Entered Zebruary 23, 1981

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 7087 Order No. R-6594

APPLICATION OF BLACKWOOD & NICHOLS CO., LTD. FOR DESIG-NATION OF A TIGHT FORMATION, SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 12, 1980, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this <u>23rd</u> day of February, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Blackwood & Nichols Co., Ltd., requests that the Division in accordance with Section 107 of the Natural Gas Policy Act, and 18 C.F.R. §271.703 recommend to the Federal Energy Regulatory Commission that the Fruitland formation underlying the following lands situated in San Juan and Rio Arriba Counties, approximately 18 miles east of the city of Aztec, New Mexico, hereinafter referred to as the Fruitland formation, be designated as a tight formation in said Federal Energy Regulatory Commission's regulations:

> TOWNSHIP 30 NORTH, RANGE 7 WEST, NMPM Sections 2 through 10: All Section 16: W/2 Sections 17 through 21: All Section 29: N/2

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> TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM Section 1: All Sections 12 and 13: A11 Section 24: A11 TOWNSHIP 31 NORTH, RANGE 6 WEST, NMPM Section 6: Lots 8, 9, 10 and 11 and S/2 A11 Section 7: Sections 18 through 20: All Section 30: A11 TOWNSHIP 31 NORTH, RANGE 7 WEST, NMPM Section 1: Lots 5, 6, 7 and 8 and S/2 S/2 Section 9: S/2 Section 10: Sections 11 through 16: A11 Sections 19 through 36: A11 TOWNSHIP 31 NORTH, RANGE 8 WEST, NMPM Section 25: A11 Section 36: A11

(3) That the Fruitland formation underlies all of the above-described lands; that the formation consists of primarily coal seams, shales and tight sandstone stringers; that the top of such formation is found at an average depth of 2800 feet below the surface of the area set out in Finding No. (2) above; and that the thickness of such formation varies with an average thickness of 300 feet within said area.

(4) That the type section for the Fruitland formation for the proposed tight formation designation is found at a depth of from approximately 2926 feet to 3224 feet on the Laserlog dated July 30, 1978, from the Northeast Blanco Unit Well No. 17-A located in Unit D of Section 9, Township 30 North, Range 7 West, Rio Arriba County, New Mexico.

(5) That the following described wells produce natural gas in commercial quantities from the Fruitland formation within the proposed area:

Northeast Blanco Unit Well #202

NE/4, Section 11, T-31-N, R-7-W, San Juan County, New Mexico -3-Case No. 7087 Order No. R-6594

Northeast Blanco Unit Well #204

SW/4, Section 1, T-31-N, R-7-W, San Juan County, New Mexico

(6) That the Fruitland formation underlying the above described lands has been penetrated by in excess of one hundred wells, none of which, with the above-named exceptions, produced natural gas in commercial quantities from the Fruitland formation.

(7) That the evidence presented in this case demonstrated that no well formerly or currently completed in the Fruitland formation within the proposed area may reasonably be presumed to have exhibited permeability, gas productivity, or crude oil productivity in excess of the following parameters:

- (a) average in situ gas permeability throughout the pay section of 0.1 millidarcy; and
- (b) stabilized production rates, without stimulation, against atmospheric pressure, as found in the table set out in 18 C.F.R. §271.703(c)(2)(B) of the regulations; and
- (c) production of more than five barrels of crude oil per day.

(8) That based on analysis of available data from existing wells within the proposed area and utilizing generally and customarily accepted petroleum engineering techniques and measurements:

- (a) The estimated average <u>in situ</u> gas permeability throughout the pay section of the Fruitland formation is expected to be 0.1 millidarcy or less; and
- (b) The stabilized production rate, against atmospheric pressure, of wells completed for production in the Fruitland formation, without stimulation, is not expected to exceed production levels determined by reference to well depth, as found in the table set out in 18 C.F.R. §271.703(c)(2)(B) of the regulations; and
- (c) No well drilled into the formation is expected to produce, without stimulation, more than five barrels of crude oil per day.

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(9) That within the proposed area there is the Ojo Alamo aquifer, found at depths of approximately 2000 feet or approximately 800 feet above the Fruitland formation.

(10) That existing State of New Mexico and Federal Regulations relating to casing and cementing of wells will assure that development of the Fruitland formation will not adversely affect said aquifers.

(11) That the Fruitland formation, or any portion thereof, as described herein, is not currently being developed by infill drilling as defined in 18 C.F.R. $\S271.703(b)(6)$ of the regulations.

(12) That the Fruitland formation within the proposed area should be recommended to the Federal Energy Regulatory Commission for designation as a tight formation.

IT IS THEREFORE ORDERED:

(1) That it be and hereby is recommended to the Federal Energy Regulatory Commission pursuant to Section 107 of the Natural Gas Policy Act of 1978, and 18 C.F.R. §271.703 of the regulations that the Fruitland formation underlying the following described lands in San Juan and Rio Arriba Counties, New Mexico, be designated as a tight formation:

| TOWNSHIP 30 NORTH, RANGE 7 WEST, NMP | M |
|--------------------------------------|------------|
| Sections 2 through 10: All | |
| Section 16: W/2 | |
| Sections 17 through 21: All | |
| Section 29: N/2 | |
| | |
| TOWNSHIP 30 NORTH, RANGE 8 WEST, NMP | <u>' M</u> |
| Section 1: All | |
| Sections 12 and 13: All | |
| Section 24: All | |
| | |
| TOWNSHIP 31 NORTH, RANGE 6 WEST, NMF | <u>'M</u> |
| Section 6: Lots 8, 9, 10 and 11 | |
| and S/2 | |
| Section 7: All | |
| Sections 18 through 20: All | |
| Section 30: All | |

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> TOWNSHIP 31 NORTH, RANGE 7 WEST, NMPM Section 1: Lots 5, 6, 7 and 8 and S/2 Section 9: S/2 Section 10: S/2 Sections 11 through 16: All Sections 19 through 36: All <u>TOWNSHIP 31 NORTH, RANGE 8 WEST, NMPM</u> Section 25: All Section 36: All

(2) That jurisdiction of this cause is hereby 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 DIVISION Xil gale 6 / JOE D. RAMEY Director

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