MERRI

Jones #1
22-32N-13W

September

Mr. Ben Stone
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

RE: C-108 Injection Permit Application
Jones #1
H Section 22, T32N, R13W 30-045-11367
San Juan County, New Mexico

Dear Mr. Stone

Please find enclosed our Application for Authorization to inject into the subject well. We plan to enter the previously abandoned wellbore and convert it to a water disposal well. If you require additional information, please contact me at (505) 327-9801, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

xc: Well File
Frank Chavez, NMOCD, Aztec, NM
BLM, Farmington District
Burlington Resources, Farmington
Lobo Production, Farmington
Hallwood Production, Denver
Thompson Eng. & Prod, Farmington

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Merrion Oil & Gas

Address: 610 Reilly Avenue, Farmington, NM 87401

Contact party: Connie Dinning Phone: 327-9801 ext. 126

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

RECEIVED
SEP 23 19[illegible]
OIL CON. DIV.
DIST. 3

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Connie S. Dinning Title Contract Engineer

Signature: [signature] Date: 9/23/97

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

APPLICATION FOR AUTHORIZATION TO INJECT SECTION III - WELL DATA

Jones #1, Convert to Water Injection

A.

1) **Well** : Jones #1 **Location**: 1840' fnl & 880' fel, Sec 22, T32N, R13W

San Juan County, New Mexico

2) **Casing:**

Size	*Depth Set*	*Hole Size*	*Cement Record*		*TOC*
10 3/4"	225'		150 sx		Circulated
5 1/2"	2600'	7 7/8"	462 sx	**Proposed**	Circulate
7 5/8"	3425'		25sx	Csg cut off @ 2825'	NA

3) **Tubing:** 2 3/8", 4.7#, EUE, Set @ approximately 2,220' KB, no internal lining

4) **Packer:** Baker Lok Set (or equivalent), Retrievable Casing Packer

Set @ 2,220' KB

B.

1) **Name of Pool/Formation:** Undesignated Mesaverde

2) **Injection Interval:** 2276' - 2470'

3) **Original Purpose of Well:** Oil Producer

4) **Well was drilled to 1430' in 1924, reentered in 1960 to 5674', then P&A'd.**

Cement plugs as follows:

- 5100' - 5670'
- 3350' - 3500'
- 450' - 650'
- 200' - 250'
- Surface Plug

5) **The Fruitland Coal is productive in the area. The Cliffhouse is more than 1500' below the Coal we do not anticipate communication.**

Merrion Oil & Gas Corporation

Wellbore Schematic

Jones No. 1

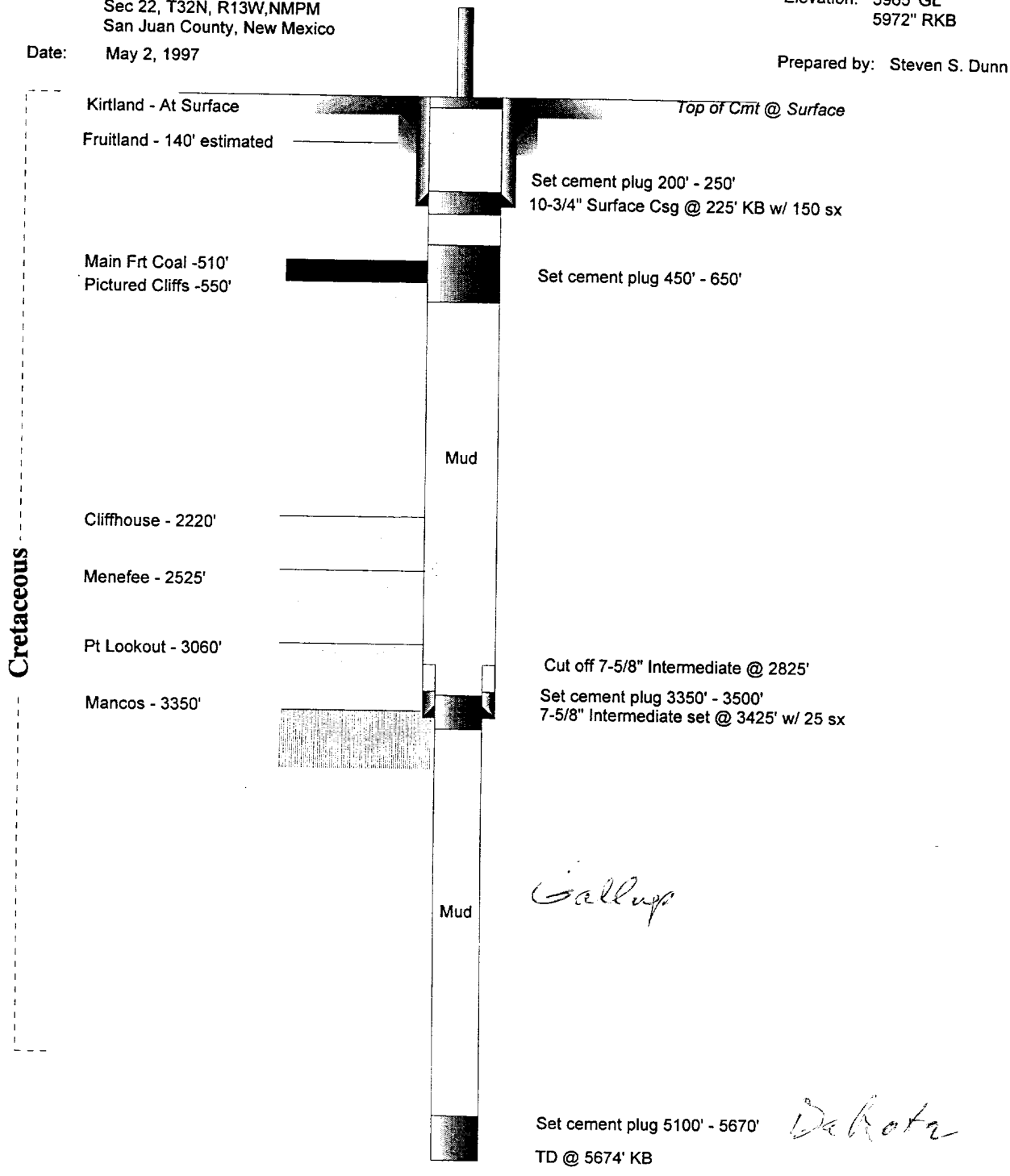
Current Wellbore Configuration

Location: 1840' fnl & 880' fel (se ne)
Sec 22, T32N, R13W,NMPM
San Juan County, New Mexico

Date: May 2, 1997

Elevation: 5965' GL
5972" RKB

Prepared by: Steven S. Dunn



Note: Well drilled in 1960 by Southern Union Gas Co. Prior to that, Farmington Petroleum Syndicate drilled a shallow well (Love #1 to 1430') at the same spot in October, 1924.

V. AREA MAP

KENNETH TAYLOR 1

TAURUS 1

LIBRA 1

SCORPIO 1

STATE LINE 2

STATE LINE 1

1E

18 17 16 15 14 13

UTE DOVE FEDERAL 1

JONES 1

POWELL 1

USA 3M

USA 2E

USA 1M

20 21 22 23 24

HOLLOWAY 1

JOHNS 1

HL WILLROBERTS: HART) 1

32N 13W

HAVASU 1

USA 3

USA 2

USA 4

USA 1

CUL

STEWARD COM 1

CARDON COM – SWD 1

MEAD 47–1

B MONTOYA 25 1M

RIPLEY 2

RIPLEY 26

B MONTOYA 25 1

LA PLATA FEDERAL 1–30 1

29 28 27 26 25

B MONTOYA 25 2

CULPEPP 1

LA PLATA 1

LA PLATA MANCOS UNIT 7

F. MONTOYA 27 1

RIPLEY

RIPLEY 2

RIPLEY 2A

MONTOYA COM 1

MONTOYA COM 1A

LA PLATA 33 2

MONTOYA A 34 MONTOYA 2

MONTOYA B 2

35

PAN AMERICAN STATE COM 1A

WRIGHT STATE COM

LA PL FEDERAL 31 4 1

LA PLATA MANCOS UNIT 3

TAFOYA 1A

TAFOYA 35

MONTOYA 1

31 32 33 34 35 36

ROBINSON BROTHERS 00001M

ROBINSON BROTHERS 1

TAFOYA 1

MONTOYA 1M

PAN AM STATE N2 36

WRIGHT STATE COM 1E

LA PLATA STICHLIC LATA MANCOS UNIT 1

JOHNS 1

LA PLATA 33 1

APPLICATION FOR AUTHORIZATION TO INJECT, SECTION VI

Joes #1, Convert to Water Injection
Wells Within Area of Review
Well Data
There are no wells within the area of review which penetrate the subject formation.

APPLICATION FOR AUTHORIZATION TO INJECT

Jones #1, Convert to Water Injection

VII. Operational Data

1) **Ave Rate:** 1-1.5 BPM **Daily Rate:** 2000 bpd (max)

2) **Open System**

3) **Ave. Pressure:** 600 psi **Max Pressure:** 1000 psi

4) **Injection water is produced from Fruitland Coal (Analysis attached)**

5) **Formation water salinity, gathered from Burlington Resources Study of Rw values. In this area the Mesaverde Rw is 0.2 ohms. This translates to about 25,000 ppm TDS.**

VIII. Geological Data

Injection Zone: Mesaverde (Cliffhouse)

Thickness: approx. = 300'

Top: 2220'

IX. Stimulation Program

The well will be fractured with slick water and 50,000# of 20/40 sand to improve conductivity. (completion procedure and stimulation plan are attached)

X. Logging and Test Data

All logs are on file with the OCD office in Aztec

XI. Fresh Water Analysis

There are no known water zones <10,000 ppm in the area of review except the formation from which the water is produced.

XII. Egineering and Geology Review to Protect Fresh Water

According to engineering and geological review, there are no known formations in the area of review below the Mesaverde which contain water with < 10,000 ppm TDS. The Fruitland Coal produces relatively fresh water (about 2000 ppm), but it is 1500' above the Mesaverde, and it is a producing gas zone. There is no reason to believe the injected water would migrate back up to the coal zone however if it did, it would be returning to its point of origin. According to logs in the area, the Rw of the Mesaverde is about 0.2 ohms, this translates to almost 25,000 ppm TDS. There are domestic water wells in the general area, outside the area of review. These produce from shallow aquifers and their water characteristics are similar to the Fruitland coal water. Again there is no reason to expect communication.

Merrion Oil & Gas Corporation

Workover Procedure

September 11, 1997

Well:	Jones #1	**Field:**	Mesaverde
Location:	1840' fnl & 880' fel (se ne)	**Elevation:**	5,965' GL
	Sec. 22, T32N, R13W, NMPM		5,972' KB
	San Juan County, New Mexico	**By:**	Connie Dinning

Procedure:

Prior to Move In

1. Set rig anchors.
2. Haul in 75 jts. of 5 1/2", 15.5#, J-55 production casing.
3. Haul in 72 jts. of 2 3/8" production tubing.
4. Dig small pit, 10' X 10'.
5. Weld flange onto surface casing stub to attach BOPs / wellhead.
6. Haul in 400 bbl frac tank and fill w/ produced water from the Powell Lease (may require several days' production)
7. Notify NMOCD of expected date for MIT.

Drill out Plugs, Set Casing

1. MIRU workover rig. NU BOPs and drill out cement plugs @ surface, surface casing shoe (225') and Fruitland Coal/PC (450'-650') with 7 7/8" bit. Note: ***Drilling mud in hole below third plug***.
2. Clean out to 2600' KB, RU to run casing.
3. RIH w/ ±2600' of 5 1/2" casing, set shoe @ ±2600'.
4. Cement casing w/ 462sx (546 cf) Class B cement, circulate to surface. WOC.

Peforate Mesaverde and Test

1. RU Petro Wireline and perforate the following intervals w/ 4 jspf, .5" diameter: 2276' - 82', 2290' - 2300', 2315' - 30', 2340' - 51', 2354' - 60', 2420' - 70'.
2. RIH w/ 5 1/2" full bore Lok Set packer with on/off tool and profile nipple on 2 3/8" injection tubing.
3. Set packer @ 2220' KB.
4. RU Cementers Inc. to pump step rate test into the Cliffhouse formation at 1/2 bpm, 1 bpm, 1 1/2 bpm and 2 bpm. Pump each step 30 minutes or until pressure stabilizes. Record pressures and flowrates on chart recorder. Pump remaining water down tubing after test is complete.
5. Frac Cliffhouse w/ slick water and 50,000# 20/40 sand as per attached procedure.
6. Perform mechanical integrity test w/ NMOCD witness - pressure up on casing / tubing annulus to 300 psi. Hold for 30 minutes. Record pressure with chart recorder.
7. Unset packer, circulate packer fluid. Set packer. RD Cementers Inc.
8. ND BOPs, NU WH. Put well on to injection.

Merrion Oil & Gas Corporation

Wellbore Schematic

Jones No. 1

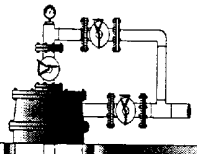
Proposed Wellbore Configuration

Location: 1840' fnl & 880' fel (se ne)
Sec 22, T32N, R13W,NMPM
San Juan County, New Mexico

Date: September 12, 1997

Elevation: 5965' GL
5972" RKB

Prepared by: Connie Dinning



Kirtland - At Surface

Fruitland - 140' estimated

Top of Cmt @ Surface

10-3/4" Surface Csg @ 225' KB w/ 150 sx

Main Frt Coal -510'

Pictured Cliffs -550'

Cretaceous

Cliffhouse - 2220'

2 3/8" tubing @ 2220' KB, 5 1/2" Lok Set full bore packer, on/off tool and profile nipple.

Cliffhouse perfs: 2276' - 2470', various intervals, 4 jspf, total 400 holes

Menefee - 2525'

5-1/2", 15.5#, J-55 Production Casing set @ 2600' w/ 462 sx

Pt Lookout - 3060'

Cut off 7-5/8" Intermediate @ 2825'

Mancos - 3350'

Set cement plug 3350' - 3500'
7-5/8" Intermediate set @ 3425' w/ 25 sx

Mud

Set cement plug 5100' - 5670'

TD @ 5674' KB

Note: Well drilled in 1960 by Southern Union Gas Co. Prior to that, Farmington Petroleum Syndicate drilled a shallow well (Love #1 to 1430') at the same spot in October, 1924.

WATER TO BE INJECTED

FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-01

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "P" POWELL #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Calcium, Total Method 215.2 * Analyzed by: VJ Date: 09/10/97	18		mg/L
Chloride Method 325.3 * Analyzed by: VJ Date: 09/17/97	150		mg/L
Carbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: VJ Date: 09/18/97	Nil		mg/L
Bicarbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: VJ Date: 09/18/97	1140		mg/L
Magnesium BY CALCULATION Analyzed by: VJ Date: 09/17/97	6.08	0.1	mg/L

NIL - Defined in COMMENTS below.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Pamela Cameron
SPL, Inc.

FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-01

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "P" Powell #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
pH Method 150.1 * Analyzed by: VJ Date: 09/10/97	8.21		
Resistivity Method 120.1 * Analyzed by: VJ Date: 09/09/97	1.877		Mohms-cm
Sulfate Method 375.4 * Analyzed by: VJ Date: 09/11/97	6.30	1	mg/L
Specific Gravity ASTM D1429 Analyzed by: VJ Date: 09/16/97	1.003		g/cm3
Total Dissolved Solids Method CALCULATION Analyzed by: VJ Date: 09/18/97	1300		mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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SPL, Inc.

FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-01

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "P" POWELL#1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Potassium, Total Method 6010A *** Analyzed by: PS Date: 09/16/97	4	2	mg/L
Sodium, Total Method 6010A *** Analyzed by: PS Date: 09/16/97	421	0.5	mg/L
Benzene Method 8020A Analyzed by: HS Date: 09/13/97	ND	1.0	ppb
Ethylbenzene Method 8020A Analyzed by: HS Date: 09/13/97	ND	1.0	ppb

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-01

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "P" Powell #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Toluene Method 8020A Analyzed by: HS Date: 09/13/97	ND	1.0	ppb
Total Xylene Method 8020A Analyzed by: HS Date: 09/13/97	ND	1.0	ppb
Total Volatile Aromatic Hydrocarbons Method 8020A Analyzed by: Date:	ND		ppb

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc.

WATER TO BE INJECTED

FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-02

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "H" HANASH #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Calcium, Total Method 215.2 * Analyzed by: VJ Date: 09/10/97	8.0		mg/L
Chloride Method 325.3 * Analyzed by: VJ Date: 09/17/97	275		mg/L
Carbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: VJ Date: 09/18/97	Nil		mg/L
Bicarbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: VJ Date: 09/18/97	1795		mg/L
Magnesium BY CALCULATION Analyzed by: VJ Date: 09/17/97	4.86	0.1	mg/L

NIL - Defined in COMMENTS below.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Danica Carmen
SPL, Inc.

FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-02

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "H" HARVASU #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
pH Method 150.1 * Analyzed by: VJ Date: 09/10/97	8.49		
Resistivity Method 120.1 * Analyzed by: VJ Date: 09/09/97	3.47		Mohms-cm
Sulfate Method 375.4 * Analyzed by: VJ Date: 09/11/97	4.26	1	mg/L
Specific Gravity ASTM D1429 Analyzed by: VJ Date: 09/16/97	1.004		g/cm3
Total Dissolved Solids Method CALCULATION Analyzed by: VJ Date: 09/17/97	2230		mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-02

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "H" Harvash #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Potassium, Total Method 6010A *** Analyzed by: PS Date: 09/16/97	3	2	mg/L
Sodium, Total Method 6010A *** Analyzed by: PS Date: 09/16/97	812	5	mg/L
Benzene Method 8020A Analyzed by: HS Date: 09/14/97	ND	5.0	ppb
Ethylbenzene Method 8020A Analyzed by: HS Date: 09/14/97	ND	5.0	ppb

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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FARMINGTON LABORATORY
P.O. BOX 1289
FARMINGTON, NEW MEXICO 87499-1289
PHONE (505) 326-2588

Certificate of Analysis No. F2-9709053-02

Merrion Oil and Gas
610 Riely
Farmington, NM 87401
ATTN: Connie Dining

DATE: 09/22/97

PROJECT: Farmington
SITE:
SAMPLED BY:
SAMPLE ID: Sample "H" Navasu #1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 09/08/97
DATE RECEIVED: 09/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Toluene Method 8020A Analyzed by: HS Date: 09/14/97	ND	5.0	ppb
Total Xylene Method 8020A Analyzed by: HS Date: 09/14/97	ND	5.0	ppb
Total Volatile Aromatic Hydrocarbons Method 8020A Analyzed by: Date:	ND		ppb

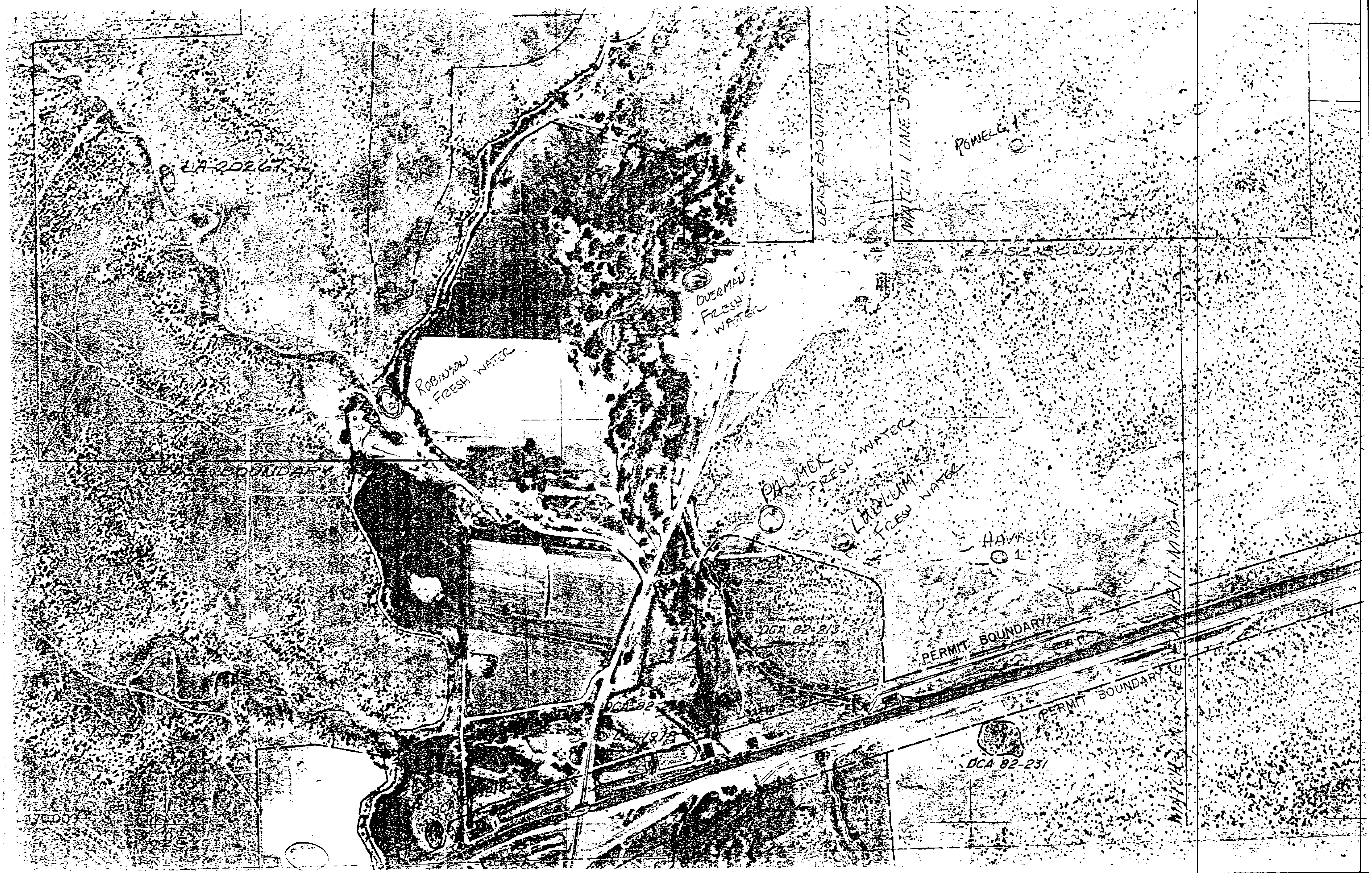
ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc.

XI. MAP OF WATER WELLS AND WATER ANALYSES



LA 20261
LEASE BOUNDARY
MATCH LINE SEE EAST
POWELL 1
LEASE BOUNDARY
OVERMAN FRESH WATER
ROBINSON FRESH WATER
LEASE BOUNDARY
PALMER FRESH WATER
LUDLUM FRESH WATER
HAWASH 1
DCA 82-213
PERMIT BOUNDARY
PERMIT BOUNDARY
DCA 82
DCA 82-231
MATCH LINE SEE

CDS Laboratories
75 Suttle Street
PO Box 2605
Durango, CO 81302

Phone:(970)-247-4220
Fax :(970)-247-4227

Report Date: 09/04/97

ANALYSIS REPORT

Attn:

MERRION OIL & GAS
LEE LUDLUM
1720 HWY 170
LA PLATA NM 87418

Paul Overman

Our Lab #: A97-133207
Sample ID: MODEL WX 203
Date Login: 08/25/97
Date Rec'd: 08/25/97

COLLECTION INFORMATION

Date/Time/By: 08/25/97 0815 P STROH
Location:

Lab#	Testname	Result	Units
A97-133207	Methane	< 0.02	mg/L
	Total Dissolved Solids	840	mg/L

Approved By: Cynthia Mc Checked By: CB

CDS Laboratories
75 Suttle Street
PO Box 2605
Durango, CO 81302

Phone:(970)-247-4220
Fax :(970)-247-4227

Report Date: 09/04/97

ANALYSIS REPORT

Attn:

MERRION OIL & GAS
LEE LUDLUM
1720 HWY 170
LA PLATA NM 87418

Fran Robinson

Our Lab #: A97-133206
Sample ID: HOUSE N GARDEN ORANGE HYD
Date Login: 08/25/97
Date Rec'd: 08/25/97

COLLECTION INFORMATION

Date/Time/By: 08/25/97 0841 P STROH
Location:

Lab#	Testname	Result	Units
A97-133206	Methane	< 0.02	mg/L
	Total Dissolved Solids	1050	mg/L

Approved By: Cynthia Mac Checked By: CB

CDS Laboratories
75 Suttle Street
PO Box 2605
Durango, CO 81302

Phone:(970)-247-4220
Fax :(970)-247-4227

Report Date: 09/04/97

ANALYSIS REPORT

Attn:

MERRION OIL & GAS
LEE LUDLUM
1720 HWY 170
LA PLATA NM 87418

Waymen Palmer

Our Lab #: A97-133205
Sample ID: HOUSE TAP RIGHT OF DOOR
Date Login: 08/25/97
Date Rec'd: 08/25/97

COLLECTION INFORMATION

Date/Time/By: 08/25/97 0905 P STROH
Location:

Lab#	Testname	Result	Units
A97-133205	Methane	< 0.02	mg/L
	Total Dissolved Solids	2140	mg/L

Approved By: Cynthia Mer Checked By: CB

CDS Laboratories
75 Suttle Street
PO Box 2605
Durango, CO 81302

Phone:(970)-247-4220
Fax :(970)-247-4227

Report Date: 09/04/97

ANALYSIS REPORT

Attn:

MERRION OIL & GAS
LEE LUDLUM
1720 HWY 170
LA PLATA NM 87418

Our Lab #: A97-133204
Sample ID: WELL TAP N FRONT OF HOUSE
Date Login: 08/25/97
Date Rec'd: 08/25/97

COLLECTION INFORMATION

Date/Time/By: 08/25/97 0926 P STROH
Location:

Lab#	Testname	Result	Units
A97-133204	Methane	< 0.02	mg/L
	Total Dissolved Solids	1520	mg/L

Approved By: Cynthia Pina Checked By: CB

MERRION

Oil & Gas

September 22, 1997

Burlington Resources
P.O. Box 4289
Farmington, NM 87499

RE: C-108 Injection Permit Application
Jones #1
Section 22, T32N, R13W
San Juan County, New Mexico

Gentlemen

We are planning to convert the subject wellbore to a water injection well in the Mesaverde formation to dispose of produced water from the Fruitland Coal formation. Attached is a copy of the state permit application.

The well is located adjacent to your lease or leases in the location listed above. We are therefore required by the state to notify you of our plans. Objections or requests for hearing should be filed within 30 days to:

NM Oil Conservation Commission
2040 S. Pacheco
Santa Fe, NM 87501

If you require additional information, please contact me at (505) 327-9801, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

xc: Unit File
Crystal Williams
Ben Stone, NMOCD, Santa Fe

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

MERRION

Oil & Gas

September 22, 1997

Hallwood Petroleum Inc.
P.O. Box 378111
Denver, CO 80237

RE: C-108 Injection Permit Application
Jones #1
Section 22, T32N, R13W
San Juan County, New Mexico

Gentlemen

We are planning to convert the subject wellbore to a water injection well in the Mesaverde formation to dispose of produced water from the Fruitland Coal formation. Attached is a copy of the state permit application.

The well is located adjacent to your lease or leases in the location listed above. We are therefore required by the state to notify you of our plans. Objections or requests for hearing should be filed within 30 days to:

NM Oil Conservation Commission
2040 S. Pacheco
Santa Fe, NM 87501

If you require additional information, please contact me at (505) 327-9801, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

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Crystal Williams
Ben Stone, NMOCD, Santa Fe

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

MERRION

Oil & Gas

September 22, 1997

Lobo Production Inc.
555 E. Main
Farmington, NM 87402

RE: C-108 Injection Permit Application
Jones #1
Section 22, T32N, R13W
San Juan County, New Mexico

Gentlemen

We are planning to convert the subject wellbore to a water injection well in the Mesaverde formation to dispose of produced water from the Fruitland Coal formation. Attached is a copy of the state permit application.

The well is located adjacent to your lease or leases in the location listed above. We are therefore required by the state to notify you of our plans. Objections or requests for hearing should be filed within 30 days to:

NM Oil Conservation Commission
2040 S. Pacheco
Santa Fe, NM 87501

If you require additional information, please contact me at (505) 327-9801, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

xc: Unit File
Crystal Williams
Ben Stone, NMOCD, Santa Fe

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

MERRION

Oil & Gas

September 22, 1997

Thompson Engineering & Production
7415 E. Main
Farmington, NM 87402

RE: C-108 Injection Permit Application
Jones #1
Section 22, T32N, R13W
San Juan County, New Mexico

Gentlemen

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2040 S. Pacheco
Santa Fe, NM 87501

If you require additional information, please contact me at (505) 327-9801, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

xc: Unit File
Crystal Williams
Ben Stone, NMOCD, Santa Fe

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

AFFIDAVIT OF PUBLICATION

No. 38527

STATE OF NEW MEXICO
County of San Juan:

DENISE H. HENSON being duly sworn says: That she is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Monday, September 22, 1997;

and the cost of publication is: $19.99

Denise H. Henson

On 9-23-97 DENISE H. HENSON appeared before me, whom I know personally to be the person who signed the above document.

Reese Nelson

My Commission Expires November 1, 2000

COPY OF PUBLICATION

Legals

PUBLIC NOTICE

Merrion Oil & Gas
610 Reilly Avenue
Farmington, NM 87401
Attn: Connie Dinning

Merrion Oil & Gas proposes to re-enter a previously plugged and abandoned wellbore and convert it to a water injection well to disposes of produced water from the Fruitland Coal formation.

Injection Well Location: 1850' fnl & 880' fel, Section 22, T32N, R13W, San Juan County, New Mexico
Injection Formation: Mesaverde
Depth of Injection zone: 2220'
Maximum Pressure: 1000 psi.
Maximum Rate: 2000 bpd
Interested parties must file objections or request for hearing with the Oil Conservation Division, 2040 S. Pacheco St., Santa Fe, New Mexico 87505 within 15 days of this notice.

Legal No. 38527 published in The Daily Times, Farmington, New Mexico, on Monday, September 22, 1997.