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William F. Carr

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June 17, 2002

**HAND-DELIVERED**

Lori Wrotenbery, Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

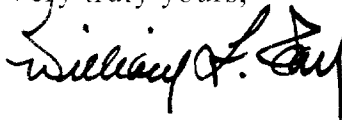
*Case 12892*

Re: Application of Mallon Oil Company for approval of a pilot project including unorthodox well locations and exceptions to Division Rule 104.C(3) for the purpose of establishing a pilot program in the Pictured Cliffs and Tertiary formations to determine proper well density requirements for Pictured Cliffs and Tertiary formation wells, Rio Arriba County, New Mexico.

Dear Ms. Wrotenbery:

Enclosed in triplicate is the Application of Mallon Oil Company in the above-referenced case as well as a copy of the legal advertisement. Mallon Oil Company requests that this matter be placed on the July 11, 2002 Examiner Hearing docket.

Very truly yours,



William F. Carr

Enclosures

cc: Mr. Robert Blaylock  
Ms. Patti Davis  
Mallon Oil Company

Mr. Reed Ferrill  
Ferrill and Associates

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

**APPLICATION OF MALLON OIL COMPANY  
FOR APPROVAL OF A PILOT PROJECT  
INCLUDING UNORTHODOX WELL LOCATIONS  
AND EXCEPTIONS TO DIVISION RULE 104.C(3)  
FOR THE PURPOSE OF ESTABLISHING A PILOT  
PROGRAM IN THE PICTURED CLIFFS AND  
TERTIARY FORMATIONS TO DETERMINE  
PROPER WELL DENSITY REQUIREMENTS  
FOR PICTURED CLIFFS AND TERTIARY  
FORMATION WELLS, RIO ARRIBA COUNTY,  
NEW MEXICO.**

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**CASE NO. 12892**

**APPLICATION**

Mallon Oil Company ("Mallon"), through its undersigned attorneys, hereby makes application pursuant to Division Rule 104.D(3) for approval of a pilot project including unorthodox well locations and exceptions to Division Rule 104.C(3) for the purpose of establishing a pilot program in the Pictured Cliffs formation, East Blanco-Pictured Cliffs Gas Pool, and the overlying Tertiary formation, Cabresto Canyon-Tertiary Pool, to determine the appropriate well density in these formations for wells in pools governed by Division Rule 104.C(3) which currently provides for one well per 160-acre gas spacing unit. Mallon also seeks approval of 25 pilot project wells located at the standard and non-standard well locations in the project area.

In support of its application, Mallon states:

1. Mallon is an interest owner and the operator of wells in the East Blanco-Pictured Cliffs Gas Pool and the Cabresto Canyon-Tertiary Pool located in Rio Arriba County, New Mexico.
2. Mallon desires to conduct a pilot project in the Pictured Cliffs and Tertiary formations in a project area fully described in Exhibit A to this application. The purpose of this pilot project is to study the feasibility of infill drilling for all Pictured Cliffs and Tertiary formation wells currently governed by Rules 104.C(3) which provides for 160-acre Pictured Cliffs and Tertiary spacing units and which precludes the drilling and production of second gas wells within 160-acre spacing units.
3. The Pictured Cliffs and overlying Tertiary formations and pools demonstrate the following characteristics:

(A) For the Pictured Cliffs and the Ojo Alamo intervals:

- (i) low permeability enhanced by varying degrees of natural fracturing;
- (ii) variable clay contents;
- (iii) faulting and permeability barriers which are suspected to limit drainage areas;
- (iv) average volumetric recovery efficiency of less than 20 percent from decline EUR and estimated volumetric Original-Gas-In-Place (OGIP).

(B) For the San Jose and Nacimiento intervals:

- (i) low reservoir pressures;
- (ii) multiple lenticular pay sands which generally do not exist in adjoining wells;
- (iii) variable clay contents and formation water salinities;
- (iv) faulting which may limit drainage areas;
- (v) for the San Jose, more than half of the producing wells are expected to recover less than 40 percent of OGIP;
- (vi) for the Nacimiento zone, recovery efficiencies expected to be similar to the San Jose.

4. Analysis of existing data on these formations and pools suggests that increasing the well density to two wells for each 160-acre spacing unit would increase the recoverable reserves from each unit.

5. Based on the current data available on these formations and pools there is a need for a pilot project to study the current density and ultimate recovery of gas from these formations and pools.

6. The data currently available on these formations and pools is inadequate to enable Mallon to determine the proper well density and ultimate recoverable reserves that can be produced from these formations and pools. Mallon therefore desires to initiate a pilot program for the drilling of infill wells in the Pictured Cliffs and Tertiary formations to obtain geological and engineering data to enable it to study and ascertain the appropriate spacing requirements for these formations and pools.

7. The pilot project is intended to accomplish the following:

- (A) acquisition of layer pressure measurements in inter-well areas;
- (B) acquisition of open-hole well log stratigraphic data to permit study of pay sand continuity;
- (C) provide actual production data to verify the absence of interference between wells;
- (D) improve estimates of original gas-in-place and recoverable reserves; and
- (E) evaluate the economic success of infill development.

8. The proposed project wells are to be located to test the concept of 80-acre well density with each well to be located 1000 feet or more from an existing well.

9. By Division Administrative Order NSL-4355, entered on September 7, 1999, the Division authorized Mallon to recomplete existing wells and drill future gas wells to the gas bearing intervals from the surface to the base of the Pictured Cliffs formation that are developed on 160-acre spacing within certain identified Jicarilla Apache contract areas in Rio Arriba County, New Mexico ("Mallon/Jicarilla Consolidated Contract Area"), which includes all lands covered by this application, to any and all formations and/or pools developed on 160-acre spacing from the surface to the base of the Pictured Cliffs formation, at locations that are unorthodox based on the current well location requirements of Division Rule 104.C(3), provided that any such unorthodox location is no closer than the required minimum orthodox distance (330 feet) to the outer boundary of the Mallon/Jicarilla Consolidated Contract Area nor closer than 10 feet to any quarter-quarter section subdivision inner boundary.

10. Mallon proposes to drill some or all of the initial 25 pilot project wells in calendar years 2002, 2003 and 2004 at standard and non-standard well locations in the quarter-quarter sections indicated on Exhibit B to this application. These well locations are in the Mallon/Jicarilla Consolidated Contract Area which may necessitate movement to (1) avoid archeological sites; (2) minimize disturbance of forested and wildlife habitats; (3) minimize construction of wellpads by avoiding rugged terrain when practical; and (4) position wellbores within geologically more favorable locations in order to maximize the likelihood of obtaining commercial gas production from the development of the project area. Mallon requests that the order entered in this case authorize the drilling of the new infill project wells at alternate standard and non-standard locations as required to accommodate these considerations within the Mallon/Jicarilla Consolidated Contract Area as long as the wells are located in accordance with the provisions of the Administrative Order NSL-4355 which requires

wells to be located no closer than the required minimum orthodox distance (330 feet) to the outer boundary of the Mallon/Jicarilla Consolidated Contract Area nor closer than 10 feet to any quarter-quarter section subdivision inner boundary.

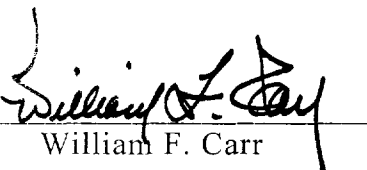
11. Notice of this application has been provided in accordance with Division Rule 1207 to (a) all operators of spacing units adjacent to any the pilot project spacing unit in the subject formations or, in the absence of an operator, to the working interest owners, (b) all Division-designated operators in the subject pools, and (c) all owners of interest in the mineral estate in existing spacing units with producing wells in the project area. These affected parties are identified on Exhibit C to this application.

12. Approval of this application will be in the best interest of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Mallon Oil Company requests that this application be set for hearing before an examiner of the Oil Conservation Division on July 11, 2002, and after notice and hearing as required by law, the Division enter its order granting this application.

Respectfully submitted,

HOLLAND & HART LLP

By:   
William F. Carr

ATTORNEYS FOR MALLON  
OIL COMPANY

**EXHIBIT A**

**APPLICATION OF MALLON OIL COMPANY  
FOR APPROVAL OF A PILOT PROJECT  
INCLUDING UNORTHODOX WELL LOCATIONS  
AND EXCEPTIONS TO DIVISION RULE 104.C(3)  
FOR THE PURPOSE OF ESTABLISHING A PILOT  
PROGRAM IN THE PICTURED CLIFFS AND  
TERTIARY FORMATIONS TO DETERMINE  
PROPER WELL DENSITY REQUIREMENTS  
FOR PICTURED CLIFFS WELLS, RIO ARRIBA  
COUNTY, NEW MEXICO.**

**PROJECT AREA**

**AREA NO. 1:**

TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM

Sections 6, 8, 17 and 18: All

**AREA NO. 2:**

TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM

Sections 19, 20, 29 and 30: All

**AREA NO. 3:**

TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM

Sections 33, 34 and 35: All

**AREA NO. 4:**

TOWNSHIP 29 NORTH, RANGE 2 WEST, NMPM

Sections 4, 5, 8 and 9: All

**EXHIBIT B**

**APPLICATION OF MALLON OIL COMPANY  
FOR APPROVAL OF A PILOT PROJECT  
INCLUDING UNORTHODOX WELL LOCATIONS  
AND EXCEPTIONS TO DIVISION RULE 104.C(3)  
FOR THE PURPOSE OF ESTABLISHING A PILOT  
PROGRAM IN THE PICTURED CLIFFS AND  
TERTIARY FORMATIONS TO DETERMINE  
PROPER WELL DENSITY REQUIREMENTS  
FOR PICTURED CLIFFS WELLS, RIO ARRIBA  
COUNTY, NEW MEXICO.**

**PROPOSED PILOT PROJECT WELL LOCATIONS**

**AREA NO. 1:**

**TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM**

**Sections 6, 8, 17 and 18**

Section 6: NE/4 SW/4  
Section 8: NW/4 NE/4  
Section 8: NW/4 SE/4  
Section 17: NE/4 NE/4  
Section 17: NW/4 SW/4  
Section 18: NE/4 NE/4

**AREA NO. 2:**

**TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM**

**Sections 19, 20, 29 and 30**

Section 19: SE/4 NE/4  
Section 20: NE/4 SE/4  
Section 20: SW/4 SW/4  
Section 29: NE/4 NE/4  
Section 29: NE/4 NW/4  
Section 29: SW/4 SW/4  
Section 30: NW/4 NE/4

**AREA NO. 3:**  
**TOWNSHIP 30 NORTH, RANGE 3 WEST, NMPM**  
**Sections 33, 34 and 35**

Section 33: NW/4 NE/4  
Section 34: SE/4 NW/4  
Section 34: SE/4 SE/4  
Section 35: SE/4 SW/4  
Section 35: NW/4 SE/4  
Section 35: SE/4 NE/4

**AREA NO. 4:**  
**TOWNSHIP 29 NORTH, RANGE 2 WEST, NMPM**  
**Sections 4, 5, 8 and 9**

Section 4: SE/4 SW/4  
Section 5: NE/4 SE/4  
Section 5: SE/4 SW/4  
Section 8: SE/4 SW/4  
Section 8: SE/4 SE/4  
Section 9: SE/4 SW/4



## EXHIBIT C

**APPLICATION OF MALLON OIL COMPANY  
FOR APPROVAL OF A PILOT PROJECT  
INCLUDING UNORTHODOX WELL LOCATIONS  
AND EXCEPTIONS TO DIVISION RULE 104.C(3)  
FOR THE PURPOSE OF ESTABLISHING A PILOT  
PROGRAM IN THE PICTURED CLIFFS AND  
TERTIARY FORMATIONS TO DETERMINE  
PROPER WELL DENSITY REQUIREMENTS  
FOR PICTURED CLIFFS WELLS, RIO ARRIBA  
COUNTY, NEW MEXICO.**

### NOTIFICATION LIST

El Paso Natural Gas Company  
Post Office Box 1492  
El Paso, Texas 79978

Bayless Grandchildren's Trust  
C/o Tommy Roberts, Trustee  
Post Office Box 129  
Farmington, NM 87499

Mr. Rich Corcoran  
Energen Resources Corporation  
2198 Bloomfield Highway  
Farmington, NM 87401

J. M. Huber Corp.  
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Houston, Texas 77079-2001

Robert L. Bayless  
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Farmington, NM 87401

J. M. Huber Corp.  
1900 W LP S  
Houston, Texas 77027

Schalk Development Co.  
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Albuquerque, NM 87125

Burlington Resources Oil & Gas Co.  
801 Cherry Street  
Fort Worth, Texas 76102

Patrick Hegarty  
Synergy Operating, LLC  
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Farmington, NM 87499

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Sturgis, MI 49091

William G. Dedert  
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Mr. Thurman Velarde  
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Oil & Gas Administration  
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Midland, Texas 79702

James R. Conway, Trustee  
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Marion, OH 43302

Roger R. Mitchell  
113 Cypress Dove Lane  
 Mooresville, NC 28117

Kevin M. Fitzgerald  
66 North Ranch Road  
Littleton, Colorado 80127

Jaco Production Company  
Post Office Box 1807  
Bakersfield, CA 93303

Case 12892:

**Application of Mallon Oil Company for approval of a pilot project including unorthodox well locations and exceptions to Division Rule 104.C(3) for the purpose of establishing a pilot program in the Pictured Cliffs and Tertiary formations to determine proper well density requirements for Pictured Cliffs and Tertiary formation wells, Rio Arriba County, New Mexico.** Pursuant to Division Rule 104.D(3) applicant seeks approval for a 25 well pilot program in the Pictured Cliffs formation, East Blanco-Pictured Cliffs Pool, and the overlying Tertiary formation, Cabresto Canyon-Tertiary Pool, to gather data to determine the appropriate well density in the Pictured Cliffs and Tertiary formations for wells in pools governed by Division Rule 104.C(3) which currently limits well density to one well per 160-acre gas spacing unit. Applicant further seeks approval of 25 pilot project wells to be drilled within the project area at orthodox and unorthodox well locations. The pilot project area encompasses all or a portion of the following acreage in Rio Arriba County, New Mexico:

Township 30 North, Range 3 West, NMPM

Sections: 6, 8, 17, 18, 19, 20,  
29, 30, 33, 34 and 35

Township 29 North, Range 2 WEST, NMPM

Sections: 4, 5, 8 and 9

The project area is located approximately 4 miles to 6 miles SW of Burns, New Mexico.

HOLLAND & HART<sup>LLP</sup>  
ATTORNEYS AT LAW

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William F. Carr

wcarr@hollandhart.com

June 20, 2002

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

**TO ALL AFFECTED PARTIES**

**Re: Application of Mallon Oil Company for approval of a pilot project including unorthodox well locations and exceptions to Division Rule 104.C(3) for the purpose of establishing a pilot program in the Pictured Cliffs and Tertiary formations to determine proper well density requirements for Pictured Cliffs and Tertiary formation wells, Rio Arriba County, New Mexico.**

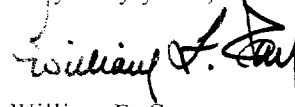
Ladies and Gentlemen:

This letter is to advise you that Mallon Oil Company has filed the enclosed application with the New Mexico Oil Conservation Division seeking approval of a pilot project including unorthodox well locations and exceptions to Division Rule 104.C(3) for the purpose of establishing a pilot program in the Pictured Cliffs and Tertiary formations to determine proper well density requirements for Pictured Cliffs and Tertiary formation wells. The project area for this pilot project is located in Sections 6, 8, 17, 18, 19, 20, 29, 30, 33, 34, and 35 of Township 30 North, Range 3 West and Sections 4, 5, 8 and 9 of Township 29 North, Range 2 West, NMPM, Rio Arriba County, New Mexico as fully identified on Exhibit A to this application. The locations of the proposed pilot infill wells by quarter-quarter section are identified on Exhibit B to the application.

This application has been set for hearing before a Division Examiner on July 11, 2002 at 8:15 a.m. The hearing will be in the Aztec City Council Chambers, located at 201 West Chaco, Aztec, New Mexico. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 1208.B to file a Pre-hearing Statement three days in advance of a scheduled hearing at the Division's Santa Fe office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. This statement must include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

Very truly yours,



William F. Carr  
ATTORNEY FOR MALLON OIL COMPANY

Enclosure

cc: Mr. Robert Blaylock  
Ms. Patti Davis