas, or the existence of a shut-in well capable of producing oil or gas.

There shall be allocated to the portion of leased premises included in any such pooling such proportion of the actual production from all lands so pooled as such

\textsuperscript{28}Primarily because of Texas case law. See, e.g., Gulf Oil Corp. v. Reid, 337 S.W.2d 267 (Tex. 1960).
portion of leased premises, computed on an acreage basis, bears to the entire acreage of the lands so pooled. The production so allocated shall be considered for the purpose of payment or delivery of royalty to be the entire production for the portion of leased premises included in such pooling in the same manner as though produced from such portion of leased premises under the terms of this Lease.

The purpose of the pooling clause is to permit the lessee to combine his leases into a multi-lease block for development and to perpetuate all such leases with a well producing from anywhere in the block. The pooling clause provides for apportionment of royalties. As is explained later in this article, most pooling in Arkansas is accomplished by field rules adopted by the Arkansas Oil and Gas Commission,\(^\text{29}\) rather than under the pooling clause of the lease.

7. **The Lesser Interest Clause:** If the Lessor owns a lesser interest in the above described land than the entire and undivided mineral estate therein, then the royalties herein provided for shall be paid to the said Lessor only in the proportion which his interest bears to the whole and undivided mineral estate.

This clause is necessary because there is always a lawyer, somewhere, who is willing to argue that each owner of a 1/10 interest in the minerals under a tract is entitled to receive a full 1/8 royalty. Of course that would result in a 10/8 total royalty obligation, leaving the lessee in a bit of a hole.

8. **The Assignment Clause:** If the estate of either party hereto is assigned, and the privilege of assigning in whole or in part is hereby expressly allowed, the covenants hereof shall extend to their heirs, executors, administrators, successors or assigns, but no change in the ownership of the land or the minerals in and under the same or assignment of royalties shall be binding on Lessee unless Lessee shall have been furnished ninety (90) days before payment hereunder of such royalties, with certified copies of recorded instruments showing evidence of title.

This clause first permits either party to assign the lease and then protects the

\(^{29}\)Hereinafter “A.O.G.C.”
lessee from the claims of assignees of the lessor until he is given proper notice of the
lessor's assignment. The requirement of certified copies is a little harsh, but it is a very
common one.

9. **Miscellaneous Surface Issues:** Lessee shall have the right to use, free of cost,
gas, oil and water found on said land for its operations, except water from the wells of
the Lessor. When required by the Lessor, the Lessee shall bury its pipelines below
plow depth and shall pay reasonable damages for injury by reason of its operations to
growing crops on said land. No well shall be drilled nearer than 200 feet to any house
or barn or other structure on said premises as of the date of this Lease without the
written consent of the Lessor. Lessee shall have the right at any time, during or after
the expiration of this lease, to enter upon the property and to remove all machinery,
fixtures, and other structures placed on said premises, including the right to draw and
remove all casing, but the Lessee shall be under no obligation to do so.

This clause, which is self explanatory, is designed to deal with several surface
issues. Note that the lessee must pay for damages to growing crops. As explained
later in this paper, there is no other obligation for a lessee who acts reasonably to pay
extra when he uses the surface to drill a well.

10. **Saving the Lease by Commencing Operations:** Notwithstanding anything
contained in this Lease to the contrary, it is expressly agreed that if the Lessee shall
commence operations as provided herein at any time while this Lease is in force, this
Lease shall remain in force and its terms shall continue so long as such operations are
prosecuted, and if production results therefrom, then as long as production is
maintained.

11. **Saving the Lease by Recommencing Operations:** If, after the expiration of the
primary term of this Lease, production on the leased premises should cease from any
cause, this Lease shall not terminate provided Lessee commences operations for
additional drilling or reworking within sixty (60) days from such cessation, and this
Lease shall remain in force during the prosecution of such operations and if production
results therefrom, then as long as production is maintained.

These two clauses save the lessee who commences operations on the last day
of the primary term and then continues until production results. Likewise, when
production from the well ceases, the lessee has sixty days to commence operations to fix the well or drill another well and production is ultimately restored. Commencing operations does not require actual drilling. The lessee must merely start and then diligently pursue those activities on the land which lead to the drilling of the well.\(^{30}\)

It is important to harmonize the Recommencing Clause with the lease’s Shut-In Clause discussed above. The lessee may only perpetuate his lease by payment of shut-in royalty if the well is shut in for lack of a favorable market. The lessee cannot “shut in” a broken well, pay shut-in royalty, and thus hold on to the lease.

12. **The Release Clause:** Lessee may at any time surrender or cancel this Lease in whole or in part by delivering or mailing such release to the Lessor, or by placing such release of record in the proper County. In case this Lease is surrendered or canceled as to only a portion of the acreage covered thereby, then all payments and liabilities thereafter accruing under the terms of this Lease as to the portion canceled shall cease. As to the portion of the acreage not released, the terms and provisions of this Lease shall continue and remain in full force and effect for all purposes.

The important thing about the Release Clause is that it allows the lessee to release the lease as to part of the lands covered and retain the rest, with a proportionate reduction of the lessee’s payment obligations.

13. **The Force Majeure Clause:** All provisions herein, express or implied, shall be subject to all Federal and State Laws and the orders, rules and regulations of all governmental agencies administering the same, and this Lease shall not in any way be terminated wholly or partially, nor shall the Lessee be liable in damages for failure to comply with any or the express or implied provisions hereof if such failure accords with any such laws, orders, rules or regulations. Should the Lessee be prevented during the last year of the primary term hereof from drilling a well hereunder by the order of any constituted authority having jurisdiction, or if Lessee shall be unable during said period to drill a well hereunder due to the equipment necessary in the drilling thereof not being available for any cause, the primary term of this Lease shall continue until one year

\(^{30}\)Haddock v. McClendon, 233 Ark. 396, 266 S.W.2d 74 (1954).
after said order is suspended or said equipment is available.

14. The Warranty Clause: Lessor hereby warrants and agrees to defend the title to the land herein described and agrees that the Lessee, at its option, may pay or discharge in whole or in part any taxes, encumbrances, or other liens existing, levied or assessed against the above described lands, and in the event Lessee exercises such option, it shall be surrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty accruing hereunder to the amount of any such encumbrance, tax or other lien paid by Lessee.

15. The Adverse Claims Clause: Lessee hereby is given the right to acquire for its own benefit, deeds, leases, or assignments covering any interest or claim in leased premises which Lessee or any other party contends is outstanding and not covered hereby and even though such outstanding interest or claim be invalid or adverse to Lessor. In the event the validity of this Lease be disputed by Lessor or by any other person, then, for the period such dispute remains indisposed of: Lessee shall be relieved of all obligations hereunder to explore or develop leased premises; all royalties or other payments which would otherwise accrue shall be suspended for such period; and this Lease automatically shall be extended for an additional period equal to the duration of such period.

16. Release of Dower and Curtesy: It is specifically understood that each wife and husband named herein and executing this Lease, for the consideration above set out and the covenants and agreements contained in this Lease to be performed by the Lessee, do hereby release and relinquish unto said Lessee all right of dower, curtesy and homestead in and to the lands covered hereby for the purpose of this Lease.

17. Successors and Assigns Clause: This Lease and all its terms, conditions and stipulations shall extend to and be binding on all successors in title of said Lessor or Lessee.

These clauses are typical clauses found in various real property instruments and should not require additional explanation.

IMPLIED COVENANTS - THE REST OF THE LEASE STORY

The oil and gas lease, like an insurance policy, is an industry drafted document. Not surprisingly courts have refused to allow industry lessees to have their unfettered way with lessors. Recognizing that the primary consideration flowing to the lessor is
royalty income, courts have imposed mandatory implied covenants upon the oil and gas lessee. There are two alternative theories behind such "implied covenants":

1) The covenants are implied in fact. These are concepts so basic that, while intended, they were so obvious it was unnecessary to include them in the writing; or,

2) The covenants are implied in law. The court doesn't care what the writing says. Public policy requires these covenants.

Different courts have given these covenants different names. Regardless, the lessee has the following implied duties:

1) The implied duty to drill sufficient wells to fully develop the lease;\textsuperscript{31}

2) The implied duty to market the product of producing wells on favorable terms;\textsuperscript{32}

3) The implied duty to protect the lease from drainage from offsetting wells;\textsuperscript{33} and,

4) The implied duty to restore the land to the extent reasonably practicable.\textsuperscript{34}

In performing these duties the lessee is held to a standard of competence and good faith known as the "Prudent Operator" standard. This standard is really a sort of specialized version of negligence law's "reasonable man" standard. Our prudent operator is a competent explorer/producer who behaves in good faith. His objective is

\textsuperscript{31}Amoco Prod. Co. v. Ware, 269 Ark. 313, 602 S.W.2d 620 (1980).

\textsuperscript{32}Taylor v. Arkansas Louisiana Gas Co., 793 F.2d 189 (8th Cir. 1986).

\textsuperscript{33}Amoco Prod. Co. v. Ware, supra

\textsuperscript{34}Bonds v. Sanchez-O'Brien Oil & Gas Co., 298 Ark. 582, 715 S.W.2d 444 (1986).
to maximize the value of the lease to both parties by maximizing commercial production. The prudent operator is not required to be perfect.\textsuperscript{35} He is not required to take industry-unacceptable risks. He certainly is not required to violate statutes or rules regulating oil and gas production.

The lessor's remedy for violation of drilling and development covenants is equitable. She may seek cancellation of the lease or, at least, of that part of the lease which the lessee has not yet developed. Even if the equity court agrees with the lessor, it will often decree cancellation only conditionally, giving the lessee a last chance to drill new wells in a relatively short period of time before being stripped of his investment.\textsuperscript{36}

Equitable cancellation is also available for violation of a lessee's duties to market, protect from drainage and restore. Alternatively or additionally, the lessor may be able to prove and recover damages for violation of these covenants.

\textbf{INGRESS AND EGRESS - THE SURFACE OWNER'S NIGHTMARE}

You are sitting in your office when in comes a call from a client who owns a farm just outside of Ozark. She bought the place last year. Like many similar transactions in gas country, your client's deed was limited to surface rights. Oil, gas and all other minerals were reserved by a prior owner and were excluded from coverage by your client's title insurance policy.

It seems the client was down at the farm dreaming of the day she would build her

\textsuperscript{35} Few are when viewed in the light of hindsight.

\textsuperscript{36} See, e.g., \textit{Arkansas Oil and Gas, Inc. v. Diamond Shamrock Corp.}, 281 Ark. 207, 662 S.W.2d 824 (1984).
dream cottage there and retire with a view of the mountains. It was a quiet pastoral scene: a babbling brook, wild flowers in bloom. Suddenly, she noticed an unwelcome new addition to Blackacre. A survey stake. Upon returning to Little Rock she received a certified letter confirming her fears. One of my good clients had selected her pristine home site as its latest drill site.

"Stop them!" she shouts hysterically. "How dare they think they can do this without my permission!" What should be your advice? Take this little quiz:

(1) Tell her she can enjoin the drilling of the well;
(2) Tell her she can recover damages for trespass to her land, perhaps even punitive damages;
(3) Tell her that if the oil company has the permission of the mineral owner she cannot stop the well from being drilled and can only recover damages if she can prove the company exercised its rights excessively or unreasonably.

If you answered (3), go to the head of the class.

A mineral owner who is not also the surface owner has a common law right, the right of "ingress and egress," to use as much of the surface as is reasonably needed to explore for the owned mineral, to produce it and to transport it to market. The ingress and egress right is, in effect, an easement belonging to the mineral owner. Permission from the surface owner is not required. The surface owner is not entitled to payment.

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37 Such permission is included in every standard oil and gas lease form. See the discussion of the oil and gas lease's granting clause above.

38 Diamond Shamrock Corp. v. Phillips, 256 Ark. 886, 511 S.W.2d 160 (1964)
She is entitled to notice that the mineral owner is coming.\textsuperscript{39} That was the reason for the certified letter.

Ingress and egress rights are not unlimited. If the mineral owner or lessee makes unreasonable use of the surface or does unreasonable harm he will be liable for damages.\textsuperscript{40} Because a jury might ultimately decide the reasonableness issue against them, most oil and gas companies are willing to settle the issue by paying modest "surface damages." However, the important lesson is: You cannot stop the well.

\textbf{THE RULE OF CAPTURE - A LICENSE TO STEAL?}

In olden days, as the common law developed, wild game\textsuperscript{41} were important. They provided sport, food and, evidently, some litigation. While the fox roams on my land he is my fox. If you shoot across the fence at him without my permission you have committed a trespass. However, should the fox jump the fence onto your land, you may capture him and thus become his owner for as long as you can contain him.

Hard minerals, such as coal, stay in place until they are mined. If there is coal under your land, it is your coal.\textsuperscript{42} You may mine it, or not, as you choose. Oil and gas, on the other hand, are fugacious\textsuperscript{43} minerals. Like the fox, they are here today, gone tomorrow. Most of us learned in seventh grade science that these substances, being

\textsuperscript{39}A.C.A. § 15-72-203.

\textsuperscript{40}Diamond Shamrock Corp. v. Phillips, supra.

\textsuperscript{41}E.g., foxes.

\textsuperscript{42}Assuming, of course, that you own the minerals or, at least, the coal.

\textsuperscript{43}Apt to wander.
liquid and gaseous, move in response to very predictable and somewhat controllable forces. Let us review.

Gravity pulls matter toward the earth. The greater the density of the matter, the greater gravity's pull. Water is more dense than oil and both are more dense than gas. Therefore, if a subsurface reservoir contains water, oil and/or gas, those substances will be layered, top to bottom, in reverse order.

Gases and liquids move from place to place, but not to escape the hounds. Their movement is in response to pressure differentials. They move from areas of relatively high pressure to areas of relatively low pressure. Were there no gravity, they would continue to move until all surrounding pressures became equal. Gravity will somewhat retard this movement.\(^4\) Again, the more dense the substance, the more it is affected by gravity.

Picture a pin-pricked balloon in extremely slow motion. The cute little gas molecule closest to the hole notices that the pressure to his left, inside the balloon, is higher than that to his right, just outside. Out he pops, free at last, headed for relatively lower pressure. He will stop moving when he is again surrounded by equal pressure. Meanwhile, the next little gas molecule notices the same thing. Bye, bye. Pretty soon most, but not all, of the gas molecules will have escaped. The number which will remain is the number required to keep the pressure inside the pricked balloon equal to that of the atmosphere outside.

\(^4\)Unless, of course, the movement is downward.
Gas in the ground works the same way. A subsurface geologic reservoir may underlie a large area encompassing several separately owned tracts. If a well drilled on my tract penetrates the reservoir, it will provide pressure differential, first at the well itself and, later, depending upon the initial pressure of the reservoir and its permeability, farther away. My well may even drain all the gas from under your neighboring tract. That drained gas may, for a time, be partially replaced by gas which migrated from areas of the reservoir even farther from the well. Eventually, though, if the reservoir is sufficiently permeable, my well will produce all of the recoverable gas from the reservoir.

Guess what? Since it was my well, it was my gas. The fact that it was originally under your land is immaterial. Like the fox, the gas has jumped the fence. That is called the "Rule of Capture."

You don't like what you just read? Do not worry. You have a remedy. Drill yourself a well. You may then get your share of gas, or even more.

There is a problem with this Rule of Capture business. If it costs $500,000\textsuperscript{45} to drill a well which is capable of producing one million MCF\textsuperscript{46} of gas from under ten separately owned contiguous tracts, and if the price of gas is $3.00 per MCF,\textsuperscript{47} that well

\textsuperscript{45}Which is about average.

\textsuperscript{46}Thousand Cubic Feet. One million MCF equals one billion cubic feet. In the Arkoma Basin a well producing that much gas is considered a success.

\textsuperscript{47}Actually, gas is priced on the basis of MMBTU's (one million British Thermal Units). However, the quality of Arkoma Basin Gas is so uniform that one MCF is almost identical to one MMBTU. Thus, the terms are used interchangeably.
will yield a gross income of $3,000,000, or a profit\textsuperscript{48} of $2,500,000. However, if each tract owner protects himself by drilling his own $500,000 well, the owners will collectively lose $2,000,000. In the real world, some of their wells will be better than others. Some lucky well owners may even see a slight profit, but it is obvious that most, if not all, will lose money. What this picture needs is regulation.

**STATE REGULATION - THE RULE OF CAPTURE IS LIMITED**

The oil and gas business is one of the very few industries where regulation is not only advantageous, but a practical necessity. Every significant American oil and gas producing jurisdiction has enacted legislation\textsuperscript{49} designed to prevent waste and protect the correlative rights of the several owners within common reservoirs.

Arkansas' regulatory scheme is administered by the A.O.G.C. The A.O.G.C. promulgates field rules for the various oil and/or gas fields across the Arkansas Arkoma Basin and South Arkansas. These field rules provide for drilling and production units as subdivisions of each field. With a few exceptions, A.O.G.C. rules permit only one well to produce, at any one time, from any separate reservoir, within each drilling and production unit.

Production from each drilling unit is shared among the various working interest and royalty owners proportionate to their respective ownership interests. The costs of drilling, equipping, and producing unit wells are likewise proportionately shared by the

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\textsuperscript{48}Without a discount for time/value.

\textsuperscript{49}Arkansas' conservation statutes originated with Act No. 105 of 1939. They are codified beginning at A.C.A. § 15-71-101.
working interest owners. The A.O.G.C. will designate one of those working interest owners as unit operator.

If unleased mineral owners refuse to execute leases and/or if working interest owners refuse to participate in the cost of drilling the well, the A.O.G.C. will issue an order\(^50\) "integrating" their non-consenting interests. That order will require each non-consenting owner to make an election.

Unleased mineral owners get three options:

1) Lease to the unit operator on terms determined to be fair and reasonable by the A.O.G.C.;
2) Participate in the cost of drilling, equipping and producing the well;
3) Receive a 1/8 royalty on their proportionate interest in the well until and unless the other 7/8 of the well’s revenue equals a sum which is determined as follows: Drilling and equipping costs times X% plus operating costs times 100% ("X" is usually 400% or 500% as determined by the A.O.G.C., to compensate the operator for taking the financial risk of drilling the well).

After this sum is recovered, each non-consenting owner becomes a participant in the well, proportionately entitled to share in future revenue and proportionately liable for future well costs. This opinion is called “going non-consent.”

If an unleased mineral owner fails to affirmatively elect from the above options,

\(^{50}\)After notice and a hearing.
she will be deemed to have selected option one.\textsuperscript{51} If a non-consenting working interest owner fails to affirmatively elect he will be deemed to have gone non-consent.

The A.O.G.C. also protects the correlative rights of owners within adjoining units by regulating the proximity of wells to unit boundaries and regulating the amount of oil or gas which each well can legally produce.

Finally, the A.O.G.C. polices the oil and gas industry. For example, it enforces royalty payment obligations and protects surface owners and the public from health and environmental hazards which might otherwise result from careless drilling or operation of wells. The A.O.G.C. is a remarkable bargain for the taxpayers of Arkansas. Its budget is 100% financed by fees and assessments paid by the industry and receives no general revenue.

**CONCLUSION**

Oil and gas practice, as a specialty, is not for most lawyers. It is a complex mix of ancient real property law and science. Still, many general civil practitioners' clients will occasionally need some oil and gas advice. We have given the surface a little scratch. There is a lot more to learn, but our hour is up.

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\textsuperscript{51}The lease.