INTERIOR BOARD OF LAND APPEALS

Burlington Resources Oil and Gas Co.

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BURLINGTON RESOURCES OIL & GAS CO.

IBLA 97-111 Decided November 16, 1998

Appeal from two decisions of the Colorado State Office, Bureau of Land Management, affirming two orders of the Colorado Oil and Gas Conservation Commission, allowing recompletion of existing wells as second wells in two 320-acre spacing units. SDR-CO-97-1 and SDR-CO-97-2.

Affirmed.

1. Indians: Mineral Resources: Oil and Gas: Tribal Lands--Oil and Gas Leases: Drilling--Oil and Gas Leases--Drainage

A BLM decision affirming an order of the Colorado Oil and Gas Conservation Commission, permitting the recompletion of an existing well in a 320-acre spacing unit will not be disturbed on appeal in the absence of a showing of harm to the Appellant where the record demonstrates by geologic evidence as well as evidence of economic benefit to the Indian Tribe that recompletion is the proper course of action.

2. Administrative Procedure: Burden of Proof--Appeals: Generally--Evidence: Burden of Proof--Oil and Gas Leases: Generally--Rules of Practice: Appeals: Burden of Proof

The burden is on an appellant challenging the propriety of BLM and Colorado Oil and Gas Conservation Commission approval of the recompletion of a second well in a spacing unit on Indian lands to point out how that action is erroneous. In cases involving the interpretation of data, the appellant must demonstrate by a preponderance of the evidence that the BLM experts erred when collecting the underlying data, when interpreting that data, or in reaching their conclusion. Where the record establishes that the Secretary's technical experts have evaluated the geologic data and have projected economic benefits to devolve on the Indian Tribe if recompletion proceeds, the Secretary is entitled to rely on their professional judgment, absent a showing of error by a preponderance of the evidence.

APPEARANCES: Carleton L. Ekberg, Esq; Mark A. Schlageter, Esq., Denver, Colorado, for Appellant; Michael J. Wozniak, Esq., Gary J. Younger, Esq., Denver Colorado, for Cedar Ridge, LCC; Thomas H. Shipps, Esq., Durango, Colorado, for Southern Ute Indian Tribe; Lyle K. Rising, Esq., Department Counsel, Office of the Regional Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE TERRY

Burlington Resources Oil & Gas Company has appealed from two separate October 30, 1996, Decisions (SDR-CO-97-1 and SDR-CO-97-2) by the Colorado State Office, Bureau of Land Management (BLM), affirming order Nos. 112-124 and 112-125, respectively, of the Colorado Oil and Gas Conservation Commission (COGCC), allowing the recompletion of two existing wells as second wells in 320-acre spacing units for the Fruitland Coal seams underlying lands of the Southern Ute Indian Tribe (Tribe).

Under an August 21, 1991, Memorandum of Understanding (Tab C) between BLM and COGCC, the COGCC Decisions in the matter were effectively the decisions of BLM and the subject of State Director Review (SDR) under 43 C.F.R. § 3165.3(b). The Decisions under appeal are authored by Richard J. Ryan, Petroleum Engineer, Reservoir Management Team Leader.

The two Decisions before us (SDR-CO-97-1 and SDR-CO-97-2) both recite that on July 11, 1988, COGCC issued Order No.112-60 which established 320-acre drilling and spacing units for the Fruitland Coal seams underlying certain portions of the Ignacio-Blanco Field, including secs. 5 and 7, T. 32 N., R. 11 W., New Mexico Principal Meridian. On September 26, 1995, Cedar Ridge, LLC (Cedar Ridge) filed a Sundry Notice with BLM's San Juan Resource Area Office (SJRA), for the recompletion of the existing Southern Ute No. 2-5 well, located in the SE¼NW¼ of sec. 5, to the Fruitland Coal seams as the second well in the 320-acre drilling and spacing unit. On September 29, 1995, Cedar Ridge, filed a Sundry Notice with SJRA for the recompletion of the existing Southern Ute No. 1-7 well, located in the SE¼SE¼ of sec. 7, to the Fruitland Coal seams as the second well in the 320-acre drilling and spacing unit consisting of the E½ of sec. 7. On October 12, 1996, the SJRA notified Cedar Ridge that until completion of an investigation of gas seepage along the Fruitland Coal seams outcrop to the northwest of the well locations, BLM could not approve its applications for recompletion of the wells. After the gas seep investigation, on June 17, 1996, Cedar Ridge filed applications with COGCC for a change in well spacing to allow for existing well Ute No. 1-7 and Ute No. 2-5 to be recompleted as second wells in their respective 320-acre spacing units in the Fruitland Coal formation.

On September 5, 1996, a hearing on this matter was held by COGCC in Denver, Colorado. At the hearing, the Tribe supported Cedar Ridge's applications and Burlington protested those applications based on its lease interests in neighboring secs. 4 and 8.

At the hearing, Terry Logan, petroleum engineer for Cedar Ridge, testified that the purpose of Cedar Ridge's application with respect to the Southern Ute No. 2-5 well, was "to move uphole and recomplete the Fruitland Coal." (Tr. Sept. 4 at 20.) 1/ Curtis B. Matthews, a consultant with M & M Geological Consultants, testified that the intermediate and basal coals in sec. 5 "are laterally continuous." (Tr. Sept. 4 at 32, 45.) Dick Baughman, petroleum geologist for the Tribe, testified that recompletion of the 1-7 and 2-5 wells would have no effect on gas seeps (Tr. Sept. 4 at 53, 57-59), and Logan concurred. (Tr. Sept. 4 at 68.)

Logan testified that the S½ of sec. 32 (immediately to the north of sec. 5) contained three times the cumulative gas on a monthly production basis compared to the N½ of sec. 5. Logan stated that as one moves south in sec. 32, the quality of the reservoir "changes quickly" and becomes "poor." (1Tr. Sept. 5 at 19.) Logan testified concerning pressure studies and gave pressure data for the 2-5 well at between 0.2 psi and 0.19 psi, or about 1/2 to 1/3 the original reservoir pressure. (1Tr. Sept. 5 at 29.) He stated that the fact that recovery percentage is low but pressure high in the N½ of sec. 5 indicates that Cedar Ridge was not recovering all the gas it was entitled to and that this was one of the reasons for filing the application to recomplete the 2-5 well. (1Tr. Sept. 5 at 31.) Logan testified at length as to the economic benefits and tax credits anticipated if the 2-5 well were recompleted. (1Tr. Sept. 5 at 37-39.) In his opinion, the recompletion of this well would promote the economic and efficient development of the reservoir. (1Tr. Sept. 5 at 43). He stated that Cedar Ridge loses $30-$40,000 per month in incremental value by not completing the 2-5 well. (1Tr. Sept. 5 at 47.)

Bob Zharadnik, exploration/production manager for the Tribe, testified that the Tribe owns all minerals in the Cedar Ridge acreage. (1Tr. Sept. 5 at 92.)

Steven Thibodeaux, senior geologist for Burlington, testified that the "coals are remarkably continuous and throughout the Township of 32 north 11 west." (1Tr. Sept. 5 at 118.) He further stated: "this may surprise the commission, but our geologic interpretations on both sides of this issue are almost identical. We have very little differences, except maybe what we called [the coal seams]. But as far as continuity of these coals across this entire township, we believe they are remarkably continuous." (1Tr. Sept. 5 at 118.) Thibodeaux admitted that reservoir quality could not be inferred from coal seam continuity. (1Tr. Sept. 5 at 135.)

Jack V. Kean, reservoir engineer for Burlington, testified that the pressure data showed the coal seams to be continuous and that the 320-acre

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1/ The record contains one transcript packet for Sept. 4, 1996, paginated from pages 1 through 76. For Sept. 5, there are two packets, one paginated from pages 1 through 223 and the other from pages 1 through 78. We will refer to these transcript packets by date and to the Sept. 5 transcripts as "1Tr. Sept. 5" and "2Tr. Sept 5."

spacing was appropriate. (1Tr. Sept. 5 at 139, 146, 152.) Kean testified that if the rate of withdrawal were increased by a recompleted well in sec. 5, "that will cause a pressure sink in Section 5 that will cause gas to migrate from adjacent sections that have higher pressure gradients." He stated further that "drainage is more than just permeability orientation. Drainage is both pressure gradient or a pressure sink and a permeability issue." (1Tr. Sept. 5 at 148.) He testified, however, that "in order to fully assess the economic impact of a [recompleted well] in Section 5, we must also assess the impact of a potential new drill in Section 4 in order to protect correlative rights." He stated that "Burlington Resources will lose a significant amount of income if forced to drill a well in Section 4." (1Tr. Sept. 5 at 154.)

Kean also testified that he really could not "draw any conclusions regarding any preferential drainage" or preferential permeability. He could not "quantify whether drawdown was coming from one area or one direction or another." (1Tr. Sept. 5 at 171, 172.)

After hearing and after discussing the testimony, the COGCC chairman and commissioners verbally approved Cedar Ridge's applications. On September 27, 1966, they issued Order Nos. 112-124 and 112-125, effective September 5, 1996, allowing recompletion of the Ute No. 1-7 and Ute No. 2-5 wells. Burlington sought SDR.

BLM Decisions (Decisions) recite and discuss the 4 issues 2/ raised by Burlington in its request for SDR. The same issues are addressed to the Board on appeal, preceded by Burlington's general allegation that the Decisions are arbitrary, capricious and an abuse of discretion. We will address each issue in turn after outlining the decisional rationale and the parties' arguments.

Burlington contends that two wells are unnecessary to drain gas from the Fruitland Coal seams in the spacing unit consisting of the W½ of sec. 5, T. 32 N., R. 11 W., New Mexico Principal Meridian, and that it will be harmed by recompletion of the Ute No. 2-5 well.

The Decision (SDR-CO-97-1) states that "it was obvious from the testimony presented at the hearing that the reasons behind recompleting the Southern Ute No. 2-5 as the second well in the Fruitland Coal seams spacing unit are to protect the correlative rights of the applicant, Cedar Ridge, from drainage by directly offsetting wells to the north and to accelerate recovery of the gas in this spacing unit." (Decision at 3.) 3/ The

2/ The Decision lists five issues. However, the first and second issue, whether recompletion is necessary and will result in additional recovery of hydrocarbons are essentially the same and are adjudicated as one.
3/ Unfortunately, the BLM Decision does not give transcript references for the evidence cited. We have provided these citations.

Decision states that according to evidence presented by Cedar Ridge, two existing wells (Valencia Canyon Nos. 32-1 and 32-3) in the S½ of sec. 32, T. 33 N., R. 11 W., may have recovered a disproportionate amount of gas in relation to the existing single well (Southern Ute No. 5-5) in the N½ of sec. 5. (1Tr. Sept. 5 at 31-34.) The Decision further states that Cedar Ridge presented "undisputed evidence" that the recompleted well (Southern Ute No. 2-5) "will provide an estimated discounted cash flow of $429,000 in royalties, taxes, and Section 29 tax credits to the Tribe by accelerating production in this spacing unit." (Decision at 3; 1Tr. Sept. 5 at 36-39.)

Next, the Decision adverts to the Colorado Revised Statutes, specifically C.R.S. § 34-60-116(2), which provides that no drilling unit shall be smaller than the maximum area that can be efficiently and economically drained by one well. The Decision states that "economic provisions of this criteri[on] for well spacing as applied to Indian lands also include the situation where a given spacing unit can be developed more economically through accelerated recovery by infill wells than by a single well." (Decision at 3.) ("Infilling," or downspacing of the spacing requirement, is the drilling of an additional well, within a spacing unit.) BLM agreed with Burlington that a second well was not necessary to drain the spacing unit, and its decision modified Order No. 112-124 accordingly. BLM concluded, however, that the economic benefits to the Tribe resulting from a recompleted well, the economic benefits to the operator and the technical merits of the recompletion were correctly evaluated in Order No. 112-124, approving recompletion, and it therefore affirmed the order.

Burlington states that recompletion of the Ute No. 2-5 well may adversely affect its interests in sec. 4. (Statement of Reasons (SOR) at 9.) Specifically, Burlington points to C.R.S. § 34-60-116(2) which governs the size of drilling units and which states that the acreage therein shall be best determined by COGCC from evidence introduced at a hearing, and that no drilling unit shall be smaller than the maximum area that can be drained by one well. Burlington asserts that both Burlington and Cedar presented geological evidence at the hearing indicating "substantially similar pressure in the Fruitland Coal seams in the Subject Drilling Unit and to the north, east and south of the Subject Drilling Unit." Burlington concludes that this "demonstrates that there is communication among the existing wells producing from the Fruitland Coal seams based upon the 320-acre spacing pattern," and that for this reason, one well is enough to drain each 320-acre spacing unit. (SOR at 10-11.)

Next, Burlington reviews evidence which, it asserts, demonstrates that one well would efficiently and economically drain the spacing unit and notes that BLM admits that recompletion of the Southern Ute No. 2-5 well is unnecessary, as BLM "has conceded that the Southern Ute No. 6-5 Well will recover all of the gas in the Fruitland Coal seam * * *." (SOR at 12.)

BLM responds that in approving the recompletion, it chose the course "which most benefits the Tribe." BLM notes that Burlington has failed to dispute "the magnitude of the financial benefits to the Tribe." (Feb. 11, 1997, BLM Reply (BLM Reply) at 1.) Specifically, BLM states that Burlington has alleged, but failed to demonstrate, that Burlington's lease in neighboring sec. 4 will be drained by recompleted Ute No. 2-5. BLM admits that its approval was not based on whether the well was necessary but on the findings that the well would protect Cedar Ridge's lease from potential drainage to the north in sec. 32, T. 33 N., R. 11 W., and accelerate recovery of gas in the W½ of sec. 5. BLM states that "[t]he projected incremental benefit to the [Tribe] in royalties, taxes, and Section 29 tax credits was projected to be $429,000." (BLM Reply at 3.) Burlington has not disputed these facts.

BLM also points out that no damage has been demonstrated to Burlington's right to produce from its lease in sec. 4. BLM notes that the Ute No. 2-5 well is approximately 1 mile distant from Burlington's interests, which, in addition, are protected by a producing 320-acre spacing unit. (BLM Reply at 3.)

Cedar Ridge's arguments parallel those of BLM. Cedar Ridge points out that under Colorado law, the COGCC is well within its discretion to consider potential impacts to correlative rights in its decisions. (Answer at 7-8.) Cedar Ridge asserts further that its evidence at the hearing demonstrated actual damage to its correlative rights as a result of excessive withdrawals of gas from the S½ of sec. 32. The Ute No. 2-5 well will allow Cedar Ridge to "protect itself from further drainage and to produce its just and equitable share of gas from the pool." (Answer at 9.)

Citing 25 C.F.R. §§ 211.1(a) and 211.4, Cedar Ridge observes that BLM has a responsibility to ensure that the Tribe's oil and gas interests are developed to their full economic potential. Cedar Ridge also refers to 43 C.F.R. §§ 3162.2(a) and 3163.3-1, providing for the drilling of wells "in accordance with an acceptable well-spacing program" which is one which "conforms with a spacing order or field rule issued by a State Commission or Board and accepted by the authorized officer, * * *." Cedar Ridge disputes Burlington's claim that the pressure data submitted by Burlington and Cedar Ridge at the hearing is consistent. Cedar Ridge notes that it presented pressure data on actual downhole pressure in secs. 5 and 32 as evidence to support its position that the 2-5 well is necessary to protect its correlative rights. By contrast, Burlington presented pressure data based on observation wells up to 4 miles away from sec. 5. Cedar Ridge argues that this data "is irrelevant to section 5 data." (Answer at 11.)

The Tribe has also filed an Answer to the appeal. It states therein that it adopts Cedar Ridge's Answer to Burlington's appeal. (Tribe Answer at 4.) In addition, the Tribe discusses various arguments, including

those addressed by BLM and Cedar Ridge, and contends that BLM's approval of the recompletion of the Ute No. 2-5 well should be affirmed. 4/

[1] Departmental regulation 43 C.F.R. § 3162.3-1(a), which applies to Indian land leases (see 43 C.F.R. § 3160.0-1), provides that an oil and gas well shall be drilled "in conformity with an acceptable well-spacing program." The regulation further provides in relevant part that such a program is either "one which conforms with a spacing order or field rule issued by a State Commission or Board and accepted by the authorized officer" or "any other program established by the authorized officer." Id. (emphasis added); San Juan Citizens Alliance, 129 IBLA 1, 6 (1994). Under that regulation, BLM makes the final pronouncement on the spacing of oil and gas wells on Indian lands. Where the record shows that recompletion of a well is required based on credible geologic evidence including evidence of economic benefit to the Indian Tribe, and where no adverse effects can reasonably be expected to impact a holder of an interest in a neighboring leasehold, approval of recompletion of a well resulting in downspacing will not be disturbed on appeal. See San Juan Citizens Alliance, supra, at 4, 14.

[2] In such cases, the burden is on the appellant to show by a preponderance of the evidence that there has been error in the decision under review. Bender v. Clark, 744 F.2d 1424 (10th Cir. 1984). In cases involving evaluation of expert testimony, such as the opinion of geologists who have described geologic formations beneath the earth's surface, we have consistently found that the Secretary may rely on the reports of his technical experts in the field, even where the evidence is contradicted, unless such opinions are shown to be in error. See Dorothy A. Towne, 115 IBLA 31, 38 (1990), and cases there cited. An appellant must demonstrate by a preponderance of the evidence that the BLM experts erred when collecting the underlying data, when interpreting that data, or in reaching their conclusion. American Horse Protection Inc., 134 IBLA 24, 27 (1995); Animal Protection Institute of America, 122 IBLA 290 (1992).

We agree with BLM and Cedar Ridge that Burlington has failed to show how its interests in neighboring sec. 4 will be adversely impacted by the recompleted Ute No. 2-5 well. Moreover, Burlington has failed to dispute the adverse financial effects on Cedar Ridge, and has not addressed the evidence of projected financial benefit to the Tribe if the well is recompleted. The weight of the evidence does not favor the status quo, but

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4/ The Tribe includes in its Answer a discussion of the "jurisdictional relationship of the Tribe, the COGCC, and the BLM with respect to Tribal lands." (Tribe Answer at 8.) Burlington has filed a "Limited Response" noting that "[t]he jurisdictional conflict is currently being reviewed in Burlington Resources Oil & Gas Co. v. Colorado Oil & Gas Conservation Commission, et al., Civil Action Nos. 96-AP-2349 and 96-AP-2352 (consolidated) (filed D. Colo. 1996)." Burlington asserts, and we agree, that this discussion is outside the scope of the present appeals.

strongly supports recompletion of the well. Finally, nothing in C.R.S. § 34-60-116(2) is violated by the Decision. As BLM explains, economic provisions for well spacing include situations where "a given spacing unit can be developed more economically through accelerated recovery by infill wells than by a single well." (Decision at 3.)

Burlington also contends that recompletion of the Ute No. 2-5 well will cause drainage to the detriment of owners of correlative rights in adjacent sections. (SOR at 13-19.)

The Decision (SDR-CO-97-1) states:

> Evidence presented by Cedar Ridge indicates that a disproportionate amount of gas has been produced from the S½ of Section 32 with two wells as compared to the production from one well in the N½ of Section 5 for a similar pressure drawdown [1Tr. Sept. 5 at 31-34, 58]. At least two factors may have contributed to this disparity. First and foremost, the two wells in the S½ of Section 32 are directly offset by only one well, the Southern Ute No. 5-5, in the N¼ of Section 5. The N¼ of Section 5, where the Ute No. 2-5 infill would be located, has been left virtually unprotected from potential drainage. Secondly, Cedar Ridge presented uncontroverted evidence that indicates there is a 4:1 directional permeability preference oriented roughly North-South/East-West in this area, resulting in elliptical drainage patterns with the primary axis oriented in a North-South direction [1Tr. Sept. 5 at 33, 42].
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> In our opinion, the same situation does not exist between Section 5 and 4, approximately one mile to the east. First, there is an existing producing Fruitland Coal seams well, the Southern Ute No. 5-5 , located between the proposed Southern Ute No. 2-5 infill well in the SENW of section 5, and the undeveloped 160 acres of the NW of Section 4. The Southern Ute No. 5-5 well in effect will act as a "no-flow" boundary between the Southern Ute No. 2-5 well and the NW ¼ of Section 4. If any drainage of section 4 does occur, it will likely happen from existing the [sic] Southern Ute 5-5 well, rather than the Southern Ute No. 2-5. Secondly, the anisotropic permeability in a North-South/East-West direction will minimize any possible cumulative drawdown effects associated with three wells in Section 5 versus two wells in section 4. It is also important to note that the current reservoir pressures are low, in the 600 psi range, meaning any induced differential pressures would be of a low magnitude as well, again minimizing any possible drainage effects.

(Decision at 4-5 (emphasis supplied).)

In support of its position, Burlington asserts that "completion and unrestricted production from * * * four wells in Section 32 * * * immediately to the north of [sec. 5]" resulted in drainage from sec. 5, a fact

which BLM has acknowledged. Burlington asserts that the Valencia Canyon Infill wells were shut in to protect the correlative rights of the offsetting mineral owners. (SOR at 13-14.)

Burlington states that the Decision gives two reasons why no drainage will occur from sec. 4 into sec. 5: The Ute No. 5-5 well will act as a "no-flow" boundary between the Ute No. 2-5 well and the N¼ of sec. 4; and the 4:1 north-south/east-west directional permeability preference results in elliptical drainage patterns in a primarily north-south direction. Burlington challenges these tenets as inconsistent with the testimony. (SOR at 14-15.) Burlington cites the testimony of Terry Logan to the effect that the discrepancy in gas produced from the S½ of sec. 32 from that produced from the N½ of sec. 5 is due to "two pressure sinks within the reservoir in Section 32 drawing the reservoir down, producing gas, versus just one well in the North of Section 5." (1Tr. Sept. 5 at 58-59.)

Burlington notes (SOR at 15) that its witness, Jack Kean, agreed with Logan's assessment when he testified that if the rate of withdrawal is increased by a recompleted well in sec. 5, this will cause a pressure sink and the migration of gas from adjacent sections with higher pressure gradients. (1Tr. Sept. 5 at 148.) Burlington argues that BLM's premise that the Ute No. 5-5 well will act as a barrier to gas migration "is clearly inconsistent with this testimony." Burlington asserts that the Ute No. 5-5 well will not only not act as a barrier, but will instead contribute to the pressure sink in sec. 5, which will result if the Ute No. 2-5 well is recompleted. (SOR at 16.)

Next, Burlington refers (SOR at 17) to Kean's testimony to the effect that drainage was not just a permeability orientation issue but both "pressure sink gradient or pressure sink and a permeability issue." (1Tr. Sept. 5 at 148.) This testimony, Burlington asserts, renders erroneous the premise in the Decision that "the anisotropic permeability in a north-south/east-west direction minimizes the effect of a pressure sink in Section 5." Burlington notes that while BLM's action may serve to protect correlative rights of owners in the N½ of sec. 5, it is adverse to the owners of correlative rights in sec. 4. Burlington characterizes this allegedly disparate treatment of correlative rights as arbitrary, capricious and an abuse of discretion. (SOR at 18.)

BLM asserts that Burlington incorrectly states BLM's position with respect to the "no-flow" barrier and the Ute No. 5-5 well. BLM explains that

> the re-completion of the Southern Ute 2-5 will not directly cause drainage of the W½ of Section 4 due to: 1) its distance from Section 4; 2) the existence of a producing 320-acre spacing unit with the producing Southern Ute No. 5-5 well in the N¼ of section 5 as a "no-flow" boundary; 3) the directional permeability due to the face and butt cleat orientation in a north-south direction which will serve to minimize any possible drainage

> affects [sic]; and 4) the fact that the differential pressures involved are relatively low which will serve to minimize any possible drainage affects [sic].

(BLM Reply at 4.) BLM states that the Ute No. 2-5 well cannot directly cause drainage of the N¼ of sec. 4 because of the existence of the Ute No. 5-5 well, which acts as a boundary because it is between the Ute No. 2-5 well and the N¼ of sec. 4. BLM concedes that drainage may occur, but that it "will likely happen" from the Ute No. 5-5 well, rather than the Ute No. 2-5 well. (BLM Reply at 5.)

BLM agrees that drainage "is quite obviously a function of both pressure drawdown and permeability." It notes, however, that "this still does not mean that anisotropic permeability oriented north/south to east/west will not minimize the drainage of these wells in an east/west direction." BLM observes that Burlington has not disputed the existence of directional permeability in the Fruitland Coals in this area. (BLM Reply at 5.)

BLM states also that "a pressure sink may exist in Section 5 relative to Section 4 absent the recompletion of the Southern Ute No. 2-5 well based on the disparity in operating conditions in the two sections alone." BLM suggests that the remedy lies with Burlington, that Burlington could protect its interests in sec. 4 by increasing gas recovery from its own wells through more efficient compression. (BLM Reply at 4.)

In its Answer, Cedar Ridge points out that Burlington's evidence on permeability and drainage patterns was based on data from wells located up to 4 miles from sec. 5. This data, it contends, does not refute the evidence of a north-south oriented elliptical drainage pattern indicating that drainage from sec. 5 was caused by wells in sec. 32, to the north, and not from sec. 4 to sec. 5. (Answer at 15.) Further, Cedar Ridge asserts that the Kean testimony, in its entirety, is anything but conclusive with respect to drainage patterns. (Answer at 16.)

Cedar Ridge points out that the COGCC commissioners, having heard all the evidence, perceived no probability of significant migration of gas from sec. 4 to sec. 5. (Cedar Ridge Answer at 14.)

Having reviewed the testimony concerning drainage and the parties' interpretation of that evidence, we conclude that BLM properly approved recompletion of the Ute No. 2-5 well. The fact that the geological evidence, specifically the scientific projections, predictions and assumptions relating to underground reservoir dynamics cannot be demonstrated with absolute certainty is clear. The data upon which experts in the field rely is reasonably subject to differing interpretations by reasonable men. In this case, the greater and more convincing evidence regarding the effects of variously situated wells upon drainage patterns and the establishment of the underground environment was presented by Cedar Ridge. Burlington presented its own evidence, based on its own data. In various technical points, Burlington's interpretations paralleled and departed from

the interpretations espoused by Cedar Ridge and BLM. Our final analysis is that while Burlington disagrees with Cedar Ridge and BLM, Burlington has not shown that approval of recompletion of the Ute No. 2-5 well is not supported by the underlying data, nor that it would result in adverse consequences to Burlington. Burlington's discussion of harmful consequences invokes speculation and fails to consider the options open to it to deal with such consequences, assuming they could reasonably be expected. We conclude that Burlington has not demonstrated by a preponderance of the evidence that BLM experts erred when collecting the underlying data, when interpreting that data, or in approving recompletion of Ute No. 2-5 well. See American Horse Protection Inc., supra.

A third argument raised by Burlington is that offsetting owners will be unable to economically drill wells to protect themselves from drainage. Burlington's fourth argument is that recompletion of the Ute No. 2-5 well will result in a further request for downspacing.

The Decision states that Burlington has no acreage contiguous to the 320-acre spacing unit consisting of the W½ of sec. 5 and that the offsetting owners that do have contiguous acreage did not protest or challenge Cedar Ridge's application to recomplete the Ute No. 2-5 well. BLM notes that in any event, it would be incumbent on Burlington to determine if the drilling of an infill well in section 4 is a necessary and viable option. (Decision at 5.)

The Decision observes that individual proposals on Indian lands will continue to be considered by BLM "where they make sense from a technical and economic standpoint," and the protection of correlative rights of individual owners will also be evaluated on an individual basis. The Decision notes that the responsibility for safeguarding rights does not rest with BLM alone, but is also the obligation of the offset operators themselves. Thus, additional infill wells may be allowed where they are required by the drainage circumstances, for diligent development, or to protect correlative rights.

On appeal, Burlington lists various reasons why the drilling of a well in sec. 4 may not be economically viable. These reasons include economic disadvantage (unavailability of an existing well to complete) and the unavailability of tax credits, among others. (SOR at 20-23.) Burlington asserts that further requests for downspacing, to be expected from the recompletion of the Ute No. 2-5 well, will not be "in the public interest." (SOR at 24.)

Burlington's arguments are speculative, and raise the specter of consequences which cannot reasonably be predicted to result from BLM action. Moreover, Burlington purports to speak for offsetting owners who have not participated in these appeals.

At the hearing, the parties agreed that the same substantive testimony, with minor departure, was applicable to Cedar Ridge's application for recompletion of the Southern Ute No. 1-7 well. (2Tr. Sept. 5 at 5-7.)

That well, as indicated above, is located in the SE¼SE¼ of sec. 7 as the second well in the 320-acre spacing unit consisting of the E½ of sec. 7.

BLM's Decision (SDR-CO-97-2) approving COGCC Order No. 112-125 is very similar to its Decision in SDR-CO-97-1, except that in the latter Decision, BLM did not modify the COGCC order. Again, the Decision discusses the same issues raised by Burlington earlier, only as applied to the E½ of sec. 7. BLM specifically disagreed with Burlington's assertion that a second well was not necessary to efficiently and economically drain sec. 7. The Decision states:

> Testimony by Cedar Ridge, including its Exhibit U, indicate[s] that an additional gas well in the E½ of Section 7 will recover an additional 470 MMCF of gas, as well as accelerate production in the spacing unit. Data provided to this office by Burlington on October 25, 1996, indicates an average recovery factor of only 22 percent of the gas-in-place in section 7 with the two existing wells. With such low recovery rates, we find inconsistency in Burlington's argument that an infill well will not recover additional reserves.
>
> Cedar Ridge's testimony with regard to the well production and pressure data in proximity to Section 7 and to the south indicate a deterioration of reservoir quality in this area. This resulted in Cedar Ridge's infill well model showing additional reserves being produced from Section 7 that would otherwise not be produced by the two existing wells. Data provided by Burlington with regard to section 7 indicate a lower gas content and lower ultimate recoveries (an average of 22 percent of the gas-in-place) than for Section 5 (an average of 58 percent of the gas-in-place to the north). This data seems to confirm the poorer reservoir quality in this section as indicated by Cedar Ridge. Again, with such low recovery rates in this section, we find inconsistency in Burlington's argument that an infill well will not recover additional reserves.

(Decision at 3-4). In sum, BLM found that the infill well was justified because it would result in additional recovery of reserves, would prevent waste by taking advantage of an existing wellbore, and would result in economic benefit to the Tribe.

Burlington asserts that its interests in neighboring sec. 8, to the east of section 7, "may be adversely affected by recompletion of the Ute 1-7." (SOR at 9.) Burlington asserts that at the hearing Terry Logan failed to present data with respect to the area that could be drained by one well or two wells in the E½ of sec. 7. Burlington cites the following statement by COGCC Chairman Allan Heinle, summarizing the results of Logan's testimony: "But if recovery is that high for one well in 320-acre

spacing, wouldn't it say that for 160 acres it would be in excess of 100% — which is I guess what you are saying — you are draining beyond 160 acres." (2Tr. Sept. 5 at 25; SOR at 12.) 5/

BLM points out that Cedar Ridge presented uncontradicted evidence of financial benefits to the Tribe, resulting from recompletion of the Ute 1-7. (Logan testimony, 2Tr. Sept. 5 at 12-14.) BLM contends that Burlington has not established that a second well is not necessary to recover additional reserves. BLM notes that evidence presented by Cedar Ridge that the reservoir quality in sec. 7 is poorer than in the sections to the north was not challenged by Burlington. (BLM Reply at 7.)

Cedar Ridge points out that it presented evidence that the quality of the reservoir decreases as one moves from north to south. Cedar Ridge also cites a conclusion by COGCC Chairman Heinle: "I think the data, though, that has been presented * * * all convince me that an additional well here is going to drain additional reserves." (2Tr. Sept. 5 at 64.) Cedar Ridge notes that its exhibits, discussed at the hearing and attached to its Answer (see Ex. 5 through 8) "reflect significant differences in daily, monthly, and cumulative production totals from this area, as one moves from north to south." (Answer at 8.) Cedar Ridge urges that these differences in production data were correctly evaluated by BLM to indicate changing reservoir quality and that they justify recompletion of the Ute No. 1-7 well. (Answer at 9.)

As in the previous appeal with regard to recompletion of the Ute No. 2-5 well, the Tribe adopts the Answer submitted by Cedar Ridge with respect to Ute No. 1-7 well. (Tribe Answer at 4.)

We conclude that Burlington failed to show how its interests in neighboring sec. 8 will be adversely impacted by recompletion of Ute No. 1-7 well. Burlington has failed to dispute the adverse financial effects on Cedar Ridge if the status quo is maintained, and has not addressed the evidence of projected financial benefit to the Tribe if Ute No. 1-7 well is recompleted. The evidence does not favor the status quo, but argues for recompletion of the well. While Burlington has voiced disagreement with the evidence and pointed out a lack of certitude in certain instances, such does not amount to a showing of error. BLM correctly affirmed Order No. 112-125.

5/ The remainder of the colloquy, not quoted by Burlington is as follows:

"THE WITNESS: What we were looking at was three wells per 640, and we got the incremental and we added two or three — it might have been as much as four percent. I forget the exact number, but it was in that range, less than five percent.

"CHAIRMAN HEINLE: So the incremental recovery from the third well is —

"THE WITNESS: It is about one half of a Bcf of gas — is what it is. I don't know if that answered your question."

(2Tr. Sept. 5 at 25-26.)

We conclude that Burlington has not demonstrated by a preponderance of the evidence that BLM experts erred when collecting the underlying data, when interpreting the data, or in approving recompletion of Ute No. 1-7 well. See American Horse Protection Inc., supra.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R § 4.1, the Decisions appealed from, affirming the two COGCC orders, are affirmed.

James P. Terry
Administrative Judge

I concur:

James L. Byrnes
Chief Administrative Judge