

District I
PO Box 1988, Hobbs, NM 88241-1988
District II
PO Drawer DD, Artesia, NM 88211-8719
District III
1000 Rio Grande 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 10, 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

API Number 30-043-20175	Post Code 20430	Post Name Eagle Mesa Entrada
Property Code 16552 12785	Property Name EMU	Well Number 1
GRID No. 014634	Operator Name Merrion Oil & Gas Corp.	Elevation 6698' GR

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
M	12	19N	04W	SWSW	460	South	330	West	Sandoval

11 Bottom Hole Location If Different From Surface

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

12 Distances Across	13 Joint or Infill	14 Commencement Code	15 Order No.
40			

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	RECEIVED OCT - 4 1995 OIL CON. DIV. DIST. 3	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief. Signature Steven S. Dunn Printed Name Operations Manager Title 3/08/95 Date
		18 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

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: (505) 327-9801
- 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.
see attachments
- 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. Attachment
- * 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. Attachment
- VII. Attach data on the proposed operation, including: Attachments
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.). Attachments
- *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. Attachment
- IX. Describe the proposed stimulation program, if any. Attachment
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.) on file
- * 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. No Fresh Water
- 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. Attachment
- 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 Dinning Title: Contract Engineer
Signature: [Signature] Date: 9/26/96
- * 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. _____

Bond Log
Change schematic
C103

SECTION III

Merrion Oil & Gas Corporation

Wellbore Schematic

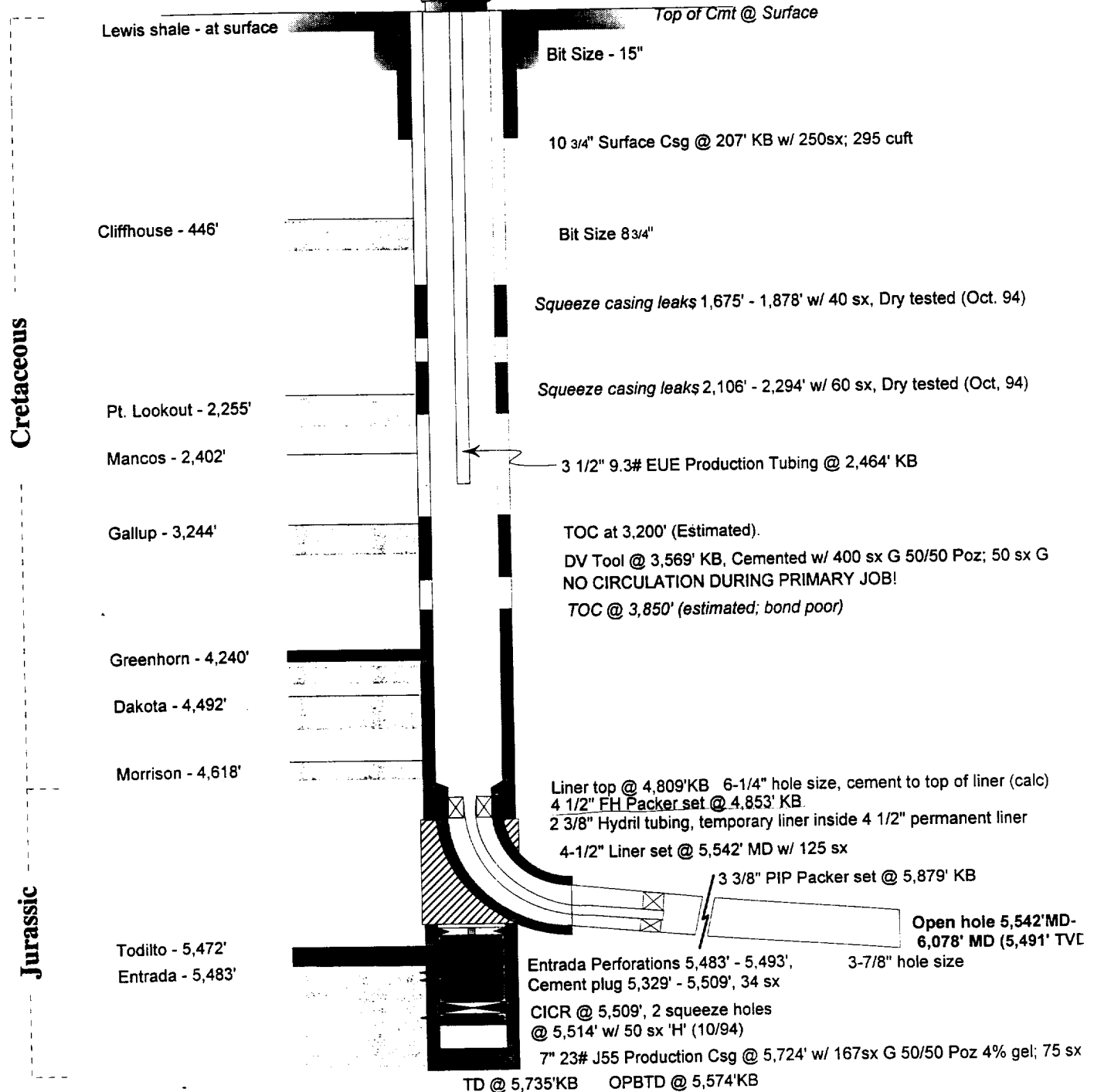
EMU H No. 1

Horizontal Wellbore Configuration

Location: THL: 460' fsl & 330' fwl (sw sw), Sec 12
 BHL: 196' fnl & 43' fwl (nw nw), Sec 13
 T19N, R04W
 Sandoval Co, New Mexico
 Date: September 20, 1996

Elevation: 6,698' GL
 6,711' RKB

Prepared by: Connie Dinning



WELL DATA:

CUM GAS:
 CUM OIL:
 SPUD: Jul 28, 1975
 COMPLETED: Aug 25, 1975

CAPACITIES:
 7" 23# - 0.0394 bb/ft

CURRENT SICP:
 CURRENT SITP:
 LINE PRESSURE:
 OIL TRANSPORTER: Giant

3225-1354
Gayle

10800

5450
5466
5483



Merrion Oil & Gas Corporation

Wellbore Schematic

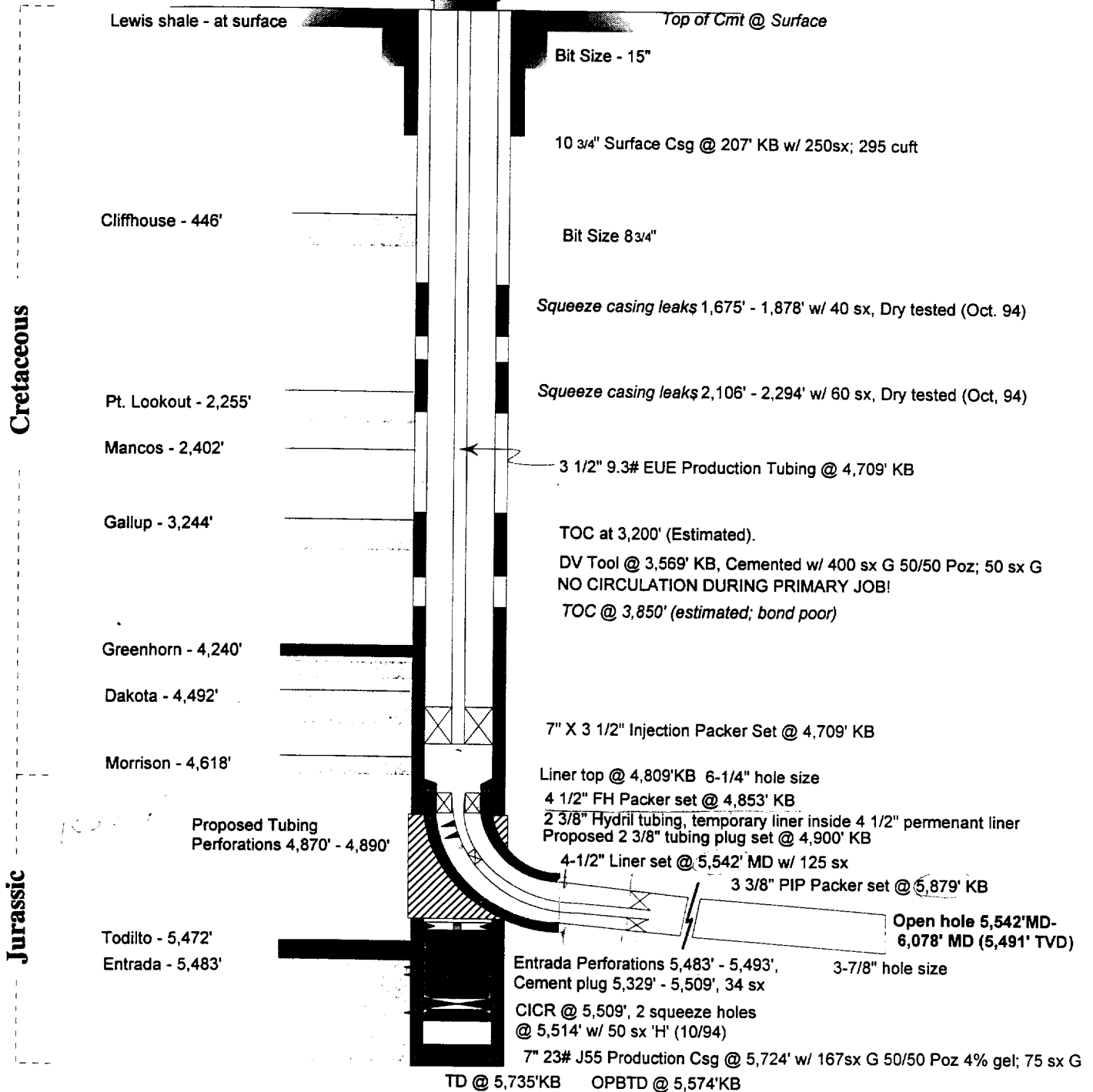
EMU H No. 1

Proposed Injection Configuration

Location: THL: 460' fsl & 330' fwl (sw sw), Sec 12
BHL: 196' fnl & 43' fwl (nw nw), Sec 13
T19N, R04W
Sandoval Co, New Mexico
Date: September 20, 1996

Elevation: 6,698' GL
6,711' RKB

Prepared by: Connie Dinning



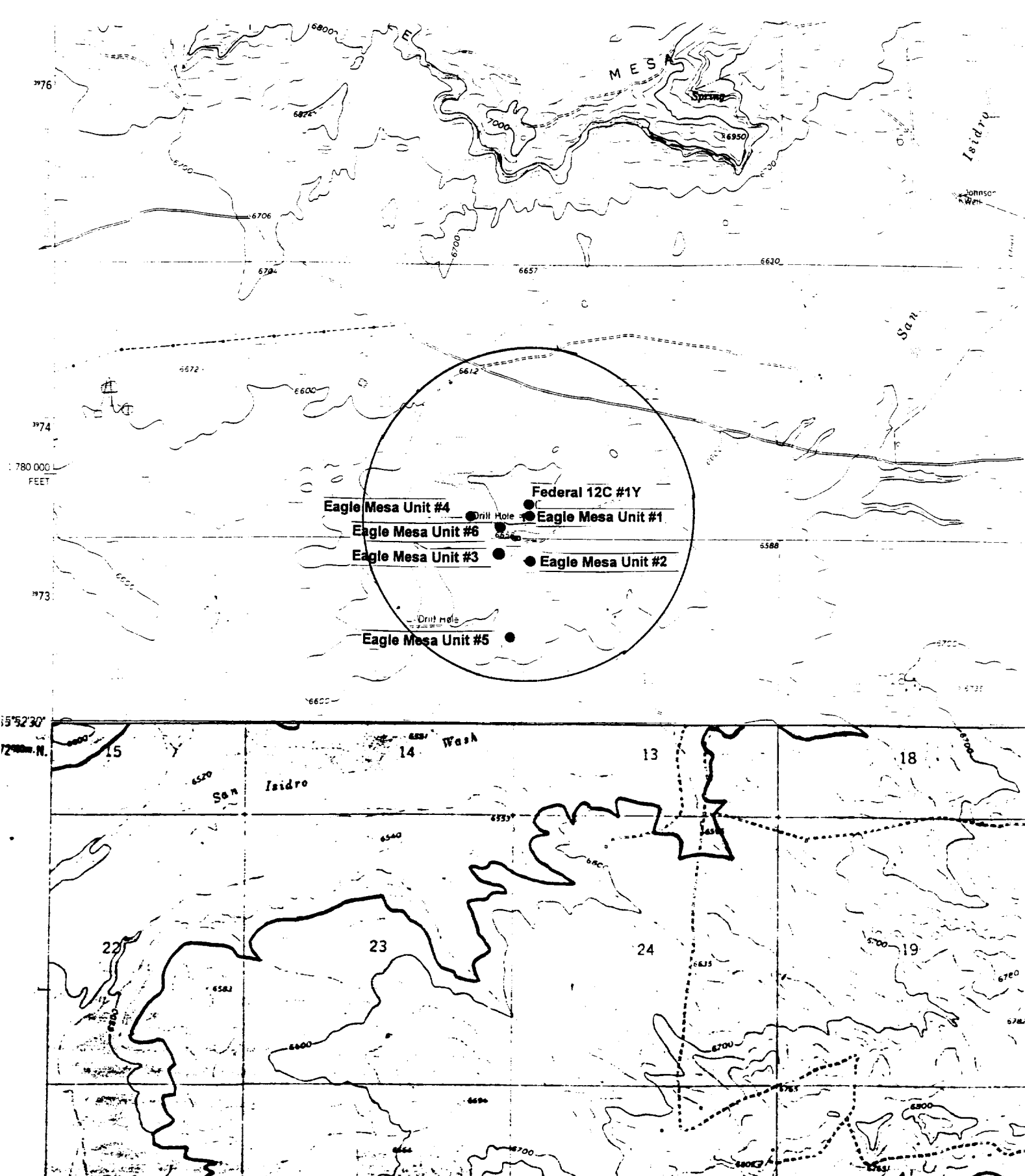
WELL DATA:

CUM GAS:
CUM OIL:
SPUD: Jul 28, 1975
COMPLETED: Aug 25, 1975

CAPACITIES:
7" 23# - 0.0394 bbl/ft

CURRENT SICP:
CURRENT SITP:
LINE PRESSURE:
OIL TRANSPORTER: Giant

SECTION V



Application for Authorization to Inject - Section V

Application for Authorization to Inject

The map on the preceding page indicates a drill hole on the border of the 1/2 mile radius area of review. There is no record of any wellbore at this location in the Dwight's data nor in the NMOCD files in the Aztec office. Field inspection of the site yielded no further information. There was nothing to indicate that a well of any sort existed at this location.

Eagle Mesa Unit #1, Convert to Water Injection									
Wells Within Area of Review									
		Well Data							
Well Name	Type	Construction		Depth Set	Hole Size	Cement Record	Spud Date	TD	
		Casing Size/Grade	Wt., lb/ft						
Eagle Mesa Unit #2	Oil	10 3/4", J-55	40.5	228'	15"	Surface, 200 sx	3/21/95	6506'	
Eagle Mesa Entrada		7", J-55	23#	5355'	8 3/4"	Total 705 sx, 2 stages		TVD =	
Horizontal Wellbore		5 1/2", J-55	15.5#	5570'	8 3/4"	Cemented on 1st Stg		5435'	
Location		Surface: 430' fnl & 330' fwl,		Sec 13					
		Top Prod: 765' fnl & 271' fwl		T19N					
		TD: 1656' fnl & 90' fel, Sec 14		R4W	Sandoval County, NM				
Completion		Open Hole, No Stimulation							
Well Name	Type	Construction		Depth Set	Hole Size	Cement Record	Spud Date	TD	
		Casing Size/Grade	Wt., lb/ft						
Eagle Mesa Unit #3	Oil	10 3/4"		197'	15"	Surface, 200 sx	10/21/75	5662'	
Eagle Mesa Entrada		7"		5347'	8 3/4"	2 stages			
		5 1/2"		5590'	8 3/4"	578 sx, 365 sx			
Location		330' fnl & 330' fel, Sec 14, T19N, R4W		Sandoval County, NM					
Completion		Perforated 5442' - 5460', No Stimulation							

APPLICATION FOR AUTHORIZATION TO INJECT, SECTION VI

Plugged and Abandoned - 3/11/96									
Well Name	Type	Construction						Spud Date	TD
		Casing Size/Grade	Wt., lb/ft	Depth Set	Hole Size	Cement Record			
Eagle Mesa Unit #4	SWD	8 5/8"	23#	229'	12 1/4"	150 sx		9/19/75	3700'
		5 1/2"	15.5#	3685'	7 7/8"	2 stages: 126 sx, 450 sx			
Location	460' fsl & 800' fel, Sec 11, T19N, R4W			Sandoval County, NM					
Completion	Perforated 3048' - 3177', 3206' - 3270', 3350' - 3428', 3470' - 3596', No Stimulation								
Well Name	Type	Construction						Spud Date	TD
		Casing Size/Grade	Wt., lb/ft	Depth Set	Hole Size	Cement Record			
Eagle Mesa Unit #5	Oil	9 5/8", J-55	36#	251' KB	12 1/4"	Surface, 190 sx (224 cf)		2/12/96	5,618'
Eagle Mesa Entrada		7", N80	23#	5,618'	8 3/4"	1st Stg, 570 sx (1107 cf)			
						2nd Stg, 325 sx (602 cf)			
Location	1955' fsl & 100' fel, Sec 14, T19N, R4W			Sandoval County, NM					
Completion	Perforated 5,454' - 5,460' (4 jsp), No Stimulation								
Well Name	Type	Construction						Spud Date	TD
		Casing Size/Grade	Wt., lb/ft	Depth Set	Hole Size	Cement Record			
Eagle Mesa Unit #6	SWD	10 3/4", J-55	40.5	203'	15"	Surface, 250 sx		9/5/75	5,560'
Eagle Mesa Entrada		7", J-55	23#	5,645'	8 3/4"	825 sx, 2 stages			
						1st Stage cemented to DV tool (Driller's notes)			
						2nd Stage lost circulation, TOC @ 3,070' CBL			
Location	330' fsl & 330' fel, Sec 11, T19N, R4W			Sandoval County, NM					
Completion	Open Hole 5,469' - 5,569', No Stimulation								

APPLICATION FOR AUTHORIZATION TO INJECT, SECTION VI

Well Name	Type	Construction			Hole Size	Cement Record	Spud Date	TD
		Casing Size/Grade	Wt., lb/ft	Depth Set				
Federal 12C #1Y	Oil (dry)	9 5/8"		187'		180 sx	10/26/95	5605'
Location	685' fsl & 330' fwl, Sec 12, T19N, R4W			Sandoval County, NM				
Completion	No Production Casing Set, Well Plugged after drilling							
	Cement Plugs in the following intervals:			5605' - 5450', 50 sx	Surface Plug, 10 sx			
				4590' - 4410', 50 sx				
				3340' - 3190', 50 sx				
				2350' - 2190', 50 sx				
				200' - 150', 30 sx				

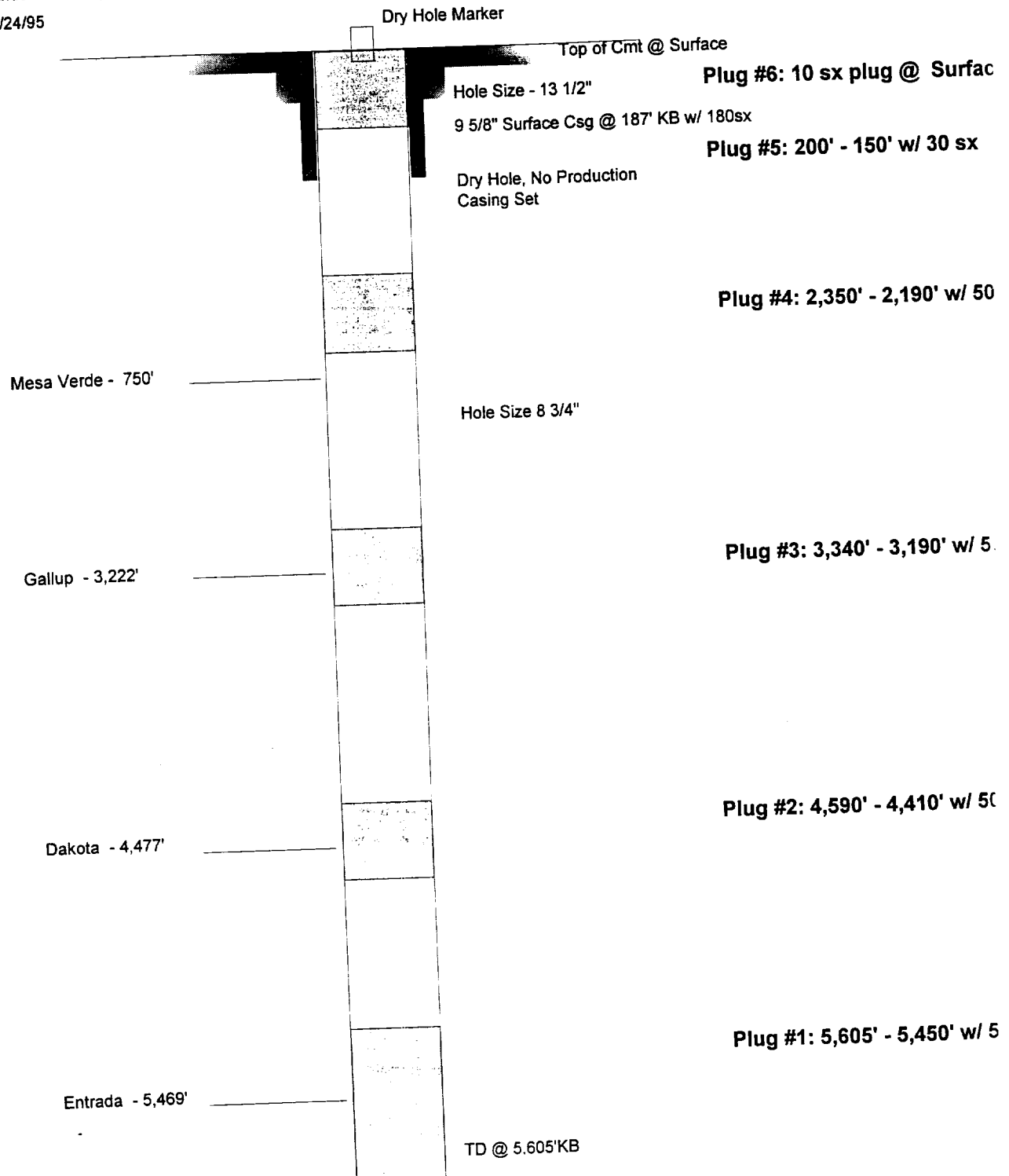
Merrion Oil & Gas Corporation
Wellbore Schematic for Offset to Proposed Water Injection Well
Federal 12C-1Y (Operator: Jordan Oil & Gas Co.)
Current Wellbore Configuration According to NMOCD Records

Location: 685"fsi & 330'fwl
Sec 12, T19N, R4W NMPM
Sandoval County, New Mexico

Prepared: 10/24/95

Elevation: 6,693' GL

By: Connie Dinning



Distribution:

Orig+4 (1-M); 1-Crystal; 1-Accounting; 1-Well File

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other Disposal

2. Name of Operator

Merrion Oil & Gas Corporation

3. Address and Telephone No.

610 Reilly Avenue, Farmington, NM 87401-2634 (505) 327-9801

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

460' fsl & 800' fel (SESE)
Section 11, T19N, R04W

FORM APPROVED

Budget Bureau No. 1004-0135

Expires: March 31, 1993

5. Lease Designation and Serial No.

NM-24961 NM 87227

6. If Indian, Alinea or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

EMU No. 4

9. API Well No.

30-043-20187

10. Field and Pool, or Exploratory Area

SWD:Gallup

11. County or Parish, State

Sandoval County,
New Mexico

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent

☒ Subsequent Report

☐ Final Abandonment Notice

☒ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

(Note: Report reason of multiple completion on Well Completion or Recommendation Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

March 11, 1995

Start rig and cement equipment (A-Plus Well Service) on 3/11/96. Road rig and cement equipment to location - RU pump truck, ND-WH. Check pressure: Casing 0 psi, Tubing 760 psi. Check for hole in tubing. Tried to spot in rig, got stuck in sand. Established rate down 3-1/2 into Gallup perms at 2 BPM at 750 psi. Plug #1: Mix and pump 120 sxs from 3596' to TOC @ 2950'. Wash up pump, drained pump. SI well. SDFN.

CONTINUED OTHER SIDE

Approved as to plugging of the well bore.
Liability under bond is retained until
surface restoration is completed.

14. I hereby certify that the foregoing is true and correct

Signed

Steven S. Dunn

Title

Operations Manager

Date

3/18/96

(This space for Federal or State office use)

Approved by

Conditions of approval, if any:

Title

APPROVED

APR 12 1996

March 12, 1995 1996

Start rig and cement equipment. Checked pressures: Csg 0 psi and Tbg 760 psi. Greased crown on rig. Spotted rig in with rig up truck. RU truck got stuck, pulled out with bulk truck. Blow well down, broke down immediately, watched for water flood, no flow back. RU rig. RD pump truck to unload BOP. RU pump truck. Press tested tubing (3-1/2") to 1000 psi - held good for 15 mins. ND WH. had problems taking wellhead apart. RU WL, RIH with 2-3/4" gauge ring and tagged Plug #1 at 2785'. POH with WL, RU Jet Cutter. RIH and cut off 3-1/2" tubing at 2785'. ND WH. NU BOP (test BOP). Change rams to 3-1/2". RU tubing equipment. **Plug #2** - Mix and pump 17 sxs (15.4 cu.ft.) of cement from 2785' to TOC @ 2635'. LD tubing to 2278'. **Plug #3** - Mix and pump 19 sxs (15.3 cu.ft.) of cement from 2278' to TOC @ 2110'. LD 30 jts of 3-1/2". Drained pump, shut well in. SDFN.

March 13, 1995 1996

Start rig and cement equipment. Open up well - Csg 0 psi and Tbg 760 psi. LD 3-1/2" tbg to 485'. Established circulation. **Plug #4** surface mix and pump 60 sxs (15.4 cu.ft.) of cement from 485' to surface. LD all the tubing. RD tubing equipment, RD floor, ND BOP. Dig out wellhead, cut off wellhead. Install dry hole marker with 18 sxs cement, 4 sxs to top off 3-1/2". RD pump truck. RD rig and blow down lines. Pulled rig off location with rig up truck, pulled rig up truck out with bulk truck.

EAGLE MESA UNIT #4 SWD

COMPLETED ~~Proposed~~ P & A

Injection Well Into Gallup

460' FSL & 800' FEL

SE, Section 11, T-19-N, R-4-W, Sandoval County, NM

Today's Date: 2/18/96

Spud: 9/19/75

Completed: 10/1/75

Lewis @ Surface

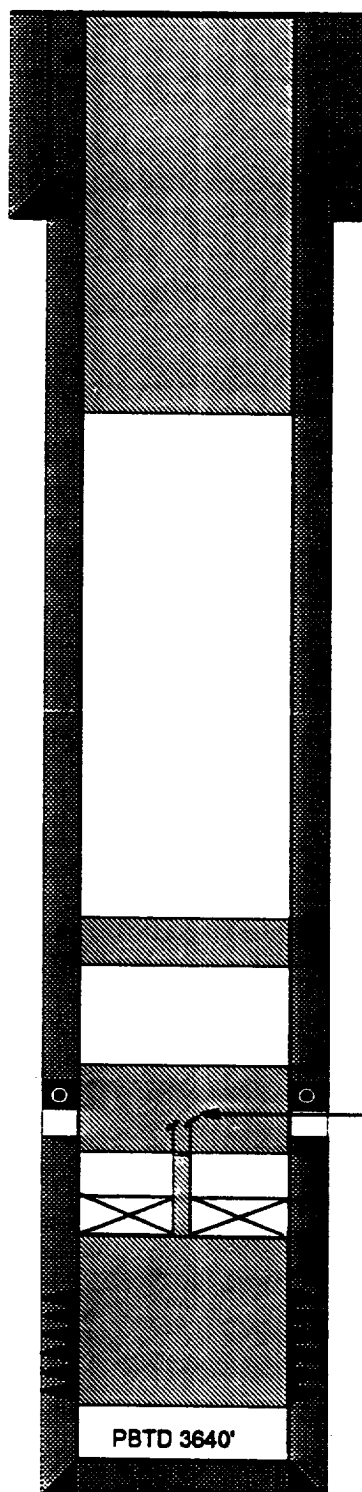
Mesaverde @ 410'

Point Lookout @ 2210'

Gallup @ 3044'

12-1/4" hole

7-7/8" hole



Circulated to surface

8-5/8" 23#, Csg set @ 229'
Cmt w/150 sxs (Circulated to Surface)

Plug #4 460' - Surface
Cement with 52 sxs Class B.

Plug #3 2260' - 2560'
Cement with 17 sxs Class B.

Plug #2 3000' - 2900'
Cement with 17 sxs Class B.

DV Tool @ 2960'
Cmt w/ 719 cf

Cut 3-1/2" Tubing @ 2950

Top of Cement @ 3004' (Calc, 80%)

Plug #1 3596' - 2950'
Cement with 98 sxs Class B.
(50% excess, long plug)

Gallup Perforations: 3048' - 3596'

5-1/2" 15.5#, Csg set @ 3685'
Cmt w/ 125 sxs

TD 3685'

SECTION VII - XII

APPLICATION FOR AUTHORIZATION TO INJECT

Eagle Mesa Unit #1, Convert to Water Injection							
VII. Operational Data							
1)	Ave Rate:	8-9 BPM	Daily Rate:	12,000 BPD			
2)	Open System						
3)	Ave. Pressure:	1,200 psi	Max Pressure:	2,000 psi			
<i>Please note, the maximum pressure is due to anticipated tubing friction at higher rates.</i>							
4)	Reinjected produced water from same formation						
5)	Water Analysis Attached						
VIII. Geological Data							
Injection Zone:		Entrada Sandstone (Eolian Dune Sand)					
Thickness:		approx. = 250'					
Top:		5,483'					
Overlaying this formation is a 10' layer of limestone and a 15' layer of anhydrite.							
According to engineering and geological review, there are no known formations in the area of review above or below the Entrada which contain water with < 10,000 ppm TDS.							
IX. Stimulation Program							
The well will not be stimulated initially. However if injection volumes and pressures are not satisfactory, a fracture program may be proposed.							
X. Logging and Test Data							
All logs are on file with the OCD office in Aztec							
XI. Fresh Water Analysis							
There are no known fresh water zones in the area of review.							
XII. EGINEERING AND GEOLOGY REVIEW TO PROTECT FRESH WATER							
There is little concern over hydraulic connection with other formations because there are no known fresh water zones in the area of review.							

THE WESTERN COMPANY OF NORTH AMERICA

API WATER ANALYSIS

Company: MERRION

Field:

Well: #1

Depth:

Formation: ENTRADA?

State:

County:

W.C.N.A. Sample No.: S106995

Legal Description:

Lease or Unit: EAGLE MESA

Water.B/D:

Sampling Point:

Sampled By: STEVE DUNN

Date Sampled: 05/03/95

Type of Water(Produced,Supply, ect.): PROD.

PROPERTIES

pH: 7.32

Specific Gravity: 1.010

Resistivity (ohm-meter): .81

Temperature: 64F

Iron, Fe(total): 0

Sulfide as H₂S: 0

Total Hardness:

(see below)

D I S S O L V E D SOLIDS

CATIONS	mg/l	me/l
Sodium, Na:	3726	: 162
Calcium, Ca:	160	: 8
Magnesium, Mg:	49	: 4
Barium, Ba:	N/A	: N/A
Potassium, K:		:

Sample(ml): 1.0 ml of EDTA: .40
Sample(ml): 1.0 ml of EDTA: .20

ANIONS	mg/l	me/l
Chloride, Cl:	1773	: 50
Sulfate, SO ₄ :	5000	: 104
Carbonate, CO ₃ :		:
Bicarbonate, HCO ₃ :	1220	: 20

Sample(ml): 1.0 ml of AgNO₃: .10

Sample(ml): 1.0 ml of H₂SO₄:
Sample(ml): 1.0 ml of H₂SO₄: .20

Total Dissolved

Solids (calculated): 11928

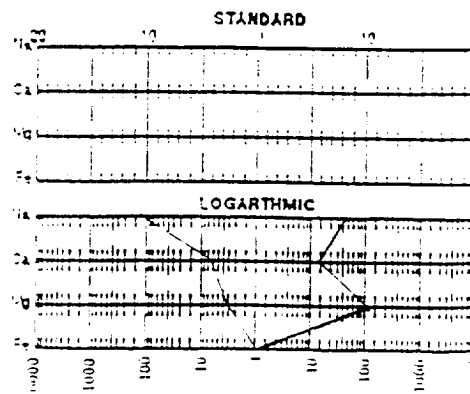
Total Hardness: 600

Sample(ml): 1.0 ml of EDTA: .60

REMARKS AND RECOMMENDATIONS:

ENTRADA WATER

WATER PATTERNS-me/l



Analyst: DO
Date Analyzed: 5/4/95

SPKED 5/4 326-5900

SECTION XIII

PUBLIC NOTICE

Merrion Oil & Gas
610 Reilly Ave.
Farmington, NM 87401
Attn: Connie Dinning
Merrion Oil & Gas proposes to convert a previously producing oil well to a water disposal well to take produced water from the Eagle Mesa Entrada field.
Injection Well Location: 460' Tsl & 330' Twt, Sec. 12, T19N, R4W, Sandoval County, NM.
Injection Formation: Entrada
Depth of Injection Zone: 5,483'
Maximum Pressure: 2,000 psi
Maximum Rate: 12,000 barrels/day
Interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 S. Pacheco St., Santa Fe, New Mexico 87505 within 15 days of this Notice.
Journal: September 27, 1996

STATE OF NEW MEXICO

County of Bernalillo

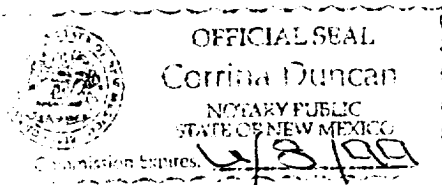
SS

Bill Tafoya being duly sworn declares and says that he is Classified Advertising manager of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for One times, the first publication being of the 27 day of Sept, 1996, and the subsequent consecutive publications on _____, 1996

Bill Tafoya

Sworn and subscribed to before me, a notary Public in and for the County of Bernalillo and State of New Mexico, this 27 day of Sept 1996

PRICE 9.71
Statement to come at end of month.



Corrina Duncan

CLA-22-A (R-1/93) ACCOUNT NUMBER 081535