

MERIDIAN OIL

OIL CONSERVATION DIVISION  
RECEIVED

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Case 10566

September 9, 1992

Mr. Michael E. Stogner  
New Mexico Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87504

Re: Application for Unorthodox Coal Gas Well Location  
Howell K #304  
695'FSL, 840'FEL, Section 15, T-30-N, R-8-W  
San Juan County, New Mexico

Dear Mr. Stogner:

Please cancel our administrative application for the above referenced well location. Per your letter of September 1, 1992, concerning placing this well on the docket for October 1, 1992, please cancel this well from that hearing. Meridian Oil Inc. does not now plan to drill this well.

Thank you for your work concerning this application.

Sincerely,



Peggy Bradfield  
Regulatory Affairs

:pb

cc: New Mexico Oil Conservation Division - Aztec  
Bureau of Land Management  
Bureau of Reclamation



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



September 1, 1992

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

Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87499-4289

Attention: Peggy Bradfield

RE: *Administrative application for an unorthodox coal gas well location for the Howell "K" Well No. 304 located 695' FSL and 840' FEL (Unit A), Section 15, Township 30 North, Range 8 West, NMPM, San Juan County, New Mexico.*

Dear Ms. Bradfield:

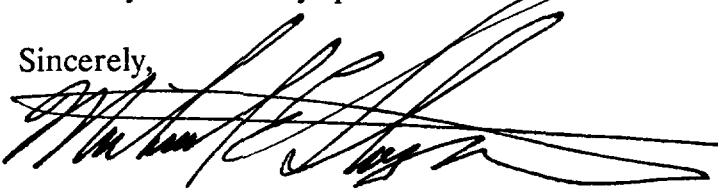
*Case 10566*

I am unable to process the subject application dated August 5, 1992 at this time. Although your application did not indicate the presence of an existing coal gas well producing the E/2 equivalent of said Section 15, our records show your Howell "K" Well No. 300 is currently dedicated to said acreage. Rule 4 of the Special Rules and Regulations for the Basin Fruitland Coal Gas Pool, promulgated by Division Order No. R-8768, as amended, provides for infill drilling in said pool *only* after notice and hearing.

Your application will be properly set for hearing before a Division Examiner on the next available docket which is scheduled for October 1, 1992. Please provide adequate notice of this matter pursuant to Special Rule 4(b).

Should you have any questions or comments concerning this matter, please contact me.

Sincerely,

  
Michael E. Stogner  
Chief Hearing Officer/Engineer

MES/amg

cc: Oil Conservation Division - Aztec  
U.S. Bureau of Land Management - Farmington  
U.S. Bureau of Reclamation - Durango  
Navajo Lake State Park

## (CEDAR HILL-FRUITLAND BASAL COAL GAS (VERTICAL LIMITS EXTENSIONS) POOL - Cont'd.)

further defined and described as having vertical limits consistent within the vertical extension of the Cedar Hill-Fruitland Basal Coal Pool.

(3) Rule 1 of said Division Order No. R-7588, as amended is hereby suspended and shall be replaced with the following:

RULE 1. (A) Each well completed or recompleted in the Cedar Hill-Fruitland Basal Coal Pool shall be spaced, drilled, operated and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 1. (B) A Cedar Hill-Fruitland Basal Coal Pool well will be defined as one which meets a preponderance of the generally characterized coalbed methane criteria as derived from:

- (a) Wireline log data;
- (b) Drilling time;
- (c) Drill cutting;
- (d) Mud logs;
- (e) Completion data;
- (f) Gas analysis;
- (g) Water analysis;
- (h) Reservoir performance;
- (i) Any other evidence that indicates the production is predominantly coal methane.

No one characteristic of lithology, performance or sampling will either qualify or disqualify a well from being classified as a coal gas well. Absent any finding to the contrary, any well completed in accordance with these rules that has met a preponderance of the criteria for determining a coal well is therefrom presumed to be completed in and producing from the Cedar Hill-Fruitland Basal Coal Pool. The District Supervisor may, at his discretion, require that an operator document said determination of the appropriate pool or require an order under the provisions of General Rule 303(c) authorizing the commingling of pools in the event a coal well fails to meet the criteria for a coal well as set forth in this rule.

## IT IS FURTHER ORDERED THAT:

(4) Any well drilling to or completed in a coal member of the Fruitland formation within this vertical extension of the Cedar Hill-Fruitland Basal Coal Pool on or before November 1, 1988 that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator of any such well shall notify the Aztec District Office of the Division, in writing, of the name and location of any such well on or before January 1, 1989.

(5) Applicant's request to authorize downhole commingling of Fruitland Sandstone Gas and Fruitland Coal Gas at the District Office level of the Division is hereby denied.

(6) This case shall be reopened at an examiner hearing in October, 1990, at which time the operators in the subject pool may appear and show cause why the vertical extension of the Cedar Hill-Fruitland Basal Coal Pool should not be rescinded and Division Order No. R-7588, as amended, should not be reinstituted as they existed prior to the issuance of this order.

(7) 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.

BASIN-FRUITLAND COAL GAS POOL  
San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico

Order No. 8768, Creating and Adopting Temporary Operating Rules for the Basin-Fruitland Coal Pool, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, November 1, 1988, as Amended by Order No. R-8768-A, July 16, 1991.

In the Matter of the Hearing called by the Oil Conservation Division (OCD) on its own Motion for Pool Creation and Special Pool Rules, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico.

CASE NO. 9420  
Order No. R-8768

## ORDER OF THE DIVISION

BY THE DIVISION: This Cause came on for hearing at 8:30 a.m. on July 6, 1988, at Farmington, New Mexico, before Examiner David R. Catanach.

NOW, on this 17th day of October, 1988, 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) Division Case Nos. 9420 and 9421 were consolidated at the time of the hearing for the purpose of testimony.

(3) The Oil Conservation Division, hereinafter referred to as the "Division", on the recommendations of the Fruitland Coalbed Methane Committee, hereinafter referred to as the "Committee", seeks the creation of a new pool for the production of gas from coal seams within the Fruitland formation underlying the following described area in San Juan, Rio Arriba, McKinley, and Sandoval Counties, New Mexico:

Township 19 North, Ranges 1 West through 6 West;  
Township 20 North, Ranges 1 West through 8 West;  
Township 21 North, Ranges 1 West through 9 West;  
Township 22 North, Ranges 1 West through 11 West;  
Township 23 North, Ranges 1 West through 14 West;  
Township 24 North, Ranges 1 East through 16 West;  
Township 25 North, Ranges 1 East through 16 West;  
Township 26 North, Ranges 1 East through 16 West;  
Township 27 North, Ranges 1 West through 16 West;  
Township 28 North, Ranges 1 West through 16 West;  
Township 29 North, Ranges 1 West through 15 West;  
Township 30 North, Ranges 1 West through 15 West;  
Township 31 North, Ranges 1 West through 15 West;  
Township 32 North, Ranges 1 West through 13 West;

(4) The Division further seeks, also upon the recommendations of the Committee, the promulgation of special pool rules, regulations, and operating procedures for said pool including, but not limited to, provisions for 320-acre spacing and proration units, designated well locations, well density, horizontal wellbore and deviated drilling procedures, venting and flaring rules, downhole commingling, and gas well testing requirements.

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

(5) In companion Case No. 9421, the Division seeks to contract the vertical limits of twenty-six existing Fruitland and/or Fruitland-Pictured Cliffs Gas Pools to include only the Pictured Cliffs sandstone and/or Fruitland sandstone intervals.

(6) The Committee, which included representatives of the oil and gas industry, New Mexico Oil Conservation Division, Colorado Oil and Gas Conservation Commission, Bureau of Land Management, and Southern Ute Indian Tribe, was originally formed in 1986 for the purpose of studying and making recommendations to the Division as to the most orderly and efficient methods of developing coal seam gas within the Fruitland formation.

(7) Geologic evidence presented by the Committee indicates that the Fruitland formation, which is found within the geographic area described above, is composed of alternating layers of shales, sandstones, and coal seams.

(8) The evidence at this time further indicates that the coal seams within the Fruitland formation are potentially productive of natural gas in substantial quantities.

(9) The gas originating from the coal seams within the Fruitland formation is composed predominantly of methane and carbon dioxide and varies significantly from the composition of the gas currently being produced from the sandstone intervals, and as such, represents a separate common source of supply.

(10) A new pool for gas production from coal seams within the Fruitland formation should be created and designated the Basin-Fruitland Coal Gas Pool with vertical limits comprising all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(11) The proposed horizontal pool boundary, which represents the geographic area encompassed by the Fruitland formation, contains within it, an area previously defined as the Cedar Hill-Fruitland Basal Coal Gas Pool (created by Division Order No. R-7588 effective February 1, 1984); said area currently comprises Sections 3 through 6 of Township 31 North, Range 10 West, and Sections 19 through 22 and 27 through 34 of Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(12) The proposed horizontal boundary of the Basin-Fruitland Coal Gas Pool should be amended to exclude that acreage currently defined as the Cedar Hill-Fruitland Coal Gas Pool described in Finding No. (11) above.

(13) The Committee has recommended the promulgation of special rules and regulations for the Basin-Fruitland Coal Gas Pool including a provision for 320-acre spacing and proration units, and in support thereof presented pressure interference data obtained from producing and pressure observation wells located within the Cedar Hill-Fruitland Coal Gas Pool, which indicates definite pressure communication between wells located 2,180 feet apart (radius of drainage of a 320-acre proration unit = 2,106 feet).

(14) Further testimony and evidence indicates that due to the unique producing characteristics of coal seams (i.e. initial inclining production rates), engineering methods such as decline curve analysis and volumetric calculations traditionally used to aid in the determination of proper well spacing, cannot be utilized.

(15) The Committee further recommended the adoption of a provision in the proposed pool rules allowing for the drilling of a second well on a standard 320-acre proration unit in order to give an operator flexibility when addressing regional geological trends.

(16) Dugan Production Corporation, Merriam Oil and Gas Corporation, Hixon Development Company, Robert L. Bayless, and Jerome P. McHugh and Associates, hereinafter referred to as the "Dugan Group", appeared at the hearing and presented geologic and engineering evidence and testimony in support of a proposal which includes the following:

1. Establishment of an area within the Southern portion of the Basin-Fruitland Coal Gas Pool to be developed on 160-acre spacing and proration units.

2. Creation of a demarcation line and buffer zone separating the 320-acre spacing portion of the pool and the proposed 160-acre spacing portion of the pool.

(17) The Dugan Group owns oil and gas leasehold operating rights in the Fruitland formation in various areas of the San Juan Basin, and currently operates numerous wells producing from coal seams and sandstone intervals within the Fruitland formation.

(18) The Dugan Group has defined the location of the proposed demarcation line and 160-acre spacing area by utilizing a preponderance of geologic factors such as coal rank, depth of burial, thermal maturation, thickness of coal, and amount of gas in place.

(19) In support of the proposed 160-acre spacing area for the subject pool, the Dugan Group presented production data obtained from four producing wells, the Nassau Well Nos. 5, 6, 7 and 8 located in Section 36, Township 27 North, Range 12 West, NMPM, San Juan County, New Mexico, which indicates that the production rate from said Nassau Well No. 5 was unaffected by initiation of 160-acre offset production in said Nassau Well Nos. 6, 7, and 8.

(20) The evidence presented by the Dugan Group further indicates however, that the Nassau Well Nos. 5, 6, 7, and 8 are producing from commingled coal seam and sandstone intervals within the Fruitland formation, and as such, do not conclusively demonstrate 160-acre non-interference exclusively within the coal seams.

(21) Insufficient evidence exists at the current time to justify the creation of a 160-acre spacing area and demarcation line within the Basin-Fruitland Coal Gas Pool.

(22) The best technical evidence available at this time indicates that 320-acre well spacing is the optimum spacing for the entire Basin-Fruitland Coal Gas Pool.

(23) In order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and to otherwise protect correlative rights, special rules and regulations providing for 320-acre spacing units should be promulgated for the Basin-Fruitland Coal Gas Pool.

(24) The special rules and regulations should also provide for restrictive well locations in order to assure orderly development of the subject pool and protect correlative rights.

(25) Due to the relatively large area encompassed by the Basin-Fruitland Coal Gas Pool, and the relatively small amount of reservoir data currently available, the special rules and regulations should be promulgated for a temporary period of two years in order to allow the operators in the subject pool the opportunity to gather additional reservoir data relative to the determination of permanent spacing rules for the subject pool and/or specific areas within the pool.

(26) The evidence and testimony presented at the hearing is insufficient to approve at the present time, the proposed provision allowing for the drilling of a second well on a standard 320-acre proration unit.

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

(27) The Committee further recommended the adoption of a provision in the Special Rules and Regulations allowing the venting or flaring of gas from a Basin-Fruitland Coal Gas well during initial testing in an amount not to exceed a cumulative volume of 50 MMCF or a period not to exceed 30 days.

(28) The evidence presented does not justify the establishment of a specific permissible volume of gas to be vented or flared from Basin-Fruitland Coal Gas Wells at this time, however, the supervisor of the Aztec district office of the Division should have the authority to allow such venting or flaring of gas from a well upon a demonstration such flaring or venting is justified and upon written application from the operator.

(29) Evidence and testimony presented at the hearing indicates that the gas well testing requirements as contained in Division Order No. R-333-I may cause damage to a Basin Fruitland Coal Gas Well, and that special testing procedures should be established.

(30) The special rules and regulations promulgated herein should include operating procedures for determination and classification of Basin-Fruitland Coal Gas Wells, horizontal wellbore and deviated drilling procedures, and procedures and guidelines for downhole commingling.

(31) This case should be reopened at an examiner hearing in October, 1990, at which time the operators in the subject pool should be prepared to appear and present evidence and testimony relative to the determination of permanent rules and regulations for the Basin-Fruitland Coal Gas Pool.

## IT IS THEREFORE ORDERED THAT:

(1) Effective November 1, 1988, a new pool in all or parts of San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, classified as a gas pool for production from Fruitland coal seams, is hereby created and designated the Basin-Fruitland Coal Gas Pool, with vertical limits comprising all coal seams within the equivalent of the stratigraphic interval from a depth of approximately 2450 feet to 2880 feet as shown on the Gamma Ray/Bulk Density log from Amoco Production Company's Schneider Gas Com "B" Well No. 1 located 1110 feet from the South line and 1185 feet from the West line of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(2) The horizontal limits of the Basin-Fruitland Coal Gas Pool shall comprise the following described area in all or portions of San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, with the exception of Section 3 through 6 of Township 31 North, Range 10 West, and Section 19 through 22, and 27 through 34 of Township 32 North, Range 10 West, San Juan County, New Mexico, which said acreage currently comprises the Cedar Hill-Fruitland Basal Coal Gas Pool:

|                    |                                |
|--------------------|--------------------------------|
| Township 19 North, | Ranges 1 West through 6 West;  |
| Township 20 North, | Ranges 1 West through 8 West;  |
| Township 21 North, | Ranges 1 West through 9 West;  |
| Township 22 North, | Ranges 1 West through 11 West; |
| Township 23 North, | Ranges 1 West through 14 West; |
| Township 24 North, | Ranges 1 East through 16 West; |
| Township 25 North, | Ranges 1 East through 16 West; |
| Township 26 North, | Ranges 1 East through 16 West; |
| Township 27 North, | Ranges 1 West through 16 West; |
| Township 28 North, | Ranges 1 West through 16 West; |
| Township 29 North, | Ranges 1 West through 15 West; |
| Township 30 North, | Ranges 1 West through 15 West; |
| Township 31 North, | Ranges 1 West through 15 West; |
| Township 32 North, | Ranges 1 West through 13 West; |

(3) Temporary Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
BASIN-FRUITLAND COAL GAS POOL

RULE 1. Each well completed or recompleted in the Basin-Fruitland Coal Gas Pool shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. A gas well within the Basin-Fruitland Coal Gas Pool shall be defined by the Division Director as a well that is producing from the Fruitland coal seams as demonstrated by a preponderance of data which could include the following:

- a. Electric Log Data
- b. Drilling Time
- c. Drill Cuttings of Log Cores
- d. Mud Logs
- e. Completion Data
- f. Gas Analysis
- g. Water Analysis
- h. Reservoir Performance

i. Other evidence which may be utilized in making such determination.

RULE 3. (As Amended by Order No. R-8768-A, July 16, 1991) The Division Director may require the operator of a proposed or existing Basin-Fruitland Coal Gas well, Fruitland Sandstone well, or Pictured Cliffs Sandstone well, to submit certain data as described in Rule (2) above, which would not otherwise be required by Division Rules and Regulations, in order to demonstrate to the satisfaction of the Division that said well will be or is currently producing from the appropriate common source of supply. The confirmation that a well is producing exclusively from the Basin-Fruitland Coal Gas Pool shall consist of approval of Division Form C-104, provided however that such approval shall be for Division purposes only, and shall not preclude any other governmental jurisdictional agency from making its own determination of production origination utilizing its own criteria.

RULE 4. (As Amended by Order No. R-8768-A, July 16, 1991) Each well completed or recompleted in the Basin-Fruitland Coal Gas Pool shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision of the United States Public Lands Survey.

Individual operators may apply to the Division for an exception to the requirements of Rule No. (4) to allow the drilling of a second well on standard 320-acre units or on approved non-standard units in specifically defined areas of the pool provided that:

(a) Any such application shall be set for hearing before a Division Examiner;

(b) Actual notice of such application shall be given to operators of Basin-Fruitland Coal Gas Pool wells, working interest owners of undrilled leases, and unleased mineral owners within the boundaries of the area for which the infill provision is requested, and to all operators of Basin-Fruitland Coal Gas Pool wells within one mile of such area, provided however any operator in the pool or other interested party may appear and participate in such hearing.

Such notice shall be sent certified or registered mail or by overnight express with certificate of delivery and shall be given at least 20 days prior to the date of the hearing.

RULE 5. (As Amended by Order No. R-8768-A, July 16, 1991) The Supervisor of the Aztec district office of the Division shall have the authority to approve a non-standard gas proration unit within the Basin-Fruitland Coal Gas Pool without notice and hearing when the unorthodox size or shape is necessitated by a variation in the legal subdivision of the United States Public Lands Survey and/or consists of an entire governmental section and the non-standard unit in not less than 70% nor more than 130% of a standard gas proration unit. Such approval shall consist of acceptance of Division Form C-102 showing the proposed non-standard unit and the acreage contained therein.

**(BASIN-FRUITLAND COAL GAS POOL - Cont'd.)**

**RULE 6.** (As Amended by Order No. R-8768-A, July 16, 1991) The Division Director may grant an exception to the requirements of Rule (4) when the unorthodox size or shape of the gas proration unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey and the non-standard gas proration unit is less than 70% or more than 130% of a standard gas proration unit, or where the following facts exist and the following provisions are complied with:

(a) the non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a governmental half section, except as provided in paragraph (c) following.

(c) The non-standard unit conforms to a previously approved Blanco-Mesaverde or Basin-Dakota Gas Pool non-standard unit as evidenced by applicant's reference to the Division's order number creating said unit.

(d) The applicant presents written consent in the form of waivers from all offset operators or owners of undrilled tracts and from all operators owning interests in the half section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(e) In lieu of paragraph (d) of this rule, the applicant may furnish proof of the fact that all of the aforesaid parties were notified by certified or registered mail or overnight express mail with certificate of delivery of his intent to form such non-standard unit. The Division Director may approve the application if no such party has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application.

(f) The Division Director, at his discretion, may set any application under Rule (6) for public hearing.

**RULE 7.** The first well drilled or recompleted on every standard or non-standard unit in the Basin-Fruitland Coal Gas Pool shall be located in the NE/4 or SW/4 of a single governmental section and shall be located no closer than 790 feet to any outer boundary of the proration unit nor closer than 130 feet to any quarter section line nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary.

**RULE 8.** The Division Director may grant an exception to the requirements of Rule (7) without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions, the recompletion of a well previously drilled to a deeper horizon, provided said well was drilled at an orthodox or approved unorthodox location for such original horizon, or the drilling of an intentionally deviated horizontal wellbore. All operators or owners of undrilled tracts offsetting the proposed location shall be notified of the application by registered or certified mail, and the applicant shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all parties described above or if no objections to the unorthodox location has been entered within 20 days after the Director has received the application.

**RULE 9(A).** The Division Director shall have the authority to administratively approve an intentionally deviated well in the Basin-Fruitland Coal Gas Pool for the purpose of penetrating the coalbed seams by means of a wellbore drilled horizontally, provided the following conditions are complied with:

(1) the surface location of the proposed well is a standard location or the applicant has obtained approval of an unorthodox surface location as provided for in Rule (8) above.

(2) The bore hole shall not enter or exit the coalbed seams outside of a drilling window which is in accordance with the setback requirements of Rule (7), provided however, that the 10 foot setback distance requirement from the quarter-quarter section line or subdivision inner boundary shall not apply to horizontally drilled wells.

(B) To obtain administrative approval to drill an intentionally deviated horizontal wellbore, the applicant shall file such application with the Santa Fe and Aztec offices of the Division and shall further provide a copy of such application to all operators or owners of undrilled tracts offsetting the proposed gas proration unit for said well by registered or certified mail, and the application shall state that such notice has been furnished. The application shall further include the following information:

(1) A copy of Division Form C-102 identifying the proposed proration unit to be dedicated to the well.

(2) Schematic drawings of the proposed well which fully describe the casing, tubing, perforated or open hole interval, kick-off point, and proposed trajectory of the drainhole section.

The Director may approve the application upon receipt of written waivers from all parties described above or if no objection to the intentionally deviated horizontal wellbore has been entered within 20 days after the Director has received the application. If any objection to the proposed intentionally deviated horizontal well is received within the prescribed time limit as described above, the Director shall, at the applicant's request, set said application for public hearing.

(C) During or upon completion of drilling operations the operator shall further be required to conduct a directional survey on the vertical and lateral portions of the wellbore and shall submit a copy of said survey to the Santa Fe and Aztec Offices of the Division.

(D) The Division Director, at his discretion, may set any application for intentionally deviated horizontal wellbores for public hearing.

**RULE 10.** Notwithstanding the provisions of Division Rule No. 404, the Supervisor of the Aztec district office of the Division shall have the authority to approve the venting or flaring of gas from a Basin-Fruitland Coal Gas Well upon a determination that said venting or flaring is necessary during completion operations, to obtain necessary well test information, or to maintain the producibility of said well. Application to flare or vent gas shall be made in writing to the Aztec district office of the Division.

**RULE 11.** Testing requirements for a Basin-Fruitland Coal Gas well hereinafter set forth may be used in lieu of the testing requirements contained in Division Order No. R-333-I. The test shall consist of a minimum twenty-four hour shut-in period, and a three hour production test. The Division Director shall have the authority to modify the testing requirements contained herein upon a showing of need for such modification. The following information from this initial production test must be reported:

1. The surface shut-in tubing and/or casing pressure and date these pressures were recorded.

2. The length of the shut-in period.

3. The final flowing casing and flowing tubing pressures and the duration and date of the flow period.

4. The individual fluid flow rate of gas, water, and oil which must be determined by the use of a separator and measurement facilities approved by the Supervisor of the Aztec district office of the Division; and

## (BASIN-FRUITLAND COAL GAS POOL - Cont'd.)

5. The method of production, e.g. flowing, pumping, etc. and disposition of gas.

RULE 12. The Division Director shall have the authority to approve the commingling within the wellbore of gas produced from coal seams and sandstone intervals within the Fruitland and/or Pictured Cliffs formations where a finding has been made that a well is not producing entirely from either coal seams or sandstone intervals as determined by the Division. All such applications shall be submitted to the Santa Fe office of the Division and shall contain all the necessary information as described in General Rule 303 (C) of the Division Rules and Regulations, and shall meet the prerequisites described in 303 (C) (1) (b). In addition, the Division Director may require the submittal of additional well data as may be required to process such application.

RULE 13. The Division Director may approve the commingling within the wellbore of gas produced from coal seams and sandstone intervals within the Fruitland and/or Pictured Cliffs formations where a well does not meet the prerequisites as described in General Rule 303 (C) (1) (b) provided that such commingling had been accomplished prior to July 1, 1988, and provided further that the application is filed as described in Rule (12).

## IT IS FURTHER ORDERED THAT:

(4) The locations of all wells presently drilling to, completed in, commingled in, or having an approved APD for the Basin-Fruitland Coal Gas Pool 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 within 30 days from the date of this order.

(5) Pursuant to Paragraph A. of Section 70-2-18, N.M.S.A. 1978, Comp., contained in Laws of 1969, Chapter 271, existing gas wells in the Basin-Fruitland Coal Gas 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 and proration units established by the Division and dedicated thereto.

(6) In accordance with (5) above, the operator shall file a new Form C-102 dedicating 320 acres to the well or shall obtain a non-standard unit approved by the Division. The operator shall also file a new C-104 with the Aztec district office of the Division.

(7) Failure to comply with Paragraphs (5) and (6) above within 60 days of the date of this order shall subject the well to a shut-in order until such requirements have been met.

(8) This case shall be reopened at an examiner hearing in October, 1990 at which time the operators in the subject pool may appear and present evidence and testimony relative to the determination of permanent rules and regulations for the Basin-Fruitland Coal Gas Pool.

(9) 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.

VADA-DEVONIAN POOL  
Lea County, New Mexico

Order No. R-8770, Adopting Temporary Operating Rules for the Vada-Devonian Pool, Lea County, New Mexico, October 26, 1988.

Order No. R-8770-A, May 30, 1990, rescinds the temporary operating rules adopted in Order No. R-8770, October 26, 1988.

Application of Union Pacific Resources Company for Pool Extension and Special Pool Rules, Lea County, New Mexico.

CASE NO. 9439  
Order No. R-8770

## ORDER OF THE DIVISION

BY THE DIVISION: This cause came on for hearing at 8:15 a.m. on August 17, 1988, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of October, 1988, 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) Division Case Nos. 9439 and 9440 were consolidated at the time of the hearing for the purpose of testimony.

(3) By Order No. R-8667 dated June 10, 1988, the Division created and defined the Vada-Devonian Pool with horizontal limits consisting of the SW/4 of Section 26, Township 10 South, Range 33 East, NMPM, Lea County, New Mexico.

(4) The applicant, Union Pacific Resources Company, seeks to extend the horizontal limits of the Vada-Devonian Pool to include the NW/4 of Section 35, Township 10 South, Range 33 East, NMPM, Lea County, New Mexico, and further seeks the promulgation of temporary special rules and regulations for said pool, including a provision for 80-acre spacing and proration units, designated well locations, and a poolwide exception to Division Rule No. 111 allowing for directional drilling or well deviations of more than five degrees in any 500-foot interval.

(5) The applicant is the owner and operator of the discovery well for said pool, the State "26" Well No. 1 located 330 feet from the South line and 2310 feet from the West line of said Section 26.

(6) The applicant is also the owner and operator of the State "26" Well No. 2 located 1910 feet from the South line and 1980 feet from the East line (Unit J) of said Section 26, which was spudded on April 21, 1988, was drilled to a depth of 12,953 feet and is currently being sidetracked to an unorthodox subsurface location within a 150-foot radius of a point 1910 feet from the South line and 2580 feet from the East line (Unit J) of said Section 26, (being the subject of companion Case No. 9440).

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

GARREY CARRUTHERS  
GOVERNOR

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

**MEMORANDUM**

**TO: ALL OPERATORS**

**FROM: WILLIAM J. LEMAY, DIRECTOR** *WJL*

**SUBJECT: RULE 104 C II OF THE GENERAL RULES AND REGULATIONS**

**DATE: AUGUST 3, 1990**

On July 27, 1988, we sent a memorandum to all operators to explain the Division's procedures for ensuring compliance with the above rule in handling applications for additional wells on existing proration units. The procedures are primarily applicable in unprorated gas pools.

The final paragraph of the July 27 memo reads as follows:

"Applications for additional wells on existing proration units will be approved only on the understanding that upon completion of the well the operator shall elect which well will be produced and which will be abandoned. Application to produce both wells will be approved only after notice and hearing and upon compelling evidence that the applicant's correlative rights will be impaired unless both wells are produced."

Additional explanation of the intent of the above paragraph is set out below:

Application to produce both wells continuously and concurrently will be approved only after notice and hearing and upon compelling evidence that the applicant's correlative rights will be impaired unless both wells are produced.

Requests to produce the wells alternately (one well shut-in while the other produces) may be submitted for administrative handling. The request should set out the length of the producing and shut-in cycles for each well (a one month minimum is suggested), the proposed method for ensuring compliance with the proposed producing and shut-in schedules, and the reasons for the request. Notice should be provided to offset operators in the usual manner, allowing a 20-day waiting period. The application should be sent to Santa Fe with a copy to the appropriate District office.





STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

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SANTA FE, NEW MEXICO 87504  
(505) 827-5800

MEMORANDUM

TO: ALL OPERATORS

FROM: WILLIAM J. LEMAY, DIRECTOR *WJL*

SUBJECT: RULE 104 C 11 OF THE GENERAL RULES AND REGULATIONS

DATE: JULY 27, 1988

There has been some confusion about interpretation of the subject rule. In each paragraph of sections (a), (b) and (c) the rule states:

"Unless otherwise provided in special pool rules, each development well for a defined gas pool shall be located on a tract..."

My interpretation of this sentence is that each well is to be located on its own individual specified unit and an additional well is not authorized simply by meeting the set back requirements of the rule.

This interpretation is necessary to prevent waste from the drilling of unnecessary wells and to protect correlative rights of all parties in the pool. Since the prorated pools have special pool rules the subject rules have greater impact on unprorated gas. Unprorated does not mean unregulated. Allowables are not issued in unprorated pools and the only method available to protect correlative rights is the control of well density and locations. Added well density required because of special geological situations can be addressed by special pool rules after notice and hearing.

Applications for additional wells on existing proration units will be approved only on the understanding that upon completion of the well the operator shall elect which well will be produced and which will be abandoned. Application to produce both wells will be approved only after notice and hearing and upon compelling evidence that the applicant's correlative rights will be impaired unless both wells are produced.

dr/

| WELL S T R       | JAN    | FEB        | MAR    | APRIL  | MAY    | JUNE   | JULY   | AUG    | SEPT   | OCT    | NOV    | DEC 1991 | PROD    | PP      | ACUM |
|------------------|--------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|---------|---------|------|
| HARDIE D         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 800N1228M 8W GAS | 1414   | 3230       | 4962   | 3720   | 3673   | 3225   | 2618   | 3007   | 3081   | 2672   | 2026   | 2012     | 35640   | 80423   |      |
| MEIER            |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 100B1532N10W GAS | 5944   | 5335       | 6257   | 6577   | 6303   | 7248   | 11335  | 11417  | 12015  | 12796  | 12290  | 13607    | 111124  | 155598  |      |
| WAT              | 3062   | 1394       | 3438   | 1449   | 4649   |        |        | 1517   |        |        |        |          | 15509   | 17711   |      |
| HOWELL           |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 800B2628M 8W GAS | 1015   | 2317       | 1898   | 1455   | 1035   | 2781   | 1648   | 1990   | 1308   | 1530   | 198    |          | 171755  | 37887   |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         | 1101    |      |
| HOWELL 4         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300C 530M 8W GAS | 138235 | 149704     | 171431 | 185891 | 142048 | 165961 | 187132 | 213564 | 214258 | 220585 | 187477 | 201801   | 2178087 | 3438880 |      |
| WAT              | 6104   | 5601       | 5933   | 196    | 86     | 224    | 153    | 388    | 71     | 5205   | 5261   | 2279     | 3279    | 63702   |      |
| 301M 430M 8W GAS | 84067  | 80181      | 91382  | 88332  | 8786   | 6436   | 5329   | 8833   | 95800  | 98891  | 86158  | 93780    | 936991  | 1826566 |      |
| WAT              | 5264   | 5132       | 5210   | 3000   | 3004   | 3236   | 3266   | 3000   | 3000   | 4740   | 4775   | 4847     | 48474   | 130296  |      |
| 3021 830M 8W GAS | LAST   | PROD. DATE | 11/90  |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              | 120    | 120        | 120    | 120    | 120    | 120    | 120    | 120    | 120    | 120    | 120    | 120      | 1440    | 3603    |      |
| LEASE TOTAL      | 222302 | 229869     | 242646 | 274223 | 150802 | 230726 | 240359 | 301899 | 310058 | 319476 | 274235 | 297581   | 311416  | 5259516 |      |
| WAT              | 11488  | 10853      | 11263  | 3316   | 3210   | 3580   | 3539   | 3218   | 3191   | 10145  | 10156  | 10246    | 84205   | 197801  |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 200B 129M 8W GAS | 223    | 73         | 669    | 616    | 628    | 538    | 510    | 515    | 462    | 75     | 178    | 9        | 4496    | 23212   |      |
| WAT              |        |            | 4      |        |        |        |        |        |        |        |        |          | 4       | 75      |      |
| HOWELL - COM     |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300H 730M 8W GAS | 2699   | 2224       | 2361   | 2168   | 2581   | 2307   | 1992   | 2065   | 1843   | 2556   | 1379   | 2536     | 26711   | 57407   |      |
| WAT              | 32     | 31         | 32     | 29     | 32     | 33     | 30     | 30     | 29     | 29     | 29     | 29       | 365     | 695     |      |
| 301F1830M 8W GAS | 2699   | 2224       | 2361   | 2168   | 2581   | 2307   | 1992   | 2065   | 1843   | 2556   | 1379   | 2536     | 26711   | 57407   |      |
| WAT              | 32     | 31         | 32     | 29     | 32     | 33     | 30     | 30     | 29     | 29     | 29     | 29       | 365     | 695     |      |
| LEASE TOTAL      | 2699   | 2224       | 2361   | 2168   | 2581   | 2307   | 1992   | 2065   | 1843   | 2556   | 1379   | 2536     | 26711   | 57407   |      |
| WAT              | 32     | 31         | 32     | 29     | 32     | 33     | 30     | 30     | 29     | 29     | 29     | 29       | 365     | 695     |      |
| HOWELL - COM J   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 301A1130M 8W GAS | 12930  | 9173       | 21472  | 21733  | 23970  | 24716  | 25997  | 30239  | 40564  | 47945  | 36400  | 45458    | 340497  | 747776  |      |
| WAT              | 8323   | 5607       | 7477   | 3148   | 4059   | 2125   | 2022   | 1629   | 1820   | 6597   | 5261   | 6469     | 54337   | 90771   |      |
| HOWELL - COM K   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 301F1730M 8W GAS | 1510   | 1063       | 966    | 298    | 1112   | 1713   | 1474   | 1253   | 927    | 268    | 180    | 180      | 10586   | 35612   |      |
| WAT              | 180    | 180        | 180    | 180    | 180    | 180    | 180    | 180    | 180    | 180    | 180    | 180      | 2160    | 4320    |      |
| HOWELL J         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 350E2831M 8W GAS | 31130  | 29352      | 37012  | 37853  | 7158   | 13851  | 25765  | 36293  | 45465  | 48217  | 62471  | 47777    | 402344  | 721293  |      |
| WAT              | 14669  | 14442      | 14745  | 10980  | 11212  | 12288  | 12843  | 10980  | 10980  | 12520  | 12828  | 13342    | 151829  | 409955  |      |
| 351N2931M 8W GAS | 49607  | 52821      | 66757  | 73230  | 12388  | 21661  | 38861  | 54188  | 87779  | 97414  | 11132  | 102640   | 748474  | 1536361 |      |
| WAT              | 14138  | 10131      | 91820  | 7500   | 7542   | 7651   | 7500   | 7500   | 7500   | 12517  | 12517  | 12517    | 24740   | 54648   |      |
| 352A3131M 8W GAS | 57471  | 58541      | 70181  | 73030  | 12663  | 18502  | 36549  | 64054  | 73299  | 84674  | 68532  | 48579    | 702115  | 1349134 |      |
| WAT              | 12631  | 12256      | 12444  | 10950  | 10980  | 11326  | 11815  | 10950  | 10950  | 11098  | 11215  | 113765   | 367833  | 767833  |      |
| 353B3331M 8W GAS | 47377  | 49636      | 67755  | 79714  | 11479  | 16236  | 56910  | 99962  | 147337 | 175038 | 145361 | 153245   | 1050032 | 1804523 |      |
| WAT              | 10687  | 9731       | 9417   | 1754   | 58     | 337    | 1138   | 336    | 748    | 7328   | 7466   | 7328     | 108024  | 1804523 |      |
| LEASE TOTAL      | 185585 | 190350     | 241705 | 263829 | 43688  | 70250  | 158125 | 254497 | 353876 | 405343 | 347476 | 388241   | 2902965 | 5471313 |      |
| WAT              | 52125  | 50160      | 50426  | 31184  | 29792  | 31620  | 34037  | 30545  | 29766  | 43207  | 43605  | 44560    | 471009  | 1210412 |      |
| HOWELL E         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300A1430M 8W GAS | 50889  | 59128      | 75282  | 67677  | 70282  | 70914  | 69846  | 80295  | 74653  | 69487  | 63575  | 76706    | 828582  | 2020242 |      |
| WAT              | 6841   | 7690       | 6440   | 7788   | 7288   | 7046   | 7046   | 6480   | 6480   | 6480   | 6480   | 6480     | 83803   | 218167  |      |
| 301N2930M 8W GAS | 2484   | 2089       | 2718   | 2665   | 2266   | 2590   | 2444   | 2421   | 2528   | 2849   | 1727   | 2189     | 29170   | 80744   |      |
| LEASE TOTAL      | 53373  | 61217      | 78000  | 70342  | 72548  | 73504  | 72338  | 82716  | 77181  | 72336  | 65302  | 78895    | 857752  | 2101008 |      |
| WAT              | 6841   | 7690       | 7387   | 6480   | 7788   | 7046   | 7046   | 6480   | 6480   | 6480   | 6480   | 6480     | 83803   | 218167  |      |
| HOWELL S         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300F 630M 8W GAS | 107886 | 109852     | 107883 | 96419  | 18459  | 67325  | 64736  | 88768  | 94709  | 117286 | 97942  | 109252   | 1080717 | 1593112 |      |
| WAT              | 11126  | 10760      | 10533  | 10553  | 10040  | 10302  | 10328  | 10486  | 10226  | 10157  | 10169  | 10060    | 124740  | 270367  |      |
| HOWELL J         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300L 330M 8W GAS | 81607  | 74911      | 85229  | 81843  | 14129  | 40473  | 62467  | 68473  | 80229  | 86688  | 77849  | 90581    | 824524  | 1809714 |      |
| WAT              | 3008   | 2636       | 2886   | 1931   | 110    | 695    | 1432   | 2132   | 80229  | 86688  | 77849  | 90581    | 18011   | 43844   |      |
| HOWELL K         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300I1530M 8W GAS | 7573   | 10053      | 13002  | 14094  | 14595  | 15213  | 15816  | 11879  | 14150  | 13416  | 5075   | 3922     | 138988  | 367568  |      |
| WAT              | 35     | 35         | 35     | 35     | 35     | 35     | 35     | 35     | 35     | 35     | 35     | 35       | 4448    | 7698    |      |
| 302F2230M 8W GAS | 10263  | 8112       | 9363   | 8943   | 7342   | 7342   | 7342   | 7039   | 7661   | 6557   | 6557   | 6557     | 94608   | 136701  |      |
| WAT              | 323    | 257        | 249    | 90     | 163    | 159    | 185    | 90     | 90     | 147    | 147    | 147      | 2010    | 5422    |      |
| 303E2130M 8W GAS | 120    | 112        | 219    | 355    | 187    | 522    | 667    | 229    | 120    | 120    | 120    | 120      | 2341    | 2867    |      |
| WAT              | 478    | 655        | 1035   | 1070   | 900    | 691    | 778    | 419    | 599    | 585    | 347    | 361      | 7898    | 16720   |      |
| LEASE TOTAL      | 17836  | 18277      | 22584  | 23412  | 23025  | 23077  | 24984  | 20175  | 21189  | 21277  | 11632  | 10467    | 237935  | 507136  |      |
| WAT              | 478    | 655        | 1035   | 1070   | 900    | 691    | 778    | 419    | 599    | 585    | 347    | 361      | 7898    | 16720   |      |
| HOWELL L         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300F2230M 8W GAS | 4403   | 4992       | 6403   | 9056   | 9155   | 8947   | 7904   | 8325   | 9292   | 13269  | 8436   | 18780    | 109162  | 121444  |      |
| WAT              | 154    | 357        | 279    | 275    | 111    | 62     | 53     | 19     | 28     | 34     | 3      | 51       | 1426    | 2150    |      |
| 301B2530M 8W GAS | 7123   | 6950       | 9491   | 9680   | 10413  | 12210  | 12075  | 12273  | 12472  | 12663  | 13150  | 12721    | 131221  | 358055  |      |
| WAT              | 2964   | 3283       | 3159   | 3142   | 3104   | 2986   | 2927   | 2927   | 2945   | 2898   | 2805   | 2878     | 36026   | 76716   |      |
| 302J3430M 8W GAS | 10926  | 13845      | 15904  | 15063  | 14547  | 13661  | 13915  | 8708   | 11179  | 10486  | 9317   | 9033     | 144674  | 478680  |      |
| WAT              | 77     | 96         | 107    | 107    | 107    | 107    | 107    | 107    | 107    | 107    | 107    | 107      | 612     | 1722    |      |
| 303F3330M 8W GAS | 57350  | 46567      | 55014  | 51738  | 50787  | 49240  | 61717  | 59352  | 63836  | 65807  | 62619  | 70842    | 694867  | 1878301 |      |
| WAT              | 1742   | 1614       | 1677   | 188    | 183    | 173    | 181    | 116    | 140    | 1514   | 1456   | 1456     | 104040  | 22557   |      |
| LEASE TOTAL      | 80002  | 78354      | 86812  | 85337  | 84902  | 84058  | 94181  | 85125  | 96140  | 102182 | 93122  | 111376   | 108519  | 285219  |      |
| WAT              | 4937   | 5350       | 5222   | 3632   | 3416   | 3245   | 3184   | 3084   | 3125   | 4520   | 4334   | 4455     | 48504   | 102945  |      |
| HOWELL 4         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 300K3130M 8W GAS | 2939   | 2475       | 2731   | 2444   | 2501   | 2203   | 1486   | 2248   | 2101   | 1539   | 1228   | 1727     | 25824   | 35172   |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| 1R 729M10W GAS   |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| WAT              |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |
| HOWELL -         |        |            |        |        |        |        |        |        |        |        |        |          |         |         |      |

Mike - **F.Y.I.\***  
This may be a minor  
technical difficulty!

© 1995 Inc. 03500



Anna

\* FOR YOUR IRRITATION

ILLEGIBLE

Subject well

|  |  |   |                |
|--|--|---|----------------|
|  |  |   |                |
|  |  |   |                |
|  |  | <p>② 38.58</p> <p>Meridian Oil, Inc.</p> <p>Howell K No. 300 →</p> <p>1990' FSL - 1175' FEL</p> <p>NSL-2509</p> <p>Basin Fruitland Coal Pool</p> <p>Spud 6/11/88</p> <p>T.D. - 3294'</p> <p>Producing 5/17 dead ↑</p> | <p>① 38.00</p> |
|  |  | <p>③ 38.21</p> <p>Meridian Oil, Inc.</p> <p>Howell K No. 3A</p> <p>1030' FSL - 1930' FEL</p> <p>Blanco Mesaverde Pool</p> <p>Spud 2/21/75</p> <p>Producing ④ 37.63</p>  |                |
|  |  | <p>Amoco Production Co.</p> <p>Florange Gas Com C#1</p> <p>1070' FSL - 910' FSL</p> <p>Spud - 1/3/90</p> <p>Basin Fruitland Coal Pool</p> <p>Producing</p> <p>w/2 dedication</p>                                      |                |

38.58

3.85

76.58

38.21

114.79

37.63

152.42

16.

312.42



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS  
GOVERNOR

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

April 29, 1988

Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87499-4289

Attention: Peggy Doak

Administrative Order NSL-2509

Dear Ms. Doak:

Reference is made to your application for a non-standard location for your Howell K Well No. 300 to be located 1990 feet from the South line and 1175 feet from the East line (Unit 1) of Section 15, Township 30 North, Range 8 West, NMPM, Wildcat Fruitland Pool, San Juan County, New Mexico. The SE/4 of said Section 15 shall be dedicated to the well.

By authority granted me under the provisions of Rule 104 F(1), the above-described unorthodox location is hereby approved.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. Lemay".

WILLIAM J. LEMAY,  
Director

WJL/DRC/ag

cc: Oil Conservation Division - Aztec

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

# OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

OIL CONSERVATION DIVISION  
RECEIVED

## REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. AUG 9 26

|   |   |              |
|---|---|--------------|
| Operator<br>Meridian Oil Inc.   |   | Well APN No. |
| Address<br>PO Box 4289 Farmington, NM 87499   |   |              |
| Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain) |   |              |
| New Well <input type="checkbox"/>   | Change in Transporter of:   |              |
| Recompletion <input type="checkbox"/>   | Oil <input type="checkbox"/> Dry Gas <input checked="" type="checkbox"/>    |              |
| Change in Operator <input type="checkbox"/>   | Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/> |              |
| If change of operator give name and address of previous operator                        |   |              |

### II. DESCRIPTION OF WELL AND LEASE

|  |                 |  |  |                         |
|--|-----------------|--|--|-------------------------|
| Lease Name<br>Howell K   | Well No.<br>300 | Pool Name, including Formation<br>Basin Fruitland Coal | Kind of Lease<br>State, Federal or Fee | Lease No.<br>SF-078578A |
| Location   |                 |  |  |                         |
| Unit Letter I : 1990 Feet From The South Line and 1175 Feet From The East Line |                 |  |  |                         |
| Section 15 Township 30N Range 8W, NMPM, San Juan County                        |                 |  |  |                         |

### III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

|  |  |
|--|--|
| Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>         | Address (Give address to which approved copy of this form is to be sent) |
| Meridian Oil Inc.  | PO Box 4289 Farmington, NM 87499   |
| Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> | Address (Give address to which approved copy of this form is to be sent) |
| Meridian Oil Inc.  | PO Box 4289 Farmington, NM 87499   |
| If well produces oil or liquids, give location of tanks.   | Is gas actually connected? When?   |
| Unit I Sec. 15 Twp. 30N Rge. 8W  |  |

If this production is commingled with that from any other lease or pool, give commingling order number:

### IV. COMPLETION DATA

|                                     |                             |          |                 |          |        |                    |            |            |
|-------------------------------------|-----------------------------|----------|-----------------|----------|--------|--------------------|------------|------------|
| Designate Type of Completion - (X)  | Oil Well                    | Gas Well | New Well        | Workover | Deepen | Plug Back          | Same Res'v | Diff Res'v |
| Date Spudded                        | Date Compl. Ready to Prod.  |          | Total Depth     |          |        | P.B.T.D.           |            |            |
| Elevations (DF, RKB, RT, GR, etc.)  | Name of Producing Formation |          | Top Oil/Gas Pay |          |        | Tubing Depth       |            |            |
| Performances                        |                             |          |                 |          |        | Depth Casing Shoes |            |            |
| TUBING, CASING AND CEMENTING RECORD |                             |          |                 |          |        |                    |            |            |
| HOLE SIZE                           | CASING & TUBING SIZE        |          | DEPTH SET       |          |        | SACKS CEMENT       |            |            |
|                                     |                             |          |                 |          |        |                    |            |            |
|                                     |                             |          |                 |          |        |                    |            |            |
|                                     |                             |          |                 |          |        |                    |            |            |

### V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

|                                |                 |   |            |
|--------------------------------|-----------------|---|------------|
| Date First New Oil Run To Tank | Date of Test    | Producing Method (Flow, pump, gas lift, etc.) |            |
| Length of Test                 | Tubing Pressure | Casing Pressure                               | Choke Size |
| Actual Prod. During Test       | Oil - Bbls.     | Water - Bbls.                                 | Gas - MCF  |
|                                |                 | AUG 3 1990                                    |            |

### GAS WELL

|                                  |                           |                           |                       |
|----------------------------------|---------------------------|---------------------------|-----------------------|
| Actual Prod. Test - MCF/D        | Length of Test            | Bbls. Condensate/MCF      | Gravity of Condensate |
| Testing Method (pilot, back pr.) | Tubing Pressure (Shut-in) | Casing Pressure (Shut-in) | Choke Size            |

### VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature Leslie Kahwaiv  
Printed Name Leslie Kahwaiv-Prod. Serv. Supervisor  
Date 07-27-90 Telephone No. (505) 326-9700

### OIL CONSERVATION DIVISION

Date Approved AUG 06 1990  
By Charles Johnson  
Title DEPUTY OIL & GAS INSPECTOR, DIST. 3

### INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- All sections of this form must be filled out for allowable on new and recompleted wells.
- Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- Separate Form C-104 must be filed for each pool in multiply completed wells.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE\*  
(Other instructions on re-  
verse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

|  |  |
|--|--|
| 1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER                                       | 7. UNIT AGREEMENT NAME   |
| 2. NAME OF OPERATOR<br>Meridian Oil Inc.   | 8. FARM OR LEASE NAME<br>Howell K  |
| 3. ADDRESS OF OPERATOR<br>P.O. Box 4289, Farmington, NM 87499  | 9. WELL NO.<br>300   |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*<br>See also space 17 below.)<br>At surface 1990'S, 1175'E | 10. FIELD AND POOL, OR WILDCAT<br>Basin Fruitland Coa                          |
| 14. PERMIT NO.   | 11. SEC., T., R., M., OR S.W. AND SURVEY OR AREA<br>Sec. 15, T30N, R8W<br>NMPM |
| 15. ELEVATIONS (Show whether OP, ST, OR, etc.)<br>6437' GL   | 12. COUNTY OR PARISH<br>San Juan   |
|  | 13. STATE<br>NM  |

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other) Revision

RELL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

X

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

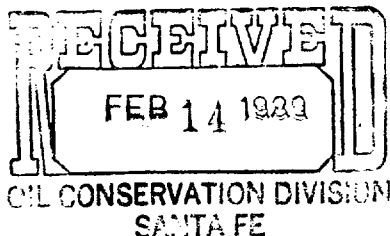
ALTERING CASING

ABANDONMENT\*

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DRAINAGE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Attached is a copy of the C102 showing the revised pool & dedication.



18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Regulatory Affairs

DATE 12-22-80

(This space for Federal or State office use)

ACCEPTED FOR RECORD

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

NMCCC

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-102  
Revised 10-1-

All distances must be from the outer boundaries of the Section.

|                                       |                      |                                       |                     |                           |
|---------------------------------------|----------------------|---------------------------------------|---------------------|---------------------------|
| Operator<br><b>MERIDIAN OIL, INC.</b> |                      | Lease<br><b>HOWELL K (SF-078578A)</b> |                     | Well No.<br><b>300</b>    |
| Unit Letter<br><b>I</b>               | Section<br><b>15</b> | Township<br><b>30-N</b>               | Range<br><b>8-W</b> | County<br><b>SAN JUAN</b> |

|                                   |  |              |                      |                                      |
|-----------------------------------|--|--------------|----------------------|--------------------------------------|
| Actual Footage Location of Wells  |  |              |                      |                                      |
| <b>1990</b>                       | feet from the                                | <b>SOUTH</b> | line and             | <b>1175</b>                          |
|                                   |  |              |                      | feet from the                        |
|                                   |  |              |                      | <b>EAST</b>                          |
|                                   |  |              |                      | line                                 |
| Ground Level Elev.<br><b>6437</b> | Producing Formation<br><b>Fruitland Coal</b> |              | Pool<br><b>Basin</b> | Dedicated Acreage<br><b>31242520</b> |

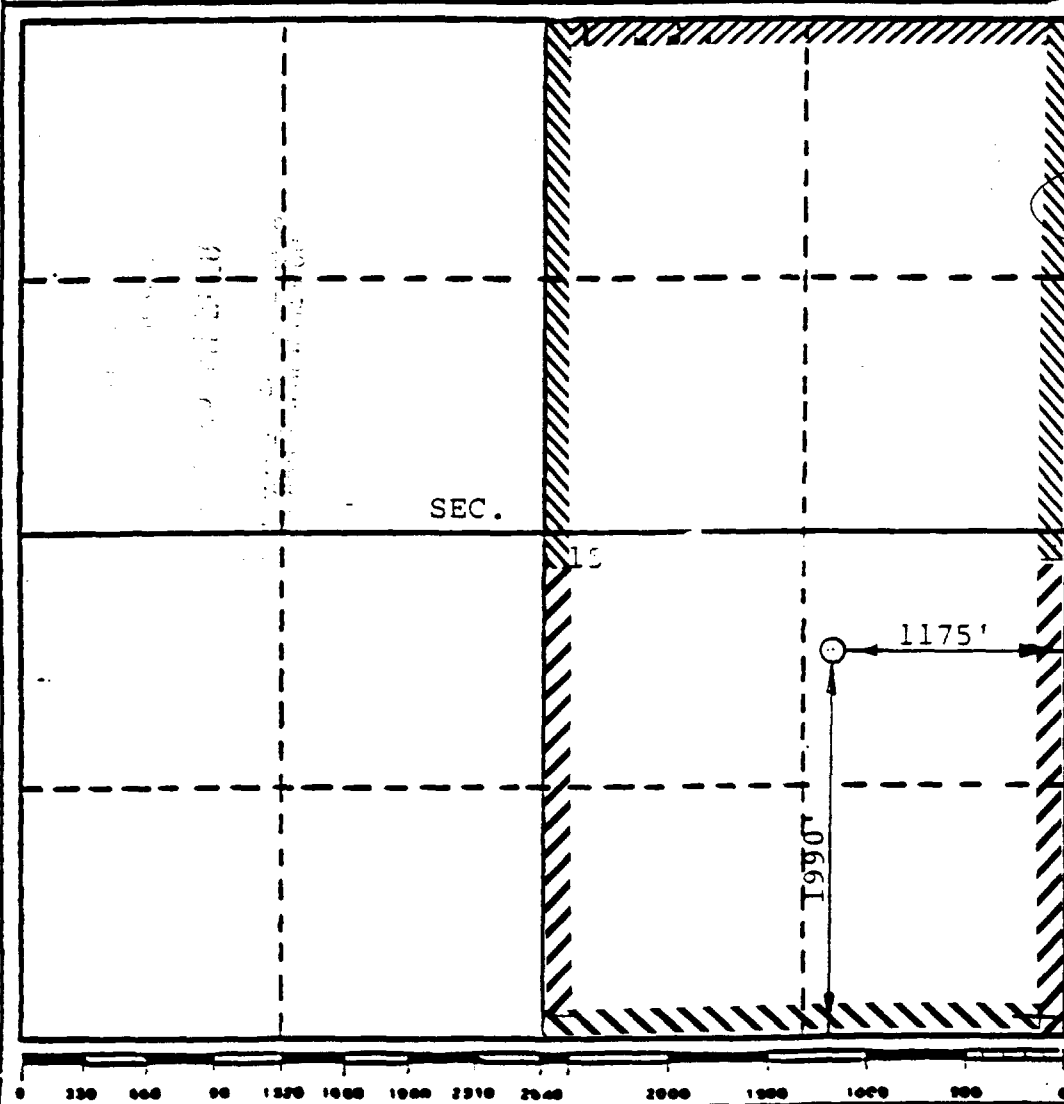
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.

NOTE: UNORTHODOX LOCATION TO AVOID CATHODIC BED



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name

Position

**Drilling Clerk**

Company

**Meridian Oil Inc.**

Date

**12-22-88**

I have verified the well location shown on this plat and plotted from field notes of surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

**MARCH 14, 1988**

Date Surveyed

**ISAAC L. WEAVER**

Registered Professional Engineer and/or Land Surveyor

Certificate No.

**8966**



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

|                        |     |
|------------------------|-----|
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| LAND OFFICE            |     |
| TRANSPORTER            | OIL |
|                        | GAS |
| OPERATOR               |     |
| PROBATION OFFICE       |     |

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-104  
Revised 10-01-78  
Format 05-01-83  
Page 1

REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. Operator  
Meridian Oil Inc.

Address

Reason(s) for filing (Check proper box)

|  |   |                                     |
|--|---|-------------------------------------|
| <input type="checkbox"/> New Well            | Change in Transporter of:               | <input type="checkbox"/> Dry Gas    |
| <input type="checkbox"/> Recompletion        | <input type="checkbox"/> Oil            | <input type="checkbox"/> Condensate |
| <input type="checkbox"/> Change in Ownership | <input type="checkbox"/> Casinghead Gas |                                     |

Other (Please explain)

If change of ownership give name  
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

|                        |                 |   |   |                         |
|------------------------|-----------------|---|---|-------------------------|
| Lease Name<br>Howell K | Well No.<br>300 | Pool Name, including Formation<br>Undes. Fruitland Coal | Kind of Lease<br>State (Federal or) Fee | Lease No.<br>SF-078578A |
| Location               |                 |   |   |                         |
| Unit Letter<br>I       | 1990            | Feet From The<br>South                                  | Line and<br>1175                        | Feet From The<br>East   |
| Line of Section<br>15  | Township<br>30N | Range<br>8W   | NMPM.                                   | San Juan                |

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

|  |  |
|--|--|
| Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>         | Address (Give address to which approved copy of this form is to be sent) |
| Meridian Oil Inc.  | PO Box 4289, Farmington, NM 87490  |
| Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> | Address (Give address to which approved copy of this form is to be sent) |
| El Paso Natural Gas Company  | PO Box 4990, Farmington, NM 87490  |
| If well produces oil or liquids,<br>give location of tanks.  | Is gas actually connected? When  |
| Unit<br>I  | Sec.<br>15   |
| Tw.<br>30N   | Rgs.<br>8W   |

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

*[Signature]*

Regulatory Affairs

September 15, 1988

(Date)

OIL CONSERVATION DIVISION

SEP 29 1988

APPROVED \_\_\_\_\_, 19

BY *[Signature]*

TITLE SUPERVISION DISTRICT # 3

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deeper well, this form must be accompanied by a tabulation of the deviate tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for all wells on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of own well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multi-completed wells.

#### IV. COMPLETION DATA

|  |   |                      |                              |               |                       |                         |           |             |            |
|--|---|----------------------|------------------------------|---------------|-----------------------|-------------------------|-----------|-------------|------------|
| Designate Type of Completion - (X)             |   | Oil Well             | Gas Well<br>X                | New Well<br>X | Workover              | Deepen                  | Plug Back | Same Res'v. | Diff. Res. |
| Date Spudded<br>06-11-88                       | Date Compl. Ready to Prod.<br>06-23-88        |                      | Total Depth<br>3294'         |               | P.B.T.D.              |                         |           |             |            |
| Elevations (DF, RKB, RT, GR, etc.)<br>6437' GL | Name of Producing Formation<br>Fruitland Coal |                      | Top Oil/Gas Pay<br>open hole |               | Tubing Depth<br>3290' |                         |           |             |            |
| Perforations<br>open hole completion           |   |                      |                              |               |                       | Depth Casing Shoe<br>-- |           |             |            |
| <b>TUBING, CASING, AND CEMENTING RECORD</b>    |   |                      |                              |               |                       |                         |           |             |            |
| HOLE SIZE                                      |   | CASING & TUBING SIZE |                              | DEPTH SET     |                       | SACKS CEMENT            |           |             |            |
| 12 1/4"  |   | 9 5/8"               |                              | 603'          |                       | 1021 cu. ft.            |           |             |            |
| 8 3/4"   |   | 7"                   |                              | 3115'         |                       | 1049 cu. ft.            |           |             |            |
|  |   | 2 3/8"               |                              | 3290'         |                       |                         |           |             |            |

#### V. TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

|                                 |                 |   |            |
|---------------------------------|-----------------|---|------------|
| Date First New Oil Run To Tanks | Date of Test    | Producing Method (Flow, pump, gas lift, etc.) |            |
| Length of Test                  | Tubing Pressure | Casing Pressure                               | Choke Size |
| Actual Prod. During Test        | Oil - Bbls.     | Water - Bbls.                                 | Gas - MCF  |

#### GAS WELL

|  |                                  |                                   |                       |
|--|----------------------------------|-----------------------------------|-----------------------|
| Actual Prod. Test - MCF/D                        | Length of Test                   | Bbls. Condensate/MMCF             | Gravity of Condensate |
| Testing Method (pirog, back pr.)<br>backpressure | Tubing Pressure (Shut-In)<br>618 | Casing Pressure (Shut-In)<br>1450 | Choke Size            |

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

| 1a. TYPE OF WELL:<br>OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> Other _____  |                                  | 5. LEASE DESIGNATION AND SERIAL NO.<br>SF-078578A   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
|---|----------------------------------|---|---------------|---------------------|----------------------------------|-----------------|---------------|------------------|----------------------|--------|-------|------|---------|--------------|--|----|-------|-------|--------|--------------|--|
| b. TYPE OF COMPLETION:<br>NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RYSVR <input type="checkbox"/> Other _____  |                                  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME _____  |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 2. NAME OF OPERATOR<br>Meridian Oil Inc.  |                                  | 7. UNIT AGREEMENT NAME _____  |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 3. ADDRESS OF OPERATOR<br>PO Box 4289, Farmington, NM 87499   |                                  | 8. FARM OR LEASE NAME<br>Howell K   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*<br>At surface 1990'S, 1/75'E<br>At top prod. interval reported below<br>At total depth   |                                  | 9. WELL NO.<br>300  |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 14. PERMIT NO. _____ DATE ISSUED _____  |                                  | 10. FIELD AND POOL, OR WILDCAT<br>Undes. Fruitland Coal   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 15. DATE SPUDDED 6-11-88 16. DATE T.D. REACHED 06-14-88 17. DATE COMPL. (Ready to prod.) 06-23-88 18. ELEVATIONS (OF RKB, RT, OR, ETC.)* 6437' GL 19. ELEV. CASINGHEAD 6437' GL   |                                  | 11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA<br>Sec. 15, T-30-N, R-8-W NMPM                      |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 20. TOTAL DEPTH, MD & TVD 3294'   |                                  | 12. COUNTY OR PARISH<br>San Juan  |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 21. PLUG, BACK T.D., MD & TVD _____   |                                  | 13. STATE<br>NM   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 22. IF MULTIPLE COMPL., HOW MANY? 1   |                                  | 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*<br>open hole completion |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 23. INTERVALS DRILLED BY<br>ROTARY TOOLS yes CABLE TOOLS _____  |                                  | 25. WAS DIRECTIONAL SURVEY MADE<br>no   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 26. TYPE ELECTRIC AND OTHER LOGS RUN<br>--  |                                  | 27. WAS WELL CORRED<br>no   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 28. CASING RECORD (Report all strings set in well)  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| <table border="1"><thead><tr><th>CASING SIZE</th><th>WEIGHT, LB./FT.</th><th>DEPTH SET (MD)</th><th>HOLE SIZE</th><th>CEMENTING RECORD</th><th>AMOUNT PULLED</th></tr></thead><tbody><tr><td>9 5/8"</td><td>36.0#</td><td>603'</td><td>12 1/4"</td><td>1021 cu. ft.</td><td></td></tr><tr><td>7"</td><td>20.0#</td><td>3115'</td><td>8 3/4"</td><td>1049 cu. ft.</td><td></td></tr></tbody></table> |                                  |   |               | CASING SIZE         | WEIGHT, LB./FT.                  | DEPTH SET (MD)  | HOLE SIZE     | CEMENTING RECORD | AMOUNT PULLED        | 9 5/8" | 36.0# | 603' | 12 1/4" | 1021 cu. ft. |  | 7" | 20.0# | 3115' | 8 3/4" | 1049 cu. ft. |  |
| CASING SIZE   | WEIGHT, LB./FT.                  | DEPTH SET (MD)  | HOLE SIZE     | CEMENTING RECORD    | AMOUNT PULLED                    |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 9 5/8"  | 36.0#                            | 603'  | 12 1/4"       | 1021 cu. ft.        |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 7"  | 20.0#                            | 3115'   | 8 3/4"        | 1049 cu. ft.        |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 29. LINER RECORD  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| <table border="1"><thead><tr><th>SIZE</th><th>TOP (MD)</th><th>BOTTOM (MD)</th><th>SACKS CEMENT*</th><th>SCREEN (MD)</th></tr></thead><tbody><tr><td>open hole completion</td><td></td><td></td><td></td><td></td></tr></tbody></table>   |                                  |   |               | SIZE                | TOP (MD)                         | BOTTOM (MD)     | SACKS CEMENT* | SCREEN (MD)      | open hole completion |        |       |      |         |              |  |    |       |       |        |              |  |
| SIZE  | TOP (MD)                         | BOTTOM (MD)   | SACKS CEMENT* | SCREEN (MD)         |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| open hole completion  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 30. TUBING RECORD   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| <table border="1"><thead><tr><th>SIZE</th><th>DEPTH SET (MD)</th><th>PACKER SET (MD)</th></tr></thead><tbody><tr><td>2 3/8"</td><td>3290'</td><td></td></tr></tbody></table>  |                                  |   |               | SIZE                | DEPTH SET (MD)                   | PACKER SET (MD) | 2 3/8"        | 3290'            |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| SIZE  | DEPTH SET (MD)                   | PACKER SET (MD)   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 2 3/8"  | 3290'                            |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 31. PERFORATION RECORD (Interval, size and number)<br>open hole completion  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| <table border="1"><thead><tr><th>DEPTH INTERVAL (MD)</th><th>AMOUNT AND KIND OF MATERIAL USED</th></tr></thead><tbody><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></tbody></table>  |                                  |   |               | DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| DEPTH INTERVAL (MD)   | AMOUNT AND KIND OF MATERIAL USED |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
|   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
|   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
|   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
|   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 33. PRODUCTION  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)<br>flowing-capable of comm HC; to be sold when connected   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| WELL STATUS (Producing or shut-in) _____  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| DATE OF TEST _____ HOURS TESTED _____ CHOKER SIZE _____ PROD'N. FOR TEST PERIOD _____ OIL—BSL. _____ GAS—MCF. _____ WATER—BSL. _____ GAS-OIL RATIO _____  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| FLOW. TUBING PRESS. _____ CASING PRESSURE _____ CALCULATED 24-HOUR RATE _____ OIL—BSL. _____ GAS—MCF. _____ WATER—BSL. _____ OIL GRAVITY-API (CORR.) _____  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| SI 618 SI 1450  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)<br>to be sold  |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 35. LIST OF ATTACHMENTS<br>--   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |
| SIGNED <u>Patty Bradfield</u> TITLE <u>Regulatory Affairs</u> DATE <u>9-15-88</u>   |                                  |   |               |                     |                                  |                 |               |                  |                      |        |       |      |         |              |  |    |       |       |        |              |  |

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof, cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

| FORMATION | TOP   | BOTTOM | DESCRIPTION, CONTENTS, ETC.                                      | NAME                               | TOP                     |                  |
|-----------|-------|--------|--|------------------------------------|-------------------------|------------------|
|           |       |        |  |                                    | MEAS. DEPTH             | TRUE VERT. DEPTH |
| Ojo Alamo | 2110' | 2300'  | ss. White cr-grn s.  | Ojo Alamo<br>Kirtland<br>Fruitland | 2110'<br>2300'<br>2990' |                  |
| Kirtland  | 2300' | 2990'  | Gry sh interbedded w/tight gry fine-grn ss.                      |                                    |                         |                  |
| Fruitland | 2990' | 3294'  | Gry carb sh, scattered coals, coals and gry, tight, fine-grn ss. |                                    |                         |                  |

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE  
(Other instructions on re-  
verse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

SF-078578A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Howell K

9. WELL NO.

300

10. FIELD AND POOL, OR WILDCAT

Undes. Fruitland Coal

11. SEC., T., R., M., OR BLK. AND  
SURVEY OR AREA

Sec. 15, T-30-N, R-08-W

N.M.P.M.

12. COUNTY OR PARISH

San Juan

13. STATE  
NM

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Meridian Oil Inc.

3. ADDRESS OF OPERATOR

Post Office Box 4289, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

See also space 17 below.)

At surface

1990'S, 1175'E

14. PERMIT NO.

15. ELEVATIONS (Show whether OF, TO, OR, etc.)

6437' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

Running Casing

(Other)

(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

06-14-88

TD 3115'. Ran 74 jts. 7", 20.0#, K-55 intermediate casing, 3102' set @ 3115'. Cemented with 475 sks. Class "B" 65/35 Poz, with 6% gel, 2% calcium chloride and 1/2 cu.ft./sack perlite (932 cu.ft.) followed by 100 sks. Class "B" with 2% calcium chloride (117 cu.ft.). WOC 12 hours. Held 1200#/30 min. Circ. to surface

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Regulatory Affairs

DATE

09-15-88

(This space for Federal or State office use)

APPROVED BY

TITLE

APPROVED DATE

CONDITIONS OF APPROVAL, IF ANY:

SEP 15

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

|   |  |  |
|---|--|--|
| 1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> <input checked="" type="checkbox"/> OTHER                                      |  | 5. LEASE DESIGNATION AND SERIAL NO.<br>SF-078578A                                      |
| 2. NAME OF OPERATOR<br>Meridian Oil Inc.  |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME   |
| 3. ADDRESS OF OPERATOR<br>Post Office Box 4289, Farmington, NM 87499  |  | 7. UNIT AGREEMENT NAME   |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.<br>See also space 17 below.)<br>At surface 1990'S, 1175'E |  | 8. FARM OR LEASE NAME<br>Howell K  |
| 14. PERMIT NO.  |  | 9. WELL NO.<br>300   |
| 15. ELEVATIONS (Show whether DF, ST, GR, etc.)<br>6437' GL  |  | 10. FIELD AND POOL, OR WILDCAT<br>Undes. Fruitland Coal                                |
|   |  | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA<br>Sec. 3, T-30-N, R-09-W<br>N.M.P.M. |
|   |  | 12. COUNTY OR PARISH<br>San Juan   |
|   |  | 13. STATE<br>NM  |

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

Spud Well  
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

06-11-88 Spudded well at 4:30 am 06-11-88. Drilled to 603'. Ran 14 jts. 9 5/8", 36.0#, K-55 surface casing set at 603'. Cemented with 400 sks. Class "B" with 1/4#/sk. gel-flake and 3% calcium chloride (1021 cu.ft.). Circulated to surface. WOC 12 hrs. Tested 600#/30 minutes, held ok.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Drilling Clerk

DATE

06-13-88

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL  
WELL ☐

GAS  
WELL ☒

OTHER

2. NAME OF OPERATOR

Meridian Oil Inc.

3. ADDRESS OF OPERATOR

PO Box 4289, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface  
1990'S, 1175'E

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

8 miles from Navajo Dam

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT. 1175'  
(Also to nearest drig. unit line, if any)

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED

TO THIS WELL

160.00 / 52.42

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED  
OR APPLIED FOR, ON THIS LEASE, FT. 300'

19. PROPOSED DEPTH

3068'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6437' GL DRILLING OPERATIONS AUTHORIZED ARE

SUBJECT TO COMPLIANCE WITH ATTACHED

"GENERAL REQUIREMENTS" PROPOSED CASING AND CEMENTING PROGRAM

22. APPROX. DATE WORK WILL START\*

23.

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4.

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH |
|--------------|----------------|-----------------|---------------|
| 12 1/4"      | 9 5/8"         | 32.3#           | 500'          |
| 8 3/4"       | 7"             | 20.0#           | 3115'         |
| 6 1/4"       | 5 1/2" liner   | 23.0#           | 3300'         |

310 cf. circulated  
980 cf to cover Ojo Alamo  
do not cement

The Fruitland formation will be completed.

A 3000 psi WP and 6000 psi test double gate preventer equipped with  
blind and pipe rams will be used for blow out prevention on this well.

This gas is dedicated.

The SE/4 of Section 15 is dedicated to this well.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*Peggy D. Doad*

TITLE

Drilling Clerk

DATE

04-19-88

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

DATE

APPROVED

AS APPROVED

APR 20 1988

NMOCC

\*See Instructions On Reverse Side

## OIL CONSERVATION DIVISION

P. O. BOX 2088

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-102  
Revised 10-1-

All distances must be from the outer boundaries of the Section.

|  |   |                         |                                       |                           |   |                        |
|--|---|-------------------------|---------------------------------------|---------------------------|---|------------------------|
| Operator<br><b>MERIDIAN OIL, INC.</b>  |   |                         | Lease<br><b>HOWELL K (SF-078578A)</b> |                           |   | Well No.<br><b>300</b> |
| Unit Letter<br><b>I</b>  | Section<br><b>15</b>                    | Township<br><b>30-N</b> | Range<br><b>8-W</b>                   | County<br><b>SAN JUAN</b> |   |                        |
| Actual Footage Location of Well:<br><b>1990</b> feet from the <b>SOUTH</b> line and <b>1175</b> feet from the <b>EAST</b> line |   |                         |                                       |                           |   |                        |
| Ground Level Elev.<br><b>6437</b>  | Producing Formation<br><b>Fruitland</b> |                         | Pool<br><b>Undesignated</b>           |                           | Dedicated Acres:<br><b>160 152.42</b> Act |                        |

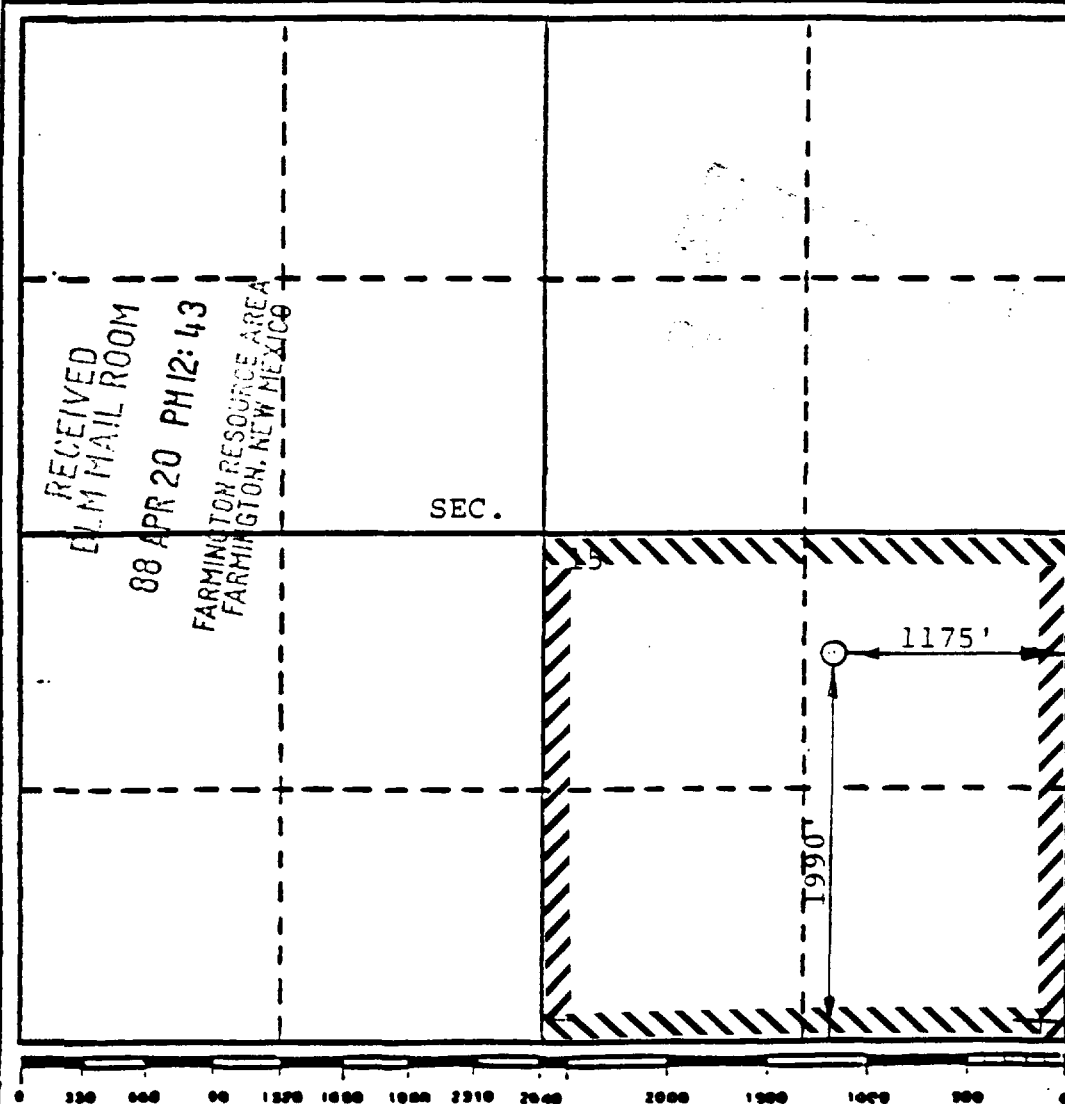
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.

NOTE: UNORTHODOX LOCATION TO AVOID CATHODIC BED



## CERTIFICATION -

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name

Position

Drilling Clerk

Company

Meridian Oil Inc.

Date

4-19-88

I have surveyed the well location shown on this plat and plotted from field notes of surveys made by me or under my supervision, and the same is true and correct to the best of my knowledge and belief.

MARCH 14, 1988

Date Surveyed

ISAAC L. WEAVER

Registered Professional Engineer  
and/or Land Surveyor

Certificate No.

8966