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*NEW MEXICO BOARD OF LEGAL SPECIALIZATION
RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW
†ALSO ADMITTED IN ARIZONA

JASON KELLAHIN (RETIRED 1991)

June 1, 1992

RECEIVED

JUN 01 1992

OIL CONSERVATION DIV.
SANTA FE

Mr. David R. Catanach
Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

HAND DELIVERED

RE: Application of Merrion
Oil & Gas Corporation for
Special Rules for Rock Mesa
Fractured Mancos Shale Pool,
Sandoval County, New Mexico
NMOCD Case 10478

Dear Mr. Catanach:

At the conclusion of the hearing on May 28, 1992, comments were made that the subject case represented a matter of "first impression" with the Division. On behalf of Benson-Montin-Greer Drilling Corp, I wish to advise you that it does not.

The issue is: "Can the Division establish temporary spacing for a pool based upon economic justification without having substantial evidence as to what is the proper drainage area per well?"

As a result of prior hearings dealing with the Dakota formation, the Commission has already answered that question in the affirmative.

On September 20, 1984, the Commission heard the application of Jerome P. McHugh in Case 8350 for 320-acre Dakota-Greenhorn-Graneros Oil Pool spacing and also heard the application of Mesa Grande Resources in Case 8286 to space the same zones in a similar area on 160-acre spacing.

The basic facts of this prior case were that some 12 wells completed in the Dakota formation produced only marginal quantities of oil and gas and the

Mr. David R. Catanach
June 1, 1992
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engineering data was inconclusive in determining if one well could economically and efficiently drain 160 acres or 320 acres. McHugh's economic argument was that the Dakota, regardless of drainage, could not be efficiently and economically developed unless it was done simultaneously with the Mancos Pool and that the Dakota must be spaced on the 320-acre spacing applied to the Mancos in that pool.

In companion orders, the Commission denied the Mesa Grande application (Order R-7746) and granted the McHugh application (Order R-7745). Copies of the two orders are enclosed for reference.

You were the Examiner when the McHugh case was reopened, and the temporary rules were extended by Order R-7745-A.

As in the Dakota case, we are not confronted with the conventional sand reservoir spacing case where the initial determination of spacing is made based upon standard drainage calculations from the initial discovery well. Rather, we are addressing a unique situation for which the conventional approach does not work. The Oil & Gas Act provides the Division with appropriate authority to determine the area that can be "efficiently and economically drained and developed by one well and in doing so the division shall consider the economic loss caused by the drilling of unnecessary wells..." 70-2-17(B) NMSA 1978 and to "fix the spacing of wells" 70-2-12(10) NMSA 1978.

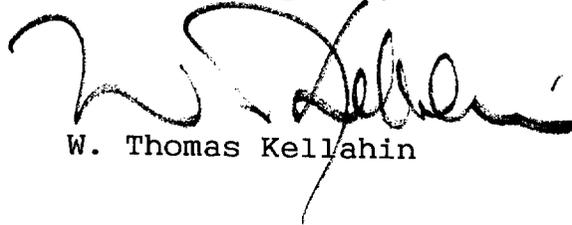
There is nothing in the Oil & Gas Act that limits the Division to only the conventional approach to spacing. As stated by the Interstate Oil Compact Commission in its No X. Interstate Compact Quarterly Bulletin (Sept. 1951):

. . . dictates of economics, influenced at times by those of expediency are and properly should be, the most important influences in fixing spacing or density in any field . . .

Mr. David R. Catanach
June 1, 1992
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Thus the Division, not only can, but must, base
pool spacing upon economic justification.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', written in a cursive style.

W. Thomas Kellahin

WTK/jcl

Enclosures

cc: w/o Enclosures

Al Greer

Tommy Roberts, Esq.

Earnest L. Padilla, Esq.

Kevin McCord (Bayless-Farmington)

1trt601.625

Called in by Tommy Roberts

5/4/92

From

Memo

FLORENE DAVIDSON
OC Staff Specialist

To May 28, 1992

Merrion Oil + Gas Corporation
Pool Creation and Temporary
Special Pool Rules
Sandoval County

Production of oil from
the Fractured Mancos
Shale Formation

Provisions for 640-acre
oil spacing, designated
well locations, and
special allowables

Comprising all of ~~S~~ Townships
18 and 19 N, Range 3 W

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:

CASE NO. 8286
Order No. R-7746

APPLICATION OF MESA GRANDE
RESOURCES, INC. FOR CREATION OF
A NEW OIL POOL AND SPECIAL POOL
RULES, RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on September 20, 1984, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 7th day of December, 1984, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Mesa Grande Resources, Inc., seeks an order creating a new pool for oil production to be designated as the Gavilan Greenhorn-Graneros-Dakota Oil Pool and the promulgation of special pool rules, including a provision for 160-acre spacing, Rio Arriba County, New Mexico.
- (3) In a companion Case 8350, Jerome P. McHugh seeks an order creating a new oil pool for a similar area with similar vertical limits and for the promulgation of special pool rules, including a provision for 320-acre spacing, Rio Arriba County, New Mexico.
- (4) Cases 8286 and 8350 were consolidated for the purposes of obtaining testimony.

(5) The Commission by Order No. R-7745 did grant the application of Jerome P. McHugh in Case 8350 which findings are hereby incorporated by reference herein.

(6) The application in Case 8286 should be denied.

IT IS THEREFORE ORDERED THAT:

(1) The application in Case 8286 is hereby denied.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

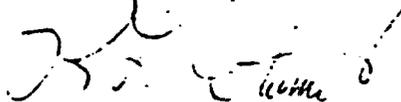
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JIM BACA, Member



ED KELLEY, Member



R. L. STAMETS, Chairman
and Secretary

S E A L

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

CASE NO. 8350
Order No. R-7745

NOMENCLATURE

APPLICATION OF JEROME P. MCHUGH
FOR THE CREATION OF A NEW OIL POOL
AND SPECIAL POOL RULES, RIO ARRIBA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 20, 1984, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 30th day of November, 1984, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Jerome P. McHugh, seeks an order creating a new oil pool, with vertical limits to be from the base of the Gavilan-Mancos Oil Pool to the base of the Dakota formation, with special pool rules including a provision for temporary 320-acre spacing and proration units, Rio Arriba County, New Mexico.
- (3) The main pay interval in said proposed pool is the Dakota formation with the Greenhorn and Graneros zones being non-continuous potential secondary zones of production in individual wells.
- (4) In a companion Case 8286, Mesa Grande Resources, Inc., seeks an order creating a new oil pool for a similar area with similar vertical limits and the promulgation of special

pool rules, including a provision for 160-acre spacing, Rio Arriba County, New Mexico.

(5) Cases 8286 and 8350 were consolidated for the purposes of obtaining testimony.

(6) Jerome P. McHugh either individually or jointly with Dugan Production Corporation has leasehold interest in 4397.89 acres representing approximately 37% of the acreage within the proposed pool boundaries.

(7) Jerome P. McHugh is the operator of 6 of the 12 completion attempts in the proposed pool and either individually or jointly with Dugan Production Corporation has a working interest in all 12 completion attempts in the proposed pool.

(8) To date, 12 completion attempts have been made within the Gavilan Area (11 within the proposed pool boundary), all located within the boundaries of the Basin Dakota Gas Pool and, based upon completion testing and early production performance, it is indicated that the Dakota formation within the pool boundary is productive primarily of oil, thereby necessitating deletion from the Basin Dakota Gas Pool and the creation of special pool rules.

(9) Available geological data indicates that the proposed Dakota pool has structural features similar to the Gavilan Mancos Pool.

(10) While the relative permeability of the Dakota zone is nearly non-existent because the matrix permeability is very low and the primary reservoir fluid is oil, productivity of the Dakota formation is enhanced by natural fracturing.

(11) Carlisle, Greenhorn, Graneros and Dakota formations are correlative well to well within the pool boundary.

(12) Average development well cost in the Gavilan area for 19 wells is \$607,984.00.

(13) Mesa Grande Resources, Inc. presented computer reservoir model results which incorporated data from the West Lindrith Dakota Pool which were used to predict performance of a Dakota completion in the Gavilan area utilizing short term tests during the completion on 2 wells.

(14) Based upon available data, the Mesa Grande Resources, Inc.'s evidence is not representative of a typical Dakota, Greenhorn, Graneros completion in the proposed pool and is

inconclusive in determining if one well can economically and efficiently drain 160 acres or 320 acres.

(15) Engineering information and production data including bottomhole pressure tests indicated that the average well in the proposed pool should be capable of producing only marginal quantities of oil and gas.

(16) Engineering information and production data from the Greenhorn-Graneros and Dakota formations indicate that these zones are marginal in nature and will not support the drilling of a well to produce these zones only.

(17) Jerome P. McHugh presented evidence designed to demonstrate that the only economic, effective and efficient method of producing the subject pool was downhole commingled with production from the Gavilan-Mancos Oil Pool.

(18) If the production from the proposed pool is downhole commingled with production from the Gavilan-Mancos Oil Pool, the high quality engineering data necessary to establish the proper permanent spacing unit size for each pool cannot be obtained.

(19) Wells in said pools should be completed as single or dual wells during the period of any temporary pool rules.

(20) The Gavilan Mancos oil pool is adjacent to and above the proposed pool and is the pool of primary interest with respect to ultimate recoveries of oil and gas.

(21) The fractured nature of the Mancos makes it susceptible to damage during the drilling and cementing of Dakota pool development wells.

(22) Damage to the Gavilan-Mancos pool may result in a substantial reduction of the ultimate recovery of hydrocarbons from the Mancos.

(23) Limiting the number of wells drilled through the Mancos formation to the proposed pool will serve to protect the Mancos formation from said potential damage.

(24) Any well drilled to the proposed pool should utilize a drilling, casing, and cementing program designed to minimize fluid loss to the Mancos formation.

(25) In order to prevent the economic loss caused by the drilling of unnecessary wells, to prevent reduced recovery of hydrocarbons from the Mancos and to otherwise prevent waste and

protect correlative rights, the Gavilan Greenhorn-Graneros-Dakota Oil Pool should be created with temporary Special Rules providing for 320-acre spacing and proration units consistent with the provisions of Commission Order No. R-7407.

(26) The vertical limits of the Gavilan-Greenhorn-Graneros Dakota Oil Pool should be defined as the Greenhorn, Graneros and Dakota formations.

(27) The horizontal limits of the Gavilan-Greenhorn-Graneros-Dakota Oil Pool should be as follows:

TOWNSHIP 24 NORTH, RANGE 2 WEST
Sections 1 through 3: All

TOWNSHIP 25 NORTH, RANGE 2 WEST
Sections 17 through 30: All
Sections 33 through 36: All

(28) To protect the correlative rights of the interested parties in the Gavilan Mancos Oil Pool, it is necessary to adopt a restriction requiring that no more than one well be completed in the Gavilan-Greenhorn-Graneros-Dakota Oil Pool in any 320 acre proration and spacing unit and that said proration and spacing unit be identical with the acreage dedicated to a well drilled to the Gavilan-Mancos Oil Pool.

(29) The said Temporary Special Rules and Regulations should be established for a period ending March 1, 1987, in order to allow the operators in the subject pool to gather information to establish whether the temporary rules should be made permanent.

(30) An order based on the above findings is in the interest of conservation, will prevent waste and protect correlative rights, and should be entered in this case.

IT IS THEREFORE ORDERED THAT:

(1) Effective December 1, 1984, a new oil pool in Rio Arriba County, New Mexico, is hereby created and designated as the Gavilan-Greenhorn-Graneros-Dakota Oil Pool, with vertical limits being from the base of the Gavilan-Mancos Oil Pool, as found at a depth of 7574 feet on the log of the Northwest Exploration Company Gavilan Well No. 1, located in Unit A of Section 26, Township 25 North, Range 2 West, NMPM, Rio Arriba County, New Mexico, to a point 400 feet below the base of the Greenhorn formation (said base being found at a depth of 7822 feet on the aforesaid log); the horizontal limits of said pool

shall comprise the following described lands in Rio Arriba County, New Mexico:

TOWNSHIP 24 NORTH, RANGE 2 WEST, NMPM
Sections 1 through 3: All

TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM
Sections 17 through 30: All
Sections 33 through 36: All

(2) Temporary Special Rules and Regulations for the Gavilan-Greenhorn-Graneros-Dakota Oil Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
GAVILAN GREENHORN-GRANEROS-DAKOTA OIL POOL

RULE 1. Each well completed or recompleted in the Gavilan Greenhorn-Graneros-Dakota Oil Pool or in a correlative interval within one mile of its boundary to the North, South and West, shall be spaced, drilled, operated and produced in accordance with the Special Rules and Regulations hereinafter set forth. The one mile automatic extension does not apply to the Eastern boundary of the proposed pool.

RULE 2. No more than one well shall be completed or recompleted on a standard unit containing 320 acres, more or less, consisting of the N/2, E/2, S/2, or W/2 of a governmental section.

RULE 3. Wells in the Gavilan Greenhorn-Graneros-Dakota Oil Pool shall have the same proration and spacing units as any well completed or recompleted in the Gavilan-Mancos Oil Pool.

RULE 4. Non-standard spacing or proration units shall be authorized only after notice and hearing.

RULE 5. Each well shall be located no nearer than 790 feet to the outer boundary of the spacing and proration unit, nor nearer than 330 feet to a governmental quarter-quarter section line and shall be located within the same quarter-quarter section as a well completed or recompleted in the Gavilan-Mancos Oil Pool.

RULE 6. No more than one well in the Gavilan Greenhorn-Graneros-Dakota Oil Pool shall be completed in the East one-half of any section that is continuous with the western boundary of the West Puerto Chiquito-Mancos Oil Pool, with said well being located no closer than 1650 feet to said boundary.

RULE 7. The limiting gas-oil ratio for the Gavilan Greenhorn-Graneros-Dakota Oil Pool shall be 2000 cubic feet of gas per barrel of oil produced.

RULE 8. Any well drilled with its objective being a formation below the Gavilan Mancos pool shall be required to take special precautions during the drilling and cementing through the Gavilan Mancos Pool interval as follows:

- (a) Drilling must be done with a mud system designated to control lost circulation within the fractured Mancos interval.
- (b) Cementing of the casing shall be done in a manner and with a slurry designed to minimize losses to natural fractures that may exist within the Mancos interval.

RULE 9. Production from any well drilled to the Gavilan Greenhorn-Graneros-Dakota Oil Pool after the effective date of this order shall not be downhole commingled with production from any other pool.

RULE 10. A standard proration unit (316 through 324 acres) shall be assigned a depth bracket allowable of 427 barrels, subject to the market demand factor.

IT IS FURTHER ORDERED THAT:

(1) The locations of all wells presently drilling to or completed in the Gavilan Greenhorn-Graneros-Dakota Oil Pool or in the Greenhorn-Graneros-Dakota formations within one mile thereof are hereby approved; the operator of any well having an unorthodox location shall notify the Aztec District Office of the Division in writing of the name and location of the well on or before February 1, 1985.

(2) Pursuant to Paragraph A. of Section 70-2-18, N.M.S.A. 1978 Comp., contained in Laws 1969, Chapter 271, existing oil wells in the Gavilan Greenhorn-Graneros-Dakota Oil Pool shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating 320 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this

order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Gavilan Greenhorn-Graneros-Dakota Oil Pool shall receive no more than one-eighth of a standard allowable for the pool.

(3) This case shall be reopened at an examiner hearing in March, 1987, at which time the operators in the subject pool should be prepared to appear and show cause why the Gavilan Greenhorn-Graneros-Dakota Oil Pool should not be developed on 40-acre spacing units.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

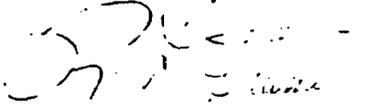
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JIM BACA, Member



ED KELLEY, Member



R. L. STAMETS, Chairman
and Secretary

S E A L

LAW OFFICES

TANSEY, ROSEBROUGH, GERDING & STROTHER, P.C.
OIL CONSERVATION DIVISION
621 WEST ARRINGTON
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Farmington, N.M. 87499

May 21, 1992

State of New Mexico
Energy, Minerals and Natural
Resources Department
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attn: William J. Lemay, Director

Re: Application for Pool Creation and Promulgation
of Temporary Special Pool Rules
Sandoval County, New Mexico

Gentlemen:

Please find enclosed a Pre-Hearing Statement for the
above-captioned cause.

Sincerely,

Mary Kay Cornwall
Mary Kay Cornwall,
Secretary to
Tommy Roberts, Esq.

/mkc
Encl.

cc: Steve S. Dunn



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

August 20, 1992

Tansey, Rosebrough, Gerding
& Strother
Attornys at Law
P. O. Box 1020
Farmington, New Mexico 87499

RE: CASE NO. 10478
Order No. R-9701-A

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

Florene Davidson

Florene Davidson
OC Staff Specialist

FD/sl

cc: BLM - Farmington
T. Kellahin
E. Padilla
Kevin McCord
Chard M. Goad
OCD - Aztec Office
Donna Dominguez



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



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BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

August 7, 1992

Tansey, Rosebrough, Gerding
& Strother
Attorneys at Law
P. O. Box 1020
Farmington, New Mexico 87499

RE: CASE NO. 10478
Order No. R-9701

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

A handwritten signature in cursive script that reads "Florene".

Florene Davidson
OC Staff Specialist

FD/sl

cc: BLM - Farmington
T. Kellahin
E. Padilla
Kevin McCord
Chard M. Goad
OCD - Aztec Office
Donna Dominguez



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
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POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

July 21, 1994

Tansey, Rosebrough, Gerding
& Strother
Attornys at Law
P. O. Box 1020
Farmington, New Mexico 87499

RE: CASE NO. 10478
Order No. R-9701-B

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

Sally E. Martinez
Sally E. Martinez
Administrative Secretary

FD/sl

cc: BLM - Farmington
OCD Aztec Office
Donna McDonald
Charles M. Goad
Kevin McCord
Ernest Padilla
Tom Kellahin