

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

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

**CASE NO. 11038
Order No. R-10239**

**APPLICATION OF MERIDIAN OIL INC.
FOR DOWNHOLE COMMINGLING, RIO
ARRIBA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on August 18, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 14th day of November, 1994, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Meridian Oil Inc., seeks exceptions from Division General Rule 303(C) to establish, on an area wide basis, authorization for downhole commingling of Dakota, Mesaverde and Gallup production in the wellbores of existing or subsequently drilled wells anywhere within Sections 26 through 30, 33, 34, and the S/2 of 35, all in Township 26 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
- (3) The subject area is comprised of two separate Federal leases, the Vaughn Federal Lease (NM-602), which consists of Sections 26 through 29, and the Klein Federal Lease (NM-601), which consists of Sections 30, 33, 34 and the S/2 of 35.
- (4) The evidence presented indicates that the interest ownership underlying the Vaughn Federal Lease is common, and the interest ownership underlying the Klein Federal Lease is common.

(5) According to applicant's testimony, it currently operates within the Klein-Vaughn Lease area:

- 26- Basin-Dakota Gas Pool producing wells
- 7- Blanco-Mesaverde Gas Pool producing wells
- 1- Undesignated Gallup producing well

(6) The applicant's proposed plan of operation for the Klein-Vaughn Lease area is as follows:

- a) the Basin-Dakota Gas Pool producing wells which are currently producing at or below a pre-determined economic threshold will be temporarily abandoned in the Dakota formation, and each well will be completed and tested in the Mesaverde and Gallup formations. After sufficient production information is obtained to establish an allocation formula, all three formations will be commingled in the wellbore;
- b) existing Blanco-Mesaverde Gas Pool wells will not be commingled with either the Dakota or Gallup formations;
- c) approximately five new wells will be drilled within the Klein-Vaughn Lease area and will initially be dually completed as Mesaverde and commingled Dakota/Gallup producers. At such time as these wells become uneconomic, they will be commingled in the Mesaverde, Dakota and Gallup formations.

(7) The twenty-four Basin-Dakota Gas Pool producing wells the applicant proposes to commingle are as follows:

<u>WELL NAME</u>	<u>WELL LOCATION</u>
Vaughn No. 8	Unit A, 26-26N-6W
Vaughn No. 12E	Unit C, 26-26N-6W
Vaughn No. 12	Unit K, 26-26N-6W
Vaughn No. 8E	Unit P, 26-26N-6W
Vaughn No. 13	Unit A, 27-26N-6W
Vaughn No. 14E	Unit D, 27-26N-6W
Vaughn No. 14	Unit K, 27-26N-6W
Vaughn No. 15	Unit A, 28-26N-6W
Vaughn No. 30E	Unit D, 28-26N-6W
Vaughn No. 30	Unit K, 28-26N-6W

Vaughn No. 15E	Unit P, 28-26N-6W
Vaughn No. 31	Unit B, 29-26N-6W
Vaughn No. 32E	Unit D, 29-26N-6W
Vaughn No. 31E	Unit I, 29-26N-6W
Vaughn No. 32	Unit K, 29-26N-6W
Klein No. 28E	Unit C, 33-26N-6W
Klein No. 26	Unit H, 33-26N-6W
Klein No. 28	Unit K, 33-26N-6W
Klein No. 19	Unit A, 34-26N-6W
Klein No. 19E	Unit C, 34-26N-6W
Klein No. 24E	Unit I, 34-26N-6W
Klein No. 24	Unit L, 34-26N-6W
Klein No. 27	Unit K, 35-26N-6W
Klein No. 27E	Unit O, 35-26N-6W

(8) The evidence presented indicates that twenty-two of the twenty-four above-described Dakota producing wells are currently marginal with production averaging approximately 88 MCF gas per day.

(9) The Vaughn Well Nos. 12E and 14 are currently non-marginal with production averaging approximately 419 MCF gas per day, however, applicant testified that these wells, as well as the other Dakota producing wells within the Klein-Vaughn Lease area, are experiencing liquid loading problems which would be greatly alleviated by the proposed downhole commingling.

(10) The current average production from Blanco-Mesaverde Gas Pool wells within the Klein-Vaughn Lease area is approximately 351 MCF gas per day.

(11) The single Gallup producing well within the Klein-Vaughn Lease area currently produces at a rate of approximately 45 MCF gas per day.

(12) The evidence and testimony indicate that the present wellbore configurations of the existing Dakota producers within the Klein-Vaughn Lease area precludes completing these wells as dual producers.

(13) The applicant's geologic evidence and testimony indicate that:

- a) the Klein-Vaughn Lease area is located on the southwest edge of the Blanco-Mesaverde Gas Pool;

- b) the only member of the Mesaverde formation which has potential for gas production in the Klein-Vaughn Lease area is the Point Lookout, and, due to the non-homogeneous nature of the Point Lookout, there is limited potential for further production;
- c) there is potential for Gallup production throughout the Klein-Vaughn Lease area, however, such production is likely to be marginal, as evidenced from the recent completion of the Klein Well No. 28E which is capable of producing approximately 45 MCF gas per day.
- d) the Basin-Dakota is fully developed within the Klein-Vaughn Lease area with the exception of Section 30 and the SE/4 of Section 33.

(14) The expected producing rates within the Mesaverde and Gallup formations within the Klein-Vaughn Lease area are insufficient to justify drilling stand alone wells to recover these reserves.

(15) The proposed downhole commingling is necessary in order for the applicant to economically recover Blanco-Mesaverde and Undesignated Gallup Pool reserves underlying the Klein-Vaughn Lease area.

(16) The applicant further demonstrated through its evidence and testimony that within the wells it proposes to commingle within the Klein-Vaughn Lease area:

- a) there will be no crossflow between the commingled pools;
- b) none of the commingled zones exposes the others to damage by produced liquids;
- c) the fluids from each zone are compatible with the other;
- d) the bottomhole pressure of the lower pressure zones should not be less than 50 percent of the bottomhole pressure of the higher pressure zone adjusted to a common datum; and,
- e) the value of the commingled production is not less than the sum of the values of the individual production.

(17) No interest owner and/or offset operator appeared at the hearing in opposition to the application.

(18) The downhole commingling of the twenty-four wells described in Finding No. (7) above in the Dakota, Mesaverde and Gallup formations will allow the applicant the opportunity to recover additional gas reserves from the Klein-Vaughn Lease area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(19) The applicant further seeks to establish an administrative procedure whereby the Supervisor of the Aztec District Office of the Division may approve the downhole commingling of subsequently drilled wells within the Klein-Vaughn Lease area provided that the wells meet a certain economic threshold, and that sufficient information is presented to establish an allocation formula.

(20) There are relatively few new drills which will be subsequently downhole commingled within the Klein-Vaughn Lease area.

(21) Obtaining Division approval as per Division Rule No. 303(C) for a relatively few number of wells within the Klein-Vaughn Lease area does not represent an excessive regulatory burden on the applicant.

(22) The applicant should be required to obtain approval to downhole commingle Dakota, Mesaverde and Gallup production within the wellbores of subsequently drilled wells within the Klein-Vaughn Lease area from the Santa Fe Office of the Division upon submittal of the data required by Division Rule No. 303(C).

(23) The applicant should consult with the supervisor of the Aztec District Office of the Division subsequent to the completion of testing operations on the subject wells in order to determine a proper allocation of production.

(24) The operator should immediately notify the supervisor of the Aztec district office of the Division any time any of the subject wells have been shut-in for seven consecutive days and shall concurrently present, to the Division, a plan for remedial action.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Meridian Oil Inc., is hereby authorized to commingle gas production from the Basin-Dakota, Blanco-Mesaverde and Undesignated Gallup Gas Pools within the following described wells in Rio Arriba County, New Mexico:

<u>WELL NAME</u>	<u>WELL LOCATION</u>
Vaughn No. 8	Unit A, 26-26N-6W
Vaughn No. 12E	Unit C, 26-26N-6W
Vaughn No. 12	Unit K, 26-26N-6W
Vaughn No. 8E	Unit P, 26-26N-6W
Vaughn No. 13	Unit A, 27-26N-6W
Vaughn No. 14E	Unit D, 27-26N-6W
Vaughn No. 14	Unit K, 27-26N-6W
Vaughn No. 15	Unit A, 28-26N-6W
Vaughn No. 30E	Unit D, 28-26N-6W
Vaughn No. 30	Unit K, 28-26N-6W
Vaughn No. 15E	Unit P, 28-26N-6W
Vaughn No. 31	Unit B, 29-26N-6W
Vaughn No. 32E	Unit D, 29-26N-6W
Vaughn No. 31E	Unit I, 29-26N-6W
Vaughn No. 32	Unit K, 29-26N-6W
Klein No. 28E	Unit C, 33-26N-6W
Klein No. 26	Unit H, 33-26N-6W
Klein No. 28	Unit K, 33-26N-6W
Klein No. 19	Unit A, 34-26N-6W
Klein No. 19E	Unit C, 34-26N-6W
Klein No. 24E	Unit I, 34-26N-6W
Klein No. 24	Unit L, 34-26N-6W
Klein No. 27	Unit K, 35-26N-6W
Klein No. 27E	Unit O, 35-26N-6W

(2) The applicant shall consult with the supervisor of the Aztec District Office of the Division subsequent to the completion of testing the subject wells in order to determine a proper allocation of production.

(3) The operator shall immediately notify the supervisor of the Aztec district office of the Division any time any of the subject wells have been shut-in for seven consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) Approval to downhole commingle subsequently drilled wells within the Klein-Vaughn Lease area shall be obtained from the Santa Fe Office of the Division upon submittal of the data required by Division Rule No. 303(C).

(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

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