Chapter 27
URANIUM LAW AND LEASES

Dan C. Perry
Attorney at Law and Mineral Management
San Antonio, Texas

Synopsis

§ 27.01 Introduction[*] [**]

This chapter provides a general background on uranium, addresses key principles of uranium law,[1] and discusses uranium leases, with analysis and examples of important lease provisions.

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[1] This chapter deals almost exclusively with state law pertinent to fee lands with an emphasis on Texas law. Resources covering federal law and leases are referenced in section 27.02.

[1] A Brief History of Uranium

Uranium is a common, weakly radioactive mineral found in low concentrations in soil, rock, and water throughout the world. It is commercially extracted from uranium-bearing minerals such as uraninite.[2] Refined uranium is referred to as either "yellowcake" or "uranium oxide," and its chemical formula is U_3O_8. In the United States and Canada, refined uranium is measured and sold in "pounds U_3O_8."[3]

Uranium was discovered in 1789, and its radioactive properties were discovered in 1896. Research starting in the 1930s led to its use as a fuel in the nuclear power industry and in *Little Boy*, the nuclear weapon used in Hiroshima.

[2] Characteristics and Uses

Uranium is an abundant and efficient source of energy.[5] However, it is rarely present in commercial quantities.

Uranium is perhaps best known as a component of nuclear weapons. Due to its density and weight, it is also used in conventional weapons. However, multiple peacetime applications and uses of uranium exist, including "the generation of electric power, diagnosis and treatment of disease, use of radioisotopes in agriculture and industry, and many others."[7]

Uranium is a more efficient fuel source for electric generation than coal, oil, or gas, and has no carbon constituents. A 42-gallon barrel holds approximately 900 pounds of U_3O_8, and one barrel of U_3O_8 contains the equivalent electrical generating capacity of 13.6 million pounds of coal or 24,400 barrels of oil.[8] The average cost of power produced at domestic nuclear power plants is $1.72 kilowatt hours (KWh), lower than all other

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[2] *See* World Nuclear Association, *available at* http://www.world-nuclear.org (*see* Supply of Uranium); Cano v. Everest Minerals Corp., 362 F. Supp. 2d 814, 816 (W.D. Tex. 2005).

[3] Fletcher T. Newton & Byron Little, "Why Nuclear Energy Will Prevail and Not Merely Survive," Uranium Exploration and Development, 1A-1, 1A-9 (Rocky Mt. Min. L. Fdn. 2006).

[4] Reserved.

[5] Craig A. Little, Ph.D., "Overview of Radiation Basics," Uranium Symposium and Workshop 2008, Colorado State University, Paper No. 1, p. 11.

[6] Reserved.

[7] Jon J. Indall, "A New Dawn for Uranium," 52 Rocky Mt. Min. L. Inst. 4-1, 4-3 (2006).

[8] Donna L. Wichers, Overview of In Situ Recovery Technology, Uranium Symposium and Workshop 2008, Colorado State University, Paper No. 4, p. 35.

generating alternatives except for hydroelectric power.[9] As of 2006, nuclear power provided 72.4% of the United States' emission-free electricity.[10]

[3] Market Price Fluctuations

Unlike other mining industries, the uranium mining industry moves at a snail's pace. On the supply side, once a commercially viable deposit has been discovered (a process that can take many years), it may take at least another 10 years to obtain the necessary permits and build production facilities.[11] Permitting and construction of new reactors can take anywhere from 10 to 15 years, with the prospect of significant delays throughout the process.

Since its first sale as a commodity, the market price for uranium has fluctuated wildly. In 1948, when commercial U_3O_8 was first sold, its market price was around $50/lb.[12] The price gradually rose to a peak of $79/lb. in 1953, and dropped gradually over the next 20 years to a low of $22/lb. in 1973.[12.1] From there it took a meteoric rise to $115/lb. in 1977, only to drop precipitously over the next 15 years to $10/lb. in 1992. Once again the price skyrocketed in 2007.[12.2] Like most other commodities, U_3O_8 dropped in late 2008 and into the financial crisis of 2009, and traded at approximately $53/lb. as of June 15, 2009.[12.3]

There is no publicly traded market for U_3O_8, and its spot sales price in market transactions has very little to do with its cost of production. Federal policies have played a major, albeit indirect, role in setting the price.[12.4]

> The relationship between uranium supply and demand has been skewed since 1985, the last year that supply and demand were in sync. Demand, which has been almost double the annual supply for the past two decades, has been met by a secondary uranium market created by reactor cancellations, government enrichment practices, government inventories, and materials from the former Soviet Union.[13]

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[9] "Nuclear Gains," Nuclear Plant J., Mar.-April 2006, p. 12, *as cited in* Indall, *supra* note 7, at 4-22.

[10] "Nuclear Energy, Powering America's Future," Nuclear Energy Inst. Feb. 2006, *as cited in* Indall, *supra* note 7, at 4-22.

[11] Newton and Little, *supra* note 3, at 1A-4.

[12] *See* http://www.uxc.com/review/uxc_Prices.aspx.

[12.1] *Id.*

[12.2] *Id.*

[12.3] *Id.*

[12.4] Indall, *supra* note 7, at 4-4.

[13] Indall, *supra* note 7, at 4-5.

Eventually, with the diminishment of secondary supplies and the renewed interest in nuclear power as an inexpensive and clean source of power, market forces should have a much greater role in setting the price for U_3O_8.

[4] Worldwide Production and Consumption of Uranium

On a worldwide basis, nuclear energy accounts for about 14% of total electricity production,[14] and U_3O_8 is used in 30 countries[14.1] to produce nuclear power. There are 438 nuclear reactors operating around the world,[14.2] which produce in excess of 2,500 billion KWh. As of 2005, worldwide uranium production was 108 million pounds, which was substantially lower than that year's annual world nuclear utility requirements of 168 million pounds.[15] Worldwide production of U_3O_8 is not projected to match worldwide demand over the next several years, with a 400-million-pound shortfall, or 23% of western demand, over this period.[16] Whether the secondary sources of supply noted above will continue to be able to make up the worldwide shortfall is a matter for speculation.

[a] Largest Uranium Producers and Consumers by Country

As of 2009, the world's largest producers of mined uranium were: Canada (20.5%), Kazakhstan (19.4%), Australia (19.2%), Namibia, Russia, Niger, Uzbekistan, and the United States.[17] As for consumption, France derives around three-quarters of its electricity generation from nuclear power. The following countries derive one-third or more of their electricity generation from nuclear power: Belgium, Hungary, Lithuania, Slovakia, Slovenia, South Korea, Sweden, Switzerland, and Ukraine. Finland, Germany, and Japan derive 24% of their electric generation from nuclear power.[18]

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[14] International Atomic Energy Agency Report 2008, at 1.

[14.1] World Nuclear Association, *available at* http://www.world-nuclear.org/info/info01.html.

[14.2] International Atomic Energy Agency Report 2008, at 1.

[15] "2005 U_3O_8 Production Review," UX Weekly, March 27, 2006, *as cited in* Indall, *supra* note 7, at 4-29

[16] Uranium Producers of Am., World Uranium Supply and Demand Paper (Jan. 2006), *as cited in* Indall, *supra* note 7, at 4-29.

[17] *See* World Nuclear Association, World Uranium Mining, *available at* http://www.world-nuclear.org/info/inf23.html.

[18] *See* World Nuclear Association, Nuclear Power in the World Today, *available at* http://www.world-nuclear.org/info/inf01.html.

[b] United States

Although construction of nuclear power facilities in the United States came to a screeching halt after the Three Mile Island incident in the 1970s, currently the United States derives 20% of its electricity generation from its 103 nuclear power plants.[19] Domestic nuclear power generation has maintained a steady market share of around 20% even though domestic consumption of power has risen greatly and no new reactors have been built.[19.1] This seeming anomaly is explained by the fact that domestic nuclear reactors have the highest efficiency capacity to generate electric power over all competing methods; operating practices have increased the output of U.S. nuclear plants from 65% to 90%.[19.2] Construction of new nuclear power projects has recently recommenced, as evidenced by the recent decision to expand the South Texas Nuclear Project. During the 1970s, the United States was the world's largest producer of uranium, but domestic policy and the crash of U_3O_8 prices nearly destroyed the domestic uranium industry. Currently, domestic production of uranium comes primarily from Arizona, Nebraska, New Mexico, Texas, and Utah. Colorado and South Dakota, as well as several other western states, are in the early phases of discovering and developing commercial uranium reserves.

[5] Uranium Production Methods

There are two distinct methods for producing uranium in current use today.

[a] Surface Mining and Milling

The oldest method, conventional mining of uranium, requires that the mineralized material be developed by constructing workings or pits to access the ore. The ore must then be extracted, broken, transported to the surface, and sent to an ore processing mill. At the mill, a sequence of physical and chemical treatment steps is used to extract the uranium from the native rock and convert it to U_3O_8.[20] Conventional mining can be conducted either through surface mining or pit mining. Conventional surface mining is destructive of the entire surface of the land. In some

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[19] Edward Fox, "A Utility Look at Nuclear Power," Uranium Exploration and Development 1B-1, 1B-3 (Rocky Mt. Min. L. Fdn. 2006).

[19.1] Indall, *supra* note 7, at 4-22.

[19.2] Charles Petit, "It's Scary, It's Expensive, It Could Save the Earth, Nuclear Power: Risking a Comeback," Nat'l Geographic, April 2006, at 54, *as cited in* Indall, *supra* note 7, at 4-22.

[20] Mark S. Pelizza, "Modern In Situ Uranium Recovery Assures No Adverse Impact on Adjacent Aquifer Uses or Surrounding USDWS," Uranium Exploration and Development 2-1, 2-17 (Rocky Mt. Min. L. Fdn. 2006).

locations, it is the only choice for extraction due to the greater depth of the uranium reserve. In most instances, conventional surface mining can be operated so as to recover larger quantities of U_3O_8 than competing methods.

[b] In Situ Recovery

A newer, alternative method of uranium production is in situ[21] recovery, also known as in situ leaching. This process works only for shallower reserves, but is much less destructive to the surface estate than conventional surface mining. The basic concept is that groundwater is circulated with bubbled oxygen through a series of injection and extraction wells until the uranium in the sand of the aquifer has been depleted due to its dissolution in the injected water. The in situ recovery method is less expensive and capital intensive than the surface mining method.

[c] New Extraction Technologies

Other methods of uranium extraction are being used or studied, such as "borehole hydraulic mining,"[22] planned to be used in Gonzales County, Texas. This area has recently been identified as having commercial uranium reserves and is relatively far from the traditional "South Texas Uranium Province" of Bee, Brooks, Duval, Goliad, Karnes, Kleberg, Jim Wells, Jim Hogg, and Live Oak Counties.[23]

[6] Political Issues

While generally beyond the scope of this chapter, it is worth noting that the many seeming advantages of using uranium as an electric power source through nuclear generation may be outweighed, or even thwarted, by political considerations. Debates rage over whether uranium is safe and environmentally friendly, and the Obama Administration does not seem to have embraced nuclear power over other "green" options. The issue of disposal of nuclear waste has stymied generations of politicians and still remains unresolved. Uranium extraction might be the most highly regulated mining industry in the United States, yet many citizens, local governments, and Native American jurisdictions violently oppose

[21] "In situ" is the Latin term for the English phrase "in position." Merriam-Webster's Collegiate Dictionary 647 (11th ed. 2008).

[22] *See* http://www.boreholemining.com.

[23] Peter E. Hosey, "Title to Uranium and Other Minerals (Still Crazy After All These Years) Déjà Vu all Over Again," State Bar of Texas Oil, Gas and Energy Resources Law Section Report, Vol. 33, No. 2, 64; W.A. Ambrose, Depositional Systems of Uranium in South Texas, 57 Gulf Coast Association of Geological Societies Transactions 5-16, *as cited in* J. Byron (Trace) Burton, III, "Uranium Leasing—Issues Facing Land and Mineral Owners," State Bar of Texas Oil, Gas and Energy Resources Law Section Report, Volume 33, No. 2, p. 22.

extraction from or near their land. Without taking a position on these issues, the author notes that the future of the domestic uranium industry will depend on the resolution of these sensitive issues.

§ 27.02 Principles of Uranium Law (Federal Lands)

Due to space requirements, as well as the author's relative lack of expertise with respect to federal lands, this section will be limited to a reference to two outstanding chapters on the topic.[24] In general, it can be stated that uranium mining on federal lands is governed by the General Mining Act of 1872.[25] The various issues involved can be summarized by their shorthand names: the "discovery" issue; the "prudent man rule"; the "marketability requirement"; the issue of "excess reserves"; and the "loss of discovery." The recordation and maintenance of mining claims is of critical importance under the Federal Land Management and Policy Act of 1976 (FLMPA).[26] Many federal environmental laws impact the extraction of uranium, not the least of which is the National Environmental Policy Act of 1969 (NEPA).[27]

§ 27.03 Principles of Uranium Law (Fee Lands)

A mineral extraction company will generally lease the right to explore for and produce fee minerals from a third-party owner; hence it is critical that the owner have title to that mineral. Whether the fee owner of the surface or mineral estate has title to uranium is an unsettled question in many jurisdictions. This section explores the various approaches to this issue and references the host of regulatory laws to which the uranium extraction industry and fee owners are subject.

[1] Is Uranium an Attribute of the Surface or Mineral Estate?

There is no short, unqualified answer to the question of whether the owner of the surface or mineral estate owns uranium. The answer is elusive because it ultimately depends upon the construction of the written instruments in the chain of title. In other words, there are multiple factors that must be considered in making the legal determination, including, for example, the state law at the time the instrument was executed, current

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[24] R. Lauren Moran & David G. Ebner, "The Uranium Mining Claim," Uranium Exploration and Development 2-1 (Rocky Mt. Min. L. Fdn. 2006); Patricia J. Winmill & Stephen Hull, "Current Challenges to Obtaining Exploration, Mining, and Associated Rights to Public and Private Lands," Uranium Exploration and Development 14-1 (Rocky Mt. Min. L. Fdn. 2006).

[25] 30 U.S.C. §§ 21-54 (originally enacted as the Act of May 10, 1872, ch. 153, 17 Stat. 91).

[26] 43 U.S.C. § 1744. See generally 2 Am. L. of Mining, Ch. 33, 44 and 45 (2d ed. 2008) for a broad review of FLMPA.

[27] 42 U.S.C. §§ 4321-4370(h).

state law (which may or may not apply retroactively), the intent of the parties to the instrument (expressed directly, indirectly, or as a matter of law), the language of the grant or reservation, and the chain of title to the particular tract of land.

Some courts among the mineral producing states have held that certain substances are part of the mineral estate or the surface estate as a matter of law. This, however, is the exception, not the rule. It would be imprudent to rely on such a holding unless the facts and circumstances are virtually indistinguishable from the precedent. As a result, land and mineral owners, producers, and practitioners must conduct research in their jurisdictions to resolve the classification of the uranium under the subject tract of land.

The answer to this issue ultimately lies with the judicial construction of legal instruments. An unambiguous instrument will be construed in accordance with its terms. Indeed, most jurisdictions require their courts to interpret an unambiguous deed by ascertaining the intent of the parties from the four corners of the instrument. If, after making this inquiry, the court determines that the grant or reservation is "ambiguous" (i.e., it is susceptible to one or more plausible constructions), one or several of the canons of construction—also known as rules of interpretation—are applied to define the rights and obligations of the parties. The issue is thus framed as follows: When an instrument is ambiguous (as to what substances are conveyed or reserved incident to the mineral estate), what analysis will the courts of the several uranium-producing states employ to determine the scope of the mineral estate conveyed or reserved thereby? Among the states, the answer is neither uniform nor simple. An even more specific and narrowly tailored question is necessary: As to this particular tract of land, in this state, pursuant to the law at the time of the instrument's execution and the law as it stands today, and by virtue of the terms of this instrument and the prior instruments in the chain of title of the subject tract, is uranium an attribute of the surface or mineral estate?[28]

Eugene Kuntz addresses the issue of what substances are included within a grant or reservation of "minerals."[29] He criticizes the traditional approach of attempting to find intent to include or exclude specific substances and argues that intent should be measured by the general intention from the standpoint of enjoyment of the respective interest created.

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[28] For an excellent discussion of these issues, see David E. Pierce, "Interpreting Oil and Gas Instruments," Texas Journal of Oil, Gas and Energy Law, Vol. 1, No. 1 (2006).

[29] *See generally* Kuntz, Law of Oil and Gas § 13.3 (1998).

Under the Kuntz approach, uranium would be considered part of the mineral estate. A general review of the relevant decisions[29.1] supports Kuntz's conclusion that uranium is generally considered part of the mineral estate, at least in the absence of language in the instrument or legislation[30] involved evincing a contrary intent. The majority of courts would likely arrive at this result, albeit by differing means. It is the tangled nature of the case law dealing with the scope of the word "minerals" that creates such uncertainty. No universal rule is applied across the jurisdictions, and sometimes even within the jurisdictions. A case-by-case, factual evaluation is required to verify the scope of the mineral estate in a particular tract.[31]

There are two different tests in Texas for determining how mineral substances are classified as attributes of either the surface or mineral estate. In determining which test applies, the practitioner must know the date when the minerals were severed from the surface estate. If that severance occurred before June 8, 1983, the "surface destruction test" as articulated in *Acker*[32], *Reed I*,[32.1] and *Reed II*,[32.2] and advocated by Professor Kuntz, applies. This test states that if a mineral substance is at or near the surface so that any reasonable extraction method requires destruction of the surface, the substance is an attribute of the surface estate as a matter of law. However, on June 8, 1983, the Texas Supreme Court in *Moser v. U.S. Steel Corporation*[32.3] acknowledged that the surface destruction test was unworkable in practice and adopted a new rule, to be applied prospectively but not retroactively, that (1) if an instrument states that a substance is a mineral, then it is a mineral regardless of its method of extraction; and (2) if an instrument does not state that a particular substance is a mineral, then it is a mineral if it is within the ordinary and natural meaning of the word "mineral." If a substance is a mineral within the ordinary and

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[29.1] Numerous cases and scholarly articles have considered the issue of the scope of the mineral estate. For a list of citations to the authorities of states that have addessed the issue, see § 27.06, Appendix A. *See* 1 Williams & Myers Oil and Gas Law § 219 (2008).

[30] A few states have statutorily defined "minerals," although the relevancy and applicability of such definitions to all cases is questionable. Texas: Tex. Prop. Code Ann. § 75.001(a)(1); North Dakota: N.D. Cent. Code §§ 47-10-24,-25; Oregon: Or. Rev. Stat. § 516.010(4); and Montana: Mont. Code Ann. § 82-1-111.

[31] *See, e.g.*, 3 Am. L. of Mining § 84.01 (2d ed. 2008).

[32] Acker v. Guinn, 464 S.W.2d 348 (Tex. 1971).

[32.1] Reed v. Wylie, 554 S.W.2d 169 (Tex. 1977)

[32.2] Reed v. Wylie, 597 S.W.2d 743 (Tex. 1980).

[32.3] Moser v. U.S. Steel Corp., 676 S.W.2d 99, 102 (Tex. 1984). The court withdrew its original June 8, 1983 opinion and replaced it with this opinion.32

natural meaning of the word, then the mineral owner can extract the substance and use as much of the surface estate as is reasonably necessary for the extraction of the mineral. However, the mineral owner will be required to compensate the surface owner for destruction of the surface unless the substance removed was expressly granted or reserved, in which case the surface owner is not entitled to compensation.[33] *Moser* also ruled that certain mineral substances are attributes of the surface estate as a matter of law, including the topsoil, loam, sand, gravel, rock, shale, caliche, limestone, and clay. Various cases have addressed this issue in the post-*Moser* world, including *Friedman v. Texaco, Inc.*,[34] *Plainsman Trading Co. v. Crews*,[35] and *Schwarz v. Texas*.[36]

The clear mandate of *Moser* is that, at least in Texas, the ownership of the various minerals should be specifically defined. One definition clause the author has used in his practice in the preparation of Mineral Deeds is as follows:

> When used in this instrument, the words "oil, gas and other minerals" shall mean all minerals of every kind and character (save for those hereinafter excepted) in, on and under the lands described in this instrument, even if such substances occur so near the surface of the ground that they can or must be mined or produced by stripping away and substantially destroying the surface of the ground, and by way of illustration, but not in limitation, "oil, gas and other minerals" shall be deemed to include oil, gas, casinghead gas and associated liquid hydrocarbons and liquid hydrocarbon products and such substances as may be produced in conjunction with the production thereof, sulphur, salt, coal, lignite, uranium, vanadium, thorium and other fissionable substances, all precious metals, heated water and steam, bauxite, brick and cement clay, iron ore, and all other minerals, SAVE AND EXCEPT "oil, gas and other minerals" shall be deemed not to include those minerals which are usually considered to be a part of the surface estate, such as the topsoil, loam, sand, gravel, rock, shale, caliche, limestone, ordinary clay and near surface substances used as road building and road construction materials.

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[33] For further discussion of these rules, which are confusing to apply in practice, see Ryan M. Sweeney, "Who Cares About the Minerals Anyway? Answers to Common Questions for the Landowner's Counsel," State Bar of Texas Oil, Gas and Energy Resources Law Section Report, Volume 33, No. 2, pp. 11-13; Hosey, *supra* note 23, at 66-76; Laura H. Burney, "Oil, Gas and Other Minerals Clauses in Texas: Who's on First?," 41 SW. L.J. 695 (1987); and Bruce M. Kramer & J. Derrick Price, "What Are Surface Minerals and Why Oil and Gas Owners Should Care," University of Texas School of Law's 34th Annual Ernest E. Smith Oil, Gas and Energy Resources Law Institute, April 4, 2008.

[34] 691 S.W.2d 586 (Tex. 1985).

[35] 898 S.W.2d 786 (Tex. 1995).

[36] 703 S.W.2d 187 (Tex. 1986).

These and related issues have been treated in other states. The author references Bruce M. Kramer and J. Derrick Price's excellent writing on this topic.[37]

[2] Regulatory Law Governing Uranium Extraction

The uranium mining industry has been held to exceptionally high standards of environmental and worker safety, as well as social and economic accountability.[38] The reader is referred to the many articles on the laws that impact the extraction, production, marketing, and use of uranium.[39] For those dealing with uranium development in Texas, Trace Burton has an excellent section in his chapter on the various regulatory procedures required by Texas law.[40]

§ 27.04 Uranium Leases (Fee Lands)

The essential conveyance and contractual agreement that grants the right to explore for, extract, produce, save, and market uranium resources from fee lands is commonly referred to as a "uranium lease." As with the oil and gas lease, the agreement is misleadingly and inaccurately referred to as a "lease," at least in the traditional sense of the characterization of "leasehold estates" under American laws. Under Texas law, for example, these transactions are properly characterized in legal terms as actual conveyances of the minerals as fee simple determinable estates. Title to the minerals does not revert to the mineral lessor until such time as the

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[37] Kramer & Price, *supra* note 33, at 8-10.

[38] Newton & Clark, *supra* note 3, at 1A-4 to 1A-5.

[39] *See, e.g.*, Anthony J. Thompson & Christopher S. Pugsley, "United States Federal/State Licensing/Permitting Regimes Implicated by Uranium Development," Uranium Exploration and Development 3-1 (Rocky Mt. Min. L. Fdn. 2006); Len Ackland, "Environmentalists Debate Nuclear Power," Uranium Exploration and Development 4-1 (Rocky Mt. Min. L. Fdn. 2006); Edward W. Harris, "State Groundwater and Reclamation Permitting Regimes and Their Application to Uranium Exploration and Mining," Uranium Exploration and Development 5-1 (Rocky Mt. Min. L. Fdn. 2006); Tim de Young & Jay F. Stein, "Water Rights Issues in the *In Situ* Leach Mining of Uranium in New Mexico," Uranium Exploration and Development 6-1 (Rocky Mt. Min. L. Fdn. 2006); David C. Frydenlund, "Waste Streams, Disposal, and Clean-Up Issues Associated with Uranium Mining and Milling," Uranium Exploration and Development 7-1 (Rocky Mt. Min. L. Fdn. 2006); Laura E. Beverage & Karen L. Johnston, "A Primer on Federal and State Occupational Safety and Health Laws and Regulations Applicable to Uranium Mining and Milling," Uranium Exploration and Development 8-1 (Rocky Mt. Min. L. Fdn. 2006); Patricia J. Winmill & Stephen Hull, "Current Challenges to Obtaining Exploration, Mining, and Associated Rights to Public and Private Lands," Uranium Exploration and Development 14-1 (Rocky Mt. Min. L. Fdn. 2006); and Jon J. Indall, "A Historical Review of the Relationship Between the Federal Government and the Domestic Uranium Industry, and Current Uranium Activities and Issues in New Mexico," Uranium Exploration and Development 16-1 (Rocky Mt. Min. L. Fdn. 2006).

[40] Burton, *supra* note 23, pp. 24-27.

determinative event transpires. Usually this event is the expiration of the primary term without the lessee either achieving production or conducting continuous operations or, after production is obtained, the permanent cessation of production in commercial quantities. Out of tradition and habit, practitioners refer to these conveyances with the colloquial term "leases."

In the negotiation and execution of uranium leases, the lessor and lessee will have some similar and competing concerns. The lessee will contribute its capital, expertise, and other resources to the venture created by the lease, usually with the intent of making a profit through the expenditure of its efforts and resources. Stated in general terms, the lessee is concerned primarily with receiving the exclusive right to explore for, extract, produce, save, and market uranium, with the least amount of restriction, competition, and control. Conversely, the lessor will simply contribute its land to the venture for a payment of bonus money upon the execution and delivery of the lease and in most instances will then take on a role of oversight while awaiting receipt of annual rental payments, surface damages, information, and, most importantly, its royalty share of the venture. In general, the lessor is most concerned with receiving financial gain while simultaneously limiting its liability to the greatest extent possible.[41] In instances where the lessor continues to own the surface estate, the lessor will be very concerned with protecting the surface estate for its use during the lease term and its eventual recovery free and clear of the uranium lease. As opposed to exclusivity, the lessor will have to weigh the competing merits of other uses of its land, including farming, ranching, hunting, participating in government programs, and extraction of other minerals from the land, be they attributes of the surface estate (such as topsoil, loam, sand, gravel, rock, shale, caliche, limestone, clay, rock asphalt, and other aggregates used for the construction of roads) or the mineral estate (generally oil, gas, and associated liquid hydrocarbons), and will want to benefit from all of these attributes even if they may compete with each other. A recent phenomenon has been the introduction of the airspace of farms and ranches as a valuable property right in light of the value of harnessing wind energy. This property right, which is an attribute of the surface estate, may also conflict with uranium mining and other uses of the land.

[41] Burton, *supra* note 23, at 22.

[42] Reserved.

As with most negotiated transactions, in the author's experience[43] the best agreement is one where both parties leave with the feeling that they left something on the table and not with the other party's shirt. The author's goal in negotiating and closing a lease is not to "win" the negotiation or "beat" the opponent with the toughest, most onerous lease form. To the contrary, the best deal (i.e., the one that is most likely to be viewed as a success by both parties and that ultimately results in the best return for both sides) is made when both parties have the greatest opportunity to achieve their respective goals.

[1] General Concepts; Contrast with Oil and Gas Leases

Perhaps the most important concept to address at the outset of a uranium lease negotiation is the method by which the lessee intends to operate. If the conventional mining method is to be utilized, the lessor will have to realize that it cannot benefit from other uses of the land that may be eliminated through the process of surface destruction. The lessor must analyze the relative values to be received from competing uses, as they may be mutually exclusive. If in situ mining is planned, it is a common practice to refer to the extraction method in the lease title, such as "Uranium In Situ Mining Lease." In this instance, the terms of the lease will be tailored to require the lessee to use the in situ method but will grant broad authority to utilize such method either with current technology or such future technologies as may emerge during the term of the lease.

In most instances, the lessee will agree to pay the lessor a bonus amount, usually determined on an acreage basis, upon execution and delivery of the lease. In most instances, the amount of land required for uranium operations is much smaller than that required for oil and gas exploration; thus, when paid on an acreage basis, the bonus payment may seem relatively small when compared to the bonus payment in an oil and gas lease transaction. The amount of the bonus is, of course, subject to negotiation, and will depend on many factors, including whether the uranium reserve is known to exist on the lessor's land, the amounts received by other lessors in the region, and the relative bargaining power of the parties. The common practice in Texas is to recite only a nominal consideration in the uranium lease[44] since both parties to the transaction may have cause to

[43] The author started his legal career 25 years ago on the lessee side of exploration and production transactions, but within a few years became a full-time representative of lessors in oil, gas, and mineral leases and related transactions, and has been involved, either as a lawyer or principal, in over 2,000 mineral lease transactions.

[44] Common expressions are: "For value received . . ."; "for $X and other good and valuable consideration . . ."; and "for and in consideration of the mutual covenants contained herein and other consideration delivered to the lessor, the receipt of which is hereby acknowledged and confessed. . . ."

keep this component of the transaction confidential. Indeed, the parties will often want to keep most of the material details of the transaction in confidence, and thus there may be a covenant in the uranium lease that it will not be filed of record, and instead a "Memorandum of Lease" will be filed in the county where the land is located that will include only the identification of the parties, words of grant, a description of the subject land, and the term (in months or years) of the uranium lease.

As discussed below, many uranium lease provisions will be similar to those found in oil and gas leases.[44.1] However, the unique nature, technology, and requirements of the uranium extraction industry, as well as developing caselaw and statutory requirements, dictate the use of specific provisions tailored to the product to be mined.

[2] Definitions

Defining specific terms to be used in the uranium lease is recommended in order to provide clarity and a better expression of the intent of the parties. Several examples of useful definitions are set forth below. The use of definitions is particularly helpful in limiting the lessee's operations to the exclusive use of in situ science and technology. For example, one of many definitions that might be used would be of the word "Mining:"

> Mining shall mean the actual extraction of Leased Substances from the ground of the Leased Premises, exclusively through the use of the in situ or solution mining process (with such technology as may currently exist or later be discovered), and the transport of such Leased Substances to a facility for Processing, such activity to include, but not be limited to, the pumping or recovery of fluids from the ore body, transport of the fluids to and from the Processing facility, and the injection or re-injection of the fluids back into the ore body.

A specific definition is also helpful to set the standard for restoration of the leased premises. For example, attorney Frank Armstrong devised the following definition in his Uranium In Situ Mining Lease (covering land in Texas):

> Restoration shall mean any site investigation or monitoring and all cleanup, containment, remediation and restoration activities to restore the Leased Premises to the condition that existed prior to Mining Operations under this Lease, including, without limitation, remediation of groundwater or surface contamination to the remediation levels or other standards adopted by the Texas Commission on Environmental Quality (TCEQ), the Texas Department of State Health Services (TDSHS) or any other state or governmental agency having jurisdiction over the Mining Operations, the plugging and abandonment of all wells to the standards adopted by any such agency, removal of all Lessee's equipment, piping and other personal property from the Leased Premises,

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[44.1] Except as specifically attributed to other practitioners, the sample lease provisions below are from the author's forms.

> restoration and reconstruction of roadways on the Leased Premises, and the final cleanup of the surface estate of the Leased Premises in accordance with Section __ herein.

A problem common to uranium leases and oil and gas leases is determining the end of the term of such lease when the lessee fails to produce the mineral in commercial quantities. The following definitions may prove helpful:

> Commercial Production shall mean Mining of a Commercial Deposit.
>
> Commercial Deposit shall refer to a deposit or multiple deposits of commercially salable quantities of Leased Substances that in Lessee's good faith determination are currently or in the future capable of being produced and sold at a price greater than the direct operating costs of Mining the same, including royalties but without deductions for sunk costs incurred prior to the time of production, capital costs, depreciation, amortization, depletion, debt service or allocated general overhead and administrated expenses, over a reasonable period of time.

There are many other opportunities to define terms to be used in the uranium lease that will facilitate the construction of the parties' rights and obligations.

[3] Granting Issues

The following provision, written in favor of the lessee, could be added at the end of the granting clause of a uranium lease to allow the lessee the broad right to mine by whatever method it determines to be most feasible:

> It is the intent of the parties to allow mining of Minerals by whatever method, including, but not limited to, surface, open pit, underground, use of solutions, whether in situ or conventional leaching, bore-hole mining and any other method or technology, whether presently contemplated or not, that is or becomes economically feasible. . . . This section and any ambiguities it may contain shall be liberally construed in favor of [lessee].[45]

While this clause is well written to protect the lessee's investment, this author would caution that use of this provision could be detrimental to a lessor anticipating only use of the in situ extraction method.

[4] Warranty of Title or Disclaimer of Title

The lessee will want the lessor to warrant its title back to the sovereignty of the soil, particularly if the surface and mineral estates are severed, in light of the difficulties (discussed above) in determining which estate owns the uranium reserve. The lessor, on the other hand, may wish to shift the risk of loss of title to the lessee, arguing that lessee already has landman and title attorney resources at its disposal to address this issue. The lessor might want to suggest the following language:

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[45] Mark T. Nesbitt, "Uranium Leases, Agreements and Other Delights," Uranium Exploration and Development 9A-1, 9A-4 (Rocky Mt. Min. L. Fdn. 2006).

> **THIS LEASE IS EXECUTED WITHOUT WARRANTY OF TITLE, EXPRESS OR IMPLIED.** However, if Lessor owns an interest in the Leased Substances in or under the Leased Premises less than the entire mineral fee estate, then the royalties to be paid Lessor shall be reduced proportionately as may be required by such lesser ownership.

The lessee might object to this language to the extent that it would allow the lessor to take bonus money based on an acreage call when in fact the lessor is not willing to stand behind its ownership of such acreage amount. A good compromise might be to use a special warranty of title, using this example from a uranium lease drafted by Frank Armstrong:

> Lessor hereby warrants and agrees to defend the title to the Leased Premises, as to those claiming by, through, or under Lessor, but not otherwise, and subject to rights of third parties under any right-of-way easements apparent upon the Leased Premises or of record and all existing leases, rights and encumbrances of record, and any agricultural and/or hunting leases or subleases in existence.

[5] Reservations and Exceptions—Drafting to Handle Multiple Mineral Development Conflicts

In the case of conventional mining for uranium, the lessee will essentially destroy the subservient surface estate in order to extract the uranium reserve. In the case of in situ mining, certain parts of the surface estate must be kept intact and undisturbed—to the exclusion of other competing uses of the land—in order for the in situ recovery to be effective.

Disputes inevitably arise if there are competing mineral exploration and development operations. How these conflicts are resolved will depend on whether the lease draftsmen anticipated such issues; if not, the resolution of these issues will be left to be interpreted under the common law[46]

[46] See Kramer & Price, *supra* note 33, at 15-23, regarding the common law that might be used to resolve such conflicts. Applicable doctrines include: the Doctrine of Subjacent Support; the Implied Easement Doctrine; the First in Time Rule; the Colorado Rule of Compensation; laws pertinent to the Texas caselaw on the separate development of oil and gas from a common reservoir; and the Doctrine of Reciprocal or Correlative Servitudes.

and statutes.[47] The following provision, which provides that the lessor is reserving certain rights and estates, is a suggestion for dealing with this issue:

> There is **EXCEPTED** from this Lease, and Lessor **RESERVES** unto itself, its successors and assigns, all oil, gas and associated hydrocarbon substances along with sulphur and any other substances that are produced therewith, as well as caliche, sand, gravel and water (except for water, the use of which is otherwise authorized herein) and any other mineral located in, on or under the Leased Land, except for the Leased Substances.
>
> Lessor further **EXCEPTS** from this Lease and Lessor **RESERVES** unto itself, its successors and assigns, equal and concurrent rights of occupancy, use and possession of the surface estate of the Leased Land by Lessor or Lessor's other mineral lessees or assignees, together with the equal and concurrent right of ingress to and egress from and over the Leased Land for, among other purposes and unless otherwise prohibited herein, the purpose of exploring, developing and operating the Leased Land for oil, gas and any other minerals of whatever nature, except for the Leased Substances. Lessee agrees to accommodate, to the maximum extent possible, any conflicting uses of the Leased Land, but to the extent that accommodation cannot be made, then access to the surface shall be based on and pursuant to the equitable doctrine of first-in-time, first-in-right.
>
> Lessor further **EXCEPTS** from this Lease and Lessor **RESERVES** unto itself, its successors and assigns, equal and concurrent rights to complete water source wells and water injection wells on the Leased Land, in any reservoir for the purpose of obtaining water for the exploration, development, operation of Lessor's reserved rights and for the purpose of disposing of salt water.
>
> Lessor further **EXCEPTS** from this Lease and Lessor **RESERVES** unto itself, its successors and assigns, equal and concurrent rights to complete and produce water source wells on the Leased Land for purposes of irrigation, domestic and agricultural consumption and the sale of such water for use off of the Leased Land.

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[47] While Texas should be commended for attempting to address the issues posed by uranium production, the statute, as drafted, failed to specifically address potential conflict with other mineral extraction lessees, most importantly oil and gas producers. Texas promulgated the Texas Uranium Surface Mining and Reclamation Act (Act) in Tex. Nat. Res. Code Ann. §§ 131.001 to .137. The Texas Railroad Commission has authority, under § 131.021 of the Act, to adopt rules governing surface mining and reclamation operations and to issue permits for exploration and surface mining development of uranium and uranium ore. Unfortunately, the Act provides no implementing regulation that requires the Commission to survey both the surface and subsurface areas to determine the existence of any potential oil and gas reserves. While perhaps some of the regulations might imply that a surface mining permittee should specify existing or potential oil and gas activities in the area, it is uncertain that this would be required. As noted by Kramer and Price, under § 131.133 of the Act, an applicant for a permit is not required to identify the owners of legal or equitable interests in mineral estates included within the permit area, other than owners of legal and equitable interests in the uranium and uranium ore. Kramer and Price conclude their analysis as follows: "[e]ven though the Commission may be aware of the incompatibility of a uranium surface-mining permit application and potential oil and gas development, the Commission cannot, under present statutory or regulatory directives, deny the permit unless it finds that the land in question is unsuitable for surface-mining." Kramer & Price, *supra* note 33, pp. 25-26.

> Lessor further **EXCEPTS** from this Lease and Lessor **RESERVES** unto itself, its successors and assigns, surface use for grazing, hunting, farming, recreational lessees and domestic habitation, which surface use rights shall be concurrent with the surface rights herein granted to Lessee.

[6] Lease Term and Rentals

As noted in section 27.01[3] above, in the United States it takes a long time for a lessee to get to the uranium production stage once an executed lease has been delivered. This is due to the many laws governing uranium extraction, as well as the political nature of issues surrounding uranium development. Thus a lessee should reasonably request a lease term that will match its intended use and anticipated timetable of operations. A common solution in Texas is to have an initial term of years (usually anywhere from three to five years), with an option term of the same number of years. The lessor will attempt to secure compensation for the use of the land during this term, and the lessee will attempt to get as much time with as little land cost as can be negotiated. In one uranium project in which the author represented the lessor (on the Palangana Dome in Duval County, Texas), the lessee was successfully producing uranium through in situ methods within three years of execution and delivery of the lease. Unfortunately, however, the collapse of the uranium market price caused the lessee to suspend its operations. The following is an example of how a lease term provision can be crafted that takes into account this situation:

> Subject to the provisions herein contained, this Lease shall remain in force for a term of four (4) years from the Effective Date (hereinafter referred to as the "Primary Term") and for so long thereafter as there is Commercial Production, with no cessation of Mining for a period in excess of sixty (60) consecutive days, from the Leased Land and/or for so long thereafter as this Lease may be maintained in force and effect under any of the other provisions herein contained.
>
> If upon the expiration of the Primary Term (regardless of whether the Primary Term of this Lease is extended by some other provision herein) there is no Commercial Production, Lessee shall have the right, exercisable within thirty (30) days of the expiration of the Primary Term, to extend this Lease for a secondary term by the payment to Lessor of an extension bonus in the amount of Three Hundred U.S. Dollars ($300) per acre multiplied by the number of acres then covered by this Lease, and upon payment, this Lease shall automatically and without further action on the part of Lessor or Lessee, and without execution of any additional instrument, be renewed for a term of four (4) years from and after the expiration of the Primary Term hereof (referred to herein as the "Renewal Term") and for so long thereafter as there is Commercial Production from the Leased Land and/or for so long thereafter as this Lease may be maintained in force and effect under any of the other provisions herein contained.

[7] Royalties

This topic could be the basis for an entire institute, as royalty law can be complicated. At the outset, the parties need to contemplate the

determination of the quantum of royalty. Most sophisticated lessors in Texas now try to negotiate a 25% royalty in their oil and gas leases; currently, this amount is not realistic for a uranium lease transaction due to the capital requirements of uranium exploration and production and the protracted time period from lease execution to the first sale of product. The issue is further complicated by the fact that the life of the lease could extend for decades through multiple market swings. In light of these issues, the author has attempted to incorporate a "sliding scale" royalty provision into his uranium leases, whereby the royalty percentage remains relatively low during bad market periods or low production levels and slides higher on a proportionate basis as the market price rises or production levels increase. The following is an example of a "sliding scale" royalty provision used in a South Texas Uranium Lease drafted by the author:

> Lessee shall pay to Lessor a royalty based upon the sale proceeds of the Leased Substances after having been processed, either at the Hobson Plant or some similar plant, with no deduction for any expenses related thereto (such expenses to include, but not be limited to, transportation, gathering, processing, marketing or any other expenses related to the processing of Leased Substances or making same ready for sale), with the resulting amount herein referred to as "Royalty" or "Royalties"). In the event that the Leased Substances are sold prior to having been processed, either at the Hobson Plant or any similar plant, then the value for purposes of determining Royalty shall be based upon the sale proceeds of mineral similar to the Leased Substances, as adjusted to reflect actual mineral content, sold after processing at plants which are similar as far as processing capabilities to the Hobson Plant and are located in South Texas. Upon the sale of Leased Substances, sold and delivered through an arms-length transaction, the applicable Royalty Percentage Rate shall be determined as follows:

Royalty Percentage Rate	**Price per Pound (US$) for which Leased Substances Are Sold**
11%	$.00 to $60.00 per pound
11.5%	$60.01 to $75.00 per pound
12%	$75.01 to $85.00 per pound
14%	$85.01 to $130.00 per pound
16%	$130.01 to $145.00 per pound
20%	$145.01 per pound and above

Practitioners may also want to incorporate various price indices to counter the effects of inflation over the potentially long period that a uranium lease can stay in effect.

In most instances, the parties agree that the basis for valuation of royalty should be the value of the processed U_3O_8 (yellowcake) and not the value of the unprocessed solution at the time it was extracted from the ground. Indeed, if the parties fail to express their intentions on this issue, under

Texas law a court will require royalty to be paid in this manner.[48] This holding is a departure from the context of oil and gas leases, for which Texas courts have required valuation to be made at the wellhead and not at the first point of sale. In a Texas case friendly to the lessor, the lessee was required to process the uranium to a marketable condition with none of the processing cost to be shared by the lessor.[49] The careful draftsman will not merely rely on the current case law since it is, of course, subject to change, and should instead specify how processing, transportation, marketing, and other related costs will be borne.

Texas oil and gas law is replete with caselaw governing the determination of the product's market value for the purpose of paying royalties. Without going through that history, suffice it to say that the Texas Supreme Court's lesson to lessors is that royalty should be based upon the proceeds of sale, or the market value of the product, whichever is higher. Uranium royalty calculation is more difficult than oil and gas royalty calculation due to the lack of a true uranium market (other than a handful of spot sales) and the general unreliability of market forces due to the many secondary supplies of uranium that distort the true market. However, there are at least two sources for the quotation of uranium market spot prices,[50] and many Texas uranium leases utilize these sources to base market value calculations.

As noted by Nesbitt, a unique aspect of the uranium royalty clause is how it deals with the payment of royalties on other mineral substances produced in association with uranium. Nesbitt recommends that care be exercised to ensure that the royalty provision is drafted to cover all minerals that are or may be present in anomalous amounts on a property.[51] Also writing on this issue is Trace Burton, who recommends that, in the event any other such minerals remain on the leased premises after the lease terminates, all such materials shall be deemed the sole and exclusive property of lessor; provided, however, that lessee should still be under the obligation to make such disposition of materials as may be required pursuant to the lease or applicable law.[52]

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[48]U.S. Steel Corp. v. Whitley, 636 S.W.2d 465 (Tex. App.—Corpus Christi 1982, writ denied).

[49]Lomex Corp. v. McBryde, 696 S.W.2d 200 (Tex. App.—San Antonio 1985, writ denied).

[50]The UX Consulting Company, LLC, http://www.uxc.com; and TradeTech Uranium Info, http://www.uranium.info.com.

[51]Nesbitt, *supra* note 45, at 9A-5.

[52]Burton, *supra* note 23, at 34.

[8] Shut-In Royalties

A lessee may require the option to pay shut-in royalties to defer performance in the event of a market disruption. A lessor should be careful to put a maximum time limit on the exercise of the shut-in royalty payment provision in order to prevent abuse. One Texas case has considered this provision[53] and ruled in favor of the lessee who shut in over a top lessee, on the basis that the uranium reserves on the property were capable of being produced in commercial quantities at the time of the shut-in event.

[9] Commingling

In general, a lessee does not have the right to commingle production of minerals.[54] If commingling occurs, the lessee might be held liable under the equitable remedy of "confusion of goods" for the payment of royalties to all parties with an interest in the commingled product as if each owner owned 100% of the commingled product. Efficient production of uranium, more so than oil and gas, might require the commingling of product and processes due to the cost and difficulty of building multiple processing facilities. The lessee, therefore, should strenuously negotiate for commingling authority. The lessor, on the other hand, should negotiate requirements that the uranium product be carefully measured and assayed in order that the quality and quantity of the produced materials can be traced to the specific land from which they were produced. The following provision attempts to reach a compromise of the legitimate requirements of the parties:

> Once Leased Substances have been produced, saved and removed from the surface of the Leased Land, Lessee shall have the right from time to time to mix or commingle Leased Substances from the Leased Land with like substances produced from other land for purposes of transporting, treating, processing and storing prior to or for the purpose of sale. Prior to such mixing or commingling, Lessee shall determine the volume and mineral content of such Leased Substances through periodic sampling and assays, using sound engineering principles. For purposes of determining the Royalty in those cases where Leased Substances have been mixed or commingled and are sold, the Leased Substances attributable to the Leased Land shall be a function of the volume and content of the Leased Substances produced from the Leased Land compared to the volume and mineral content of the Leased Substances produced from outside of the Leased Land. In all cases of such sales of mixed or commingled Leased Substances, Lessee shall provide Lessor with copies of reports detailing assays, measurements and allocations made in accordance with this provision. At Lessor's own cost and expense, Lessor shall be entitled to designate an agent who will have independent access to such assays, measurements and allocations so that he can prepare an independent report regarding same.

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[53] Everest Exploration, Inc. v. URI, Inc., 131 S.W.3d 138 (Tex. App.—San Antonio 2004, no pet.).

[54] Nesbitt, *supra* note 45, at 9A-6.

[10] Assignment or Restrictions on Assignment

In general, the lessee will want great freedom to assign the uranium leasehold estate, in whole or in part, to accommodate the raising of capital and other operational concerns. The lessor, on the other hand, made its deal with the original lessee and can be reasonably expected to want to rely on the continued participation and liability of that specific lessee. The following provision attempts to address these respective concerns:

> The rights and estate of any party hereto may be assigned from time to time, provided, however, that, due to the special relationship of trust and confidence between Lessor and Lessee, any assignment, mortgage or other transfer of all or any interest in this Lease by Lessee shall be null and void without the prior written consent of Lessor. Lessee shall furnish to Lessor a copy of any proposed assignment, mortgage or other transfer and provide Lessor with detailed information regarding the identity and address of any such proposed assignee as well as a complete description of its technical, operational and financial capabilities. Lessor's consent shall be based upon its assessment of the proposed assignee in the context of its credentials and its ability to assume and fulfill the obligations set out in this Lease in a timely and professional manner. These provisions shall apply to any type of assignment, sublease, conveyance, mortgage, pledge or transfer of all or a portion of this Lease or rights or interest hereunder.

The assignment clause should also address the issue of whether a lessee who properly assigns its interest in accordance with the foregoing standards will be excused from any liability or only from prospective liability.

[11] Information and Audit Rights

In general, a mineral lessee will want to maintain the confidentiality of all information pertinent to its operations in order to preserve trade secrets and processes and to prevail over competitors. The lessor, however, expects to have access to certain important information in order that it can monitor operations on its property to ensure lease compliance, as well as to determine that its economic interest is being properly honored in accordance with the requirements of the lease. The following provision attempts to address these respective needs:

> Lessee shall furnish Lessor, concurrently with its receipt or transmittal of same, with copies of all studies, applications, reports or other information relevant to its operations on the Leased Land, including, but not limited to, that which is submitted by Lessee to any and all governmental agencies having jurisdiction over activity undertaken pursuant to terms of the Lease. Likewise, Lessee shall furnish Lessor, within thirty (30) days of receipt, with copies of all notices or other correspondence received from any and all governmental agencies having jurisdiction over activity undertaken pursuant to terms of the Lease. Lessee shall also furnish Lessor with copies of all: location plats, well logs and core records; tests, analyses, assays, or other types of scientific or technical analyses of the Leased Substance; and production and processing records. All such data shall be provided to Lessor within a reasonable time period following Lessee's receipt thereof, provided that all accumulated data shall be provided to Lessor on at least a quarterly basis. Lessee shall furnish to Lessor, within thirty (30) days of execution, copies of all contracts and agreements pertaining to the sale

or disposition of Leased Substances from the Leased Land. In the event such contracts contain any provisions which would genuinely make such contracts confidential or trade secrets, Lessee shall notify Lessor accordingly in writing and Lessor agrees to hold such material confidential for a period of two (2) years after the delivery of same; provided, however, if Lessor requires such data to perform an audit or to enforce Lessee's compliance with this Lease, Lessor shall be permitted to use such information and disseminate same to its accountants, expert witnesses and attorneys subject to a reasonable confidentiality agreement or order consistent with the foregoing concepts in this Section. Lessor, or its duly authorized representatives, shall have the right at all times and at their own risk to enter into and upon the Leased Land and workings thereon for the purposes of examining and inspecting the same and ascertaining whether the terms and conditions of this Lease are being carried out and performed by Lessee, so long as such access or inspection does not interfere with the operations of Lessee. Lessor, or his duly authorized representatives, shall at all reasonable times have access to production and sales records, assays, measurements and evaluation of ore records, and all other records pertinent and necessary for substantiating the compliance of Lessee with the provisions of this Lease.

[12] Operations, Surface Estate Issues, Restoration, and Reclamation

If the lessor no longer owns any interest in the severed surface estate at the time of preparation of the uranium lease, it may simply require that the lessee comply with all applicable laws, provide a strong indemnity, acquire the proper amount of insurance (with lessor acknowledged in writing as a loss payee), and be bonded. In such instance, the lessor may also want to have the lessee covenant to attempt to negotiate the resolution of surface issues in good faith with the surface owner. On the other hand, if the lessor also owns the surface estate it will want to negotiate very specific requirements for surface operations, as well as for the restoration and reclamation of the surface. The author has not provided any lease terms relevant to this provision, due to considerations of length, as well as the requirement that such provisions be specifically tailored to the unique characteristics of a particular tract of land. The author wants to note, however, a creative provision utilized by Frank Armstrong with respect to the issue of "contaminated" surface damage that cannot be restored to comply with applicable law. In such instance, Armstrong has drafted a workable provision whereby "lessee shall pay to lessor, as full compensation therefore, a sum equal to four hundred percent (400%) of the market value of such land as of the time that lessor discovers such contamination." Unfortunately, space limitations preclude the reproduction of the entire provision.

[13] Statute of Limitations

The operation of a uranium lease and related facilities is complex, and the lessor that lacks expertise in such matters could easily fail to determine when the lessee has breached a lease obligation. Unfortunately, some

courts have imposed very stringent statute of limitations requirements on lessors that, in the author's opinion, are too onerous. The author attempts to negotiate the following provision, based on the common law "discovery rule" (which does not apply in Texas unless drafted between the parties):

> The applicable Texas statutes of limitation shall govern the filing of any suits or causes of action brought hereunder, but in the event that a claim was difficult to discover or was inherently undiscoverable by either party hereto, any such suit shall be brought within the applicable limitations period commencing after an average, reasonable person would have discovered such claim in the exercise of ordinary diligence.

[14] Pooling or Prohibition on Pooling

Uranium operations do not require as much surface area as do most oil and gas leases, and therefore the author generally attempts to restrict the lessee from any pooling authority. The author's practice is to invite the lessee to prove a legitimate need to pool, based on geology and engineering requirements, and, in the event such presentation is persuasive, a reasonable pooling clause can usually be negotiated. Lessors are cautioned not to grant unlimited pooling authority because, unfortunately, Texas jurisprudence has a plethora of cases wherein it was held that the lessee exercised such power in bad faith.

[15] Other Lease Provisions

There are many other important provisions in a uranium lease, but space limitations preclude further discussion.

§ 27.05 Conclusion: Future of the Domestic Uranium Industry

This is a critical period in American history, when important long-term energy choices are being made, some of which may have unintended consequences that could preclude the use of other alternatives. While nuclear power has many advantages, such as relative efficiency, cost, supply, and environmental appeal, it also carries certain political baggage, some of which is well deserved. A political emphasis should be placed on encouraging careful uranium production and use, and acknowledging that uranium is a plentiful, green resource that could go a long way to meeting our nation's energy requirements.

§ 27.06 Appendix A: Uranium as Attribute of Surface or Mineral Estate: Authorities by State

ALABAMA

Payne v. Hoover, Inc., 486 So. 2d 426 (Ala. 1986).

ALASKA

Norken Corp. v. McGahan, 823 P.2d 622 (Alaska 1991).

ARIZONA

Spurlock v. Santa Fe P. R.R., 694 P.2d 299 (Ariz. Ct. App. 1984).

CALIFORNIA

Pariani v. California, 164 Cal. Rptr. 683 (Cal. App. 1st Dist. 1980).

COLORADO

McCormick v. Union Pac. Resources Co., 14 P.3d 346 (Colo. 2000).

Keith v. Kinney, 140 P.3d 141 (Colo. Ct. App. 2005), *cert. denied* 2006.

FLORIDA

Collins v. Coastal Petroleum Co., 118 So. 2d 796 (Fla. Dist. Ct. App. 1st Dist. 1960).

IDAHO

Menard, "A Proposal for the Construction of 'Other Minerals' in Idaho," 18 Idaho L. Rev. 97 (1982).

Stucki v. Parker, 703 P.2d 693 (Idaho 1985).

LOUISIANA

West v. Godair, 542 So. 2d 1386 (La. 1989).

MONTANA

Farley v. Booth Bros. Land & Livestock Co., 890 P.2d 377 (Mont. 1995).

Karell, "Montana's Statutory Protection of Surface Owners from Strip Mining and Resultant Problems of Mineral Deed Construction," 37 Mont. L. Rev. 347 (1976).

NEVADA

Christensen v. Chromalloy Am. Corp., 656 P.2d 844 (Nev. 1983).

NEW MEXICO

New Mexico & Arizona Land Co. v. Elkins, 137 F. Supp. 767 (D.N.M. 1956).

Champlin Petroleum Co. v. Lyman, 708 P.2d 319 (N.M. 1985).

NORTH DAKOTA

Lee v. Frank, 313 N.W.2d 733 (N.D. 1981).

McDonald v. Antelope Land & Cattle Co., 294 N.W.2d 391 (N.D. 1980).

Schulz v. Hauck, 312 N.W.2d 360 (N.D. 1981).

OHIO

Wiseman v. Cambria Prods. Co., 572 N.E.2d 759 (Ohio Ct. App., Lawrence County 1989).

OKLAHOMA

Holland v. Dolese Co., 540 P.2d 549 (Okla. 1975).

PENNSYLVANIA

Bundy v. Myers, 94 A.2d 724 (Pa. 1953).

New York State Natural Gas Corp. v. Swan-Finch Gas Dev. Corp., 173 F. Supp. 184 (W.D. Pa. 1959).

Highland v. Commonwealth, 161 A.2d 390 (Pa. 1960).

SOUTH DAKOTA

Rysavy v. Novotny, 401 N.W.2d 540 (S.D. 1987).

TEXAS

Moser v. United States Steel Corp., 676 S.W.2d 99 (Tex. 1984).

Reed v. Wylie, 554 S.W.2d 169 (Tex. 1977) (*Reed I*).

Reed v. Wylie, 597 S.W.2d 743 (Tex. 1980) (*Reed II*).

Acker v. Guinn, 464 S.W.2d 348 (Tex. 1971).

UTAH

Patterson v. Wilcox, 358 P.2d 88 (Utah 1961).

State Land Bd. v. State Dep't of Fish & Game, 408 P.2d 707 (Utah 1965).

WASHINGTON

Kunkel v. Meridian Oil, Inc., 792 P.2d 1254 (Wash. 1990).

WYOMING

Miller Land & Mineral Co. v. State Highway Comm'n, 757 P.2d 1001 (Wyo. 1988).

Armgardt, "What 'Other Minerals' Should Mean in Wyoming," 21 Land & Water L. Rev. 417 (1986).