

EAGLE EXPLORATION CO.

IBLA 84-512

Decided November 15, 1984

Appeal from decision of Wyoming State Office, Bureau of Land Management, increasing the rental for oil and gas lease W 63773.

Affirmed.

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

One who challenges a determination by the Bureau of Land Management that land is within the known geologic structure of a producing oil or gas field has the burden of showing that the determination is in error.

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

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

APPEARANCES: Paul M. Joeckel, Land Manager, Eagle Exploration Company, Denver, Colorado, for appellant; Lowell L. Madsen, Esq., Department Counsel, Office of the Regional Solicitor, Denver, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE HARRIS

Eagle Exploration Company (Eagle) has appealed from an April 17, 1984, decision of the Wyoming State Office, Bureau of Land Management (BLM), increasing the rental for oil and gas lease W 63773 to \$2 per acre, effective July 1, 1984, due to the inclusion of part of the leased lands in an undefined

addition to the known geologic structure (KGS) 1/ of the Jackknife Spring oil and gas field. 2/

On appeal Eagle argues W 63773 is not within a KGS because W 63773 is nearly 4 miles from the nearest production. Eagle charges the information available to it indicates the KGS should be limited to "the current parameter of the Jackknife Spring Oil Field." It contends the current size of the Brady Unit which was formed to explore the Jackknife field should represent the outside boundaries of the KGS and since W 63773 is not part of that unit, it should not be included in any KGS expansion. Further, Eagle asserts that the KGS determination is not based solely on geological reasons, "but rather an over reaction to a problem you have recently encountered."

In response BLM claims that Eagle's arguments are insufficient to refute the KGS determination which was based on established, scientific methods employed by BLM experts. BLM, citing TXO Production Corp., 73 IBLA 33 (1983), urges that a KGS determination should not be disturbed in the absence of proof that the determination is erroneous.

The record in this case contains two geologic reports. One dated January 25, 1984, provides the basis for the KGS addition at issue. The other, dated May 18, 1984, further expands those bases, with particular attention to the Dakota Formation. In that regard, the May 18, 1984, report states:

The Dakota Formation produces natural gas from three separate sand intervals, referred to, for the purpose of this report, in stratigraphically descending order as the "A", "B", and "C" intervals (refer to attached Dakota Formation geologic cross-section) Productive wells in the Dakota are not restricted to any particular location on the structure. The "A" sand interval is laterally continuous and is easily identifiable from well logs. It produces in three of the six wells completed in the Dakota across the structure. The "B" and "C" sand intervals are distinct traceable sands on the north and south ends of the structure, but interfinger to form one interval with slight facies changes near the middle of the field. The "B"- "C" sand sequence produces in five of the six wells completed in the Dakota.

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1/ A "known geologic structure" is presently defined as "technically 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 3100.5(1).

2/ Oil and gas lease W 63773 was assigned to Eagle Exploration Company, First Exploration Company, and Albany Oil and Gas, Ltd., effective Aug. 1, 1980. Those companies hold 50 percent, 25 percent, and 25 percent interests, respectively. Only Eagle has filed an appeal.

The boundaries of the undefined addition to the Jackknife Spring KGS were determined based on the net effective reservoir zero-foot isopach lines calculated for the reservoirs within the Dakota Formation described above (refer to attached Net Effective Reservoir Isopachs Map). The net effective reservoir is defined for this report as a subsurface thickness of rock that has sufficient porosity to permit the accumulation of crude oil or natural gas under adequate trap conditions, and is presumptively productive for oil or gas. The zero-foot net effective reservoir isopach line essentially outlines the known limits of the stratigraphic trap in the Dakota Formation. The stratigraphic trap of the Dakota Formation covers a broader geographic area than the gas/oil/water contact defined for the Nugget and the Weber Formations. The net effective reservoir thickness was calculated for each well that had tested the Dakota in the Jackknife Spring area by using any one, or multiple combinations of the following: reports of operation, completion reports, production tests, drill stem tests, IWR's, well logs (electric/induction logs, sonic logs, nuclear/density logs, temperature logs, and other miscellaneous logs as available), P.I. data, and other published and unpublished literature. The undefined addition to the Jackknife Spring KGS hereby includes all 40-acre spacing units, or portions thereof, cut by the net effective reservoir zero-foot isopach line of the Dakota Formation not within an existing KGS (refer to the attached Jackknife Spring KGS map).

[1] One challenging a Departmental determination that land is within the KGS of a producing oil or gas field has the burden of showing that the determination is in error. Reed International, 80 IBLA 145 (1984); Angelina Holly Corp., 70 IBLA 294 (1983), *aff'd*, Angelina Holly Corp. v. Clark, 587 F. Supp. 1152 (D.D.C. 1984). Eagle states that there is no producing well within 4 miles of its lease. However, the determination of the boundary lines of the KGS of a producing oil or gas field or of an undefined addition to such a field does not guarantee the productiveness of the area so designated. Ambra Oil & Gas Co., 58 IBLA 67, 68 (1981). Thus, the fact that the nearest producing well is 4 miles away is not dispositive of whether the land in question is presumptively productive.

Eagle has presented no specific evidence to refute the KGS designation which is based on sound geological interpretation. <sup>3/</sup> Therefore, we conclude that Eagle has failed to meet its burden of showing that the Government's determination is in error.

[2] Where BLM has determined that any part of the lands described in a noncompetitive oil and gas lease is within an undefined addition of a KGS, the lessee is required to pay increased rental of \$2 per acre for the entire lease. 43 CFR 3102.2-2(d); Ambra Oil & Gas Co., *supra* at 69.

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<sup>3/</sup> There is no evidence in the record to support Eagle's allegation that the KGS determination was based on something other than geological factors.

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.

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Bruce R. Harris  
Administrative Judge

We concur:

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Gail M. Frazier  
Administrative Judge

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Wm. Philip Horton  
Chief Administrative Judge