

DHC

8/12/99

2423

MERRION

OIL & GAS

JUL 23 1999

July 21, 1999

Mr. David Catanach
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

**Re: Application for Administrative Approval
Downhole Commingling
Basin Fruitland Coal Pool and WAW Pictured Cliffs Pool
Hi Roll 2R
Section 35, T27N, R13W
San Juan County, New Mexico**

Dear Mr. Catanach:

Merrion Oil & Gas requests administrative approval for downhole commingling of the Basin Fruitland Coal and the WAW Pictured Cliffs Pools in the subject wellbore. The following information is provided in support of this application:

I. Proposed Spacing Units

Exhibit 1 is the ownership plat showing the offset operators. Exhibit 2 shows the C-102 plat for the Basin Fruitland Coal with a 320 acre spacing unit in the W/2 of Section 35. Exhibit 3 is the C-102 plat for the WAW Pictured Cliffs Pool with a ± 160 acre spacing unit in the SW/4 of Section 35.

II. Justification

The Hi Roll 2R is a redrill of the Hi Roll 2, which is a slim-hole completion with 2-7/8" casing. Because of the inefficient slim-hole completion, significant reserves will be left behind in this well. However, the reserves are not sufficient enough to justify drilling a well with the PC as the only target.

The Fruitland Coal is productive to the south of our well, but has not been "proved-up" north across our lease. Because of the risk associated with the step-out, we could not justify drilling a coal well by itself. Therefore, it is only by commingling the two zones that we can justify redrilling the well.

III. Allocation Methodology

Exhibit 4 shows the PC production from the current Hi Roll 2 well while Exhibit 5 shows the production history of an offset coal well. The coal gas rate in the offset stabilized quickly and declined exponentially, similar to the PC. Therefore, Merrion proposes to obtain stabilized production tests on each zone separately and use a fixed percentage to allocate future production between the two zones. If subsequent data indicates the need, additional testing may be done in the future to adjust the allocation percentages.

IV. Reservoir Fluid Compatibility

Water analyses are not available for wells in the immediate area. However, the waters of the PC and Fruitland have been generally determined to be compatible across the basin based on other similar applications to the OCD.

V. Cross Flow Between Zones

The current reservoir pressure of the PC is estimated to be 110 psi, while the Fruitland Coal is at 200 psi. With a flowing line pressure of less than 50 psi, crossflow is not anticipated to be a problem.

VI. Well Ownership Notification

The spacing unit and ownership of the two zones is identical.

VII. Offset Operator Notification

Exhibit 1 is a plat showing all offset operators. Exhibit 6 is a list of all the offset operators who received a certified copy of this application.

VIII. Summary

Both the PC and the Fruitland Coal lack the reserves to economically justify a new well on their own. Commingling the zones will maximize reserves and protect correlative rights. Therefore, we request your approval of this application.

Page Three
July 21, 1999

Please call me with questions or if additional information is required.

Sincerely,

A handwritten signature in cursive script that reads "George Sharpe".

George F. Sharpe
Manager – Oil & Gas Investments

Xc: Offset Operators
Aztec OCD, BLM – Farmington

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
811 South First St., Artesia, NM 88210-2835

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☐ YES ☒ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Merrion Oil & Gas Corporation Address 610 Reilly Avenue, Farmington, NM 87401-2634

Lease Hi Roll Well No. 2 R Unit Ltr. - Sec - Twp - Rge K-35-27N-13W County San Juan

Spacing Unit Lease Types: (check 1 or more)
OGRID NO. 014634 Property Code _____ API NO. _____ Federal ☒ State _____ (and/or) Fee _____

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Basin Fruitland Coal (GAS-71629)		WAW Fruitland Sand Pictured Cliffs (GAS- 27190)
2. Top and Bottom of Pay Section (Perforations)	1170'-1190'		1200'-1220'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flow		Flow
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 200 psi	a.	a. 110 psi
	b. (Original) 200 psi	b.	b. 200 psi
6. Oil Gravity (°API) or Gas BTU Content	BTU 1000		BTU 1100
7. Producing or Shut-In?	Shut-In Not completed yet		Shut-In Not completed yet
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/ water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data * If Producing, give date and oil/gas/ water rates of recent test (within 60 days)	Date: N/A Rates:	Date: Rates:	Date: N/A Rates:
	Date: Rates: N/A	Date: Rates:	Date: Rates: N/A
8. Fixed Percentage Allocation Formula - % for each zone	Will be provided after well is drilled. Oil: % Gas: %	Oil: % Gas: %	Oil: % Gas: %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☐ Yes ☐ No
11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). _____
16. ATTACHMENTS:
- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
 - * Production curve for each zone for at least one year. (If not available, attach explanation.)
 - * For zones with no production history, estimated production rates and supporting data.
 - * Data to support allocation method or formula.
 - * Notification list of all offset operators.
 - * Notification list of working, overriding, and royalty interests for uncommon interest cases.
 - * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE _____ TITLE Engineer DATE 7-21-99

TYPE OR PRINT NAME George F. Sharpe TELEPHONE NO. (505) 327-9801

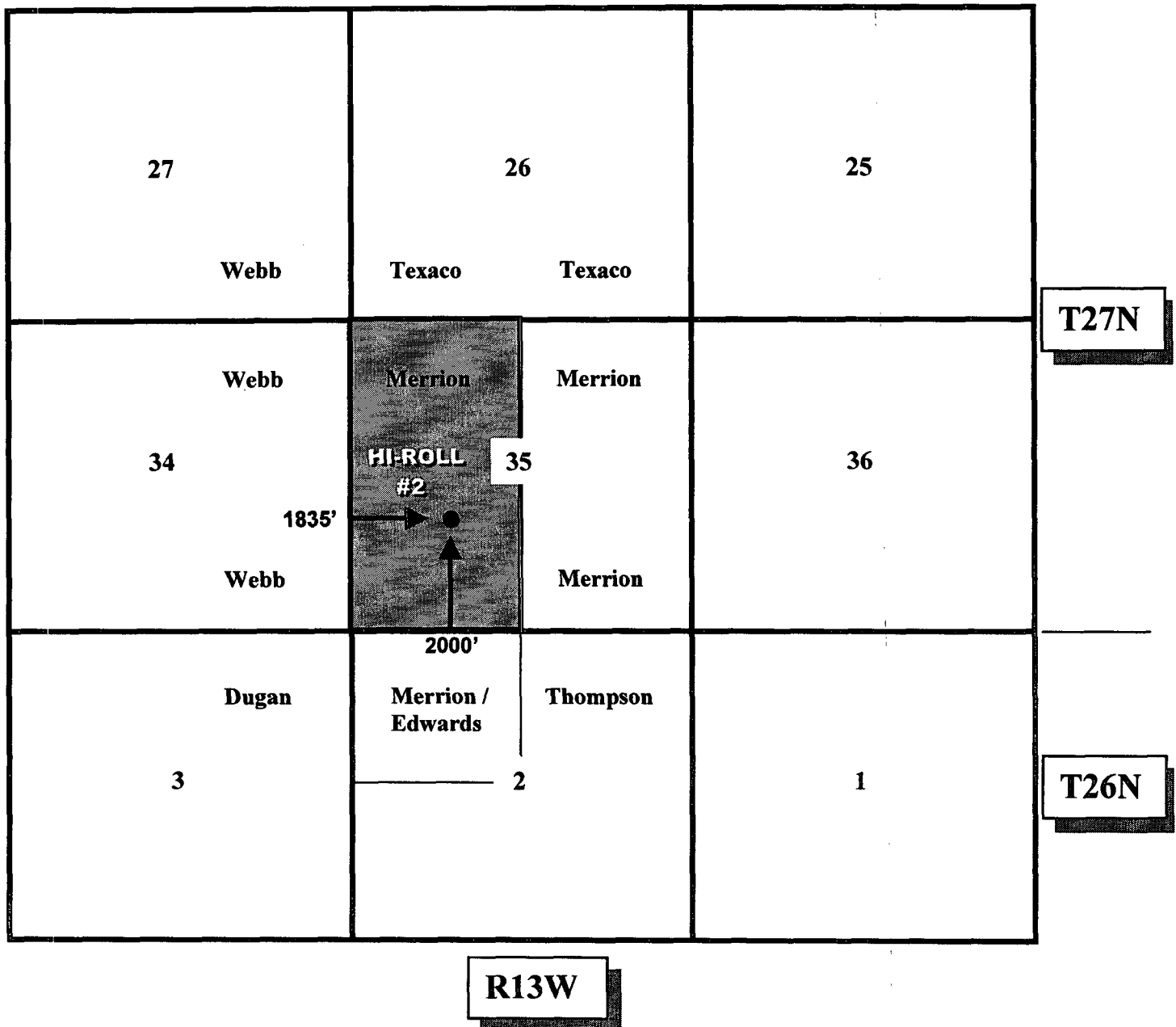
Exhibit 1

Offset Operator Plat

HI-ROLL #2

T27N, R13W, Section 35

Application to Commingle Producing Formations



District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 71629		3 Pool Name Basin Fruitland Coal	
4 Property Code		5 Property Name Hi Roll			6 Well Number 2 R
7 OGRID No. 014634		8 Operator Name MERRION OIL & GAS CORPORATION			9 Elevation 6031'

10 Surface Location

UL or lot no. K	Section 35	Township 27 N	Range 13 W	Lot Idn NESW	Feet from the 2000	North/South line South	Feet from the 1835	East/West line West	County San Juan
--------------------	---------------	------------------	---------------	-----------------	-----------------------	---------------------------	-----------------------	------------------------	--------------------

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
---------------	---------	----------	-------	---------	---------------	------------------	---------------	----------------	--------

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
--------------------	--------------------	-----------------------	--------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p>Signature George F. Sharpe</p> <p>Printed Name Engineer</p> <p>Title</p> <p>Date</p>
	<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>21 Jan 1999</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>Certificate Number</p>

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 87190		3 Pool Name WAW Fruitland Sand Pictured Cliffs	
4 Property Code		5 Property Name Hi Roll			6 Well Number 2 R
7 OGRID No. 014634		8 Operator Name MERRION OIL & GAS CORPORATION			9 Elevation 6031'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	35	27 N	13 W	NESW	2000	South	1835	West	San Juan

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

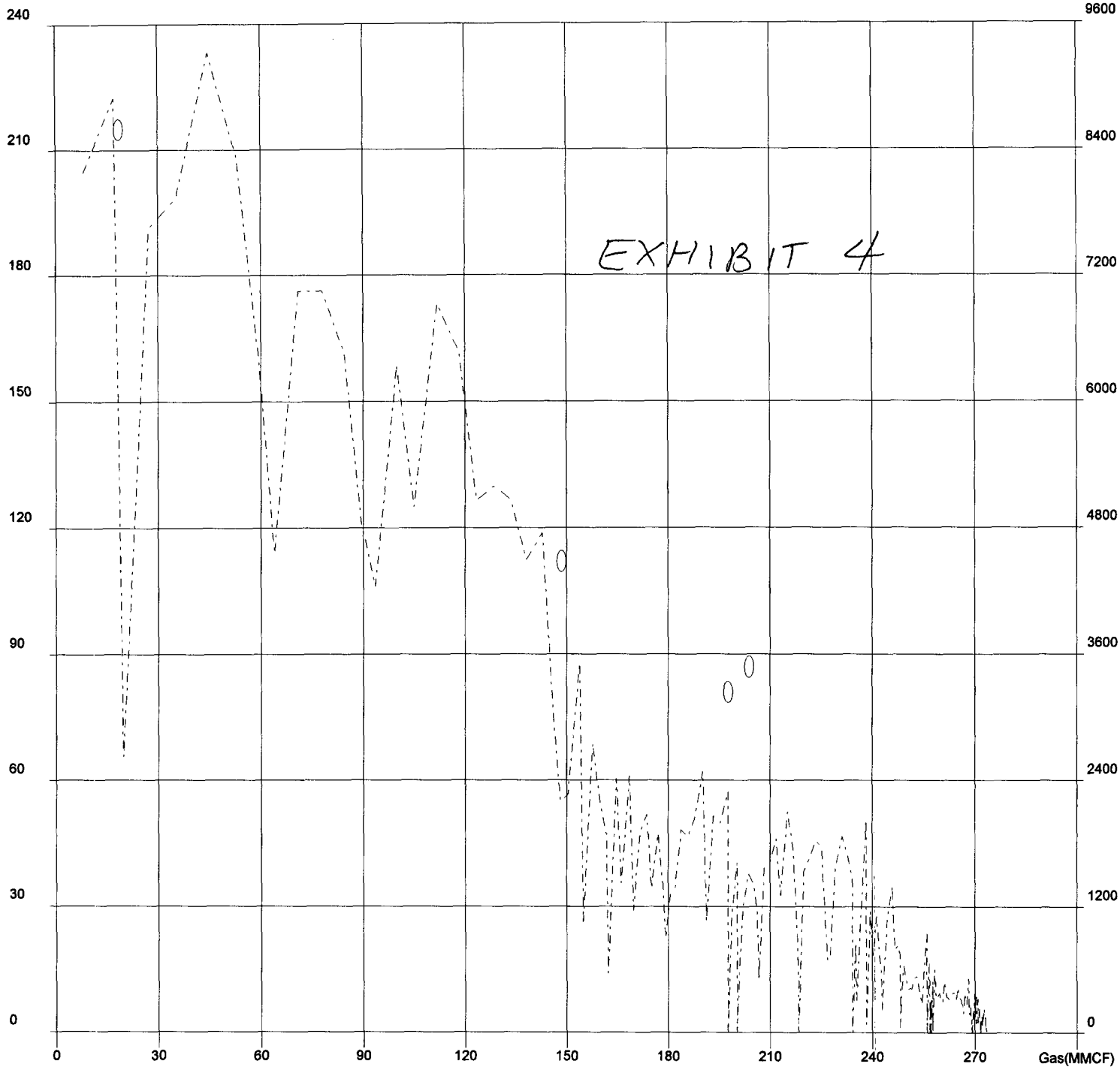
<p>16</p>				<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p>Signature George F. Sharpe</p> <p>Printed Name Engineer</p> <p>Title</p> <p>Date</p>	
<p>EXHIBIT 3</p>				<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief</p> <p>21 Jan 1999</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>6844</p> <p>Certificate Number</p>	

Dwights

Lease: HIGH ROLL (2)

07/09/99

Retrieval Code: 251,045,27N13W35K00FP



WHSIP

County: SAN JUAN

F.P. Date: 07/78

Gas (mcf/mo)

Field: WAW (FRUITLAND PICTURED CLIFFS) F Oil Cum: 0 bbl

Reservoir: FRUITLAND PICTURED C

Gas Cum: 273.4 mmcf

Operator: MERRION OIL & GAS CORP

Location: 35K 27N 13W

Dwights

Lease: HICKMAN (7R)

07/09/99

Retrieval Code: 251,045,26N12W03A00FT

8

800

7

700

6

600

5

500

4

400

3

300

2

200

1

100

0

0

EXHIBIT 5

0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 Gas(MMCF)

WHSIP

0

County: SAN JUAN

F.P. Date: 12/90

Gas (mcf/mo) -----

Field: BASIN (FRUITLAND COAL) FT

Oil Cum: 0 bbl

Reservoir: FRUITLAND COAL

Gas Cum: 23.87 mmcf

Operator: EDWARDS J K ASSOC INC

Location: 3A 26N 12W

EXHIBIT 6

Offset Operator Notification Hi Roll 2R Commingling Application

To: Offset Operators

If you have questions, please call George Sharpe at (505) 327-9801, ext. 114. If you have any objections to this application, please notify the NMOCD in writing within 20 days of receipt of this application.

Mr. Paul Thompson
Thompson Engineering
7415 E. Main
Farmington, New Mexico 87402

Mr. Richard Fromm
Whiting Petroleum
1700 Broadway, Suite 2300
Denver, Colorado 80290

Mr. Tom Dugan
Dugan Production Corp.
P.O. Box 420
Farmington, NM 87499-0420

Mr. Max Webb
2705 ½ E. Main St.
Farmington, NM 87402

Mr. Kieth Edwards
Edwards Energy Corp.
1401 17th St., Suite 1400
Denver CO 80202

Texaco Production Inc.
3300 N. Butler Ave.
Farmington, NM 87401