STATE OF NEW MEXICO
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: El Paso Natural Gas Company

Address: PO Box 4289, Farmington, NM 87499

Contact party: J. D. Falconi Phone: (505) 327-0251

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. Attachment #2

* 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 #3

VII. Attach data on the proposed operation, including: Attachment #4

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.).

RECEIVED
AUG 27 1986
OIL CON. DIV.
DIST. 3

*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. Attachments #5 and #6.

IX. Describe the proposed stimulation program, if any. Attachment #7

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.) Attachment #8

* 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. Attachment #9

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 #10

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. Attachment #11

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: James D. Falconi Title Drilling Engineer

Signature: James D. Falconi Date: 8-26-86

* 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

Confidential

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE August 28, 1986

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD ✓
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated August 27, 1986

for the El Paso Nat Gas Co. San Juan 30-6 U. #112 Y 1-26-30N-6W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve.

Yours truly,

Frank T. Chavez

ATTACHMENT #1

Well Data:

Operator: El Paso Natural Gas Company

Well Name and Number: San Juan 30-6 Unit #112Y Disposal Well

Lease Designation and Serial Number: SF 078741

Location: 1120'FNL, 870' FEL, Section 26, T-30-N, R-6-W, Rio Arriba County, New Mexico

Spud Date: 8-5-84 Completion Data: 6/30/85

Total Depth: 14,030' PBTD: 9250' (proposed)

Well Type: Disposal Field: Wildcat

Injection Formation: Morrison and Entrada

Perforate: Morrison and Entrada formation with 2 spf (proposed). Perf intervals to be picked off of cased hole logs correlated with existing open hole logs.

Depth of next deepest oil and gas zone: N/A

Depth of next shallowest oil and gas zone: Dakota @ 7972'

Existing casing and cement program:

Hole Size	Csg. Size	Wt.& Grade	Depth Set	Cement Volume & Top
36"	30"	line pipe	80'	backside job w/225 sx filled to surface
26"	20"	133# K-55	532'	720 sx circulated
17 1/2"	13 3/8"	72#N-80&S-95	4040'	2450 sx circulated
12 1/4"	9 5/8"& 9 7/8"	47.0# RS-95 62.8# SS-95	8105'	1905 sx-4360' Temp.Survey
8 1/2"	7"	38.0# S-95	7756-14026'	598 sx to circ.liner, did not circ. Squeeze cmt'd liner top w/300 sx. Press.tested to 3000 psi, held ok.

Proposed tubing program:

8100' of 4 1/2", 11.60#, J-55 EUE tubing with internally bonded plastic coating to protect against corrosion. A Baker Model R-3 packer will be set at approximately 8100'.

San Juan 30-6 Unit #112Y Disposal Well

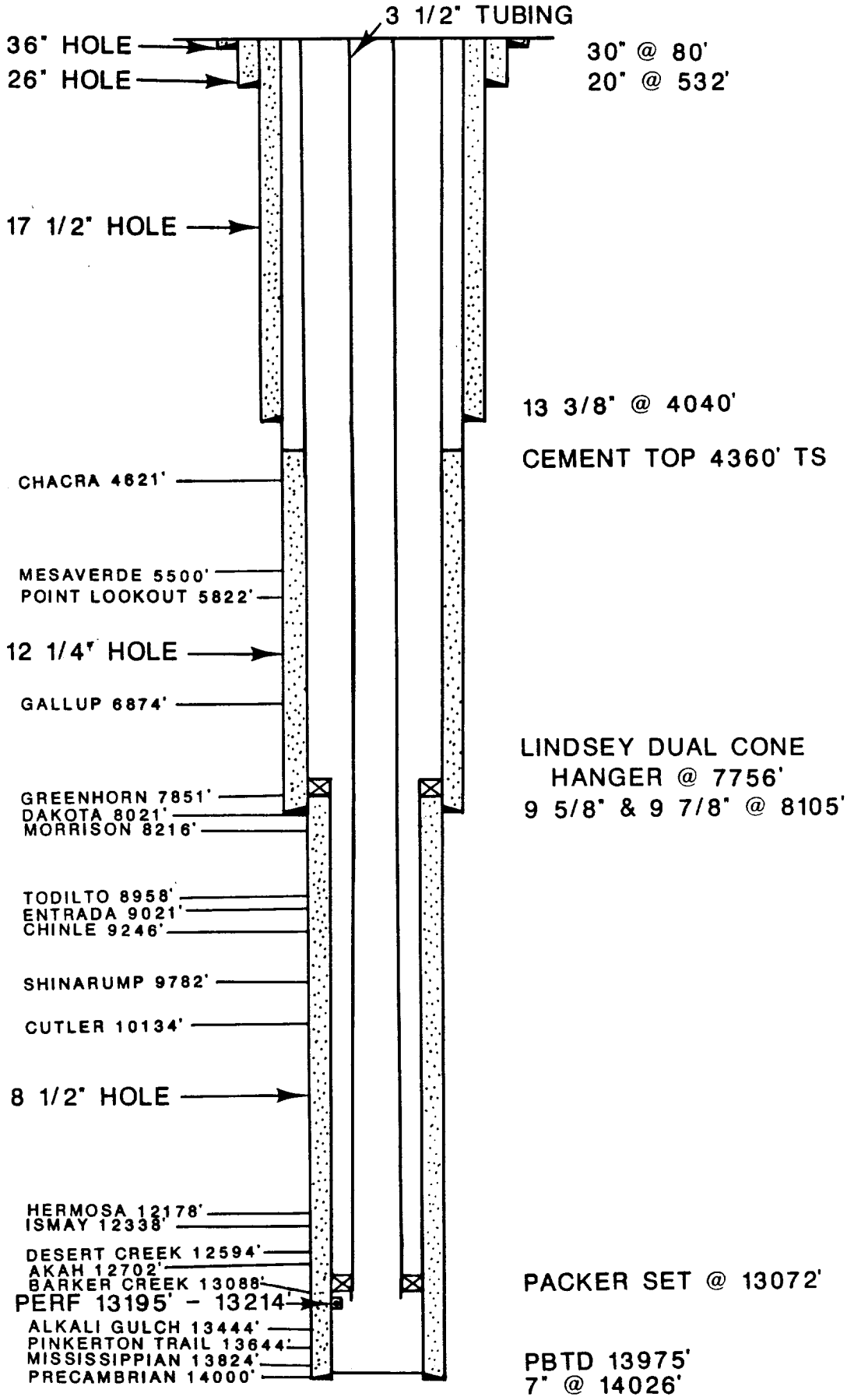
It is intended to plug back the existing wellbore to the base of the Entrada formation at 9275' in accordance with State and Federal regulations.

Run GR/CCL-CBL and perforate Entrada formation with 1 spf. Breakdown perforations with acid and balls. Swab back formation and collect formation fluid sample for analysis. Stimulate Entrada with a x-link gel frac. Clean out to PBTD and run injection test to determine injection feasibility. Set bridge plug and perforate the Morrison formation with 1 spf. Breakdown perforations with acid and balls. Swab back formation and collect formation fluid sample for analysis. Stimulate Morrison with a x-link gel frac. Clean out to bridge plug and run injection test to determine injection feasibility.

This well is being drilled for disposal purposes in the Morrison and Entrada formations. If commercial hydrocarbon production is indicated by formation testing, it will be completed as a productive well and produced to depletion prior to injection into the Morrison and Entrada formations.

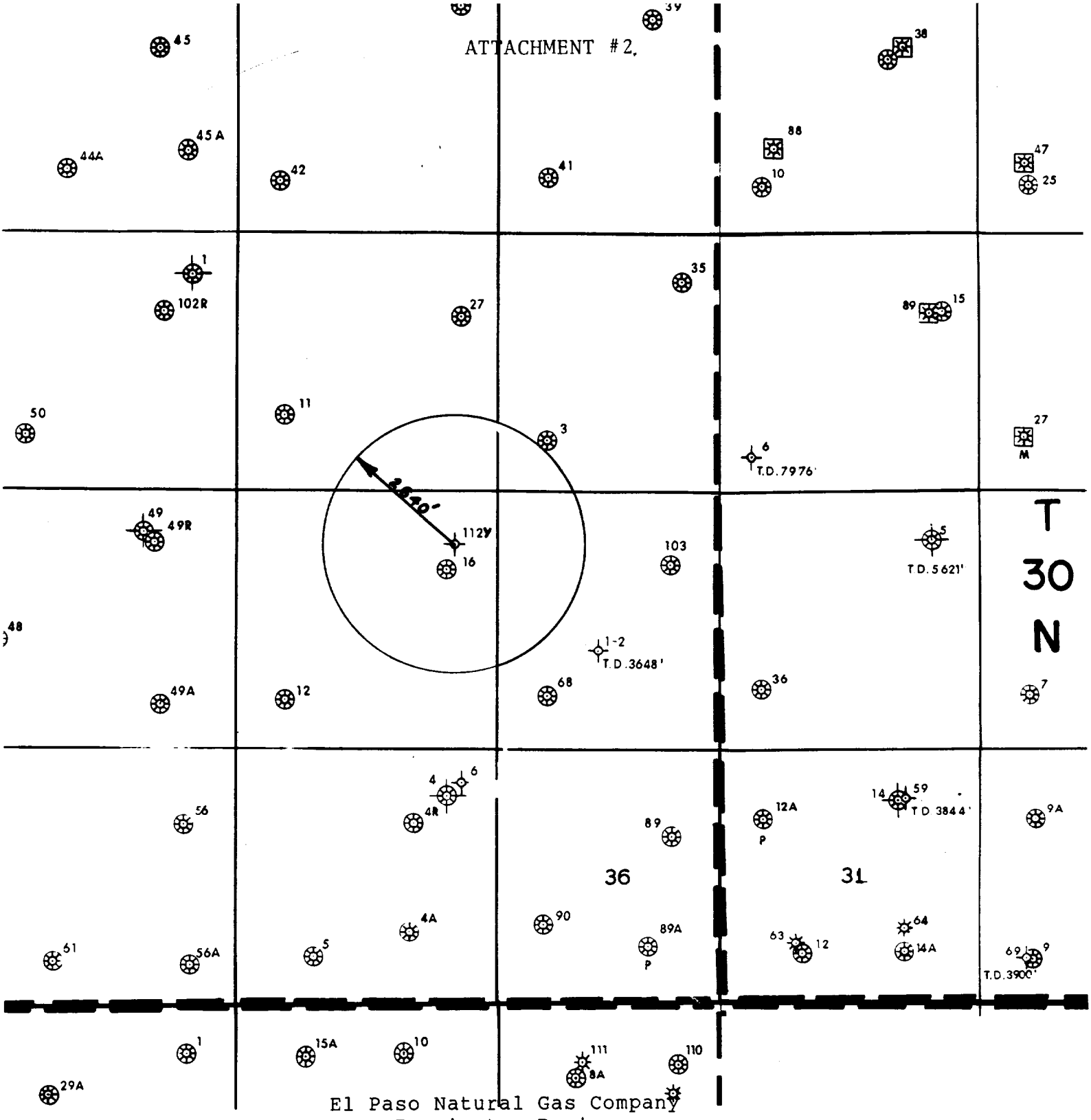
EXISTING
WELL BORE DIAGRAM

#112Y
NE 26, 30 - 6



J. D. FALCONI 8/14/86

ATTACHMENT #2.



El Paso Natural Gas Company
Farmington Region

PROPOSED MORRISON AND ENTRADA WATER DISPOSAL WELL

El Paso Natural Gas Company
San Juan 30-6 Unit #112Y Disposal Well
1120'FNL, 870'FEL
Section 26, T-30-N, R-6-W
Rio Arriba County, New Mexico

By: J. D. Falconi 2" = 1 mile August 6, 1986

Attachment #3

San Juan 30-6 Unit #112Y Disposal Well

The subject well is the only well in the area of review which penetrated the proposed injection formations. All pertinent data required for this section is present in tabular and/or schematic form throughout this application.

Attachment #4

San Juan 30-6 Unit #112Y Disposal Well

VII.

1. The proposed injection well will be used to dispose of produced water from wells within the San Juan 30-6 Unit area. A maximum injection rate of 12,000 bbls/day is anticipated with an average daily injection rate of 8000 bbls/day.

2. The produced water will be stored in a closed system on the injection location. This will consist of a series of 6 - 400 bbl. tanks, injection pumps and filters.

3. The proposed average and maximum injection pressures are 1500 psi and 2000 psi respectively.

4. Water Analysis: Mg/l

Well Number	Na	Ca	Mg	Cl	HCO_3	SO_4	CO_3	TDS
San Juan 30-6 Unit								
#400	5,463	120	38	1,620	12,224	24	0	13,590
#402	5,825	78	33	668	14,701	Trace*	0	13,748

* less than 0.1 PPM

5. The Morrison and Entrada sandstones are not productive of oil and gas within the prescribed one mile radius. Water analyses are not available in the immediate vicinity. The following tabulation gives total dissolved solids on several wells which have penetrated the Morrison and Entrada formations.

Well Name & No.	Location	Date Tested	TDS
MORRISON:			
Jicarilla 123 C #29	NW 5-25-4	10-29-82	24,834
Hubbell #5E	NW 19-29-10	5-29-81	19,442
Huerfano Unit #270	SW 7-26-10	7-25-80	13,474
ENTRADA:			
Filon #21-1 Federal	SW 21-20-5	8-20-76	10,726
Dome #20-1 Santa Fe	NE 20-21-8	2-10-77	11,114

Attachment #7

Proposed Stimulation Program

It is intended to stimulate this well by perforating the Morrison and Entrada formations with 1 spf (exact perf intervals will be determined from cased hole logs correlated with open hole logs run in the well). An acid job will be used to breakdown and ball off the perforations. The formations will be fractured with a cross-link gel/sand system. Formation fluid samples will be collected to determine the compatability of injection fluids with formation fluids.

Attachment #8

Proposed Logging Program

It is intended to run GR/CCL-CBL logs in the 7" liner from PBTD to the top of the 7" liner.

Attachment #9

Chemical Analysis of Fresh Water

There are no existing fresh water wells in existance within one mile of the proposed injection well.

Attachment #10

STATEMENT

I hereby certify that I have examined available geologic and engineering data and can find no evidence of connection between the disposal zone and underground drinking water sources.

8-26-86
Date

J. D. Falconi
Drilling Engineer

[redacted]

Attachment #11

Intent to Dispose of [illegible] Water in the Subsurface

El Paso Natural Gas Company proposes to dispose of produced water in the Morrison and Entrada formations. The injection well will be the San Juan 30-6 Unit #112D Disposal Well located 1120' FNL and 870' FEL of Section 28, T-30-N, R-6-W, N.M.P.M., Rio Arriba County, New Mexico. Depth of injection will be from 6826' to 8080'. Maximum [illegible] rated rate is 12,000 BWPD at a maximum surface injection pressure of 2000 psig.

Questions should be addressed to: Merrion Oil Inc., Attention: O.W. Daly, Post Office Box 1389, Farmington, New Mexico, 87499, or call (505) 327-0317. Objections or requests for hearing by interested parties must be filed with the New Mexico Oil Conservation Division, [illegible] Fe, New Mexico 87504, within 15 days. [illegible]

STATE OF NEW MEXICO }
County of Bernalillo } ss

THOMAS J. SMITHSON

..... being duly sworn declares and says that he is NAT'L ADV. MGR. .... 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 or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,

for ..... 1 ..... times, the first publication being on the ..... 9 ..... day of ..... August ..... ,198 6 ....., and the subsequent consecutive publications on .....

..... T. Thomas J. Smithson .....

OFFICIAL SEAL
CONNIE MONTOYA
NOTARY PUBLIC - NEW MEXICO
NOTARY BOND FILED WITH SECRETARY OF STATE
My Commission Expires 4-18-90

Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this ..11..... day of ... August ..... ,198 6

PRICE ..... 2.05 .....

Statement to come at end of month.

ACCOUNT NUMBER C81582

EDJ-15 (R-2/86)

[redacted]

The New Mexican

New Mexico's Oldest Daily
Phone 983-3303 P.O. Box 2048
Santa Fe, New Mexico 87504

MERIDIAN OIL INC.
Att. Donna Mayberry
P.O. BOX 4289
FARMINGTON, NM 87499

DATE	ARTICLE	CHARGES
	LEGAL No. 39342 ACCOUNT No. 52779 P.O. No.	38 Lines 1 time at $ 10.26 — Lines ___ times at $ ___ Handling Charges $ ___ Tax $ .55 Total $ 10.81

TEAR ALONG DOTTED LINE

PLEASE RETURN TOP PORTION WITH REMITTANCE

Notice to Disposer of Water in the Subsurface

El Paso Natural Gas Company proposes to dispose of produced water in the Morrison and Entrada formations. The injection well will be the San Juan 30-6 Unit #112Y Disposal Well located 1120' FNL and 670' FEL of Section 26, T-30-N, R-6-W, N.M.P.M., Rio Arriba County, New Mexico. Depth of injection will be from 8220' to 9250'. Maximum anticipated rate is 12,000 BWPD at a maximum surface injection pressure of 2000 psig.

Questions should be addressed to Meridian Oil Inc., Attention: C.W. Dein, Post Office Box 4289, Farmington, New Mexico 87499, or call (505) 327-0251. Objections to this proposal or request for hearing by interested parties must be filed with the New Mexico Oil Conservation Division, Post Office Box 2088, Santa Fe, New Mexico 87501 within 15 days.
Legal No. 39342
Pub. August 13, 1986

Affidavit of Publication

State of New Mexico
County of Santa Fe

I, A.D. Warren being first duly sworn, declare and say that I am Legal Advertising Manager of The New Mexican, a daily Newspaper published in the English Language, and having a general circulation in the Counties of Santa Fe, Los Alamos and Rio Arriba, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, Legal # 39342 a copy of which is hereto attached, was published in said newspaper once each day for one consecutive day and that the notice was published in the newspaper's proper, and not in any supplement, the first publication on the 13 day of August 1986; and that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

A.D. Warren

Legal Advertising Manager

Subscribed and sworn to before me on this 13

day of August A.D., 19 86

OFFICIAL SEAL
HELEN KELLER
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 3/87

Helen Keller

AFFIDAVIT OF PUBLICATION

No. 18728

STATE OF NEW MEXICO,
County of San Juan:

Margaret Billingsley being duly sworn, says: That he is the Sec. to the Publisher of THE FARMINGTON 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 FARMINGTON 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 one consecutive (days) (weeks) on the same day as follows:

First Publication Monday, August 11, 1986

Second Publication

Third Publication

Fourth Publication

and that payment therefor in the amount of $ 8.78

has been made.

Margaret Billingsley

Subscribed and sworn to before me this 11th day of August, 19 86.

Virginia Kimberling
NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: 5-2-87

Copy of Publication

Intent to Dispose of Water in the Subsurface

El Paso Natural Gas Company proposes to dispose of produced water in the Morrison and Entrada formations. The injection well will be the San Juan 30-6 Unit No. 112Y Disposal Well located 1120 FNL and 870' FEL of Section 26, T-30-N, R-6-W, N.M.P.M., Rio Arriba County, New Mexico. Depth of injection will be from 8220' to 9250'. Maximum anticipated rate is 12,000 BWPD at a maximum surface injection pressure of 2000 psig.

Questions should be addressed to Meridian Oil Inc., Attention: C.W. Dein, Post Office Box 4289, Farmington, New Mexico 87499, or call (505) 327-0251. Objections to this proposal or request for hearing by interested parties must be filed with the New Mexico Oil Conservation Division, Post Office Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Legal No. 18728 published in the Farmington Daily Times, Farmington, New Mexico on Monday, August 11, 1986.

Attachment #5

The proposed well, the San Juan 30-6 Unit #112Y Disposal Well, in NE 26, T-30-N, R-6-W, will inject water into sandstones of the Morrison Formation and the Entrada Sandstone.

The Morrison Formation was intercepted from 8216 to 8950 feet. The net sandstone thickness is 58 feet with porosity greater than or equal to 6% based on wireline logs. The mud log on the San Juan 30-6 Unit No. 112Y in NE 26, T-30-N, R-6-W shows the Morrison sandstones be light to medium reddish-brown, pink and gray, poorly to moderately indurated, very fine to fine grained, subangular to subrounded, medium to well sorted, slightly siliceous cemented, trace of calcite and occasionally silty. The shales are light green to gray, reddish-brown to brown, soft to firm, subplaty to platy, in part waxy and occasionally silty. The siltstones are predominately reddish-brown and medium brown to tan, soft, platy to subplaty, slightly calcareous, very argillaceous and slightly sandy.

The Entrada Sandstone was intercepted at 9020 to 9245 feet. The net sandstone thickness is 14 feet with porosity greater than or equal to 6%. The sandstone is predominately light to medium gray, fine to medium grained, subangular to subrounded, poorly to moderately indurated, medium to well sorted and very calcareous.

Potential aquifers overlying the proposed injection zones in this well are within 2875 feet of the surface and include the San Jose, Nacimiento, and the Ojo Alamo.