

H. L. BROWN, JR.  
POST OFFICE BOX 2237  
MIDLAND, TEXAS 79702-2237

October 27, 1992

Commissioner of Public Lands  
State of New Mexico  
P.O. Box 1148  
Santa Fe, NM 87501-1148

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Attention: Mr. Floyd O. Prando  
Director, Oil and Gas Minerals Division

Re: Preliminary approval Request  
North Feather-State Unit  
North Feather Prospect  
Lea County, New Mexico  
HLBJR #472

Gentlemen:

H. L. Brown, Jr. respectfully requests your consideration and approval of this Application for Designation of the North Feather-State Unit Area, Lea County, New Mexico, as an area logically subject to development under a Unit Plan of Operation, and for determination of the depth of the Initial Test Well to be drilled upon such Unit Area, and in support thereof respectfully shows:

1. Designation

The area to be designated as the North Feather-State Unit Area comprises 640.00 acres in Lea County, New Mexico, as outlined on the attached land plat, in duplicate, marked Exhibit "A". A Schedule of leases marked Exhibit "B", with appropriate tract and Serial Numbers of the State leases within the Unit Area, is attached to each copy of the Exhibit "A". All of the Unit Area is comprised of State Land. It is proposed that the unit Area cover all oil and gas in and produced from the hereinabove specified lands committed to the agreement as to all formations.

2. Unit Agreement

Operations would be conducted under the State's current recommended Unit Form with modified segregation clause. A proposed copy of this form is enclosed for your consideration and further recommendation.

3. Geology

Enclosed herewith, in duplicate, is a geological report to substantiate this application. It is requested that this material be treated as confidential. Applicant proposes to drill a well in the Unit Area to be located 1650' FNL and 990' FEL Section 16, T15-R32E, to a depth sufficient to test the Morrow Formation or 12,500 feet, whichever is the lesser depth. It is believed a well drilled to this depth will penetrate the most prospect horizons in the Unit Area.

4. Justification for Unit Development

The proposed unit well will be subject to the Feather-Morrow Pool which is unusual because it is currently classified by the New Mexico Oil Conservation Division as a Morrow oil pool on 40-acre oil spacing.

The Morrow formation within the proposed unit area is expected to be highly discontinuous, of irregular size and shape such that a single Morrow well should be able to adequately deplete that Morrow reservoir.

Accordingly, development and exploration on existing 40-acre oil spacing is wasteful in that it will lead to the drilling of unnecessary wells that are too close together.

Approval of a unit will afford to the operator and interest owners the most effective and efficient means of exploration and development because the unit operator can locate the unit well at the optimum place in the unit without the risk of having that Morrow well immediately offset by another well drilled on 40-acre oil spacing.

In the absence of a unit, exploration and development plans will be dictated by individual lease acreage configurations and lease expiration dates rather than by plans developed to recover the maximum hydrocarbons at the least expense.

5. Conclusion

It is our opinion that designation of this North Feather-State Unit Area will conserve natural resources and prevent waste.

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The undersigned respectfully requests Designation of the North Feather-State Unit Area and approval of the depth and location of the Initial Well.

Yours very truly,

H. L. BROWN, JR.

By: 

Q. Peter Courtney,  
Land Manager

QPC/sp

Enclosures

W. THOMAS KELLAHIN  
NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW  
EL PATIO BUILDING  
117 NORTH GUADALUPE  
POST OFFICE BOX 2265  
SANTA FE, NEW MEXICO 87504-2265

BEFORE EXAMINED  
OIL CONSERVATION DIVISION  
TELEPHONE (505) 982-4285  
TELEFAX (505) 982-2047  
EXHIBIT NO. 4  
CASE NO.

December 11, 1992

Commissioner of Public Lands  
State of New Mexico  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

HAND DELIVERED

ATTN: Mr. Floyd O. Prando, Director  
Oil & Gas Minerals Division

RE: Revised Request for Preliminary Approval  
Proposed North Feather-State Unit  
Lea County, New Mexico

Dear Mr. Prando:

On behalf of H. L. Brown, Jr., we hereby revise his request dated October 27, 1992 for preliminary approval of the referenced unit to include a second well commitment and to submit additional information to justify approval of this unit.

Specifically, as a condition of approval of the proposed 640-acre unit consisting of the S/2 of Section 9 and the N/2 of Section 16, T15S, R32E, NMPM, Lea County, New Mexico, H. L. Brown, Jr., as operator, commits to the drilling of the initial unit well to a depth sufficient to test the Morrow formation at a location within the S/2NE/4 of Section 16, and that within six (6) months after the completion date of the initial unit well as a commercial producer, the operator shall commence drilling a second well within the N/2 of Section 16. If the second well is not timely commenced, the unit area will be contracted to exclude the NW/4 of Section 16 from the unit area.

The revised request, benefits H. L. Brown, Jr. by allowing him to plan for initial well spacing in excess of the 40-acre oil spacing rules which now limit exploration. The revised request benefits the State of New Mexico by requiring H. L. Brown, Jr. to commit to drilling a second well or releasing the state lease which would otherwise expire on March 3, 1993.

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The proposed formation to be tested by the initial well is the Morrow formation which almost always is developed on 320-acre gas well spacing. However, in this area, a unique circumstance exists in that the producing gas-oil ratios of the Morrow wells in the area will cause the New Mexico Oil Conservation Division to classify the proposed well as an oil well on 40-acre oil spacing.

Considering the low 33 percent success ratio of Morrow tests in the area, it is uneconomic to develop the Morrow on 40-acre oil well spacing. See Brown's economic analysis, Enclosure (1), attached hereto, which demonstrates the unacceptably poor drilling economics even when using optimistically escalated oil and gas pricing. In addition, petroleum engineering pore volume analysis shows potential drainage areas from 119 acres to 226 acres. See Enclosure (2), attached hereto. This result is consistent with the Reservoir Fluid Study for the State UTP No 1 Well which concludes that the hydrocarbons are in a gaseous phase at reservoir conditions. The Study is attached hereto as Enclosure (3).

Despite the high probability that the proper spacing pattern is in excess of 40-acre oil spacing, there is insufficient pressure data available to either establish a new pool separated from the wells to the south or to determine the ultimate spacing pattern for this proposed unit area. Because of that lack of data, we are not yet able to obtain a change in well spacing from the New Mexico Oil Conservation Division.

In order to avoid drilling unnecessary wells on spacing patterns that are too small, a state approved unit is necessary. It will afford both the State of New Mexico and the other interest owners the flexibility to initiate an exploration program which will obtain reservoir data which then can be used to determine proper well spacing for the most efficient recovery of hydrocarbons.

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Enclosed is an additional copy of the original request dated October 27, 1992 and another copy of all exhibits. Also enclosed is a check for the \$60.00 filing fee.

Please call me if you need anything further.

Very truly yours,



W. Thomas Kellahin

WTK/jcl  
cc: H. L. Brown, Jr.

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