

WHAT EVERY KANSAS PRACTITIONER SHOULD KNOW ABOUT
OIL AND GAS LAW

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(NOTE: Although these lease forms are routinely used in the oil and gas business, all such "standard" forms contain serious defects.)

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I. WHY OIL AND GAS LAW?

- A. Recent developments in oil and gas law demonstrate that all attorneys practicing in Kansas (and other major oil and gas producing states) require some basic knowledge concerning the ownership, development, and sale of oil and gas.
- B. Regardless of the nature of your practice, the chances are good you will come in contact with an oil and gas problem. It may be in a family law, banking law, probate, real estate, or some other setting not directly related to "oil and gas law." Nevertheless, the practitioner must be equipped to recognize potential problems associated with the unique body of law governing the oil and gas resource.
- C. Goal of this session is to provide basic information needed to alert practitioners to the more common pitfalls associated with oil and gas law. This will be done, where possible, through an analysis of recent developments in the area to provide a timely review for those already versed in oil and gas law.

II. OIL AND GAS LAW IS NOT "PROPERTY" OR "CONTRACT" LAW

- A. Oil and gas jurisprudence is a mix of property and contract concepts which often generates a rule foreign to property or contract law.
- B. For example, the oil and gas "lease" is a "contract" between the landowner and developer. However, the developer seldom signs the "contract." Instead, it is treated like a conveyance from the landowner to the developer which, under the statute of frauds, only requires the signature of the grantor and acceptance by the grantee.
- C. Special property and contract rules have developed to

govern this special type of property. The practitioner must first learn something about the property - oil and gas. The practitioner can then begin to appreciate the special rules designed to facilitate the ownership and development of oil and gas.

III. THE OIL AND GAS RESOURCE

A. Petroleum Geology.

1. Organic theory of petroleum ("oil and gas") formation - through geologic time marine life died and accumulated with eroded sediment at the bottom of ancient oceans. Heat, pressure, and other processes converted the accumulated organic material into petroleum.
 - a. Source rock - shale rocks where the conversion took place.
 - b. Reservoir rock - porous and permeable rock which contains petroleum squeezed from the source rock.
2. Search for petroleum includes theorizing where source rock would be and then looking for reservoir rock which might have trapped petroleum squeezed from the source rock.
3. Petroleum normally found in sedimentary rock which possesses the physical properties of porosity and permeability.
 - a. Porosity - the rock has spaces in which oil, gas, and water can accumulate.
 - b. Permeability - the rock spaces are connected so the material within the spaces can be transmitted from pore to pore.
4. A connected bed of porous and permeable rock which contains petroleum is called a "reservoir."
 - a. The reservoir must be contained within natural barriers to "trap" the petroleum.
 - b. Common types of reservoirs:
 - (1) Anticline
 - (2) Fault

(3) Stratigraphic Trap

B. Reservoir Mechanics.

1. The reservoir, in its natural state, is under pressure.
 - a. Once the reservoir is breached, the oil, gas, and water will move toward the low pressure zone created by the well.
 - b. Oil is produced through a displacement process. The oil will move toward the low pressure zone created by the well bore. Gas or water will move in to fill the pore space previously occupied by oil.
2. Three types of reservoir drive mechanisms:
 - a. Dissolved Gas Expansion (Solution Gas Drive).
 - (1) As reservoir pressure is reduced by the well, gas dissolved in the oil is liberated from the oil. This liberated gas then fills the pores previously occupied by the oil and begins to displace the oil.
 - (2) As reservoir pressure declines, larger quantities of gas will be released and increasing amounts of gas will be produced by the well as oil production declines.
 - (3) Least efficient reservoir drive mechanism; recover from 5% to 30% of the oil in the reservoir.
 - b. Gas-Cap Expansion.
 - (1) Oil in the reservoir is saturated with dissolved gas and excess gas is compressed and found free in a cap laying over the oil zone.
 - (2) Energy to move the oil to the well bore is supplied by the compressed gas cap which tends to flush the oil downward out of the upper portions of the reservoir.

(3) In addition to the energy from the gas cap, the gas dissolved in the oil will also provide energy to displace the oil.

(4) Properly operated gas-cap expansion reservoir can recover from 20% to 50% of the oil in the reservoir.

c. Water Encroachment.

(1) Water at the bottom and edges of the reservoir creates pressure against the upper zones of oil and gas.

(2) When oil and gas are produced, water will encroach from the bottom of the reservoir flushing the oil and gas upward.

(3) Properly operated water encroachment reservoir can recover from 35% to 75% of the oil in the reservoir.

3. Combination Drive Reservoir.

a. Have free gas in a cap over the oil zone and water under the oil zone.

b. Also have dissolved gas in the oil which is released when the reservoir pressure drops.

4. Reservoir development must be planned to make maximum use of the natural reservoir energy.

a. Improper location or completion of wells can reduce the efficiency of the reservoir drive mechanisms.

b. Improper rates of production can reduce the efficiency of the reservoir drive mechanism.

5. Enhanced recovery techniques are used to produce oil remaining in the reservoir after natural reservoir drive forces are no longer effective.

a. Natural reservoir drive forces - Primary Production.

b. Artificial reservoir drive forces - Secondary and Tertiary Production. Collectively called "enhanced recovery" techniques.

- (1) Waterflooding - common form of secondary recovery. Inject water in designated wells to flush oil toward a production well.
- (2) Gas Injection - another form of secondary recovery. May also reinject produced gas or water to prolong primary production from the reservoir.
- (3) Tertiary recovery encompasses the more exotic techniques used to recover residual oil. Can use a solvent, detergent, or heat to move the oil toward the well. For example, carbon dioxide injected into the reservoir will dissolve into the crude oil, reduce its viscosity, and move the oil, or lighter hydrocarbons, toward a production well.

IV. OWNERSHIP OF OIL AND GAS

A. Initially determined by surface boundaries.

1. Owner of the land owns the surface and any minerals beneath the surface.
2. Kansas, in Zinc Co. v. Freeman, 68 Kan. 691, 696, 75 P.995, 997 (1904), adopted the "ownership in place" theory of oil and gas ownership.
 - a. In Kansas, the person vested with title to land is deemed to presently own, in addition to surface rights, any oil, gas, or other minerals which may be located beneath the surface boundaries of the land. Magnusson v. Colorado Oil and Gas Corp., 183 Kan. 568, 574, 331 P.2d 577, 582 (1958); Gas Co. v. Neosho County, 75 Kan. 335, 337-38, 89 P. 750, 751-52 (1907) (ownership in place rule applied to oil and, in a companion case, to natural gas).
 - b. Upon receiving title to a parcel of land, the landowner obtains a present right to all oil, gas, and other minerals within the land.

B. Rule of Capture.

1. Although the landowner has a present ownership interest in oil and gas beneath his land, rights in the resource are lost once it moves outside surface boundaries. Zinc Co. v. Freeman, 68 Kan. 691, 696, 75 P. 995, 997 (1904).
2. Oil and gas can migrate, within the reservoir, in response to pressure changes created by wells drilled into the reservoir.
3. To perfect ownership of oil and gas, it must be reduced to possession through the process of "capture."
4. The rule of capture protects the adjacent landowner who properly completes a well in the common reservoir and causes oil and gas to migrate across surface boundaries toward his land.
 - a. Adjacent landowners must protect their land from drainage by development of their own land. Carlock v. Krug, 151 Kan. 407, 411, 99 P.2d 858, 861 (1940).
 - b. Rule of capture gives landowners the right to drill wells, bottomed anywhere within the surface boundaries of their property, and to obtain legal title to all the oil and gas they could produce from such wells, even though some or most of it was drained from under land owned by others.
5. Kansas Supreme Court recently applied the rule of capture to the production of natural gas injected into a gas storage reservoir. The party injecting the gas was not a public utility authorized to condemn the reservoir for storage, nor had it obtained the right to use the reservoir underlying adjacent lands. Anderson v. Beech Aircraft Corp., 237 Kan. 336, 699 P.2d 1023 (1985).
6. Although Kansas recognizes the rule of capture, the landowner has certain rights which can be enforced to protect oil and gas while still in the reservoir - correlative rights and conservation regulation.

V. CORRELATIVE RIGHTS DOCTRINE AND CONSERVATION REGULATION

A. Correlative Rights.

1. The correlative rights doctrine recognizes that a person operating a well properly located on his land can significantly affect the rights of other property owners in the same reservoir.
2. Unrestrained, an absolute right to drill and produce as one pleases from a reservoir could destroy the ability of others to try and capture oil and gas beneath their property.
3. Cannot take action which will injure the reservoir so other owners in the common resource are unable to exercise their opportunity to capture.

B. Conservation Regulation.

1. Used to protect correlative rights and "prevent waste."
2. Establishes some ground rules for exercising the right to capture oil and gas.
3. Oil and gas are natural resources in which the public has a strong interest.
4. Rule of capture causes much of the oil and gas in the reservoir to be wasted through inefficient production practices. Such practices are employed to maximize the individual's self-gain at the expense of the other owners overlying the reservoir.
5. Public's interest - obtain maximum recovery of oil and gas at the lowest cost. Ensure the resource is not used for inferior purposes. Failure to obtain maximum recovery at the lowest cost is "waste."
6. Conservation techniques used to prevent or control waste include:
 - a. Location Restrictions - require a minimum distance between producing wells and require wells to be drilled a minimum distance from lease or property lines.
 - b. Production Restrictions - control the rate of production to achieve orderly removal of the resource.

- c. Pooling - permit separate properties to be operated as a production unit to comply with location restrictions. In Kansas pooling is not required by statute. Voluntary pooling agreements are "encouraged" by production restriction practices.
 - d. Unitization - operate entire reservoir as a single property unit. Surface boundaries used only to calculate each party's share in total production from the reservoir.
7. Kansas Corporation Commission administers the Kansas oil and gas conservation program.

VI. COMMONLY CREATED OIL AND GAS PROPERTY INTERESTS

A. The Surface and Mineral Estates.

- 1. Ownership of minerals underlying a tract of land can be conveyed separately from the overlying surface interest.
- 2. Upon conveyance of an interest in some or all of the minerals in a tract of land, two separate property interests are created: a surface estate and a mineral estate. Zaskey v. Farrow, 159 Kan. 347, 351, 154 P.2d 1013, 1015-16 (1945).
 - a. Two separate fee simple estates are created. Each is potentially infinite in duration and can be disposed of by gift, sale, or inheritance. Crowe Coal & Mining Co. v. Atkinson, 85 Kan. 357, 360, 116 P. 499, 500 (1911).
 - b. Severance of the mineral estate from the surface estate can occur by granting a mineral estate or by granting the surface estate and excepting a mineral estate. Shaffer v. Kansas Farmers Union Royalty Co., 146 Kan. 84, 89, 69 P.2d 4, 7 (1937).
 - c. Conveyance of a mineral estate is accomplished by a document called a "mineral deed." Hickey v. Dirks, 156 Kan. 326, 327, 133 P.2d 107, 109 (1943).

B. The Mineral Estate.

- 1. Owner of a mineral interest has the right to enter the land encompassed by the mineral interest to

explore for, develop, and produce the minerals. Corbin v. Moser, 195 Kan. 252, 257, 403 P.2d 800, 804 (1965).

- a. Can authorize others to develop the property for the mineral interest owner's benefit.
 - b. Mineral owners typically do not develop their mineral interest, but instead contract with a developer to conduct exploration, development, and production operations.
2. Mineral interest includes the right to develop, the right to authorize others to develop, and the right to any benefits under development contracts with third parties.
3. Can divide the mineral estate as follows:
- a. Divided Interest.

Example: A owns all the mineral estate in Section 30. A conveys to B all the minerals in the East 1/2 of Section 30.
 - b. Undivided Interest.

Example: A conveys to B an undivided one half interest in all the minerals in Section 30.
 - c. Term Interest.

Example: A conveys to B all the minerals in Section 30 for a term of 3 years.
 - d. Defeasible Interest.

Example: A conveys to B all the minerals in Section 30 for so long as oil or gas is produced from Section 30.
 - e. Defeasible Term Interest.

Example: A conveys to B all the minerals in Section 30 for 3 years and so long as oil or gas is produced from Section 30.
 - f. Future Interests.

Example: A conveys all the minerals in Section 30 to B for life, remainder to C.

g. Depth Limitations.

Example: A conveys to B all the minerals in Section 30 from the surface down to 3000 feet below the surface.

h. Substance Limitations.

Example: A conveys to B all the natural hydrocarbon gas in Section 30.

i. Nonparticipating Interests.

Example: A conveys to B 1/16th of all oil and gas produced from Section 30, free of any of the costs of production. [NOTE: under Kansas law, this conveyance violates the Rule Against Perpetuities.]

j. Combination of the noted limitations.

4. Can also subject the mineral estate to contractual limitations.

a. Most common contractual limitation is the granting of a license to explore, develop, and produce oil and gas.

b. License called an "Oil and Gas Lease."

C. The Leasehold Estate.

1. Usually the mineral interest owner transfers his development rights to a person or entity specializing in oil and gas development.

a. Instrument used to transfer development rights called an "Oil and Gas Lease."

b. The lessee (developer) obtains the mineral interest owner's right to enter the premises and conduct exploration, development, and production operations.

2. When a lease is granted the lessor still owns all the mineral interest. None of the minerals have been conveyed to the lessee. The lessee merely has a contractual right to develop and produce minerals from the mineral estate. The mineral interest owner's property right in the minerals is subject to the terms of the oil and gas lease.

3. Under the oil and gas lease the landowner

typically receives compensation in the form of a bonus, possible delay rental, and a cost-free share of any minerals produced, called a royalty.

- a. Bonus - money paid by developer (lessee) to induce mineral interest owner (lessor) to enter into an oil and gas lease.
 - b. Delay Rental - money paid to lessor by lessee, pursuant to an oil and gas lease, as rent for the privilege of delaying drilling operations on the leased land.
 - c. Royalty - a share of oil and gas produced from the mineral interest free of any costs of production.
4. Leasehold estate can be fractionated much like the mineral interest. Absent limiting language in the lease, A can assign divided, undivided, term, defeasible term, and various future interests out of the leasehold. A can limit the assignment by depth or substance.
 5. Any rights carved from the leasehold estate are limited by the terms of the oil and gas lease. If the lease terminates, anything created out of the lease will likewise terminate. See Campbell v. Nako Corporation, 195 Kan. 66, 402 P.2d 771 (1965).
 6. Leasehold Interest or Working Interest - refer to the rights which the lessee has under the oil and gas lease (the basic right being the right to "work" the property for the granted minerals).
 - a. Assignment of an undivided interest in the leasehold gives the assignee an undivided working interest - often called an "operating" interest because the assignee can enter and work the property subject to the lease.
 - b. Can also create "nonoperating" interests in the leasehold. Nonoperating means the holder of the interest does not have the power to enter the leased premises to conduct development operations. It is merely an economic interest in oil and gas when, and if, it is produced. Common nonoperating interests include:
 - (1) Overriding Royalty - a right to a share

of oil and gas from the leased land free of the cost of production. Payable out of the working interest from which it is carved.

(2) Production Payment - a right to a share of oil and gas from the leased land free of the cost of production but limited to a specified quantity or value of production.

(3) Net Profits Interest - a right to a share of oil and gas from the leased land free of the cost of production but payable only when the lessee earns a net profit from its operations. Difficulty is defining what costs will be deducted from revenue to determine whether a net profit has been realized.

7. Oil and gas lease typically requires lessee to pay lessor a fraction (traditionally $1/8$ th) of production as a royalty. This would entitle the lessee to the remaining $7/8$ ths of production from which the lessee would pay for the costs of exploration, development, and production.

Any nonoperating interests created by lessee will be payable out of lessee's share of production.

For example: A leases his mineral estate to B. The lease entitles A to a $1/8$ th royalty. B is entitled to the remaining $7/8$ ths of production, but must pay $8/8$ ths of all costs of production.

To obtain funds to help pay for the drilling, B assigns an overriding royalty to C which entitles C to $1/16$ th of $8/8$ ths of all oil and gas produced from the leased land. Production and costs will be allocated as follows:

B (lessee) pays $8/8$ ths of the costs [under the terms of the oil and gas lease and the overriding royalty assignment].

B will receive $13/16$ ths of the production [$7/8$ ths granted under the oil and gas lease less $1/16$ th of $8/8$ ths of production assigned to C].

A will receive $1/8$ th of the production [under the terms of the oil and gas lease].

C will receive $1/16$ th of the production [under the terms of the overriding royalty assignment].

VII.

THE DEVELOPMENT PROCESS

A. Persons Involved.

1. Landowner.

- a. Owner of land - if title to oil and gas has not been previously severed from the surface estate.
- b. If oil and gas has been severed, the owner of the mineral interest in oil and gas must grant the development rights.

2. Lease Promoter.

- a. Acquires right to develop a block of acreage from the appropriate landowners.
- b. Usually assigns development rights to the developer.
- c. Usually retains an economic interest in the rights assigned.

3. Lease Developer.

- a. May or may not be the same person who initially obtains the right to develop from the landowner.
- b. In Kansas, development is often done through a "promoted" deal with many (usually up to 32) investors involved.

4. Contractors, Subcontractors, and Suppliers.

- a. Provide services and supplies to develop the lease.
- b. Provide services and supplies to maintain the lease in production.

5. Transporters of Production.

- a. Traditionally, purchaser of production also the transporter.
- b. May have a third party providing gathering, treatment, processing, and compression services. May require delivery and redelivery of the production.

- c. New transportation role emerging for natural gas. See FERC Orders 436 and 451.

6. Purchasers of Production.

- a. Usually the producer will sell production to a third party purchaser at or near the field where produced.
- b. Changes in gas market structure may result in sales by producer directly to an end user.

7. Other Participants.

- a. New interests can be created by parties owning rights in the oil and gas.
 - (1) Assign rights in the property interest.
 - (2) Give third parties a secured position in the property interest.
 - (3) Have third parties obtain a secured position by statute.
- b. New interests can be created by involuntary action. For example, judgment in a divorce or other civil action. Death of an interest owner; probate of an estate.

B. Relationships and Documents Involved.

1. Mineral Deeds.

- a. Concerned with mineral deeds and other documents, such as estate and other property-related court proceedings, which determine ownership of the oil and gas mineral estate.
- b. Problem is to account for all the rights which authorize development of the oil and gas in the tract of land you wish to develop.

2. Oil and Gas Leases.

- a. Basic document which is used to grant landowner's oil and gas development rights in the land to the lease promoter.
- b. Lease promoter (lessee) obtains the right to develop the property subject to the express and implied terms of the oil and gas lease.

3. Assignment of Lease Rights.

- a. Often the lease promoter has no intention of developing the lease. Instead, they plan to obtain leases on a block of acreage and then sell them to persons interested in development or resale.
- b. Lease promoter often retains an interest in the assigned lease.
 - (1) May be a fractional share of the "working interest" - an undivided share of the right to develop ("work") the lease pursuant to its terms (an "operating" interest)
 - (2) May be a right to a share of production from wells on the lease. No right to work the lease - merely a right to receive a share of production. For example: an overriding royalty, production payment, or net profits interest (a "nonoperating" interest).

4. Development of the Lease - Joint Development.

- a. Lease owner may want to leverage the cost and risk of development by conveying undivided working interests to others willing to participate in development. For example:

A agrees to give B a 50% working interest in the leased land if B will provide 50% of the development costs and assume 50% of the risk of development.

- b. To coordinate the development of the leased land the cotenants of the working interest usually enter into an Operating Agreement.

Designates the person responsible for the day-to-day operation of the lease and provides guidelines for sharing development decision-making and for sharing revenues and expenses.

- c. Lease owner may want to entice another developer to drill on the leased land. A Farmout Agreement is often used to authorize another developer to drill on the leased land and acquire rights in the working interest.

All or a portion of the working interest is usually assigned, subject to various reassignment obligations depending upon the success of drilling operations.

Operating Agreement usually required since there is a possibility of joint ownership of the working interest.

5. Development of the Lease - Promoted Development.

- a. Instead of sharing the risk of development with another developer, the lease owner may seek direct financial assistance from investors.
- b. Developer sells undivided working interests in the lease pursuant to a Development Agreement whereby the developer agrees to drill one or more wells on the lease.

Development Agreement is often oral; it should always be written.

Often the Development Agreement is incorporated into an Operating Agreement.

- c. Developer may retain an operating or nonoperating interest in the lease, or both. The deal is said to be "promoted" because the developer will generally make money from the sale of interests even though the well is a dry hole.

For example: A owns a lease. The lease cost A \$1,000. A enters into a contract with Drilling Company which agrees to drill a well to a specified depth for \$100,000. Other costs associated with development will require \$9,000. A sells an undivided 1/32nd of the lease to each of 32 investors for \$5,000 per 1/32nd. A's promotion fee is \$50,000.

A may also retain a nonoperating interest in the lease, such as an overriding royalty. A, instead of selling all the working interest, may retain part of the working interest and use some of the promotion fee to pay the share of development costs allocated to his share of the working interest.

- d. Investors will usually enter into an

Operating Agreement either with the promoter or someone hired by the promoter to operate the well.

6. Contracts for Services and Supplies.

- a. Major contractor - drilling company. Rights of parties specified by the Drilling Contract.
- b. Other service contracts. Developer and drilling company will each contract with various persons to drill, complete, test, equip, and operate wells on the leased land.
- c. Supply contracts. Developer and drilling company will each contract with various persons to provide supplies needed to drill, complete, test, equip, and operate wells on the leased land.

7. Transportation Agreements.

- a. Transportation agreement may be required where production will be sold at a point off of the lease.
- b. Transporter may provide a number of services in addition to transportation - treatment, processing, storage.

8. Treatment and Processing Agreements.

- a. Production from the well may be delivered to other persons to treat or process production.
- b. In some instances title to production will pass subject to redelivery to the developer. For example, developer may sell gas at the well subject to an obligation to redeliver the gas to developer so liquid hydrocarbons can be removed through processing.

9. Production Purchase Contracts.

- a. Most oil and gas sales occur in the field where they are produced. Title passes to the purchaser in or near the field.
- b. Gas is beginning to be sold at points far removed from the field where produced. Likely to have more direct sales by the producer to the end user.

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