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Oil Shale and the Mining Laws

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OIL SHALE AND THE MINING LAWS

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The lessons learned from World War II and the necessity for insuring a continuous future oil supply for our country, plus the tremendous steps in acquiring technological "know-how" being taken by the Bureau of Mines, under authority granted by the Synthetic Liquid Fuels Act,[1] have once again called attention to lands valuable for oil shale. In the process, lawyers have found themselves faced with new and interesting problems. The purpose of this article will be to point out certain of those problems and present the authorities bearing upon their solution; however, a brief introductory comment on the history of oil shale development and the distribution and nature of oil shale deposits should prove helpful.

Oil shale deposits have been worked in various countries throughout the world. The oil shale industry of Scotland perhaps is the oldest and best known; however, the largest was conducted in Manchuria by the Japanese during World War II as a source of liquid fuels for military uses. In this country, considerable interest was first shown in western oil shales in 1916, the peak of activities being reached in 1923. The Catlin operation near Elko, Nevada was perhaps the nearest approach in this country to an oil shale enterprise on a commercial scale. Over 100 companies were formed for developing oil shale deposits. A large part of them, however, proved to be stock promotion deals only, which were detrimental to the industry. The Bureau of Mines operated an experimental oil-shale retort plant near Rifle, Colorado from September, 1926 to June, 1927 and again from April, 1928 to July, 1929. After that the plant was dismantled since, by this time, the East Texas oil field had been discovered, and the country had lost interest in substitute liquid fuels.[2] Colorado, particularly in the vicinity of the

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* Written while a student at the University of Denver College of Law. A copy of this article was submitted to the Regional Office of the United States Department of Interior, Bureau of Land Management, at Salt Lake City, and the following comment was received from Arthur W. Brown, Acting Regional Administrator:

> "This office . . . desires to compliment you on the excellent research job accomplished on a subject as comprehensive, complicated and disputed as this one.
>
> " . . . Your article . . . will be made a permanent part of our records, and I assure you that it will be consulted frequently by our personnel in connection with our many mining and oil shale problems."

[1] Act of April 5, 1944, c. 172, 30 U.S.C. c. 6 (1949 Supp.).

[2] U. S. Bureau of Mines, Report of Investigations No. 4269 (E. D. Gardner, *Oil Shale Project, Rifle, Colorado,* 1948).

towns of Rifle, DeBeque and Grand Valley, was one of the principal centers of activity during the Twenties.

Oil shale is known to occur in about 20 States of the Union and in Alaska. The most extensive deposits are in the Green River formation of Colorado, Utah and Wyoming.[3] Presently available sampled sections indicate the oil shale of Colorado contains 300 billion, that of Utah 42.8 Billion, and that of Wyoming 3 billion barrels of shale oil.[4] The shale of western Colorado, generally, is cheaper to mine, apparently richer and probably more persistent than elsewhere in the Rocky Mountain Region.[5] In 1920, about 900,000 acres of public domain in Colorado, 2,700,000 acres in Utah, and 500,000 acres in Wyoming were classified as chiefly valuable for their oil shale. About 1,000 square miles, or 640,000 acres, contain oil shale beds of sufficient thickness and richness to be of potential economic importance. Private holdings in the Rifle-DeBeque area of Colorado comprise about 300 square miles.[6] Immense tonnages of oil shales occur in Ohio, Indiana, Kentucky, and Tennessee, but the oil content of these shales is too low for them to be considered of economic importance at present. High-grade oil shale occurs at Elko, Nevada, but the beds are relatively thin, and the tonnage is limited.[7]

Oil does not exist in oil shale as such; it is not a mere container of residual oil. The oil is present in the form of a complex organic compound called kerogen. The organic matter is chiefly the remains of primitive aquatic plants and animals, and is largely structureless amorphous material derived from the partial putrefaction of aquatic organisms growing during the middle Eocene period. Upon destructive distillation—that is, heating in the absence of air—this organic material is decomposed, yielding hydrocarbons, oils and permanent gases. 'Shale" is really a misnomer, as the rock (which is tough and strong) is a magnesium marlstone and has few of the qualities usually attributed to shale. In the Parachute Creek horizons (which is the principal oil shale member) of the Green River Formation, the oil shale is divided into three zones: the main zone, 460 to 630 feet thick; the middle zone, 230 to 270 feet thick; and the lower zone, 205 to 220 feet thick. These zones are generally separated by 50 to 150 feet of barren marlstone. The oil shale beds are undisturbed and lie nearly horizontal. Some shale measures of commercial interest outcrop in cliffs near the top of escarpments.[8] These geologic facts are of importance in connection with the problem of proper mineral locations, considered below.

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[3] Note 2, *supra.*
[4] A.I.M.E. Tech. Pub. No. 2358 (Carl Belser, 1948), p. 11.
[5] A.I.M.E. Tech. Pub. No. 2286 (E. D. Gardner 1947).
[6] Note 2, *supra.*
[7] U. S. Bureau of Mines, Report of Investigations No. 4457 (*Synthetic Liquid Fuels,* 1949), Part II, p. 2.
[8] Notes 2, 4, 5, and 7, *supra;* 17 Oil & Gas Journal 52 (Bureau of Mines, 1919); A.I.M.E. Tech. Pub. No. 2666A (E. D. Gardner and E. M. Sipprelle, 1949); Dean Winchester, *Oil Shale of Colorado and Utah,* 36 Railroad Red Book 695 (1919).

LOCATION UNDER THE MINING LAWS

By the turn of the century there had been enacted a considerable number of statutes [9] regulating the disposition of publicly owned mineral lands. None of these statutes expressly applied to oil shale. It was in reliance upon these statutory provisions, upon decisions of the courts and of the Department of the Interior (which were applicable only by analogy), and upon their own practical knowledge, that mining men first located oil shale. The Act of February 25, 1920,[10] was the first statute expressly applicable to oil shale. What was probably the first patent to be granted upon an oil shale location was that to Verner Z. Reed and James Doyle on land in Garfield County, Colorado, in 1920.[11] From 1916, when activity began, until 1920, there were apparently no authoritative public announcements as to the proper procedure to be followed, i.e., whether lands valuable for oil shale should be located as lodes or placers. However, the Department of Interior in each of the years 1916, 1917, 1918 and 1919 [12] answered individual inquiries concerning oil shale generally. The letter of 1916 is discussed below. It is believed that a problem, the exact proportions of which are unknown, does exist, for as one authority wrote in 1921:[13]

> Previous to February 25, 1920, oil shale deposits were located under the mining law of 1872, with its amendments, and it is probable that a considerable acreage of oil shales has been located and is now being held under that law either as lode or placer claims . . . It is probable that most oil shale deposits which have been located under the mining law have been located as placer claims.

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[9] Act of July 4, 1866, 30 U.S.C. § 21 (1940): In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law. Act of July 26, 1866, 30 U.S.C. § 22 (1940): All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase . . . under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

Subsequent sections prescribe certain rules and regulations to govern the location of "Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits." Act of 1872, 30 U.S.C. § 23. This statute also provides the manner of obtaining title from the government for lands "claimed and located for valuable deposits" under the preceding sections. 30 U.S.C. § 35 (1940) provides: Claims usually called "placers", including all forms of deposit, excepting veins of quartz or other rocks in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings as are provided for vein or lode claims. The Act of February 11, 1897, 30 U.S.C. § 101 (1940) provides: Any person authorized to enter lands under the mining laws of the United States may enter and obtain patent to lands containing petroleum or other mineral oils. and chiefly valuable therefor, under the provisions of the laws relating to placer mineral claims.

[10] Act of Feb. 25, 1920, 30 U.S.C. §§ 181 *et seq.* (1940); 30 U.S.C. § 241 (1940).

[11] *Interior Department,* Instructions, 47 L.D. 548, May 10, 1920.

[12] Reviewed in Instructions of May 10, 1920, note 11, *supra.*

[13] James R. Jones, *The Legal Status of Oil Shale Deposits in the Public Domain,* 111 Mining Journal 68, 69 (1921).

And it was said:

> The whole matter (of development) has been retarded by the uncertain status of the land laws, as well as by a general feeling of uneasiness as to the attitude of the current public land policy toward any but a meager scale type development.[14]

Assuming, then, that oil shale land has been located as both placers and lodes, what authorities bear upon the validity of each?

Applicable General Principles

The following general principles of mining law are applicable:

(1) Whatever is recognized as a mineral by the standard authorities on the subject, when the same is found in quantity and quality to render the land sought to be patented more valuable on this account than for purposes of agriculture, should be treated as coming within the purview of the mining acts of 1872.[15] Oil shale has long been recognized as a valuable mineral deposit, and for many years the mining of such deposits and the distillation of petroleum and other mineral substances therefrom has been an extensive industry in Scotland.[16] The Director of the Geological Survey in 1916 classified large areas in Colorado, Utah and Wyoming as mineral lands, valuable as a source of petroleum and nitrogen.[17]

(2) The amount of land which may be located as a vein or lode claim, the amount of land which may be located as a placer claim, the price per acre required to be paid to the Government in the two cases when patents are obtained, the rights conferred by the respective locations and patents, and the conditions upon which such rights are held, differ so materially as to make the question whether mineral lands claimed in any given case belong to one class or to the other a matter of importance both to the Government and to the mining claimant.[18]

(3) Mineral lands of either class can not be lawfully located and patented except under the provisions of the statute applicable to such class. Veins or lodes may be located and patented only under the law applicable to veins or lodes. Deposits other than veins or lodes are subject to location and patent only under the law applicable to placer claims.[19]

(4) The statutes describe a "lode" claim as being upon ". . . veins or lodes of quartz and other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits." A "placer" claim, on the other hand, is described as ". . . all forms of de-

[14] *Symposium on Western Oil Shales*, 36 Railroad Red Book 549 (1919).

[15] 43 C.F.R. § 185.2; Interior Dept. B.L.M. Circular No. 1278 § 5; W. H. Hooper, 1 L.D. 560 (1881); 36 Railroad Red Book 580 (1919).

[16] Note 11, *supra; see* also, State of Utah v. Watson Oil Co., 50 L.D. 323 (1924), holding that deposits of oil shale were a valuable mineral deposit in 1905; But *cf.*, United States v. Strauss, 58 L.D. 567 (1943).

[17] Letter, Director, U.S.G.S., to Commissioner, G.L.O., May 23, 1916.

[18] Henderson v. Fulton, 35 L.D. 652 (1907); Harry Lode Mining Claim, 41 L. D. 403 (1912).

[19] Webb v. American Asphaltum Mining Co., 157 F. 203 (1907); note 18, *supra*, and cases cited.

posit, excepting veins of quartz, or other rock in place. . . ." [20]

(5) What constitutes a lode or vein of mineral matter has been no easy matter to define.[21] No arbitrary definition can be given, but the courts and the Department have been guided by the sense given it by miners, by interpretation of general geological data and by the character of the particular deposit in question, and the terms and purposes of the mining laws.[22] The following definition has often been cited with approval: "In general, it may be said, that a lode or vein is a body of mineral or mineral body of rock, within defined boundaries, in the general mass of the mountain"[23] Another definition is: "In practical mining, the terms 'vein' and 'lode' apply to all deposits of mineralized matter within any zone or belt of mineralized rock separated from the neighboring rock by well-defined boundaries . . ." [24] Further: "The controlling characteristic of a vein is a continuous body of mineral-bearing rock in place, in the general mass of the surrounding formation." [25] The statute should be interpreted as though it read, "veins, or lodes, of rock in place." [26] The two essential elements of a lode are (1) the mineral-bearing rock, which must be in place and have reasonable trend and continuity, and (2) the reasonably distinct boundaries on each side of the same.[27]

(6) While some of the authorities hold the view that only minerals of the metallic class are within the statutes relating to veins or lodes, the great weight of authority is the other way, and the Department is of opinion that the latter is the better view.[28]

Lode Claims for Oil Shale Possible

There are four classes of cases where the courts have been called upon to determine what constitutes a lode or vein within the intent and meaning of different sections of the statutes: (a) those between miners who have located claims on the same lode under the provisions of sec. 2320, R.S.; (b) those between placer and lode claimants, under the provisions of sec. 2333; (c) those between mineral claimants and parties holding town-site patents to the same ground; and (d) those between mineral and agricultural claimants of the same land.[29] Further, the question may arise where application for patent is made to the Department.[30]

The following examples indicate the distinction drawn between those deposits contemplated by the placer regulations and those

[20] Note 9, *supra;* San Francisco Chemical Co. v. Duffield, 205 F. 480 (1913).
[21] Iron Silver Mining Co. v. Chessman, 116 U. S. 529 (1886).
[22] Notes 18, 19, and 20, *supra;* E. M. Palmer, 38 L.D. 294 (1909).
[23] Judge Hallett, cited in Stevens v. Williams, 1 McCrary 480, Fed. Cas. No. 13,341 (1879).
[24] Hayes v. Lavagino, 53 P. 1029 (Utah, 1898); Book v. Justice Co., 58 F. 106 (1893).
[25] Beals v. Cone, 62 P. 948 (1900).
[26] I Lindley on Mines § 299.
[27] Barringer & Adams, *Law of Mines and Mining,* p. 437; Henderson v. Fulton, note 18, *supra.*
[28] Pacific Coast Marble Co. v. Northern Pacific Ry Co., 25 L.D. 233 (1897); note 18, *supra; see* also Lindley on Mines, §§ 86, 323; 1 Snyder on Mines § 337.
[29] Migeon v. Montana Central Ry. Co., 77 F. 249 (1896).
[30] *See,* for example, Harry Lode Mining Claim, note 18, *supra.*

covered by the lode regulations. Beds of marble which do not bear any mineral substance of value, which do not lie in vein or lode formation, and which are nothing more than a quarry are locatable only as a placer, and not as a lode.[31] On the other hand, a broken, altered, and mineralized zone of limestone, lying between walls of quartzite, constitutes a lode or vein within the meaning of the mining laws.[32] And sand-rock or sedimentary sandstone formation in the general mass of the mountain bearing gold was held to be rock in place bearing mineral, constituting a vein or lode within the purview of the statute, and a placer entry was held to be unlawful.[33] One authority [34] has stated that any lode, vein or deposit of rock in place between defined or definable boundaries containing any of the precious or economic metals or minerals, excepting coal, whether metallic or non-metallic, should be held to be and is locatable and patentable as a lode claim.

In the classic case of *Webb v. American Asphaltum Company*,[35] it was the judgment of the Circuit Court of Appeals, 8th Circuit, that asphaltum, varying in its consistency from a liquid to a semi-liquid condition, may be located as a petroleum, but that when it assumes the solid form and is found in a vein or lode, it cannot be located under the petroleum placer statute. If Congress had intended to include veins of asphaltum in place, the Court held, it would have so stated in the Act of 1897.[36]

On the basis of the above principles of mining law and the decisions cited, and in the absence of any direct Departmental or judicial authority, location of oil shale deposits on the public domain as lode mining claims would appear to have been justified. As has been shown, oil shale constitutes a valuable mineral within the meaning of the mining laws. There is no free oil in the shale, rather there is an organic matter called kerogen from which shale oil is produced by distillation. The kerogen is contained in marlstone, which is a rock, both technically and within the statutes. The rock containing kerogen is found in beds which are undisturbed and lie nearly horizontal, with definable boundaries.[37] Further, under the holding of the *Webb* case, *supra*, the mere fact that petroleum products are derived from the mineral is not sufficient to bring the entry within the purview of the petroleum placer Act of 1897 where it occurs in lodes. Logically, therefore, it would seem that oil shale deposits should be located as lodes. As stated previously,[38] it would appear that some claims were so located but that the matter was one of serious doubt. And an author, writing in 1918, said:

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[31] Henderson v. Fulton, note 18, *supra*.
[32] U. S. Mining Co. v. Lawson, 134 F. 769 (1904), affirmed in 207 U. S. 1.
[33] E M. Palmer, note 24, *supra*.
[34] Snyder on Mines, p. 307; Harry Lode Mining Claim, note 18, *supra*.
[35] Note 19, *supra*.
[36] Note 9, *supra*.
[37] See references in note 8, *supra*.
[38] *See* James R. Jones, note 13, *supra; Oil Shale Locations*, 4 Mining Cong. Journal 7 (1918).

> . . . During the recent hearings at Washington before the Public Lands Committee of the House on the pending Mineral Lands Leasing Bills (S. 2812 and H.R. 3232), which measures are to open, on the leasing principle, the remaining oil, coal and phosphate areas of the public lands of the U. S., delegates appeared from Utah, Wyoming and Colorado, urging the necessity for considering at the same time, the shale oil problem, as there is now no specific law for acquiring title to these patent lands. Rights to shale land are being initiated under placer mining laws. Having in mind the unhappy experiences of the oil land operators with this inept and archaic law, it is natural that those fostering the new industry should fear a repetition of the experience of the oil men with that statute.[39]

The unhappy experience of the oil men, referred to above, is well-known history. For over 20 years lands valuable for oil and gas were located under the placer mining statutes, there being no statute expressly applicable.[40] In 1896 the Department reversed its previous stand and held that oil was not within the purview of the statutes.[41] The next year Congress expressly authorized the entry and location of oil lands under the placer mining laws.[42]

Placer Locations Favored by Department

While the status of lode locations for oil shade may be legally uncertain, though logically sound, there appears to be no such uncertainty where valid locations were made under the placer mining laws. There exists both direct and indirect authority for this latter statement. On May 10, 1920, First Assistant Secretary Vogelsang rendered his decision on the first application for patent for oil shale placer claims.[43] After reviewing the facts, quoting the applicable statutes, and pointing to the commercial development taking place as showing the value of oil shale as a mineral, Mr. Vogelsang reviewed prior statements of the Department which, he said, had been made "while disclaiming any intention of expressing a binding opinion in the premises." He cited a letter to Senator Myers, dated May 16, 1916, in which was stated, *inter alia*:

> *It would seem that* a discovery by competent locators, locating in good faith, of oil shale unappropriated and on unwithdrawn public domain, capable, by approved methods, of yielding oil in such quantities so as to make the land chiefly valuable therefor, would be a sufficient compliance with the provisions of said oil placer act of 1897, and that *locations based upon such a discovery must be made and entered, if at all, under provisions of said Act of* 1897.[44]

Mr. Vogelsang also quoted from a letter of the Director of the Geological Survey, dated May 23, 1916, to the Commissioner

[39] J. H. G. Wolf, *Commercial Aspects of the Shale Oil Industry,* 116 Mining & Scientific Press 643 (1918).

[40] *Interior Dept.,* Instructions, Jan. 30, 1875 (Sickle's Mining Laws 491); Maxwell v. Brierly, 10 C.L.O. 50; In re Rogers, 4 L.D. 284 (1885); In re Piru Oil Co., 16 L.D. 117 (1893); Gird v. California Oil Co., 60 F. 531 (1894).

[41] Union Oil Co., 23 L.D. 222 (1896).

[42] Note 9, *supra;* Union Oil Co., 25 L.D. 351 (1897).

[43] Note 11, *supra.*

[44] Note 11, *supra.*

of the General Land Office, classifying oil shale lands as valuable for petroleum and nitrogen and recommending the lands remain open under the mineral land laws "even though they are ambiguous and but poorly adapted to deposits of this type." The following language then appears:

> Oil shale having been thus recognized by the Department and by Congress as a mineral deposit and a source of petroleum, and having been demonstrated elsewhere to be a material of economic importance, *lands valuable on account thereof must be held to have been subject to valid location and appropriation under the placer mining laws, to the same extent and subject to the same provisions and conditions as if valuable on account of oil or gas. Entries and applications for patent for oil shale placer claims will therefor be adjudicated by your office in accordance with the same legal provisions and with reference to the same requirements and limitations as are applicable to oil and gas placers.*[45]

This decision occasioned much comment in mining circles. That it was generally received with relief is indicated by the caption of an article which appeared shortly thereafter, to-wit, "Oil Shale Entries Made Prior to Leasing Law are All Right." [46] This, of course, was because most claims had been located under the placer regulations. The decision would appear to be in direct conflict with the *Webb* case, *supra*. In effect, it decides that "oil" (really kerogen and not oil at all), even though it appears in solid form and in lode or vein formations, is nevertheless subject to entry and patent under petroleum placer mining laws. There appears little doubt that the problem was carefully considered by the Department, and that the decision was rendered with full realization that the applicable laws were "ambiguous and but poorly adapted to deposits of this type."

That the rule as stated by Mr. Vogelsang has been, and is, considered the law is indicated by the fact that in more than 30 decisions and regulations issued by the Department, and in two decisions of the United States Supreme Court, all directly concerned with oil shale, the propriety of locating such lands as placer claims has never been questioned, but rather seems to have been assumed.[47] And, as stated by the United States Supreme Court under different circumstances, " . . . in the construction of a doubtful and ambiguous law, the contemporaneous construction of those who are called upon to act under the law, and were appointed to carry its provisions into effect, is entitled to great respect," [48] and "ought not to be overruled without cogent reasons." [49] And the Department has said, " . . . This view having been generally accepted for so long a time, and property rights having grown up under it, there should be, in my judgment, the

[45] Reviewed in Instructions of May 10, 1920, note 11, *supra*.
[46] Oil, Paint & Drug Reporter, June 21, 1920, p. 15.
[47] *See*, for example, Dennis v. Utah, 51 L.D. 229 (1925); Krushic v. U. S., 280 U S. 306 (1930); Ickes v. Virginia-Colorado Development Corp., 295 U. S. 639 (1934).
[48] Brown v. U. S., 113 U. S. 568 (1884).
[49] United States v. Moore, 95 U. S. 760 (1887).

clearest evidence of error, as well as very strong reasons of policy and justice controlling, before there should be a departure from it." [50] Many thousands of acres of land held under such placer locations have gone to patent.

In summation, then, it appears that oil shale deposits on the public domain are properly locatable under the petroleum placer mining laws. In the case of lode claims, however, the matter is not so clear. Pursuant to the instructions of May 10, 1920,[51] and from Mr. Vogelsang's letter to Senator Myers, there is indication that a patent on such a location would be denied. If declarations by the Department were not deemed controlling, it would seem that location by lode would be proper and, indeed, technically more accurate than a placer location. As stated, the Department's decision is in conflict in principle with the *Webb* case, *supra,* although that case dealt with asphaltum rather than oil shale. The general principle that mineral lands of either class (lode or placer) can not be lawfully located and patented except under the provisions of the statute applicable to such class, is a double-edged sword; if the Department's decision is controlling (which undoubtedly it is in view of the vested rights which have grown up under it), then the principle operates against lode claims; otherwise the principle operates against placer claims. No direct authority has been found as to the validity of a lode location for oil shale.

The Requisite Discovery

"No location of a mining claim shall be made until the discovery of a vein or lode within the limits of the claim located." [52] Placer claims shall be subject to entry and patent "under like circumstances and conditions or upon similar proceedings as are provided for vein or lode claims." [53]

The general rule as to discovery may be stated thus: where minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine, the requirements of the statute have been met. The geological structure and development of minerals on adjacent lands are pertinent. It is not necessary that the discovery be such that the mineral in its present situation can be immediately disposed of at a profit.[54]

However, in an unreported decision of July 29, 1925,[55] the

[50] Pacific Coast Marble Co. v. Northern Pacific Ry. Co., note 28, *supra.*
[51] Note 11, *supra.*
[52] 30 U.S.C. § 23 (1940).
[53] 30 U.S.C. § 35 (1940).
[54] Freeman v. Summers, 52 L.D. 201 (1927).
[55] Freeman v. Summers, (unreported), July 29, 1925, cited in Empire Gas & Fuel Co., 51 L.D. 424 (1926).

Department created a furor among mining men by holding that a discovery was valid only if it was of a richness equal to or exceeding that provided by the rule adopted by the U.S.G.S. in its regulations of April 3, 1916, for the classification of lands with respect to their oil shale character (15 gallons per ton for beds not less than one foot thick which were too deep to be mined by open-cut methods).

The decision occasioned much comment, and the Secretary ordered further hearings, largely to obtain additional expert testimony. In 1926 many prominent mining men interested in the matter obtained a hearing before the Secretary. The following year rehearings were held in the case. In the decision rendered September 30, 1927,[56] the earlier decision was recalled and vacated. The Department stated in the later ruling that although the impression had become general, it had not been the purpose of the prior decision to rule that the regulations would be used as a yardstick, that the Department had endeavored to correct this impression by subsequent communications, and that the true rule was (and is) that each case presented must be determined upon the facts there disclosed. The Department then held that the following evidence showed a sufficient discovery: that in this particular area of Colorado the lands contained the Green River formation, and that this formation carries oil shales in large and valuable quantities; that while the beds vary in the richness of their content, the formation is one upon which the miner may rely as carrying oil shale which, while yielding at places comparatively small quantities of oil, in other places yields larger and richer quantities—in other words, having made his initial discovery at or near the surface, he may with assurance follow the formation through the lean to the richer beds.

While the decision is not couched in the terms usually found in statements of the rule, yet the effect seems to be to reaffirm that rule.

THE LEASING ACT OF 1920 [57]

The leasing Act is expressly made applicable to oil shale, as well as the other minerals named therein. By the Act, deposits of the minerals within its scope were thereafter to be dealt with on the leasing principle. As to such minerals, the previous system of locating such deposits as lode or placer claims, with the right to apply for patent, was abolished, except with respect to certain existing claims.

Section 21 deals exclusively with oil shale, while sections 26 to 38, inclusive, are general provisions applicable to oil shale and the other minerals covered by the act. Section 21 provides:

[56] Note 54, *supra*.
[57] Act of February 25, 1920 (Public Law No. 146); 30 U.S.C. § 181 *et seq.* § 241.

(1) that no lease shall exceed 5,120 acres.

(2) that leases shall be described by legal subdivisions of the public-land survey, or if unsurveyed, to be surveyed by the United States at the expense of the applicant.

(3) that leases may be for indeterminate periods.

(4) that conditions and covenants relative to methods of mining, prevention of waste, and productive development may be imposed.

(5) that the annual rental shall be $.50 per annum per acre, and that the lessee shall pay such royalties as are specified in the lease; that rentals may be credited against royalties; that royalties are subject to readjustment at the end of each 20-year period; and that the Secretary may, in his discretion, waive the payments of any royalty and rental during the first 5 years of the lease.

(6) that no person, association or corporation may be granted more than one lease.

As stated, sections 26 to 38, inclusive, are those generally applicable to coal, phosphate, sodium, oil, gas and oil shale. Only two of these sections will be mentioned in passing. Oil shale is conspicuous by its absence from the enumeration of coal, phosphate and sodium in that part of section 27 which prohibits any person, association or corporation from holding more than one lease in any one State at one time, with further restrictions upon holding interests in other leases indirectly, e.g., as a stockholder, etc. However, oil shale is specifically mentioned in a subsequent provision of the same section prohibiting unlawful trusts, contracts or conspiracies in restraint of trade in the mining and selling of certain named minerals. Nevertheless, it has been decided by the Department [58] that although oil shale is not mentioned in the above provision, that the prohibition does apply to oil shale. The decision points out that the maximum acreage for oil shale leases is twice that for other minerals, that section 21 prohibits the granting of more than one oil shale lease to any one person, etc., that the regulations provide for a statement of interests held and that the total does not exceed 5,120 acres, and that the lease form provides for a covenant for faithful observance of section 27.

Section 37 embodies the provision which has caused probably more uncertainty and more litigation than any other single provision of the mining laws. This is the so-called "saving clause" as to valid existing claims under the prior mining law. Controversy as to the interpretation of this section has arisen mainly in connection with the necessity of doing annual assessment work, and is discussed under "Assessment Work," *infra.*

[58] *Limitations Respecting the Leasing of Oil-Shale Deposits,* 48 L.D. 635 (1922).

Referring back to section 21, another provision thereof grants a preference right to lease to certain individuals.[59]

REGULATIONS ISSUED PURSUANT TO ACT OF 1920 [60]

It is provided by section 3(e) that the applicant for lease must produce evidence that the land is valuable for its oil shale content with a statement as accurate as may be of the character and extent and mode of occurrence of the deposits. By section 3(f) he must state his proposed method, so far as determined, as to the process of mining and reduction to be adopted, the diligence with which such operations will be carried on, and the contemplated investment in reduction works and development, and the capital available therefor. Section 3(g) provides that the register will fix the time within which adverse or conflicting claims may be filed, which is to be not less than 30, nor more than 40 days from first publication. The area and form of the lease is discretionary with the Secretary.[61] The first year's rental ($.50 per acre) must be paid within 30 days from notice that the right to a lease is granted.[62] A form of lease is given,[63] clause 4(a) of which is a covenant to spend an agreed minimum sum of money (spread over 5 years) for mining operations, and clause 4(b) of which requires a bond conditioned upon such expenditures being made. Clause 4(g) sets forth the required standard of diligence.

Section 7 deals with the preferred rights to a lease given by section 21 of the Act. It is stated, " . . . Claimants of such preferred rights to lease should present same promptly; otherwise the lands may be leased to others, in which case any preference rights under this proviso will be deemed to have lapsed." Although no direct authority has been found, it would seem that the language of section 21 of the Act and the interpretation given section 37 thereof by the Supreme Court in the *Krushnic* and *Virginia-Colorado Development Corp.* cases [64] would forbid any such action by the Department, and that the provision is beyond its authority, if interpreted to mean that prior valid claims could thus be extinguished.

ASSESSMENT WORK

Such a conflict of opinion between the Department and mining men arose as to the effect of section 37 upon the necessity for

[59] It is provided that: . . . any person having a valid claim to such minerals (oil shale) under existing laws on Jan. 1, 1919, shall, upon relinquishment of such claim, be entitled to a lease under the provisions of this section for such area of the land relinquished as shall not exceed the maximum area authorized by this section to be leased to an individual or corporation; Provided, however, That no claimant for a lease who has been guilty of any fraud or who had knowledge or reasonable grounds to know of any fraud, or who has not acted honestly and in good faith, shall be entitled to any of the benefits of this section.

[60] *Interior Dept.*, Circular No. 671, March 11, 1920. *See* also, Circular 1729, April, 1949, 43 C.F.R. 191.

[61] § 5.

[62] Note 61, *supra.*

[63] § 6.

[64] Note 47, *supra.*

doing annual assessment work [65] to maintain the validity of existing claims that it was necessary for the Supreme Court to pass upon two such cases before the matter was thought settled.

In 1927 the Department was presented with the following case [66] for decision: one Emil L. Krushnic and others had located certain oil shale placer claims in 1919. It was questionable whether the required assessment work was done for the year 1920. No third person ever attempted to relocate the claim. On December 16, 1922, Krushnic (having acquired the interest of his co-locators) applied for patent. After the filing of such application, the Department instituted contest proceedings. Krushnic defended by pointing to the familiar provision of mining law that as to land subject to relocation by another upon default of the prior locator in the performance of annual assessment work, the forfeiture is not consummated until some one else enters with the intent to appropriate the property under the mining laws;[67] further, that under the pre-existing law the Government did not possess the character of an adverse claimant, and that the Act of 1920 did not change this rule, even though by the Act the lands were withdrawn from entry under the placer mining laws so that no third person could relocate the claim and thus compel a forfeiture.[68] In short, by section 37 of the Act valid claims then existing were protected, previously failure to do assessment work did not *ipso facto* work a forfeiture, and the validity of a claim was not affected by the fact that neither the Government nor a third person could compel forfeiture by failure to do assessment work. However, the Department ruled otherwise, declaring (1) that one of the objects of the Act was to raise additional public revenue by rents and royalties from leases rather than making free grants, and (2) that the provision of the earlier statute [69] relating to the resumption of work as preventing forfeiture had no application to lands no longer subject to relocation.

Krushnic took an appeal from the decision, and in the lower

[65] ". . . On each claim located after May 10, 1872, and until patent has been issued therefor, not less than $100 worth of labor shall be performed or improvements made during each year . . . and upon failure to comply with these conditions, the claim or mine upon which such failure occurred shall be open to relocation in the same manner as if no location of the same had ever been made, provided that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such relocation . . ." 30 U.S.C. § 28 (1940). 30 U.S.C. § 29 (1940) provides the procedure for obtaining patent, including among others, the following requirement: ". . . The claimant at the time of filing this application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the United States Survey-General that $500 worth of labor has been expended or improvements made upon the claim by himself or grantors . . ." The Act of Feb. 25, 1920, § 37, 30 U.S.C. § 193 (1940) provides: That the deposits of . . . oil shale . . . in lands valuable for such minerals, . . . shall be subject to disposition only in the form and manner provided in this Act, *except as to valid claims existent at date of passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery.* (Emphasis added.)

[66] Emil L. Krushnic, 52 L.D. 282 (1927).

[67] *See,* for example, Belk v. Meagher, 104 U.S. 279 (1881); Oscamp v. Crystal River Mining Co., 58 F. 293 (1893); Field v. Tanner, 22 Colo. 278, 75 P. 916 (1904); Bingham Amalgamated Copper Co. v. Ute Copper Co., 181 F. 748 (1910).

[68] United States v. U. S. Borax Co., 58 I.D. 426 (1943).

[69] 30 U.S.C. § 28 (1940).

court secured a writ of mandamus directing that patent be issued.[70] The court reasoned that there was no apparent intention on the part of Congress to include within the terms of the Act claims initiated under the mining law and which had valid existence at the date of passage; that the locator is not subjected to any forfeitures that did not apply to the mining law; that it had generally been held that a failure to do assessment work did not, in the absence of intervention of a relocator, work a forfeiture; and that both the Department and the courts had recognized that the statutory requirements as to assesment work were not a matter of concern to the Department. The Department relied heavily on the case of *Hodgson v. Midwest Oil Co.*,[71] but the court refused to follow it, holding that the fundamental error in the opinion was in deciding that failure to do assessment work automatically terminated a locator's rights. The court disposed of the Department's argument that if the Leasing Act only prohibited the relocation by the third party of an existing mining claim, the original locator might defer his assessment work indefinitely or so long as he could evade the charge of abandonment, by reasoning: (1) that such mining claim, even though patent is never secured therefor, is property in the fullest sense of the word, and has always been considered transferable without infringing the title of the United States; (2) that a part of this property right was to resume delinquent assessment work without penalty in the absence of relocation; (3) that such claims were authorized under a statutory policy of aid to the mining industry, rather than to secure revenue to the Government; and (4) that "if Congress intended in the Leasing Act to deprive a prior locator of this valuable privilege, it would have given expression to that intent in clear and unmistakable language." The lower court granted mandamus.

Certiorari was granted,[72] and the Supreme Court affirmed the decision of the lower court,[73] pointing out resumption of work by the original locator after default "is an act not in derogation, but in affirmance, of the original location; and thereby the claim is 'maintained' no less than it is by the performance of the annual assessment work. Such resumption does not restore a lost estate; it preserves an existing estate." However, certain language in the opinion was to lead to further litigation; the interpretation given this language is considered below. The Department in compliance with the decision clearlisted Krushnic's application for patent.

Another case [74] came before the Department shortly after the *Krushnic* case, and prior to the Supreme Court decision thereon. The Department followed its views previously expressed, and

[70] U. S. v. West, 30 F. 2d 742 (1929).
[71] 17 F. 2d 71 (1927).
[72] Wilbur v. U. S., 179 U.S. 831.
[73] 280 U. S. 306 (1930); 53 L.D. 45 (1930).
[74] Standard Shales Products Co., 52 L.D. 522 (1928).

denied patent for failure to perform assessment work for the year 1919 where claimant did not file notice of intention to hold in order to take advantage of statutory relief from assessment work and did not resume work prior to the passage of the Leasing Act. On rehearing,[75] the Department vacated its decision so as to follow the decision of the court in the *Krushnic* case.

Department Claims Right to Challenge for Default

It has been mentioned that certain language of the Court in the *Krushnic* case led to further litigation. The Court, after stating that a claim is "maintained" by resumption of work regardless of whether assessment work had previously been done, continued, " . . . unless at least some form of challenge on behalf of the United States to the valid existence of the claim has intervened."

In instructions issued February 28, 1930, and June 17, 1930,[76] the Department interpreted this statement to mean that the Government was in the same position as an adverse claimant under the statutes [77] insofar as challenging a default in assessment work was concerned, and that the challenge must be made at a time when the claim was not being maintained. It was declared that in order to make a lawful challenge, action must be taken "at a time when there is an actual default and no resumption of work, and prior to the time the patent proceedings including the publication of notice have been completed." In the case under consideration, challenge was not made until 7 months after patent had issued, and therefore the challenge was held unlawful.

In two subsequent cases [78] the Department reaffirmed its interpretation of the language in the *Krushnic* case, and expressly declared that it was following the policy that default in performance of assessment work not cured by a resumption of work was a valid ground of challenge by the United States to the valid existence of the claim. Undoubtedly, said the Department, it had authority to determine whether a valid claim was initiated prior to the date of passage of the act. " . . . The public interest dictates that the facts bearing upon such inquiry (as to whether the claim was valid as regards discovery, marking boundaries, etc.) should be ascertained and established when the evidence is available, and not postponed to await the day now apparently remote and unpredictable, when mining operations to extract oil shale have become economically practical and profitable, and rights under the Leasing Act would be invoked by persons wishing to avail them-

[75] 53 L.D. 42 (1930).
[76] *Interior Dept.*, Instructions, 53 L.D. 131, June 17, 1930.
[77] ". . . If no adverse claim shall have been filed with the register and receiver of the proper land office at the expiration of 60 days of publication, it shall be assumed that the applicant is entitled to a patent . . . and therefore no objection from third parties to the issuance of a patent shall be heard, except it be shown that the applicant has failed to comply with the terms of this chapter." 30 U.S.C. § 29 (1940).
[78] Francis D. Weaver, 53 L.D. 175 (1930); The Federal Shale Oil Co., 53 L.D. 213 (1930).

selves of its provisions, but when in all probability the question of whether a particular tract of land was within the purview of the act or within the exception of valid claims would be difficult to resolve correctly because of the obliteration or effacement of evidence by lapse of time, and spurious claims would have to be permitted to stand for lack of evidence to establish their invalidity." [79] The Department claimed for itself, for the same reasons and under authority of the *Krushnic* case, jurisdiction to attack oil shale claims for failure to "maintain" them subsequent to passage of the Act. No other cause for challenge could arise, said the Department, since the Court was referring to claims admitted to be valid at the date of the Leasing Act. Subsequent maintenance, not merely prior status, was the test stated by the court. If the default were established, authority existed to declare the claim null and void, and the land became subject to the operation of the Act. Dual forms of challenge by institution of proceedings and by posting notice of actual repossession were considered proper. On another occasion the Department determined the requisites of a resumption of work sufficient to prevent forfeiture.[80]

The matter was further clarified by the decision of the Supreme Court in a case decided in 1934.[81] The Department had affirmed the Commissioner's decision holding invalid oil shale placers upon which assessment work for the year 1931 had not been performed and where the work had not been resumed prior to challenge by posting. The Department rejected the contention that the language of the court in the *Krushnic* case should be interpreted to permit only challenges "to the valid existence of the claim at the time the Leasing Act went into effect," e.g. that the location was fraudulent, that it was a mere paper location without discovery or actual possession in search of minerals or marking of boundaries, or abandoned at the date of the Leasing Act. This interpretation was held untenable since none of these grounds had any reference to assessment work, and their validity would not be affected by the fact that the owner did or did not do the assessment work. Rather, the Court was speaking of a claim which was valid at the date of the Act (as was that of Krushnic), and thus could have meant only a challenge of default in the performance of assessment work.

Oil Shale Placer Claim Immune from Government Challenge

The decision of the Department was reversed by the lower court, and that court's judgment was affirmed by the Supreme Court. While the Court does not expressly say, nor decide, that an oil shale placer claim valid at the passage of the Act of 1920 is from that date forward valid and immune from attack though there is never a dollar's worth of assessment work done, that re-

[79] The Federal Shale Oil Co., note 78, *supra.*
[80] Shale Oil Co., 53 L.D. 572 (1931).
[81] Ickes v Virginia-Colorado Development Corp., 295 U. S. 639 (1934).

sult might seem to follow logically when read with the *Krushnic* case. The Court, of course, drew heavily from the earlier decision. In the *Krushnic* case, no adverse proceedings were taken until application had been made for patent and at a time when the necessary expenditures for improvements for patent had been made. In the instant case, however, the facts were somewhat different. Challenge had been instituted at a time when there was actual default and apparently before claimant had resumed work. However, in claimant's answer, it was alleged that claimant had intended to resume and had made arrangements for that resumption which would have been had but for the action of the Department. It is to be noted that in the one case there had actually been resumption of work, while in the other preparations for such resumption had been made, both prior to challenge. The language in the two opinions is practically identical. Both decisions emphasize that under the general mining laws a valid mining location is a grant by the United States to the locator of the right of present, exclusive possession; that performance of annual assessment work serves but two purposes—to protect the claim against location by another and as expenditures toward making up the $500 sum necessary for patent; that a failure to do such work does not *ipso facto* work a forfeiture, but that resumption of the work "is in affirmance of and preserves an existing estate"; that the matter of annual expenditure has never been considered a matter for concern to the Department; and that the possessory right was in all events (herein discussed) good as against the United States even though no work was done.

What then, is the effect of (1) the fact that the lands were withdrawn from entry under the previously existing mining law so that third persons cannot relocate upon default; (2) the provision of section 37 of the Act of 1920 which saves valid claims "thereafter maintained"; and (3) the language in the *Krushnic* case that a claim is "maintained" upon resumption after default "unless . . . some form of challenge . . . to the valid existence of the claim has intervened"?

First, let it be noted that in both cases the word "maintained" was used in connection with the "resumption" of work. And, as stated, both cases involved "resumption" of work, actual or prepared. This would seem to lead to the conclusion reached by the Department that there is a requirement of continued assessment work even after the date of the Act. But, in the *Virginia-Colorado Corporation* case, it was held that the "challenge" given the Department by the *Krushnic* case referred to the grounds of "lack of discovery, fraud, or other defect, or that it was subject to cancellation by reason of abandonment," and thus by inference not to assessment work, as insisted by the Department. Thus, it would seem that the interpretation adopted by mining men was sup-

ported. The Court further weakened the position of the Department by holding that the "challenge" mentioned in the *Krushnic* case was "a reservation, not a decision, and it does not aid the government in its contention here." If this reasoning be correct, then it would seem that the effect of the propositions stated in (2) and (3) above is that a claim is "maintained" even after default, if work is resumed, and that preparations for resumption are likewise sufficient; and further, that the *Krushnic* case added nothing to the jurisdiction of the Department to challenge.

In answer to the first proposition, reference may be made to the opinion of the lower court, in its well-reasoned opinion on the *Krushnic* matter, to-wit: " . . . It would require a stretch of the imagination to hold that under the existing policy it was intended by Congress that the Government, through its Secretary of Interior, might assume the functions of a relocater and enforce the forfeiture of the locator and dispossess him of his claim." This language may possibly be weakened by a later passage, " . . . If Congress had intended in the Leasing Act to deprive a prior locator of this valuable privilege (of resuming work), it would have given expression to that intent in clear and unmistakable language. . . ." Of course, locations are subject to cancellation upon proof of abandonment, but whether the mere failure of performing assessment work with the undoubted intent of holding on to potentially valuable properties would be sufficient proof is conjectural.

Conclusions As to Assessment Work

Thus, with regard to oil shale placer claims located before the passage of the Leasing Act, and upon which it may be questionable whether assessment work has been done, it appears that the cases support the following conclusions:

(1) Until the passage of the Act, default in performing assessment work merely gave rise to the possibility of a valid relocation by third parties; if no such event occurred, then the claim was valid in so far as the assessment work was concerned, and such validity was not impaired by the passage of the Act. Until the passage of the Act, it seems certain that the Department had no authority to challenge on such grounds.

(2) As regards assessment work subsequent to the Act:

(a) Mere default is not sufficient to invalidate the claim. And the recording of the prescribed notice in lieu of labor neither adds to nor detracts from such validity.[82] This is the situation where no challenge was ever made by the Department.

(b) Where there was actual default and where the Department challenged the claim, still the Department's action was beyond its authority if such challenge was made at a time:

(i) after expiration of the sixty-day period allowed other adverse claimants to contest applications for patent; or

[82] Note 74, *supra; Oil Shale Placer Claim,* 54 L.D. 244 (1933). The Department in its opinion expressly confined its ruling to cases where the statute did not provide for forfeiture for noncompliance.

(ii) when the locator intended to and had made arrangements preparatory to resuming work, and thus the Department's action interfered with such right. The conclusions stated thus far appear to have express authority.

(iii) And it would seem that the conclusion follows that there never existed in the Department a right to challenge such claims on the ground of default of assessment work, whether such default occurred prior or subsequent to the passage of the Act.[83]

(iv) Abandonment, of course, remains a ground for challenge.

The significance of certain other decisions of the Department regarding assessment work is much lessened if the view previously expressed with regard to the initial necessity for such work is considered correct. Hence, these decisions will be mentioned only in passing. As regards group assessment work, it has been held that the provisions of the Act of 1903 [84] relating to oil placers and limiting the benefits of common improvement work to five claims does not apply to oil shale placer claims,[85] but that the locator is entitled to perform such work under the general law applicable to group work generally.[86] As to the character of the work, the Department has declared, " . . . Where the work has actually been done in good faith, and is reasonably adapted to the purpose for which it was designed, although it may not have been the best possible mode of development, the Department will not substitute its judgment as to its wisdom or expediency for that of the owner."[87] It is apparent that the general rules apply.

In terms of policy, it would seem that the struggle of the Department has resulted in at least a semblance of assessment work being done during part of the years since the passage of the Act of 1920, and that the problem then faced by the Department no longer exists. Then the problem was to promote development in the face of a law which apparently freed locators from the necessity of assessment work at a time when economically feasible development seemed many years in the future. Today genuine economic development seems assured. It would appear that the interests of the nation would be better served by greater stability in titles to oil shale lands, rather than uncertainties created by litigation over the interpretation of an ambiguous statute. Probably most mining men believe that there is no requirement for

[83] The Department, in the *Virginia-Colorado Corp.* case, *supra*, evidently elected to stand or fall on the broader ground of its existance of a right to challenge, since by its action in filing a motion to dismiss, it admitted that a claimant had made preparations to resume work; however, it appears that it was this very ground upon which the decision turned. No doubt, the Department believed that the facts in the case were as clear as could be proved (in the absence of proof of abandonment), and when overruled there, conceded defeat on the broader issue. Many years have elapsed since this adverse decision, and no later cases on the point have been found.

[84] 30 U.S.C. § 102 (1940).

[85] Notes 66 and 74, *supra; Interior Dept.*, Instructions, 52 L.D., 334, March 10, 1928; *Interior Dept.*, Instructions, 52 L.D. 333, Nov. 12, 1927; Smallhorn Oil Shale Refining Co. and Frederick J. Crampton, 52 L.D. 329 (1928).

[86] Note 85, *supra*.

[87] Note 74, *supra*.

assessment work on such claims and that the Department has always been without right to challenge for default.

THE WITHDRAWAL OF 1930

Pursuant to statutory authority,[88] by Executive Order of April 15, 1930,[89] and subject to valid existing rights, the deposits of oil shale and lands containing such deposits owned by the United States were temporarily withdrawn from lease or other disposal, and reserved for the purposes of investigation, examination and classification.[90] No applications were accepted after that date, except applications for patent under the mining laws for metalliferous mining claims, or applications under other public land laws which were based on claims initiated prior to the date of the withdrawal. Although maps were prepared for the register of each district showing the lands containing oil shale of recognized commercial importance in Colorado, Wyoming and Utah, the withdrawal included lands, in fact, valuable for oil shale though not shown on the map. Entries, filings or selections thereafter allowed were subject to cancellation prior to patent if found to be valuable for oil shale.[91]

The order has been construed as a withdrawal from every form of claim except for metalliferous minerals, and even for the allowance of a railroad right-of-way across certain of these lands, executive orders modifying the order of April 15, 1930, have been necessary.[92] However, the Act of February 28, 1931,[93] has been construed to permit stock-raising homestead applications on such lands.[94] And a later Executive Order modified the orignal order to authorize the Secretary to issue oil and gas permits and leases under the Act of 1920 on such lands.[95]

As concerns the effect of the withdrawal on existing claims, the only decision found concerning oil shale claims was one holding that a mineral reservation under the Act of 1914 [96] would not be required in trust patents to be issued for Uncompahgre Ute Indian allotments pending on the date of the withdrawal.[97] The withdrawal, of course, states that it is "subject to valid existing rights."

A recent decision [98] of the Department is of interest and importance. The case involved the action of the Commissioner in rejecting applications for oil shale leases under the Act of 1920, which applications were filed in 1943. The applicant, Frank A.

[88] Act of June 25, 1910, as amended Aug. 24, 1912, 43 U.S.C. § 141, 142 (1940); 16 U.S.C. § 471 (1940); Pan-American Petroleum & Transport Co. v. U. S., 273 U. S. 456 (1927).
[89] Executive Order No. 5327, April 15, 1930.
[90] *Withdrawal of Oil Shale Lands*, Executive Order of April 15, 1930, 53 L.D. 127.
[91] Note 90, *supra*.
[92] Executive Orders Nos. 5708, 5723, and 5772, cited in Langdon H. Larwill, 54 L.D. 190 (1933).
[93] 43 U.S.C. § 291 (1940).
[94] *Interior Dept.*, Circular No. 1244, 53 L.D. 346 (1931).
[95] Executive Order No. 6016, Feb. 6, 1933.
[96] Act of July 17, 1914, 30 U.S.C. § 121 (1940).
[97] *Interior Dept.*, Instructions, 53 L.D. 538, Nov. 13, 1931.
[98] Frank A. Kelly ("N" Denver 052584; A. 23911, A. 23912—July 12, 1945).

Kelly, appealed on the ground that the withdrawal of 1930 should be revoked as to the land in question. The Department denied his petition on the basis of a memorandum from the U.S.G.S. in which it was stated that there was insufficient economic warrant at that time for modifying the order on the grounds that the oil shale industry is still in the experimental stage and not demonstrably able to compete successfully with the oil fields and refineries; further, that Kelly had failed to show, as required by the regulations [99] his proposed method of mining and reduction, his contemplated investment, and the amount and source of capital available therefor. It was felt that the best interests of the Government would lie in awaiting the result of the research and experimentation provided for by Congress before making its oil shale reserves available for what could be only speculative development. It was pointed out there was abundant non-Federal land available in the area for that purpose. It was suggested that when feasible methods of oil shale exploitation had been developed, a Government policy of disposing of its shale holdings by competitive leasing might be justified. Kelly challenged the statement that there was not at present sufficient economic warrant for modifying the withdrawal, and pointed to the development authorized by the Synthetic Liquid Fuels Act of 1944 and the selection of a site near Rifle, Colorado, on which the first demonstration plant was to be erected. He declared such action was made necessary by the precipitous decline in oil reserves. The Department considered the synthetic liquid fuels legislation as indicating quite the contrary, that considerable research and experimentation was yet required before a commercial program could be undertaken. Kelly further declared that he would follow the best method of mining and reduction demonstrated by the Bureau of Mines, that the investment would be in keeping with costs as determined by the Bureau for good mining practice, and that the source of capital would probably be "venture money". He criticized the proposal that leasing be by competitive bidding, contending it would operate to the detriment of the small independent operator. However, the Department considered Kelly's statement of his technical and financial plans as being too vague; the best methods of production, said the Department, were apparently yet to be developed by the Bureau of Mines; he had seemingly made no arrangements for securing capital; and he inferentially admitted that the development of the lands would be of a speculative nature. His motions for rehearing were denied, and the applications rejected.

In 1948 it was stated that the oil shale lands had not yet been restored and that " . . . Large areas of potentially rich oil shale lands are still in public ownership. . . . " [100] As of this writing, the withdrawal order of 1930 remains in effect.

[99] Note 60, *supra*.
[100] Letter, Chief, Oil Shale Mining Div., SLFP, Denver, to Theron Wasson, Chief Geologist, Pure Oil Co., Chicago, Ill., July 15, 1948.