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MERRION

OIL & GAS

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**OIL CONSERVATION
DIVISION**

February 5, 2003

Mr. William Jones
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

**RE: Application for Administrative Approval
Downhole Commingling
Basin Dakota and White Wash Mancos-Gallup Pools
Federal 20 No. 1E
Section 20, T25N, R9W
San Juan County, New Mexico**

Dear Mr. Jones:

Merrion Oil & Gas (Merrion) requests administrative approval for downhole commingling of the Basin Dakota and the White Wash Mancos-Gallup Pools in the subject wellbore. The following information is provided in support of this application.

I. History and Justification

The Federal 20 No. 1E was drilled and completed in 1985 as a Dakota gas well. It has produced approximately 523,000 MCF. It currently produces about 40 MCFD. To extend the life of the well, Merrion proposes to complete the Mancos-Gallup interval and commingle it with the Dakota formation.

II. Proposed Spacing Units

Exhibit 1 is the C-102 plat for the Basin Dakota Pool with a 320 acre spacing unit in the east half of Section 20. Exhibit 2 is the C-102 plat for the White Wash Mancos-Gallup Pool with a 40 acre spacing unit in the SW/4 NE/4 of Section 20.

III. Allocation Methodology

Exhibit 3 shows the Dakota production from the Federal 20 No. 1E while Exhibit 4 shows the production history of the Federal 28 No. 2E, an offset commingled White Wash Mancos-Gallup and Basin Dakota well (the upper zone was added in May 2003). The commingled production from the Federal 20 No. 1E should be similar to the offset well's production. The information on the C-107A application form is based on production from the Federal 28 No. 2E.

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 indicate 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 Mancos and Dakota have been generally determined to be compatible across the basin based on other similar applications to the NMOCD.

V. Cross Flow Between Zones

The reservoir pressure of both zones is estimated to be 1500 psig. Therefore, crossflow is not anticipated to be a problem.

VI. Well Ownership Notification

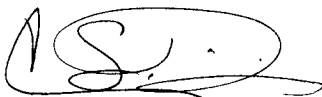
The ownership of the two zones is identical, so no notification is necessary.

VII. Summary

Reserves for the Gallup zone are not sufficient to justify drilling a new well. Commingling the zones will maximize reserves and protect correlative rights. Therefore, we request your approval of this application.

If you have questions or need additional information, please call me at (505)327-9801 ext. 126.

Sincerely,



Connie S. Dinning
Production Engineer

Cc: Steve Hayden, Aztec NMOCD
BLM, Farmington Field Office

File: s/operate/workovers/huerfano area/Federal 20-1E Commingle Just.doc

District I
1625 N. French Drive, Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised June 10, 2003

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

APPLICATION TYPE
☒ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Merrion Oil & Gas Address 610 Reilly Ave. Farmington, NM 87401

Lease Federal 20 Well No. 1E Unit Letter-Section-Township-Range G, 20, 25N, 9W County San Juan

OGRID No. 014634 Property Code 7783 API No. 30-045-26204 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Whitewash Mancos/ Setup DEX		Basin Dakota ✓
Pool Code	64290		71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5413' - 5938'		6437' - 6456'
Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	Not Required		Not Required
Oil Gravity or Gas BTU (Degree API or Gas BTU)	42		1244
Producing, Shut-In or New Zone	New Zone		Producing
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.)	Supporting Data from Fed 28-2E Date: December 2003 Rates: 10 MCFD, 3 BOPD	Date: Rates:	Date: December 2003 Rates: 40 MCFD, 0 BOPD
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 100 % 20%	Oil Gas % %	Oil Gas 0 % 80%

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐

Will commingling decrease the value of production? Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐

NMOCD Reference Case No. applicable to this well: _____

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 working, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

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

SIGNATURE  TITLE Production Engineer DATE February 6, 2003

TYPE OR PRINT NAME Connie S. Dinning TELEPHONE NO. (505) 327-9801 ext. 126

E-MAIL ADDRESS cdinning@merrion.bz

District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe. NM 87505

Form C-102
 Revised August 15, 2000

Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-26204		² Pool Code 71599		³ Pool Name Basin Dakota	
⁴ Property Code 007783		⁵ Property Name Federal 20			⁶ Well Number 1E
⁷ OGRID No. 014634		⁸ Operator Name Merrion Oil & Gas			⁹ Elevation 6664' GR

¹⁰ Surface Location

UL or lot no. G	Section 20	Township 25N	Range 9 W	Lot Idn SW NE	Feet from the 1830	North/South line North	Feet from the 1840	East/West line East	County San Juan
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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
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¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

16				¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>	
				Connie S. Dinning Printed Name Production Engineer Title	
				February 4, 2004 Date	
			¹⁸ SURVEYOR CERTIFICATION <i>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.</i>		
			Date of Survey Signature and Seal of Professional Surveyor:		
			Certificate Number		

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Revised August 15, 2000

Submit to Appropriate District Office
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-26204		² Pool Code 64290	³ Pool Name White Wash Mancos-Gallup
⁴ Property Code 007783	⁵ Property Name Federal 20		⁶ Well Number 1E
⁷ OGRID No. 014634	⁸ Operator Name Merrion Oil & Gas		⁹ Elevation 6664' GR

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
G	20	25N	9 W	SW NE	1830	North	1840	East	San Juan

¹¹ Bottom Hole Location If Different From Surface

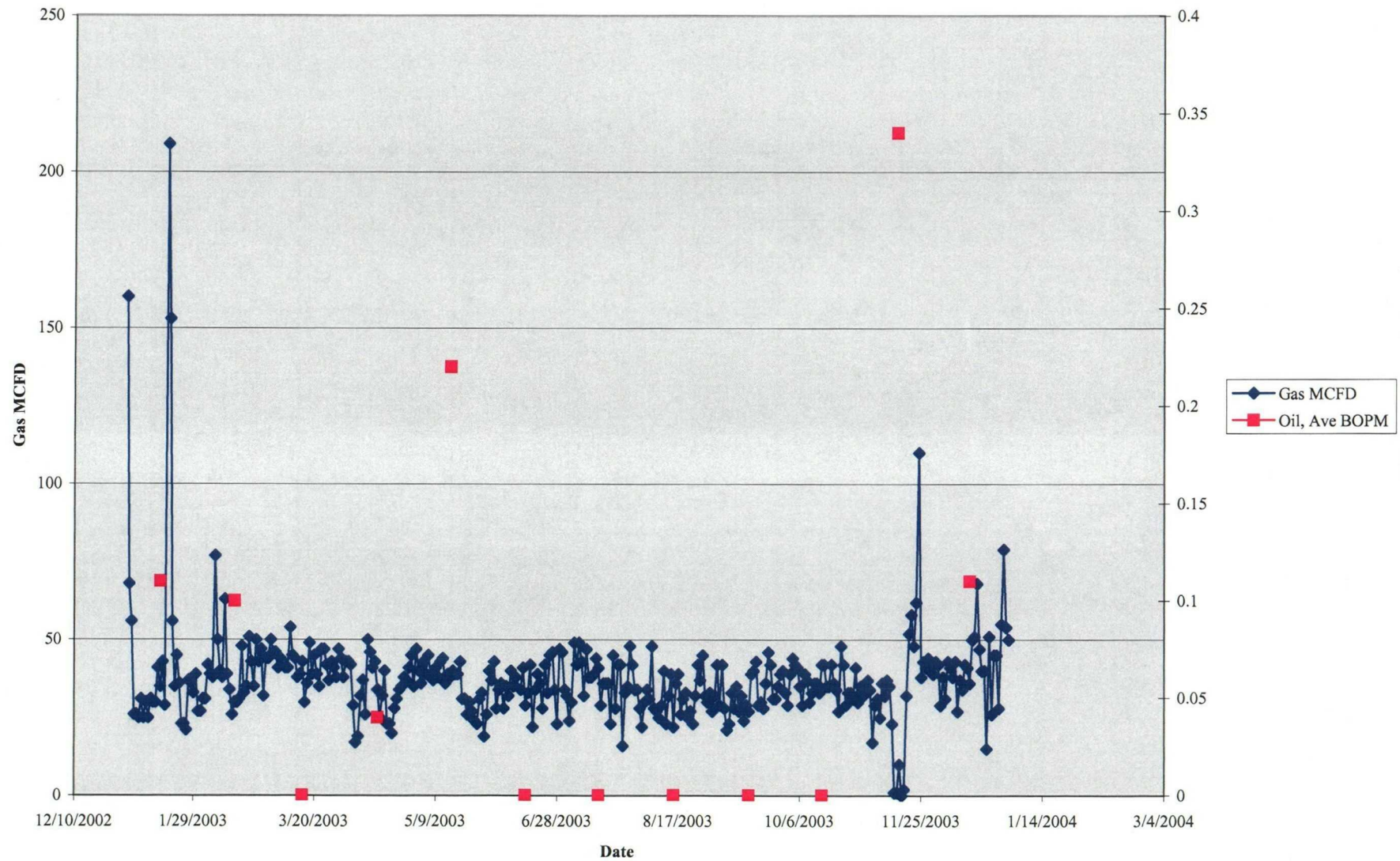
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

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					<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>
					Certificate Number

Federal 20 No. 1E Production



Federal 28 No. 2E Production

