

JACK J. GRYNBERG

IBLA 86-354

Decided August 24, 1988

Appeal from a decision of the Wyoming State Office, Bureau of Land Management, increasing annual rental rate for noncompetitive oil and gas lease W-86962.

Affirmed.

1. Oil and Gas Leases: Applications: Generally--Oil and Gas Leases: Known Geologic Structure--Oil and Gas Leases: Noncompetitive Leases

A person challenging a determination by the Bureau of Land Management that land is within a known geologic structure of a producing oil or gas field has the burden of showing by a preponderance of the evidence that the determination is in error.

2. Oil and Gas Leases: Known Geologic Structure--Oil and Gas Leases: Rentals

When the Bureau of Land Management has determined that any part of the lands described in a noncompetitive oil and gas lease is within an addition to a known geologic structure, the lessee is required to pay an increased rental of \$2 per acre for the entire lease.

APPEARANCES: Jack J. Grynberg, pro se; Lowell L. Madsen, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Denver, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE LYNN

Jack J. Grynberg has appealed from a decision of the Wyoming State Office, Bureau of Land Management (BLM), dated January 27, 1986, increasing the annual rental rate on his noncompetitive oil and gas lease, W-86962, from \$1 to \$2 per acre.

Pursuant to section 17 of the Mineral Leasing Act, as amended, 30 U.S.C. § 226 (1982), and effective April 1, 1984, BLM issued a noncompetitive oil and gas lease to appellant for 240 acres of land situated in Park County, Wyoming.

By memorandum dated February 26, 1985, the District Manager, Worland District, notified the Wyoming State Director that some of the lands included in appellant's lease, described as the SW 1/4 NW 1/4, sec. 15, T. 47 N., R. 100 W., sixth principal meridian, Wyoming, were situated within an addition to the Gooseberry Northeast Field defined known geologic structure (KGS) effective November 21, 1984. In its January 1986 decision, BLM notified appellant of the KGS determination and stated that "[b]eginning with the lease year which starts at least 30 days from your receipt of this notice, and for each year thereafter through the fifth lease year, the annual rental rate is \$2.00 per acre, or fraction thereof." (Emphasis in original.)

In his statement of reasons on appeal, appellant objects to the inclusion of his acreage into the Gooseberry Northeast KGS, arguing in part:

(i) The producing horizons in the North Gooseberry field are associated with strong water drives, thus structural closure is necessary to form a hydrocarbon trap. To date, no oil production has been found below the mean sea level contour as mapped on the Tensleep, shown on the attached map.

(ii) The Mobil #T-23-22B Govt (NW 1/4 Section 22) was drilled in 1964 and encountered the Tensleep at a plus five feet (mean sea level datum). A drill stem test of the Tensleep recovered 570 feet of water. Thus the presence of a water drive occurring near mean sea level was confirmed.

(iii) The nearest Grynberg acreage to the field is in Section 15. This acreage lies on the north flank of the structure and, according to the published interpretation, more than 190 feet below the known water level in the field. Furthermore surface dips measured on and near this acreage show a northeast plunge of eight degrees thus clearly confirming that this acreage is on the flanks of the structure.

Appellant contends that the proposed extension of the Gooseberry Northeast KGS disregards prudent geologic data and has no rational merit.

In its answer BLM argues that the person challenging a KGS determination must show by a preponderance of the evidence that the determination is incorrect and contends appellant's statement of reasons did not meet that requirement. BLM also prepared and submitted to the Board a geologic report on the Gooseberry Northeast KGS, dated March 20, 1986. The report, prepared by a petroleum geologist with the Worland District, BLM, states at pages 2-3:

Mr. Grynberg's statement of reasons does not address the portion of the reservoir that is in the Phosphoria (also called Embar) Formation. The Tensleep and Phosphoria formations form a single reservoir in the subsurface via interconnecting fractures and have a common oil-water contact. All four wells in the Gooseberry

Northeast field have been completed in the upper part of, and produced oil from the Phosphoria Formation. These completions are summarized in Attachment one and clearly indicate that the reservoir extends to the top of the Phosphoria Formation. The presumptively productive area (i.e., the limit of the reservoir) then, is the intersection of the oil-water contact with the top of the Phosphoria Formation, not the top of the Tensleep Formation as proposed by Mr. Grynberg. Attachment two is a diagrammatic cross-section showing these relationships. The presumptively productive area is also shown on the Structure Contour Map of the Phosphoria Formation which accompanies the KGS Geological Report for the Gooseberry Northeast KGS (see also Attachment four with this report). This productive limit can be shown on the map accompanying Mr. Grynberg's statement of reasons by drawing in the -230 foot contour line (see Attachment three). It should be noted that the published map accompanying Mr. Grynberg's statement of reasons is dated 1956 and the dry holes in NE/4 SW/4 section 21 and the SW/4 NW/4 section 22 were drilled in 1976 and 1964 respectively.

Attachments three and four clearly show that the presumptively productive area in Gooseberry Northeast field includes part of SW/4 NW/4, Section 15, T. 47 N., R. 100 W.

BLM Manual section 3022.1-11E(2) dated June 28, 1985 states that, "The limits of a KGS should be described to include at a minimum the entire State-approved spacing unit if any part of it is determined to be within a productive or presumptively productive trap but in units no smaller than the smallest legal land subdivision, surveyed tracts, or lot." In the Gooseberry Northeast field the State-approved spacing is 40 acres, therefore, all of the SW/4 NW/4, section 15, T 47 N., R. 100 W. was included in the KGS.

CONCLUSION

If only the Tensleep Formation was productive in Gooseberry Northeast field then all of the Grynberg acreage would be outside the presumptively productive area. This is clearly not the case, however, as the reservoir includes the entire zone between the oil-water contact and the top of the Phosphoria Formation. This makes the presumptively productive area much larger than Mr. Grynberg contends in his statement of reasons and includes part of the SW/4 NW/4, section 15, T. 47 N., R. 100 W.

Appellant's response to BLM's answer states at page 3: "From the information available to us we conclude that the Phosphoria and Tensleep formations do not have a common oil/water contact. An impervious shale zone ranging from six to twenty six feet thick lies upon the Tensleep formation preventing any upward migration of fluid." Appellant contends that hydrocarbon production from the Phosphoria formation is from the upper portion of the formation and is perhaps aided locally by vertical fracturing. Appellant argues, however, that the fracturing does not extend laterally over the entire area as can be seen from the absence of evidence of fracturing in the detailed

descriptions of core samples taken in the formation, and does not extend downward into the Tensleep formation based on the presence of barren zones noted in the core descriptions. Based on his geologic observations, appellant contends that due to structural position, the Phosphoria formation is not presumptively productive on his acreage in section 15 and that the Tensleep formation is probably not productive on his acreage.

BLM submitted a second geologic report in reply to appellant's response. That report concludes at page 4:

Data presented in this report indicate that an impervious shale is not present in Gooseberry Northeast field. The "shale" described by Mr. Grynberg is, in fact, a very dolomitic shaly zone that is brittle and subject to fracturing, and thus would allow communication of fluid between the upper Phosphoria and Tensleep formations and establishment of a common oil-water contact. Nonfractured intervals in cores from the Gooseberry Northeast field do not indicate that a fractured zone is not present. Cores are narrow columns of rock six inches or less in diameter and it would be rather fortuitous that a core intersected fractures and oil shows continuously. The presence of similar intervals of no shows in the giant Oregon Basin field, where a common oil-water contact is known to exist, clearly demonstrates that such intervals do not preclude fluid migration. A common oil-water contact is the most logical and scientifically viable interpretation for Gooseberry Northeast field considering the available data and similarities to other oil fields that are known to have common oil-water contacts. This interpretation allows the oil-water contact (about sea level) as determined from drill stem tests and completion intervals in the Tensleep Formation to be extended to the top of the Phosphoria Formation. Because of this, the reservoir was projected onto the Grynberg acreage in SW 1/4 NW 1/4, Section 15, T. 47 N., R. 100 W. The KGS boundary therefore should not be changed to exclude the Grynberg acreage.

A KGS is defined as "the trap in which an accumulation of oil or gas has been discovered by drilling and determined to be productive, the limits of which include all acreage that is presumptively productive." 43 CFR 3100.0-5(l). A KGS designation recognizes the existence of a continuous entrapping structure on some part of which there is production, but does not predict productivity at any particular place within the "presumptively productive" area. Beard Oil Co., 99 IBLA 40 (1987); R. K. O'Connell, 85 IBLA 29, 32 (1985); Lloyd Chemical Sales, Inc., 82 IBLA 182 (1984); Robert G. Lynn, 61 IBLA 153, 154 (1982). Accordingly, it is not necessary that there be production within or in the immediate vicinity of land designated as part of a KGS. Land may properly be included in a KGS based upon geologic evidence indicating that a producing deposit extends under the land which renders the land "presumptively productive." Sherbourne Partnership, 90 IBLA 130, 133 (1985); Charles J. Frank, 90 IBLA 33, 37 (1985); Thomas Bohr, Jr., 89 IBLA 384, 386 (1985).

[1] A person challenging a Departmental determination that land is within the KGS of a producing oil or gas field has the burden of showing by a preponderance of the evidence that the determination is in error. Bender v. Clark, 744 F.2d 1424 (10th Cir. 1984); Mary Lee H. Picou, 88 IBLA 356 (1985); Eagle Exploration Co., 83 IBLA 354 (1984), and cases cited therein. In essence, challengers must demonstrate that their conclusion is more convincing. This proof should generally consist of evidence that any purported traps do not occur at all under the land in question or that the entire purported accumulation of oil or gas which does exist is not productive in paying quantities, thereby rebutting the presumption of productivity raised by BLM's addition of the land to the KGS. Celeste C. Grynberg, 96 IBLA 87, 89 (1987), and cases cited therein.

In this appeal BLM included the land in appellant's lease within the Gooseberry Northeast field KGS extension on the presumed existence of a common oil-water contact between the Tensleep and Phosphoria formations. Appellant challenges the existence of the oil-water contact asserting that an impervious shale rests between the Tensleep and Phosphoria Formations, as evidenced by nonfractured intervals in core samples taken from the Gooseberry Northeast field.

From our review of the record, we conclude that the BLM geologic data and supporting information substantiate the addition to the Gooseberry Northeast field KGS. Appellant's arguments do not demonstrate by a preponderance of the evidence that BLM's KGS determination was in error. At best, appellant has established that geological experts may disagree regarding the existence of fluid migration and common oil-water contact between the Tensleep and Phosphoria formations and other oil fields with similar characteristics. Where such differences of opinion exist and the appellant has not shown that his interpretation of the data is more likely to be correct than that of BLM, the Board will sustain the BLM finding. B. K. Killion, 90 IBLA 378, 386 (1986); Sherbourne Partnership, *supra* at 134.

[2] It is well established that when BLM has determined that any part of the lands described in a noncompetitive oil and gas lease is within an addition to a KGS, the lessee is required to pay an increased rental of \$2 per acre for the entire leasehold. 43 CFR 3103.2-2(d); 1/ Lewis & Clark Exploration Co., 97 IBLA 171 (1987); James D. Creighton, 87 IBLA 79 (1985), and cases cited therein. Accordingly, BLM properly increased the rental rate applicable to appellant's entire lease.

1/ That regulation provides:

"On lands within a lease issued under Subpart 3111 of this title after the effective date of this regulation which is later determined to be within a known geologic structure outside of Alaska * * *, the annual rental shall be \$2 per acre or fraction thereof beginning with the first lease year after the expiration of 30-days notice to the lessee. During the first 5 years of the lease term, the same rental increase is applicable to leases issued under Subpart 3112 of this title."

Therefore, 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.

Kathryn A. Lynn
Administrative Judge
Alternate Member

I concur:

David L. Hughes
Administrative Judge

