

March 15, 2005

PWVJ0501752 424

PWVJ0501752 424

RECEIVED

MAR 16 2005

Oil Conservation Division
1220 S. Saint Francis Drive

Santa Fe, NM 8750s

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

RE: Application for Administrative Approval
Downhole Commingling
Potwin Pictured Cliffs, Dufers Point Gallup Dakota
Shoofly No. 1
Section 14, T24N R8W
San Juan County, New Mexico

Dear Mr. Jones:

Merrion Oil & Gas (Merrion) requests administrative approval for downhole commingling of the Potwin Pictured Cliffs and the Dufers Point Gallup Dakoa in the subject wellbore. The following information is provided in support of this application.

## I. History and Justification

The Shoofly No. 1 was drilled and completed in 1984 as a Gallup oil well. It produced approximately 23,400 BO through December 2004. The oil rate in September 2004 was about 2.5 BOPD and the gas rate about 10 MCFD. The Gallup was approaching its economic limit, so we did a study and determined that there could be uphole Pictured Cliffs potential.

The pump went down in October 2004 and we decided to add the coal at the point that we moved a rig on to do the pump change. The well has logged off and will not flow.

## II. Proposed Spacing Units

Exhibit 1 is the C-102 plat for the Dufers Point Gallup Dakota Pool, a 160 acre spacing unit in the northwest quarter of Section 14. Exhibit 2 is the C-102 plat for the Potwin Pictured Cliffs, an 80 acre spacing unit in the east half of the northwest quarter of Section 14.

#### III. Allocation Methodology

Exhibit 3 is the decline curve for the Dufers Point Gallup Dakota production. Exhibit 4 is the decline curve for the Mesa No. 2, an offset Potwin Pictured Cliffs producer. Based on the Mesa No. 2 production, we project that the Shoofly No.1 will initially make about 50 MCFD from the Pictured Cliffs. Based on this data, we plan to allocate 100% of the oil

production to the Gallup. Depending upon the actual Pictured Cliffs production, we will adjust the gas allocation, but based on the data we have now, the gas will be allocated 85% to the Pictured Cliffs and 15% to the Gallup.

Merrion proposes to obtain stabilized production tests on the Pictured Cliffs and use a fixed percentage to allocate future production between this zone and the Gallup. 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 Pictured Cliffs and the Gallup have been generally determined to be compatible across the basin based on other similar applications to the NMOCD. The Gallup does not make a significant amount of water in this well, and the Mesa No. 2 offset well only makes about 10 barrels of water per month from the Pictured Cliffs.

## V. Cross Flow Between Zones

The reservoir pressure of the Pictured Cliffs is lower than the Gallup, but we anticipate that the liquids will be pumped up the tubing while the gas is produced up the casing/tubing annulus. The small volume of Gallup gas production should not crossflow into the Pictured Cliffs. The surface casing pressure will be about 40 psi, so all the gas will preferentially flow to the surface.

## VI. Well Ownership Notification

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

#### VII. Summary

The well production is marginal under current conditions, but we believe there are additional reserves behind pipe in the Pictured Cliffs. The Potwin Pictured Cliffs would not justify drilling a new wellbore, however commingling with the Gallup will allow recovery of these additional reserves. Therefore, we request your approval of this application.

If you have questions or need additional information, please call me at (505)324-5326.

Sincerely,

Connie S. Dinning Production Engineer

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

File: s/operate/workovers/Huerfano/Shoofly 1 Commingle Just.doc

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

State of New Mexico

Form C-107A Revised June 10, 2003

# District II

1301 W. Grand Avenue, Artesia, NM 88210

# Energy, Minerals and Natural Resources Department

Oil Conservation Division

APPLICATION TYPE

| District III 1000 Rio Brazos Road, Azzec, NM 87410  |   | uth St. Francis Dr.<br>New Mexico 87505                             | Single Well<br>Establish Pre-Approved Pools |  |  |  |
|---|---|---|---|--|--|--|
| District IV   | Santa Pe, I   | New Mexico 87303  | EXISTING WELLBORE                           |  |  |  |
| 1220 S. St. Francis Dr., Santa Fe, NM 87505   | APPLICATION FOR DO  | WNHOLE COMMINGLING  | YesNo                                       |  |  |  |
|   |   | 1 115   | (6)   |  |  |  |
| Merrion Oil & Gas   | 610 Reilly Ave, Farmington, NM  | \$7401  |   |  |  |  |
| Operator<br>NM-16589  | - 1   | dress<br>C-14-24N-8W  | San Juan                                    |  |  |  |
|   |   |   |   |  |  |  |
| Lease   |   | -Section-Township-Range   | County                                      |  |  |  |
| OGRID No. <u>014634</u> Property C  | ode <u>007842</u> API No. <u>30</u>   | 0-045-26133 Lease Type: X   | FederalStateFee                             |  |  |  |
| DATA ELEMENT  | UPPER ZONE  | INTERMEDIATE ZONE   | LOWER ZONE                                  |  |  |  |
| Pool Name   | Potwin Pictured Cliffs  |   | Dufers Point Gallup-Dakota                  |  |  |  |
|   | 83000 /   |   | 19859                                       |  |  |  |
| Pool Code   | 2142' - 2244'   |   | 5540' – 5826'                               |  |  |  |
| Top and Bottom of Pay Section<br>(Perforated or Open-Hole Interval)   | 2172 - 2274   |   |   |  |  |  |
| Method of Production  | Artificial Lift   |   | Artificial Lift                             |  |  |  |
| (Flowing or Artificial Lift)  | 502   |   | 1515  |  |  |  |
| Bottomhole Pressure (Note: Pressure data will not be required if the bottom   | 583 psi   |   | 1515 psi                                    |  |  |  |
| perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)   |   |   |   |  |  |  |
| Oil Gravity or Gas BTU  | 1000 BTU  |   | 1474 BTU                                    |  |  |  |
| (Degree API or Gas BTU)   |   |   |   |  |  |  |
| Producing, Shut-In or<br>New Zone   | New Zone  |   | Producing                                   |  |  |  |
| Date and Oil/Gas/Water Rates of   |   |   |   |  |  |  |
| Last Production. (Note: For new zones with no production history,   | Not yet completed  Date:  | Date:   | Date: 9/30/04                               |  |  |  |
| applicant shall be required to attach production  |   |   |   |  |  |  |
| estimates and supporting data.)   | Rates:  | Rates:  | Rates:                                      |  |  |  |
| Fixed Allocation Percentage   | Oil 0 Gas 50 mcfd   | Oil Gas   | Oil 2.7 Gas 9 mcfd                          |  |  |  |
| (Note: If allocation is based upon something other<br>than current or past production, supporting data or   | 0.0/  | 0/  | 1000/                                       |  |  |  |
| explanation will be required.)  | 0 % 85%   | % %   | 100% 15%                                    |  |  |  |
|   | ADDITIO   | NAL DATA  |   |  |  |  |
| Ann all scanding marriates and arramiding   |   |   | Vec V Ne                                    |  |  |  |
| Are all working, royalty and overriding If not, have all working, royalty and ov  |   |   | Yes No<br>Yes No                            |  |  |  |
| Are all produced fluids from all commi  | ngled zones compatible with each  | other?  | Yes <u>X</u> No                             |  |  |  |
| Will commingling decrease the value o   | _   |   | Yes No X                                    |  |  |  |
|   | _   |   | 105 NO_ <u>A</u>                            |  |  |  |
| If this well is on, or communitized with or the United States Bureau of Land Ma   |   |   | Yes_XNo                                     |  |  |  |
| NMOCD Reference Case No. applicab   | le to this well:  |   | <del></del>                                 |  |  |  |
| Attachments:  C-102 for each zone to be comming Production curve for each zone for For zones with no production histor Data to support allocation method of Notification list of working, royalty Any additional statements, data or of the statements. | at least one year. (If not available, ry, estimated production rates and sor formula. | , attach explanation.) supporting data. or uncommon interest cases. |   |  |  |  |
|   | PRE-APPRO   | OVED POOLS  |   |  |  |  |
| If application is   | to establish Pre-Approved Pools, t  | the following additional information w                              | rill be required:                           |  |  |  |
| List of other orders approving downhol List of all operators within the proposed Proof that all operators within the proposed Protection of the proposed of the processors data.  | d Pre-Approved Pools  | ••  |   |  |  |  |

| I hereby certify that the information above is true and | complete to t | he best of my knowledge an | d belief.    |         |
|---|---------------|----------------------------|--------------|---------|
| SIGNATURE   | TITLE         | Production Engineer        | DATE         | 3/15/05 |
| TYPE OR PRINT NAME Connie Dinning                       |               | TELEPHONE NO. (_50         | 05_)_324-532 | 26      |
| E-MAIL ADDRESS cdinning@merrion.bz                      | •••           |                            |              |         |

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

12 Dedicated Acres

160

<sup>13</sup> Joint or Infill

14 Consolidation Code

<sup>15</sup> Order No.

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

# State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102 Revised June 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

|  |                           | V               | VELL LO     | OCATIO1                         | N AND ACR                          | EAGE DEDIC  | CATION PLA    | T    |     |                                    |
|--|---------------------------|-----------------|-------------|---------------------------------|------------------------------------|---|---------------|------|-----|------------------------------------|
| 1  | API Numbe<br>30-045-26133 | =               |             | <sup>2</sup> Pool Code<br>19859 | :                                  | oofly  Itor Name Oil & Gas  CC Location  Re North/South line Feet from the East/West line 1650' West  If Different From Surface |               |      |     |                                    |
| <sup>4</sup> Property<br>00784               |                           |                 |             |                                 | <sup>5</sup> Property I<br>Shoofly |   |               |      | 6 1 | Well Number<br>1                   |
| <sup>7</sup> OGRIE<br>146:                   |                           |                 |             |                                 | <sup>8</sup> Operator Merrion Oil  |   |               |      | !   | <sup>9</sup> Elevation<br>6939' GL |
|  |                           |                 |             |                                 | <sup>10</sup> Surface              | Location  |               |      |     |                                    |
| UL or lot no.<br>C                           | Section<br>14             | Township<br>24N | Range<br>8W | Lot Idn<br>nenw                 | Feet from the<br>790'              |   |               |      |     | County<br>San Juan                 |
| <u>.                                    </u> |                           | •               | 11 Be       | ottom Ho                        | le Location I                      | f Different From  | m Surface     |      |     |                                    |
| UL or lot no.                                | Section                   | Township        | Range       | Lot Idn                         | Feet from the                      | North/South line  | Feet from the | West |     | County                             |

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

|           | DIMIND   | 1100 0111111111111111111111111111111111 | MITROVEDET THE |  |
|-----------|----------|---|----------------|--|
| 16        |          |   |                | <sup>17</sup> OPERATOR CERTIFICATION                   |
|           | 790' fnl |   |                | I hereby certify that the information contained herein |
|           | /// 1111 |   |                | is true and complete to the best of my knowledge and   |
|           |          |   |                | belief.  |
|           | 0        |   |                |  |
| 1650' fwl |          |   |                | Signature  |
|           |          |   |                | )  |
|           |          |   |                | Connie Dinning   |
|           |          |   |                | Printed Name   |
|           | NM-16589 |   |                | Production Engineer, cdinning@merrion.bz               |
|           |          |   |                | Title and E-mail Address                               |
|           |          |   | ·              | 3/15/05  |
|           |          |   |                | Date   |
|           |          |   |                |  |
|           |          |   |                | <sup>18</sup> SURVEYOR CERTIFICATION                   |
|           |          |   |                | 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.     |
|           |          |   |                |  |
|           |          |   |                | Date of Survey   |
|           |          | •                                       |                | Signature and Seal of Professional Surveyor:           |
|           |          |   |                |  |
|           |          |   |                |  |
|           |          |   |                |  |
|           |          |   |                |  |
|           |          |   |                | Certificate Number                                     |
|           |          |   |                |  |

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

## State of New Mexico

Energy, Minerals & Natural Resources Department

## **OIL CONSERVATION DIVISION**

1220 South St. Francis Dr.

Form C-102

Revised June 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

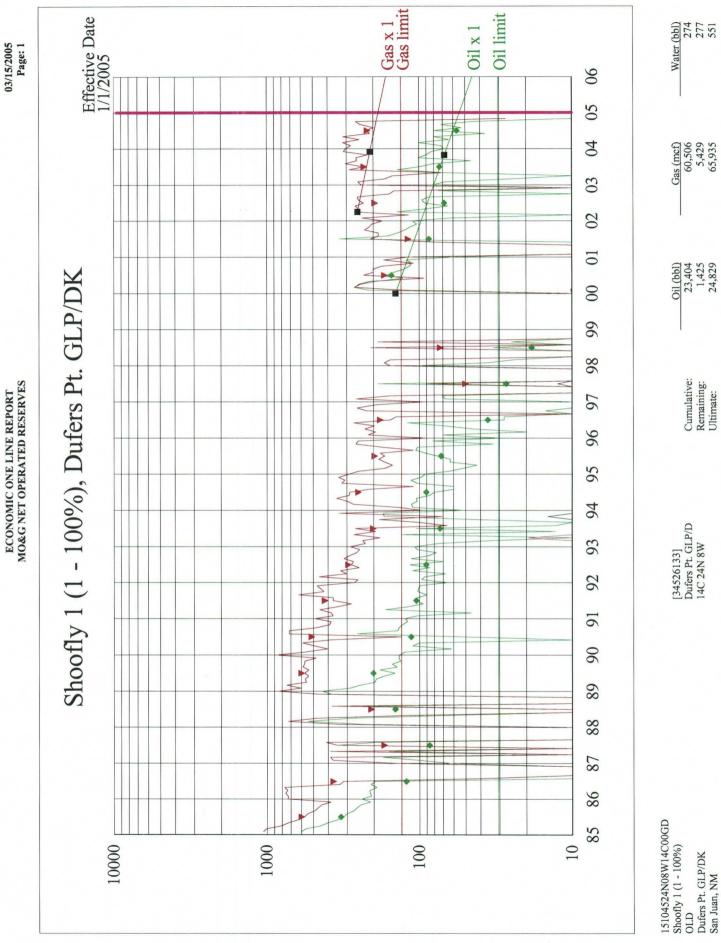
Fee Lease - 3 Copies

| District IV  |                         |   |               |                 | Santa Fe, NI            | M 87505  |                        |                        |                                    |  |
|--|-------------------------|---|---------------|-----------------|-------------------------|--|------------------------|------------------------|------------------------------------|--|
| 1220 S. St. Francis  | Dr., Santa l            | Fe, NM 8750                                     | 5             |                 |                         |  |                        | ☐ AME                  | NDED REPORT                        |  |
|  |                         | 1   | WELL LO       | OCATIO!         | N AND ACR               | EAGE DEDIC                                       | ATION PLA              | T                      |                                    |  |
| <sup>1</sup> API Number <sup>2</sup> Pool Code<br>30-045-26133 83000 |                         |   |               |                 | ;                       | <sup>3</sup> Pool Name<br>Potwin Pictured Cliffs |                        |                        |                                    |  |
| 4 Property Code 5 Pr<br>007842                                       |                         |   |               |                 |                         | Property Name 6 Well Number Shoofly 1            |                        |                        |                                    |  |
| <sup>7</sup> OGRID<br>14634  |                         | <sup>8</sup> Operator Name<br>Merrion Oil & Gas |               |                 |                         |  |                        |                        | <sup>9</sup> Elevation<br>6939' GL |  |
|  |                         |   |               |                 | <sup>10</sup> Surface 1 | Location   |                        |                        |                                    |  |
| UL or lot no.<br>C   | Section<br>14           | Township<br>24N                                 | Range<br>8W   | Lot Idn<br>nenw | Feet from the<br>790'   | North/South line<br>north                        | Feet from the<br>1650' | East/West line<br>West | County<br>San Juan                 |  |
|  |                         | <u> </u>  | 11 Bo         | ottom Ho        | le Location If          | Different Fron                                   | n Surface              |                        |                                    |  |
| UL or lot no.  | Section                 | Township  | Range         | Lot Idn         | Feet from the           | North/South line                                 | Feet from the          | East/West line         | County                             |  |
| <sup>12</sup> Dedicated Acre<br>160                                  | s <sup>13</sup> Joint o | r Infill 14                                     | Consolidation | Code 15 Or      | der No.                 |  | I                      |                        |                                    |  |
| NO ALLOWA  | ABLE WI                 | LL BE AS  |               |                 |                         | NTIL ALL INTER                                   |                        | EEN CONSOLID           | ATED OR A NO                       |  |
| 16   |                         | 1   |               |                 |                         |  |                        |                        |                                    |  |

**OPERATOR CERTIFICATION** I hereby certify that the information contained herein 790' fnl is true and complete to the best of my knowledge and belief. 1650' fwl Signature Connie Dinning Production Engineer, cdinning@merrion.bz NM-16589 Title and E-mail Address 3/15/05 Date <sup>18</sup>SURVEYOR CERTIFICATION 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. Date of Survey Signature and Seal of Professional Surveyor:

Certificate Number





Lease Name: MESA
County, State: SAN JUAN, NM
Operator: DUGAN PRODUCTION CORPORATION
Field: POTWIN
Reservoir: PICTURED CLIFFS
Location: 16 24N 8W SW NE NW



