4-5 MILES AWAY - INJECTION INTO THE MORRISON/ENTRADA

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

WATER ANALYSIS

RECEIVED
MAR 25 1977
Minerals Management Inc.

File WA - 5

Company Dome Petroleum Corp. Well Name Sante Fe 20 No. 1 Sample No. SS-2

Formation _____ Depth _____ Sampled From _____

Location Sec 20 T 21N R 8W Field _____ County San Juan State N.M.

Date Sampled 3-9-77 Date Analyzed 3-13-77 Engineer RGC

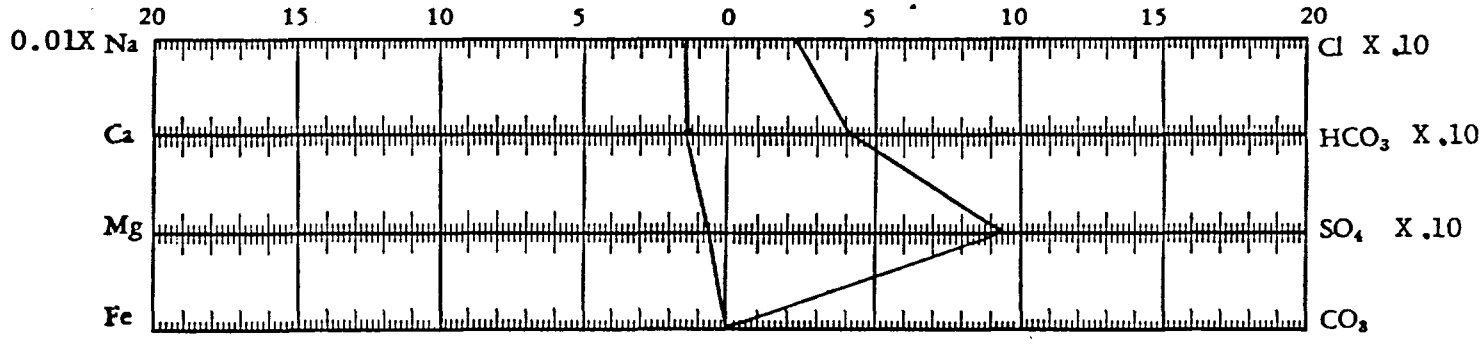
Total Dissolved Solids 11,114.5 mg/L _____ Sp. Gr. 1.009 @ 70 °F.

Resistivity 1.0 ohm-meters @ 70 °F. _____ Hydrogen Sulfide Present

pH 7.73

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	140.44	3228.7	Chloride	25.47	903.0
Calcium	1.35	27.0	Bicarbonate	41.73	2546.0
Magnesium	0.73	8.9	Sulfate	91.61	4400.0
Iron	0.03	0.9	Carbonate	ND	ND*
Barium	ND	ND	Hydroxide	ND	ND

*ND = Less than 0.1 mg/L



Scale: meq/L

All analyses except iron determination performed on a filtered sample.

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: MERRION OIL & GAS Well: EAGLE MESA UNIT NO. 1

Contact: CONNIE DINNING Title: ENGINEER Phone: 505-327-9801

DATE IN 10-3-96 RELEASE DATE 10-18-96 DATE OUT 10-28-96

Proposed Injection Application is for: ___ **WATERFLOOD** ___ Expansion ___ Initial

Original Order: R- _____ ___ Secondary Recovery ___ Pressure Maintenance

~~**SENSITIVE AREAS**~~ X **SALT WATER DISPOSAL** ___ Commercial Well

___ WIPP ___ ~~Capitan Reef~~ ___ Other _____

Data is complete for proposed well(s)? YES Additional Data Req'd _____

AREA of REVIEW WELLS

6 Total # of AOR 2 # of Plugged Wells

YES Tabulation Complete YES Schematics of P & A's

YES Cement Tops Adequate NO AOR Repair Required

INJECTION FORMATION

Injection Formation(s) ENTRADA

Source of Water or Injectate SAME Compatible Analysis YES

PROOF of NOTICE

YES Copy of Legal Notice YES Information Printed Correctly

YES Correct Operators N/A Copies of Certified Mail Receipts

NO Objection Received NO Set to Hearing _____ Date

NOTES: _____

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? YES

COMMUNICATION WITH CONTACT PERSON:

1st Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

2nd Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

3rd Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Revised 7-1-81

SWD 646

10/18/96

RECEIVED
OCT - 3 1996
OIL CONSERVATION DIVISION

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 Ex 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.
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: Attachemnts

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: _____ 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. _____

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

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

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 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	Pool Code	Pool Name
30-043-20175	20430	Eagle Mesa Entrada

Property Code	Property Name	Well Number
~~16552~~ 17213	EMU	1

OGRID No.	Operator Name	Elevation
014634	Merrion Oil & Gas Corp.	6698' GR

Surface Location

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

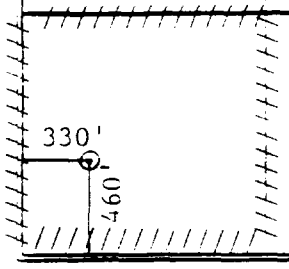
Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete 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

SECTION III

Eagle Mesa Unit #1, Convert to Water Injection

A.				
1)	**Well** : Eagle Mesa Unit #1			**Location**: 460' fsl & 330' fwl, Sec 12, T19N, R4W
				TD: 196.4' fnl & 42.8' fwl
2)	**Casing:**			
	Size	*Depth Set*	*Hole Size*	*Cement Record*
	10 3/4"	207'	15"	250 sx
	7"	5724'	8 3/4"	692 sx, 2 stages
				1st Stg cemented to 3,850' estimated
				2nd Stg TOC @ 3,200' estimated
	4 1/2" N80	4,809' -	6 1/4"	125 sx
	11.6#	5,542'		
3)	**Tubing**	3 1/2", 9.3#, EUE, Set @ approximately 4,709' KB, no internal lining		
	Strings:	2 3/8", 4.6#, EUE from 4,853' - 5,879' as temporary liner		
4)	**Packers:**	Baker Lok Set (or equivalent), Retrievable Casing Packer		
		Set @ 4,709' KB		
		FH Paker, 4 1/2", set @ 4,853' KB		
		PIP Packer 3 3/8", set @ 5,879' KB		
B.				
1)	**Name of Pool/Formation:**			Eagle Mesa Entrada
2)	**Injection Interval:**		5,542' - 6,078', Measured Depth (Horizontal) Open Hole	
3)	**Original Purpose of Well:**			Oil Producer
4)	**Casing Leaks @ 1,765' - 1,878' & 2,106' - 2,294' were cement squeezed**			
		w/ 40 sx and 60 sx cement respectively		
5)	**There are no other producing zones in the area.** The Dakota, Gallup and Mesa Verde			
		are present as illustrated on the wellbore diagram, but they are not productive.		

Merrion Oil & Gas Corporation

Wellbore Schematic

EMU H No. 1

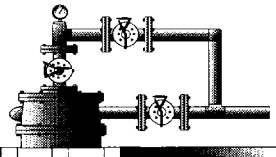
Horizontal Wellbore Configuration

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



Cretaceous

Lewis shale - at surface

Top of Cmt @ Surface

Bit Size - 15"

10 3/4" Surface Csg @ 207' KB w/ 250sx; 295 cuft

Cliffhouse - 446'

Bit Size 8 3/4"

Squeeze casing leaks 1,675' - 1,878' w/ 40 sx, Dry tested (Oct. 94)

Squeeze casing leaks 2,106' - 2,294' w/ 60 sx, Dry tested (Oct, 94)

Pt. Lookout - 2,255'

Mancos - 2,402'

3 1/2" 9.3# EUE Production Tubing @ 2,464' KB

Gallup - 3,244'

TOC at 3,200' (Estimated).

DV Tool @ 3,569' KB, Cemented w/ 400 sx G 50/50 Poz; 50 sx G
NO CIRCULATION DURING PRIMARY JOB!

TOC @ 3,850' (estimated; bond poor)

Greenhorn - 4,240'

Dakota - 4,492'

Morrison - 4,618'

Liner top @ 4,809'KB 6-1/4" hole size, cement to top of liner (calc)
4 1/2" FH Packer set @ 4,853' KB
2 3/8" Hydril tubing, temporary liner inside 4 1/2" permanent liner

4-1/2" Liner set @ 5,542' MD w/ 125 sx

3 3/8" PIP Packer set @ 5,879' KB

Jurassic

Todilto - 5,472'

Entrada - 5,483'

**Open hole 5,542'MD-
6,078' MD (5,491' TVD)**

3-7/8" hole size

Entrada Perforations 5,483' - 5,493',
Cement plug 5,329' - 5,509', 34 sx

CICR @ 5,509', 2 squeeze holes
@ 5,514' w/ 50 sx 'H' (10/94)

7" 23# J55 Production Csg @ 5,724' w/ 167sx G 50/50 Poz 4% gel; 75 sx G

TD @ 5,735'KB OPBTD @ 5,574'KB

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

Merrion Oil & Gas Corporation

Wellbore Schematic

EMU H No. 1

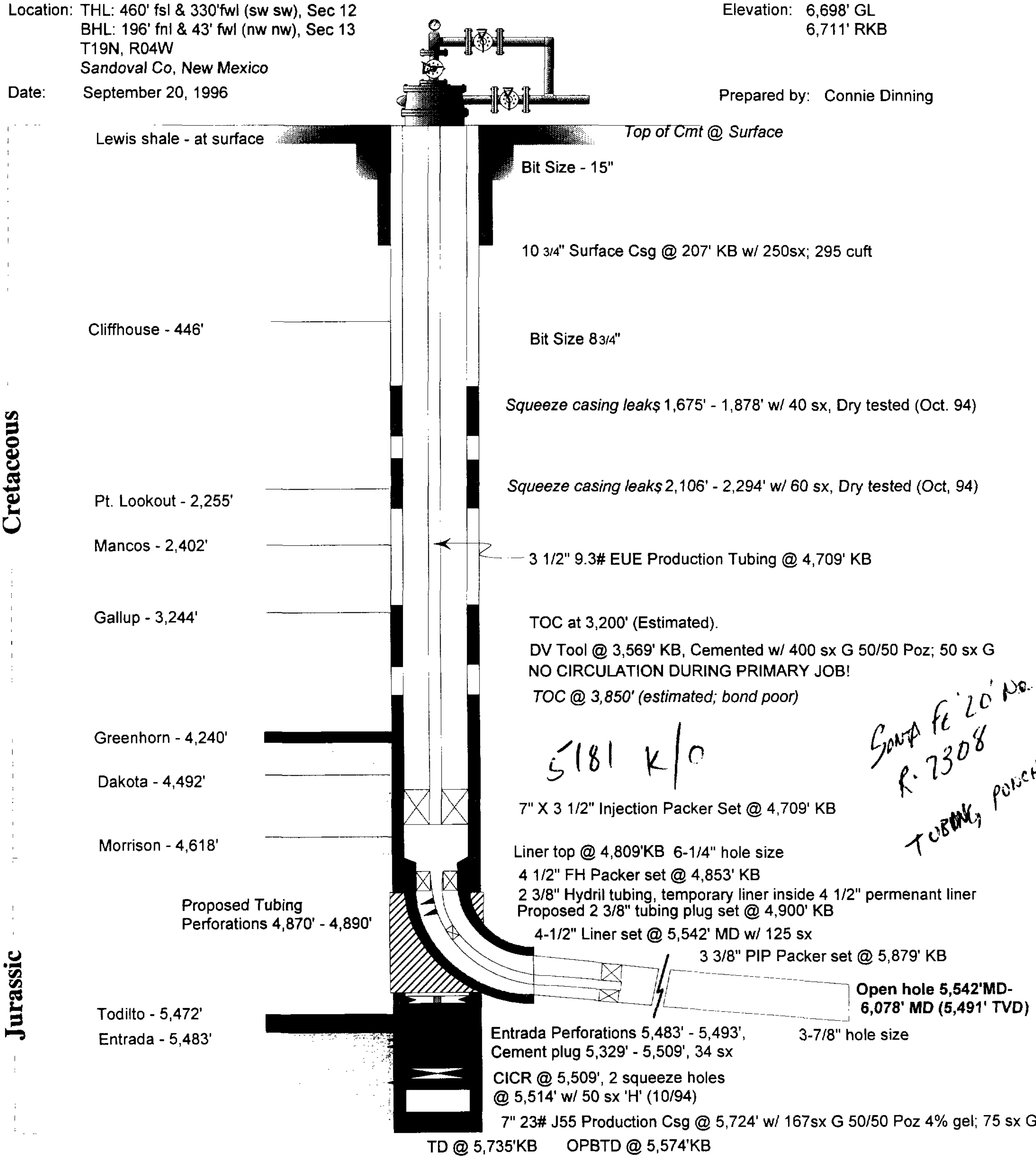
Proposed Injection Configuration

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



Santa Fe '20' No. 2
R. 7308
Tubing punchers

Tbg Plug
5466

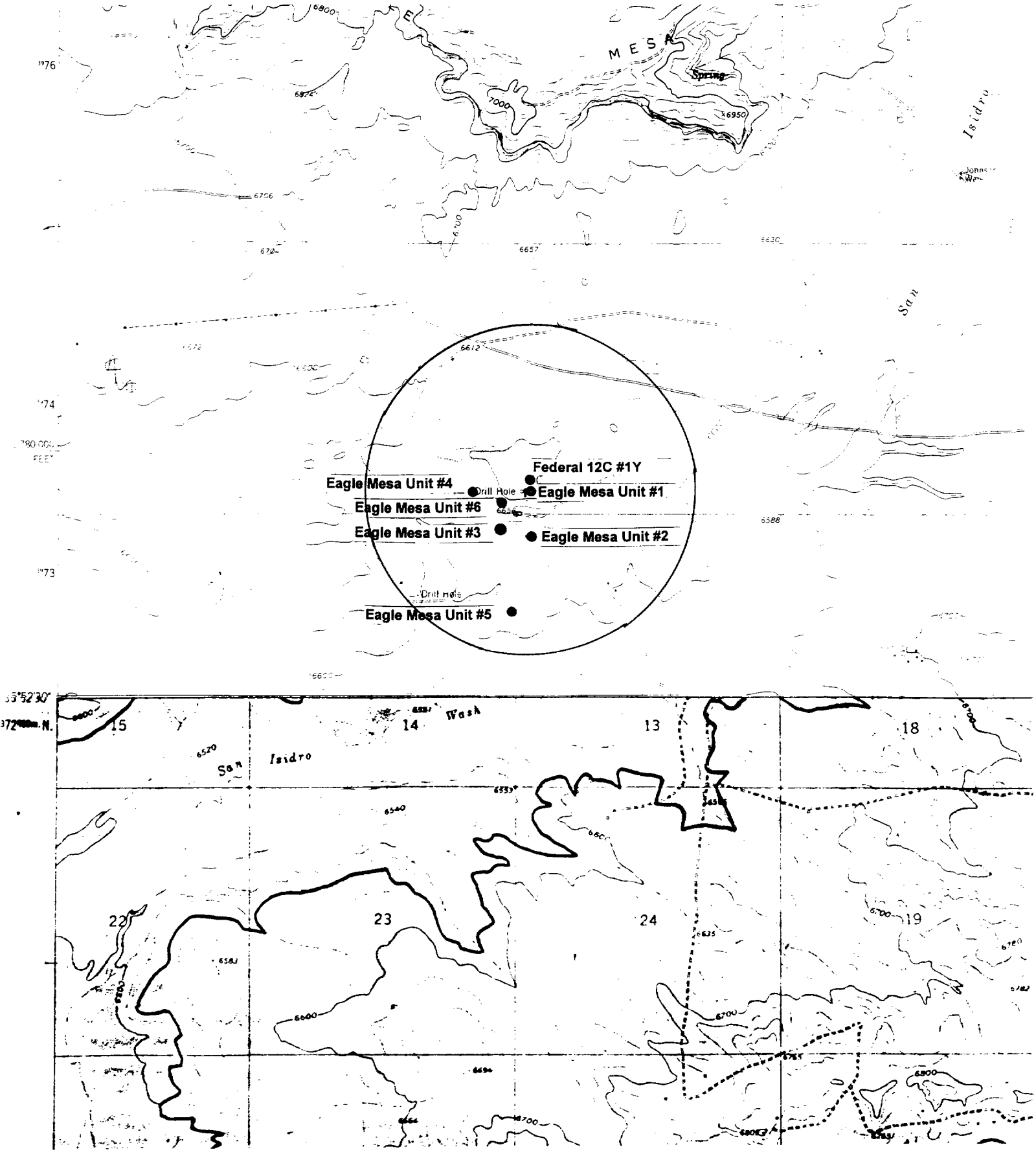
WELL DATA:

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.

SECTION VI

Eagle Mesa Unit #1, Convert to Water Injection

Wells Within Area of Review

Well Data

Well Name	*Type*	*Construction*					Spud Date	TD
		Casing Size/Grade	*Wt., lb/ft*	*Depth Set*	*Hole Size*	*Cement Record*		
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*					Spud Date	TD
		Casing Size/Grade	*Wt., lb/ft*	*Depth Set*	*Hole Size*	*Cement Record*		
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' fnl & 100' fel, Sec 14, T19N, R4W			Sandoval County, NM				
Completion	Perforated 5,454' - 5,460' (4 jspf), 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*					Spud Date	TD
		Casing Size/Grade	*Wt., lb/ft*	*Depth Set*	*Hole Size*	*Cement Record*		
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.)

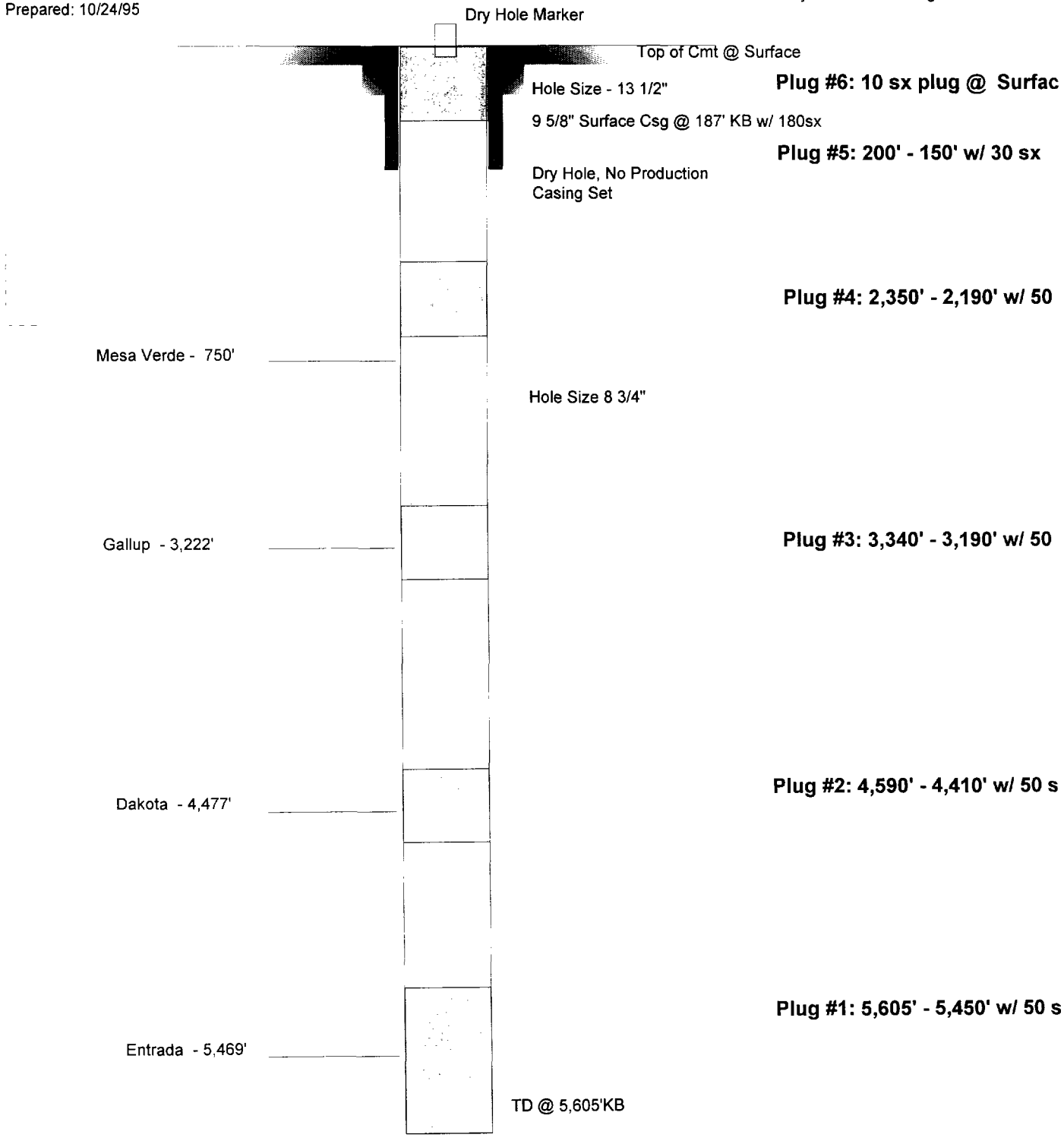
Current Wellbore Configuration According to NMOCD Records

Location: 685"fsl & 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 (... M); 1-Crystal; 1-Accounting; 1-Well File

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

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

5. Lease Designation and Serial No.: NM-24961
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA, Agreement Designation:

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) Secion 11, T19N, R04W

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	☒ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion 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 perfs 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 _____ Title _____ Date APPROVED
Conditions of approval, if any: APR 1 2 1996

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

March 12, 1995

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 wit 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

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

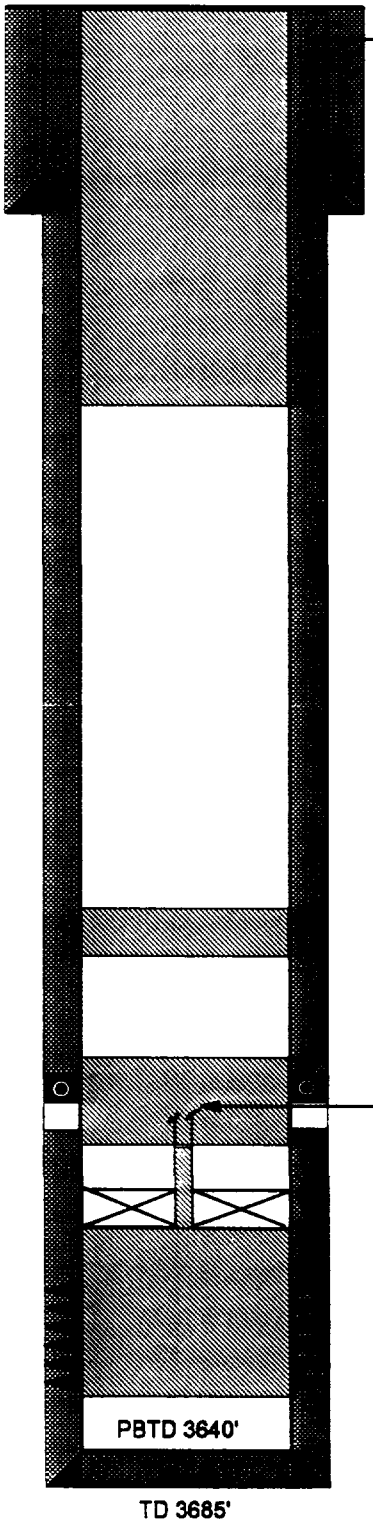
Completed: 10/1/75

Lewis @ Surface

Mesaverde @ 410'

Point Lookout @ 2210'

Gallup @ 3044'



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

SECTION VII - XII

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

Please note, the maximum pressure is due to anticipated tubing friction at higher rates.

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 W A T E R A N A L Y S I S

Company:	MERRION	W.C.N.A. Sample No.:	S106995
Field:		Legal Description:	
Well:	#1	Lease or Unit:	EAGLE MESA
Depth:		Water.B/D:	
Formation:	ENTRADA?	Sampling Point:	
State:		Sampled By:	STEVE DUNN
County:		Date Sampled:	05/03/95
	Type of Water(Produced,Supply, ect.):		PROD.

PROPERTIES

pH:	7.32	Iron, Fe(total):	0
Specific Gravity:	1.010	Sulfide as H2S:	0
Resistivity (ohm-meter):	.81	Total Hardness:	
Tempature:	64F	(see below)	

D I S S O L V E D SOLIDS

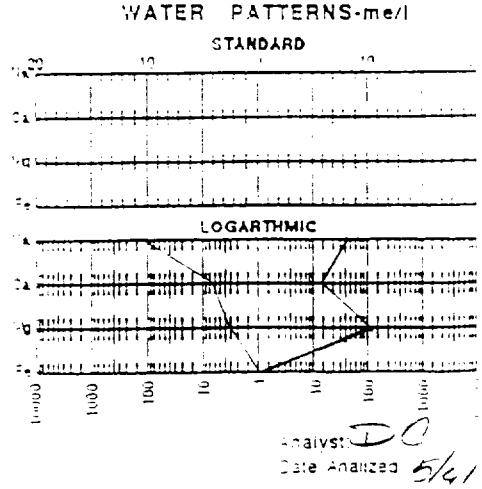
CATIONS	mg/l		me/l			
Sodium, Na:	3726	:	162			
Calcium, Ca:	160	:	8	Sample(ml):	1.0 ml of EDTA:	.40
Magnesium, Mg:	49	:	4	Sample(ml):	1.0 ml of EDTA:	.20
Barium, Ba:	N/A	:	N/A			
Potassium, K:		:				

ANIONS	mg/l		me/l			
I: .5000Chloride, Cl:	1773	:	50	Sample(ml):	1.0 ml of AgNO3:	.10
Sulfate, SO4:	5000	:	104			
Carbonate, CO3:		:		Sample(ml):	1.0 ml of H2SO4:	
Bicarbonate, HCO3:	1220	:	20	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:

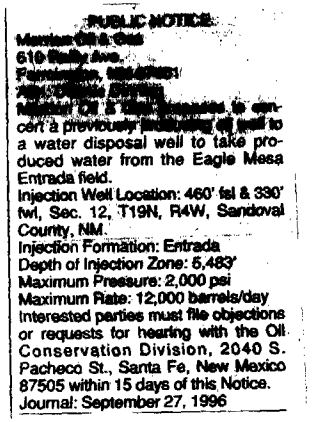
ENTRADA WATER



Analyst: DC
Date Analyzed 5/6/

FAXED 5/4 326-5900

SECTION XIII



PUBLIC NOTICE

[redacted] to convert a previously [redacted] well to a water disposal well to take produced water from the Eagle Mesa Entrada field.
Injection Well Location: 460' fsl & 330' fwl, 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.

4/3/99

Norma Duncan

CLA-22-A (R-1/93) ACCOUNT NUMBER 131585