<u>Editor's note</u>: <u>aff'd</u>, Civ.No. 91-CV-0097-B (D. Wyo. Dec. 19, 1991), <u>appeal</u> <u>filed</u>, No. 92-8009 (10th Cir. Jan. 17, 1992); <u>withdrawn</u>, <u>mandate</u> <u>issued</u> (Oct. 6, 1992)

KERR-McGEE CORP.

IBLA 90-85 Decided March 6, 1991

Appeal from a decision of the Wyoming State Office, Bureau of Land Management, affirming, as modified, a finding by the Casper District Manager that drainage requiring payment of compensatory royalty had occurred from Federal leases W-47997, W-56951, and W-56951-A.

Affirmed.

1. Oil and Gas Leases: Compensatory Royalty--Oil and Gas Leases: Drainage

   A Federal oil and gas lessee was properly assessed compensatory royalty for failure to drill an offset well within 5 months after collection of data indicating that an economic offsetting well should be drilled to protect the Federal lessor.

2. Board of Land Appeals--Estoppel--Federal Employees and Officers: Authority to Bind Government

   Silence by Departmental officials cannot support a claim of estoppel against the Department. Where officials of the Bureau of Land Management issued a notice of drainage to an operator in 1982, but took no further action to enforce the notice until 1985, the Department was not estopped to assess compensatory royalty.

3. Evidence: Preponderance--Oil and Gas Leases: Drainage

   If a lessee contends that a prudent operator would not have drilled a protective well in 1982 because it would not have been profitable, to prevail, the lessee must also prove by a preponderance of evidence that a protective well drilled in 1982 would not then have been profitable.

APPEARANCES: Hugh C. Garner, Esq., Salt Lake City, Utah, for appellant; Michael F. Deneen, Esq., Office of the Regional Solicitor, Denver, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE ARNESS

Kerr-McGee Corporation appeals from a decision of the Acting Deputy State Director, Wyoming State Office, Bureau of Land Management (BLM), affirming, as modified, findings by the Casper, Wyoming, District Manager, BLM, made on June 16, 1989, that drainage requiring payment of compensatory royalty had occurred from Federal oil and gas leases W-47997, W-56951, and W-56951-A. The land subject to drainage is located in secs. 31 and 36, T. 37 N., R. 75 W., and secs. 1 and 6, T. 36 N., R. 75 W., sixth principal meridian, Converse County, Wyoming, within the Sand Dunes unit agreement, for which Kerr-McGee is the unit operator. 1/ On January 17, 1989, Kerr-McGee succeeded Jerry Chambers Exploration Company (JCEC or Chambers) as the operator of the Sand Dunes unit, which was formed November 29, 1984. The unit includes these three drained Federal leases but not the State lease on which the draining well is located.

It is not now disputed that the Muddy formation in the Federal leases was drained by State 16-36, a well drilled by JCEC on Wyoming lease 73-27141 in the SE¼ SE¼, sec. 36, T. 37 N., R. 76 W., sixth principal meridian. This well was completed in the Muddy formation at between 12,659 and 12,670 feet on December 22, 1981. On February 11, 1986, the Sand Dunes Federal No. 7-1 well, located in the NE¼ of sec. 1 about one-half mile from the State 16-36, was completed for production in the Muddy formation as an offsetting or protective well to State 16-36. The issue presented is whether the Federal operator and lessees breached their obligation to drill an offset well to protect the Federal leases from drainage by the Cole Creek State No. 16-36-37. This issue pertains to the time between the initial completion of the State well as a Muddy formation producer on December 22, 1981, until the Federal offset well (Sand Dunes Federal No. 7-1), spudded in November 1984, commenced production from the Muddy formation in February 1986. 2/

On March 19, 1982, the Minerals Management Service (MMS) 3/ sent notice to Banner Oil and Gas, Ltd., a lessee of Federal lease W-56951-A, stating pertinently that

1/ The decisions by the District Manager were addressed to Kerr-McGee as unit operator and as lessee. The other lessees and working interest owners named in the decisions who are represented here on appeal by the unit operator are Samedan Oil Company, Laser Oil Company, Global Natural Resources, Phillips Petroleum Company, ANR Production Company, Marathon Oil Company, Banner Oil and Gas, Ltd., W. Merle Freeman, Maxus Exploration Company, William R. Weyman, Hiram J. Moore, Jerry Chambers Exploration, Beren Corporation, Richard J. Rigo, and Union Pacific Resources Company.

2/ The Deputy State Director's decision states that the offset well reached total depth in January 1985 and the Dakota, Muddy, and Frontier formations were all perforated and tested. The well was completed for production in the Frontier formation on Apr. 15, 1985, but was not completed for production from the Muddy formation until Feb. 11, 1986. The latter completion was subsequent to a BLM letter of Nov. 7, 1985, advising the unit operator that the unit is subject to drainage by the 16-36 well (Muddy formation) and requesting immediate action to protect the unit.

3/ Responsibility for all MMS onshore minerals management functions was subsequently transferred to BLM. Secretarial Order No. 3087, 48 FR 8983 (Mar. 2, 1983).

oil and gas lease W 56591 A * * * is subject to drainage by Jerry Chambers Well No. 16-36-37 in the SE¼ SE¼, sec. 36, T. 37 N., R. 76 W., sixth principal meridian. * * * please advise us by May 17, 1982 of your plans for protecting the subject federal lease from drainage.

You will be expected to drill a protective well on your lease unless you can demonstrate that such a well would have little or no chance of encountering oil or gas in quantities sufficient to pay the cost of drilling and operating the well with a reasonable profit. Regardless of whether or not a paying protective well can be drilled, you will be obligated to pay compensatory royalty unless you can demonstrate that geologic conditions at depth preclude any oil and/or gas beneath the Federal lease being produced from the offsetting well. If assessed, compensatory royalty will be due from the date of this letter until the date on which continuous production commences from the offset well.

On April 19, 1982, Banner replied to MMS that:

The Chambers [State 16-36] well was completed on December 22, 1981, in the Muddy Formation from perforation covering the interval from 12,660' to 12,670' with an initial potential of 73 BOPD (barrels of oil per day). This well was drilled to a total depth of 12,960' at a cost of $1,400,000.

On January 30, 1982, the Muddy producing zone was fracture treated at a fluid injection rate of 10 barrels per minute at 6,000 psi and the sand screened out. The well was returned to production and flowed at approximately 90 BOPD with 50 lbs. of tubing pressure. Cumulative production through March 27, 1982, was 6,533 barrels of oil.

Chambers plans to run bottom hole pressure tests around May 15, 1982. These tests, when taken with the production history, will help in determining the potential reserves for this well and the possible areal extent of the reservoir.

In view of the great depth, the thin producing zone and the low productivity of this well we do not believe this to be an economic venture. The lenticular nature of the muddy formation and the low productivity of the Chambers well leads us to believe that the subject lease is not being drained by the Chambers well. This position is further supported by the unsuccessful effort to develop the Bear Creek field, where the Superior No. 1-Govt.-Tracey, located in the SW4 of Section 26 T38N-R75W was completed in 1966 in the muddy formation at production rates of approximately 270 BOPD. Subsequently this discovery well was offset in three directions without success.

We have no immediate plans to drill an offset to the Chambers well, but we will continue to carefully monitor the production

> history of this well in an attempt to determine the areal extent of the reservoir and its economic potential.

Following this response from the Federal lessee, the operator's agent also replied to BLM's drainage notice by letter dated July 20, 1982. After repeating the history of the State 16-36 well described by the lessee, the agent for the operator stated:

> The [State 16-36] well is currently flowing at 105 BOPD with 50 lbs of tubing pressure and no water. Cumulative production through July 1, 1982 was 14,854 barrels of oil.
>
> A two-week bottom hole pressure test is currently being run. This test, along with the earlier DST and production history, will help in determining the potential reserves for this well and possible areal extent of this pressure depletion reservoir.
>
> Data to date shows the Muddy sand of limited areal extent of approximately 180 to 250 acres. The volumetric calculations are shown on [an attachment]. This shows the well to be draining slightly less than the spacing we will be requesting from the state.
>
> In summary, Jerry Chambers Exploration Co. believes no drainage is occurring to Federal lease W-56951A. In addition, JCEC has applied to drill an offset to the discovery well. Therefore, no drainage royalties should be assessed.

Drilling on the offsetting Federal 7-1 began on November 11, 1984. First production was obtained in the Dakota formation on January 23, 1985. On November 7, 1985, BLM notified the operator that Federal 7-1 should be produced from the Muddy formation to protect Federal leases from drainage by the State 16-36. The Federal 7-1 produced oil from the Muddy formation on February 11, 1986.

Following review by BLM staff geologists and engineers, a series of decisions issued on June 16, 1989. As to the operator, who was the operator of both the draining well and the drained leases, BLM found that, while a protective well, Federal 7-1, had been completed, drilling and production from the well had not been prosecuted diligently, and that

> you will be assessed compensatory royalty from the date the Sand Dunes unit became effective, November 29, 1984, until the Sand Dunes unit well No. 7-1 first produced from the Muddy Formation, February 11, 1986. That portion of the offending well's production attributed to unitized lands has been determined to be 73.72 percent.

As to the other Federal lessees, it was determined that, in proportion to drainage attributable to each lease, that "you will be assessed compensatory royalty from December 22, 1982, one year after the 16-36 first produced from the Muddy Formation until the Sand Dunes unit became effective, November 29, 1984."

Administrative review of the Casper District Manager's decision was obtained, and a hearing was held in the State Director's office on July 28, 1989. Following the hearing, the Acting Deputy State Director affirmed the June 16, 1989, decisions, finding that

> a prudent operator could have drilled an economic well in 1982, based on the same 1982 data that was available to the lessee.
> In our opinion, the lessee did not drill diligently or produce continuously from all wells necessary to protect the lessor from drainage. To drill and produce from an offset well from the Frontier Formation does not protect the lessor from drainage in the Muddy Formation. Protection from drainage did not occur until the 7-1 Well started producing from the Muddy Formation on February 11, 1986.

(Decision at 3). He went on to find that the operator was responsible for payment of compensatory royalty because

> Chambers, as driller and operator of the 16-36 Well and owner of 30.82 percent operating rights and the same amount of record title [in Federal lease W-56951-A], is presumed to have knowledge of a potential drainage situation as of December 22, 1981. In addition, by letter dated March 19, 1982 the [Department] noti-fied Chambers of a potential drainage situation. * * *
>
> Regarding Unit drainage, Chambers, as the operator of the offending well and the lessee of W-56951A, was aware of the potential drainage situation on December 22, 1981. Section 17 of the Sand Dunes Unit Agreement makes it very clear that the Unit Operator must take appropriate measures to prevent Unit drainage. Chambers, as the Unit Operator, had to realize that the Unit was subject to drainage on November 29, 1984, the effective date of the Sand Dunes Unit Agreement.

Id. 4/

4/ As to those Federal lessees which were not common to the offending well, the BLM decision held that the authorization for expenditure (AFE) forms dated Jan. 27 and June 14, 1982, proposing to drill, test, and complete a well offsetting the 16-36 well which were circulated to all prospective participants, including lessees and working interest owners, provided notice of the drainage situation (Decision at 3). Notice of drainage is not an issue raised on appeal, as appellants' brief focuses on the contention that the offset well was diligently drilled in compliance with the prudent operator rule and that BLM is estopped to assess compensatory royalty.

Kerr-McGee argues that the Federal 7-1 was diligently completed to offset the State 16-36 in the Muddy formation because

> [t]he interval between completion of the Cole Creek State #16-36 well and commencement of production from the Muddy Formation, and the drilling, completion and production from the Muddy Formation in the Sand Dunes Federal #7-1 well constituted a reasonable time - a reasonable time within which to gather the assurances in terms of geology, knowledge of the character of the producing formation, sale of gas and the myriad of other factors that go into the making of a decision of this magnitude. All that was sought was the reasonable assurance that the drilling of an offset well would have a chance to pay a reasonable profit to the lessee over and above the cost of drilling and operating the well.

(Statement of Reasons (SOR) at 18). Kerr-McGee's argument on appeal is divided into four parts, consisting of contentions that the offset well was diligently pursued, that a prudent operator would not have drilled an offset well for 3 years following production from State 16-36 because data available before 1984 was insufficient to establish that an economic well could have been drilled, that BLM is estopped to assess compensatory royalty because it failed to pursue the demand to offset or pay compensatory royalty made by the drainage notice sent in 1982, and that the discounted cash flow analysis made by BLM showing an economic protective well to be feasible in 1982 is incorrect. The reply filed by Kerr-McGee summarizes the position taken, stating that "[w]hat this dispute boils down to is whether an economic offset well to the Cole Creek State #16-36 well could have been justified in July 1982 based on the data then available." Id. at 13.

Arguing that the protective well was diligently produced, Kerr-McGee assumes that evaluation of the economic possibility of drilling a profitable well may not consider events taking place after 1982, because to do so would be to improperly second-guess the operator and his Federal lessees. This argument, that data from wells drilled in the Sand Dunes field area between 1983 and 1988 should not be used to evaluate either the State 16-36 or the Federal 7-1 wells, was directed against the decision of the Casper District Manager. The Acting Deputy State Director agreed with this position, and limited his review to the facts known in 1982, but nonetheless reached the same result as had the District Manager, concluding that an economic well could have been drilled at the end of 1982 and that a prudent operator would have done so, acting in reliance on the known data available at the end of that year.

Well data available to JCEC in 1982 established that production from State 16-36 increased throughout 1982: reported monthly production increased from 2,594 barrels of oil and 3,113 MCF (thousand cubic feet) of gas in March 1982 to 3,935 barrels of oil and 4,722 MCF of gas in August. The well was shut down for 2 weeks in July to take pressure readings at the bottom of the well-bore. This study revealed that pressure steadily increased from 2,031.065 psi on July 8, 1982, to 5,703.001 psi on July 22, 1982 (Attachment A to Kerr-McGee Reply filed Jan. 8, 1990). An August 27, 1982, analysis of this study by the operator made a "low side" estimate for

bulk reservoir volume of 714 acre feet, and concluded that "[i]f the average thickness is 9 feet, the areal extent of the reservoir should be at least 80 acres. The reservoir should contain a minimum of 432,000 RB equivalent to 251,000 STB OOIP [stock tank barrels of original oil in place]." Id.
By the end of October 1982 there had been no decline in production, nor did a decline from initial production occur during 1982 (Exh. G to BLM Amended Response).

Seeking to explain this level production rate in terms of facts known in 1982, Kerr-McGee postulates:

> Relatively "constant" producing rates will result under the following conditions: (a) when the reservoir is capable of higher oil and gas production than the wellbore will physically allow. This is in the situation where there has been formation damage or a mechanical limitation of the tubing and/or perforations, thus impeding performance; (b) when the reservoir drive mechanism is predominantly a strong water drive and constant reservoir pressure is more or less maintained; or (c) when a well is artificially restricted by state regulatory allowables or rules.

(SOR at 24-25). Each of these postulated conditions is then denied to exist in the case of State 16-36, and a conclusion is drawn that the well, despite its level production rate, "would, very shortly, decline." Id. at 25. Instead of comparing State 16-36 to other wells exhibiting a production rate that rose to a higher level than was initially obtained and then remained constant for 6 months or longer without decline, Kerr-McGee argues that it should be compared to "other Muddy producers in the area" such as the Steinle Ranch field wells where production declined "after 3 or 4 months of steady production" (SOR at 26; Reply at 13). Reliance is also placed by Kerr-McGee on the Superior No. 1-Govt-Tracey well, where unsuccessful offsetting wells were drilled into the Muddy formation, indicating the Muddy is a "narrow, sinuous channel" where offsetting is very chancy (SOR at 13).

Using these assumptions about production decline, but assuming an initial level production, well cost for a protective well was calculated by Kerr-McGee at $1,965,000, an 8-percent rate of return was forecast, monthly operating costs were calculated at $3,000 assuming 1982 prices and taxes, and payout predicted to occur in 6 years. This model predicts an offset well would lose $193,000. (A table furnished with the Reply shows the cost to drill a foot of oil well was $108.73 in 1982.)

BLM interprets the well data from State 16-36 differently, concluding that "production and pressure data indicates that 16-36 was in communication with a very large reservoir" (BLM Answer at 10). Unlike the calculations made by the operator, BLM's cost analysis does not assume level production from the State 16-36 should remain constant (although, instead of declining, production from the State 16-36 actually increased, reaching a daily production of 127 barrels of oil in August 1982). Use of this "low-side" approach was prompted by use by BLM of the pressure data collected in July

1982 (as reported on Attachment A to appellants' Reply), which indicated potential daily flow rates, according to BLM calculation, between 188 and 214 barrels, a daily increase of 105 barrels or more from the initial production obtained on December 22, 1981. Using this pressure data to calculate an initial production rate of 200 BOPD, BLM assumes an immediate 35-percent rate of declining production and a well cost of $1.4 million (assuming a cost to drill of $116 per foot) and operating costs of $333,000, which yields a 52.8-percent rate of return, with payout occurring in 1.62 years to ultimately yield a profit after taxes (Attachment 1B to BLM Response filed Feb. 6, 1990).

[1] The operator of State 16-36 and the Federal leases adjoining it to the east and south on December 22, 1981, was the same company; it therefore had notice that it was draining the two Federal leases lying within 660 feet of the well when the State 16-36 well began initial production. Atlantic Richfield Co., 105 IBLA 218, 95 I.D. 235 (1988); CSX Oil & Gas Corp., 104 IBLA 188, 95 I.D. 148 (1988). BLM estimates that 73.72 percent of the production of State 16-36 was attributable to the three Federal leases here under review. That drainage has occurred is not now disputed by Kerr-McGee, who contends, instead, that it was not evident that it could have been economic to offset State 16-36 until after 3 years of well data had been collected.

In March 1982, however, BLM gave notice to JCEC that drainage was taking place and that either an offset well should be drilled or compensatory royalty paid. The responses to this notice denied that there was enough oil present to enable production from a protective well to yield a profit, the standard established by the Department to require compensatory royalty where drainage from a Federal leasehold is occurring. Atlantic Richfield Co. (On Reconsideration), 110 IBLA 200, 96 I.D. 363 (1989); Nola Grace Ptasynski, 63 IBLA 240, 89 I.D. 208 (1982). Therefore, by March 1982, the operator had received actual notice of the production from State 16-36, which it had drilled itself, and written notice from BLM that drainage was occurring from the Federal leases requiring either an offset well or payment of compensatory royalty. If there was not enough petroleum resource to support a profitable offset well on the Federal leases, the operator was obliged to show that was the case. Cordillera Corp., 111 IBLA 61 (1989).

To do this, Kerr-McGee has argued by analogy to other wells in the vicinity of State 16-36 that the State 16-36 well should have been a short-lived, low producer if it had performed like other Muddy producers in the vicinity. From the start, however, the well performed differently than the other Muddy formation wells, and the data from the well, particularly the production and pressure data obtained in 1982, does not support this argument. Unlike the wells to which Kerr-McGee compares it, the State 16-36 increased production for the first 8 months of production before leveling off at a higher rate of production than it had at the beginning. No other Muddy wells reported in the record before us showed similar behavior. Moreover, the July pressure data indicated that initial results understated the production potential of the State 16-36 well. On the record before us, Kerr-McGee has failed to show error in the BLM calculation that there was a sufficient resource available to justify drilling an offset well to the

State 16-36 in 1982. We find that, considering all the data available to the operator in August 1982, a prudent operator would have drilled an offsetting well by year's end. 5/

[2] Kerr-McGee points out that BLM was silent about the drainage occurring from the Federal leases by State 16-36 after March 19, 1982, until November 7, 1985, when it ordered production to begin from the Muddy formation at Federal 7-1. This silence, Kerr-McGee contends, estops assessment of compensatory royalty. There are several reasons why this argument must fail.

Foremost is the policy of the Department that it will not find an estoppel unless a misrepresentation in an official decision underlies the claim. Steven E. Cate, 97 IBLA 27 (1987); United States v. Morris, 19 IBLA 350, 82 I.D. 146 (1976). The effect of this policy is to eliminate claims that silence by Departmental employees can give rise to an estoppel against the Department. It is axiomatic that the authority of the United States to enforce a public right or protect a public interest is not vitiated or lost by acquiescence of its officers or agents, or by their laches, neglect of duty, failure to act, or delays in the performance of their duties. 43 CFR 1810.3(a).

Here, moreover, the case for estoppel is especially weak, for the underlying information that both Kerr-McGee and BLM use to support their conflicting arguments concerning the profit to be derived from an offset well comes from the records of the operator of the State and Federal leases. This is not a case where the operator was denied data. Quite the contrary, pressure data obtained in 1982 was not released to BLM until 1990, during the course of appellate review. This is the usual state of affairs in matters respecting oil and gas production, of course, where acquisition of the Federal resource is accomplished by private means. This circumstance received comment in Atlantic Richfield (On Reconsideration), 110 IBLA at 203, 96 I.D. at 364, and helps explain the rule that notice of drainage may not be required to be given by BLM in order to be effective in certain cases, such as where a draining well on non-Federal land is also operated by the lessee of Federal lands which it drains. See Atlantic Richfield Co., 105 IBLA at 228, 95 I.D. at 241.

[3] In this case, however, written notice of drainage was given by BLM. Notice is not an issue here. We have considered the case on its merits and found that, under the circumstances of the case, because of early data obtained from the Muddy formation in the State 16-36, it would not

5/ Kerr-McGee argues that the operator circulated several drilling proposals for an offset well to the lessees beginning in 1982, but that the proposals were rejected by the owners. The proposals were not, however, concerned only with drilling an offset well in the Muddy formation to State 16-36, but proposed other completions in other formations as well. The reasons for rejection were not explained by the owners, and we cannot speculate about their motives in rejecting early proposals to offset State 16-36.

have been prudent to drill until after production and pressure dated collected in the summer of 1982 were obtained. Once that data was collected and evaluated by the operator, however, it showed that a profitable offset well was feasible and should have been drilled at the end of December 1982 at the latest, as BLM found. Indeed, Kerr-McGee has offered no data obtained from later exploration to support the position taken by the Federal lessees, arguing instead that our review should be confined to information available in 1982. 6/ We have done so. The 1982 data supports BLM's decision. To avoid this conclusion, Kerr-McGee would be required to prove by a preponderance of evidence that a protective well would not be profitable. See Cordillera Corp., supra. 7/ It has not done so on the record before us.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

Franklin D. Arness
Administrative Judge

I concur:

C. Randall Grant, Jr.
Administrative Judge

6/ The later acquired data, including data from the Federal 7-1 well, establishes that the extent of the reservoir and the amount of the resource in it were much larger than had been anticipated by the operator. See Reservoir Engineering Report, Global Natural Resources Corp., filed Oct. 23, 1986.

7/ To meet this requirement, Kerr-McGee relies on an affidavit by its Rocky Mountain District Manager to the effect that BLM's cost analysis is flawed, arguing that variables in the 1982 well could be analyzed differently, and pointing to an error in the calculation of reservoir standard tank barrels in the BLM calculation (Affidavit of David R. Kimes dated Feb. 28, 1990). This argument, however, does not tend to show that drilling a protective well would have been uneconomic in 1982, but proceeds from the assumption, made by Kerr-McGee throughout its arguments on appeal, that the Muddy reservoir was much smaller than it later proved to be. In so doing, Kerr-McGee violates the premise of the argument it makes concerning this case: it assumes evidence not available in 1982, nor, as it turned out, later.

To prove that a protective well would have been uneconomic in 1982, Kerr-McGee could, of course, use data collected from 1983 through 1988. That is, it need not limit the scope of its evidence in the manner it required of BLM, but could offer well data from later years. Evidence concerning financial matters would, of course, remain limited to 1982 information.