KELLAHIN and KELLAHIN Attorneys at Law Jason Kellahin El Patio - 117 North Guadalupe W. Thomas Kellahin Post Office Box 2265 Karen Aubrey Santa Fe, New Mexico 87504-2265 July 18, 1984

Telephone 982-4285 Area Code 505

RECEIVED

JUL 18 1984

Mr. Joe D. Ramey Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501 "Hand Delivered"

OIL CONSERVATION DIVISION

Re: Application of Mesa Grande Resources Inc.

Gavilan Greenhorn-Dakota Oil Pool Rio Arriba County, New Mexico

Cair 4350

Dear Mr. Ramey:

Our firm represents Mr. Jerome P. McHugh and Dugan Production Corporation and is opposed to the above application of Mesa Grande Resources Inc. which is an application for creation of a 160 acre oil pool now set for hearing on August 1, 1984.

Although Dugan Production Corporation and Jerome P. McHugh are significant interest owners in the area to be included in the new pool, Mesa Grande Resources Inc. has made no effort to notify us of this application.

It was not until July 5, 1984, that I discovered the pending application by Mesa Grande and sent a copy to my clients. You may recall that this area is approximately the same area that was contested last fall in the Gavilan Mancos Pool.

You will find enclosed our application to have this area spaced on 320 acres.

Rather than hear this matter twice and because of the inadequate notice given by Mesa Grande Resources, we request that the Mesa Grande case be continued to the end of August and that both cases be heard at the same hearing.

Thomas Kellahin

Very truly

WTK:ca Enc.

cc: W/Enc. See attached mailing list.

Mr. Joe D. Ramey July 18, 1984 Page 2

cc: William F. Carr, Esquire
Campbell, Byrd & Black
Attorneys at Law
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Mr. John Roe Dugan Production Company 709 Bloomfield Road Farmington, New Mexico 87401

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KELLAHIN AND KELLAHIN

Mr. Joe D. Ramey July 18, 1984 Page 3

> Charles J. Boyce Amoco Production Company P. O. Box 800 Denver, Colorado 80201

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Tom Olay Southland Royalty P. O. Drawer 570 Farmington, New Mexico 87401

Mesa Grande Resources 1200 Philtower Building Tulsa, Oklahoma 74103

STATE OF NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS OIL CONSERVATION DIVISION

RECEIVED

IN THE MATTER OF THE APPLICATION OF JEROME P. MCHUGH FOR THE CREATION OF A GAVILAN GREENHORN, GRANEROS, DAKOTA OIL POOL, FOR THE ADOPTION OF SPECIAL POOL RULES, INCLUDING 320 ACRE SPACING, RIO ARRIBA COUNTY, NEW MEXICO.

JUL 18 1984

OIL CONSERVATION DIVISION

CASE: 8350

APPLICATION

Comes now JEROME P. MCHUGH, by and through his attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Division for an order creating a Gavilan Greenhorn, Graneros Dakota Oil Pool and for the adoption of Special Pool Rules, including 320 acre spacing, Rio Arriba County, New Mexico, and in support thereof would show:

- 1. Applicant is an operator and interested party in the orderly and reasonable development of the Greenhorn Graneros and Dakota formations in the Gavilan field of Rio Arriba County, New Mexico.
- 2. Applicant proposes that the following described acreage be deleted from the Basin Dakota Gas Pool and be established as the Gavilan Greenhorn Graneros, Dakota Oil Pool:

Township 24 North, Range 2 West Sections: 1 through 3

Township 25 North, Range 2 West Sections: 17 through 30 plus 33 through 36

- 3. That the Eastern boundary of the proposed Gavilan Greenhorn, Graneros Dakota Oil Pool is immediately adjacent to the Western boundary of the West Puerto Chiquito-Mancos Oil Pool.
- 4. That the proposed Gavilan Greenhorn, Graneros Dakota Oil Pool has existing oil wells established on 320 acre spacing and proration units in the Basin-Dakota Gas Pool which should be deleted from the Basin Dakota Gas Pool and made a part of the Gavilan Greenhorn Graneros Dakota Oil Pool.
- 5. That the special rules are required to insure that the Gavilan Greenhorn Graneros Dakota Pool is developed so as not to violate the correlative rights of the owners of interests in the Gavilan Mancos and the West Puerto Chiquito-Mancos Oil Pools.
- 6. That certain wells in the area to be designated as subject to the proposed Gavilan Greenhorn Graneros Dakota Oil Pool Rules have been commingled downhole with the Gavilan-Mancos Oil Pool with both pools being spaced on common 320 acre dedications.
- 7. That the vertical limits for the new Gavilan Greenhorn, Graneros Dakota Pool be from the base of the Gavilan-Mancos Oil Pool to the base of the Basin-Dakota Gas

Pool thereby including the Greenhorn, Graneros, and Dakota Formations.

- 8. That in order to insure the prevention of waste, the protection of correlative rights and the orderly development of the proposed pool, applicant proposes the adoption of Special Pool Rules for said pool including the following:
 - (a) For establishment of 320 acre spacing and proration units for Greenhorn, Graneros, and Dakota wells within the pool area.
 - (b) Wells drilled through the Gavilan Mancos Oil Pool with an existing Mancos well in the same quarter section shall be drilled with a mud system adequate to minimize lost returns throughout the Mancos interval;
 - (c) Wells drilled through the Gavilan Mancos Oil Pool with an existing Mancos well in the same quarter section shall be cemented across the Mancos interval in a manner so as to minimize damage to the Mancos;
 - (d) That any Gavilan Greenhorn, Graneros, Dakota Pool well shall have the same proration and spacing unit as any Gavilan-Mancos Oil Pool well drilled in the same section, AND
 - (e) That any Gavilan Greenhorn, Graneros, Dakota Pool well shall be located in the same quarter-quarter section as the Gavilan-Mancos Oil Pool well.
 - (f) For such further rules and regulations as are just.
- 9. That said Special Pool Rules should be adopted for a temporary period corresponding to the temporary period for the Gavilan-Mancos Oil Pool which ends March 1, 1987.

WHEREFORE, applicant requests that after notice and hearing this application be granted as requested.

Kellahin & Kellahin

W. Thomas Kellahin P. O. Box 2265

Santa Fe, New Mexico 87501

982-4285 (5Ø5)

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

OIL CONSERVATION DIVISION SANTA FE

APPLICATION OF MESA GRANDE RESOURCES, INC. FOR THE CREATION OF A NEW OIL POOL AND SPECIAL POOL RULES INCLUDING 160-ACRE SPACING, RIO ARRIBA COUNTY, NEW MEXICO

CASE NO. 8286

APPLICATION OF JEROME P. McHUGH FOR THE CREATION OF A NEW OIL POOL AND SPECIAL POOL RULES INCLUDING 320-ACRE SPACING, RIO ARRIBA COUNTY, NEW MEXICO

CASE NO. 8350

MEMORANDUM OF MESA GRANDE RESOURCES, INC.

I. INTRODUCTION

The above cases were consolidated for hearing and were heard on September 20, 1984 by the Commission. The cases involve creation of and spacing for the proposed Gavilan Greenhorn-Graneros-Dakota Oil Pool. Mesa Grande Resources, Inc. seeks 160-acre spacing, or 320-acre spacing with an infill provision, and Jerome P. McHugh seeks 320-acre spacing.

At the hearing, Mesa Grande Resources, Inc., presented competent evidence showing:

- Dakota pools in the San Juan Basin all have spacing of 160 acres or less;
- The majority of the Dakota pools in the San Juan Basin have 160-acre spacing;
- 3. There are reservoir continuity problems in the

Dakota producing interval;

- Units larger than 160 acres will not effectively drain a Dakota reservoir;
- 5. The proposed new pool has geological characteristics typical for the San Juan Basin, and therefore 160-acre spacing is proper;
- 6. More oil will be recovered with 160-acre spacing than with 320-acre spacing; and
- 7. A well completed only in the proposed new oil pool will be economical on 160-acre spacing.

At the close of hearing, the Commission asked for the following issues to be addressed:

- 1. What effect do special pool rules in a shallow pool have on a separate and deeper pool?
- 2. Will infill drilling violate correlative rights, cause waste, or cause the drilling of unnecessary wells?

II. General Rules

The Commission (and Division) are empowered and required to prevent waste and protect correlative rights. N.M. Sat. Ann. § 70-2-11 (1978). N.M. Stat. Ann. § 70-2-12B (1978) authorizes the Division or Commission:

- (7) to require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties; ...
- (10) to fix the spacing of wells....

Also, the Commission may establish proration units, "such being an area that can be efficiently and economically drained and developed by one well." N.M. Stat. Ann. § 70-2-17(B) (1978).

The Commission has broad authority to establish spacing and proration units. Rutter & Wilbanks Corp. v. Oil Conservation Commission, 87 N.M. 286, 532 P.2d 582 (1975). The special expertise and competence of the Commission is recognized, and findings and orders of the Commission based on substantial evidence will be upheld. Id.; Viking Petroleum, Inc. v. Oil Conservation Commission, 100 N.M. 451, 672 P.2d 280 (1983).

III. Shallow Pool With Spacing Different From the Deeper Pool.

The Gavilan-Mancos pool rules currently provide for 320- acre spacing. Mesa Grande Resources, Inc. has requested 160-acre spacing in the Gavilan Greenhorn-Graneros-Dakota pool, which underlies the Gavilan-Mancos pool. A question arose at the hearing on whether this was proper.

First, this situation occurs in many pools in this state. In Lea County, the Scharb Bone Springs oil pool, with 80-acre spacing, overlies the Wolfcamp formation, which has 40-acre spacing. Also, in Southeast New Mexico, the Eunice-Monument and Langlie-Mattix pools underlie the Eumont and Jalmat pools, which have wider spacing. There are certainly other examples. Also, as noted above, the Commission has broad authority to fix spacing so long as it is based on substantial evidence. The Commission should base its decision on all reasonable factors offered into evidence. However, the spacing in the shallow pool should not control spacing in deeper pools. If this was the case, the

first pool established in an area would often control spacing in all subsequently discovered deeper producing horizons. The converse would also be true.

IV. Infill Drilling

The Commission should, of course, interpret the conservation statutes to prevent waste and prevent the drilling of unnecessary and economically wasteful wells. Wilbanks Corp. v. Oil Conservation Commission, supra. Commission is authorized to establish proration units which can "efficiently and economically" be drained and developed by one well. N.M. Stat. Ann. § 70-2-17(B) (1978). Both factors must be considered in establishing proration unit size. See Kuykendall v. Corporation Com'n, 634 P.2d 711 (Okla. 1981). Decades of experience have proved that the Dakota producing interval is best drained by one well per Furthermore, evidence was presented at the 160 acres. hearing that the Gavilan Greenhorn-Graneros-Dakota pool could not be adequately drained by a unit larger than 160 acres. Thus waste will be prevented by 160 acre units, and there is no need for temporary 320-acre spacing in order to collect further data. Mesa Grande Resources, Inc. also presented evidence that production solely from the Dakota interval was economical. Because such wells are economical, correlative rights will be protected. If the requirements of § 70-2-17(B) are met, waste will not occur nor will correlative rights be impaired by 160-acre spacing or 320acre spacing with an infill provision.

Jerome P. McHugh emphasized at the hearing that excessive damage could occur to the Gavilan-Mancos formation by infill drilling to the Dakota interval. Under the existing rules, there are no well spacing requirements which would prohibit wells being drilled as close to each other through the Mancos formation on 320-acre spacing as would be drilled on 160-acre spacing. Furthermore, Mesa Grande Resources, Inc. is the largest single working interest owner in the area of the proposed new pool. As such, it does not seek rules or spacing which would damage producing intervals and thus impair its future production. It believes that prudent operations will prevent damage to the Gavilan-Mancos pool and have no adverse effect on the correlative rights of other operators.

Finally, it should be noted that the Commission must take into consideration not only the correlative rights of operators, but also those of royalty owners. Evidence was presented at the hearing that 160-acre spacing, or 320-acre spacing with an infill provision, will result in the recovery of additional hydrocarbons. Such recovery is certainly in the interests of royalty owners and must be considered by the Commission in its decision.

V. CONCLUSION

Mesa Grande Resources, Inc. respectfully requests the Commission to adopt spacing and proration units for the Gavilan Greenhorn-Graneros-Dakota pool of 160 acres, or alternatively 320-acre spacing with a 160-acre infill provision. The evidence at the hearing and decades of

production history in this area prove that the Dakota interval can be adequately developed only on 160-acre spacing. Furthermore, such development is economical and will have no adverse effect on recovery from the shallower Gavilan-Mancos pool.

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