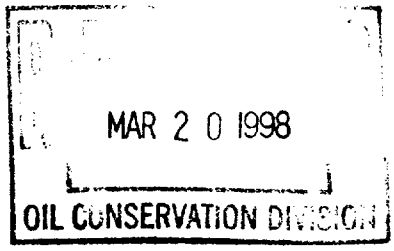
SWD 4/6/98
703

UMC Petroleum Corporation



March 19, 1998

State of New Mexico, Energy Minerals &
Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

RE: Cole 25 State #1
Unit A, Sec 25-T10S-R37E
Lea County, New Mexico

Dear Madam or Sir;

Enclosed for the application to convert the subject well to water disposal is Form C-108 and the required attachments. The well is currently plugged and abandoned. UMC has applied to the District office to re-enter and drill out the existing plugs to the intended injection interval.

If you have any questions or need additional information, I can be reached at (303) 573-4721. Thank you for your time in this matter.

Sincerely,

Scott M. Webb
Regulatory Coordinator

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: UMC Petroleum Corporation

Address: 410 17th Street, Suite 1400, Denver, Colorado 80202

Contact party: Scott M. Webb Phone: (303) 573-4721

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.

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: Scott M. Webb Title Regulatory Coordinator

Signature: [signature] Date: March 19, 1998

* 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 District

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.

Affidavit of Mailing

UMC Petroleum Corporation
Application for Authorization to Inject
Cole 25 State #1
Lea County, New Mexico

I, Scott M. Webb, Regulatory Coordinator, UMC Petroleum Corporation, have on March 19, 1998, mailed a copy of the subject application to the following persons at the addresses shown:

Surface Owner

Ben Alexander
DASCO Land Corporation
P.O. Box 947
Hobbs, New Mexico 88241-0947

Offset Operators

G.W. Ainsworth
9106 Cumberland Drive
Irving, Texas 75063

Maralo, Inc.
P.O. Box 832
Midland, Texas 79702

Meridian Oil Company
P.O. Box 51810
Midland, Texas 79705

Yates Petroleum Corporation
105 South 4th Street
Artesia, New Mexico 88210

Scott M. Webb, Regulatory Coordinator

State of New Mexico)
)
County of Denver)

The forgoing instrument was acknowledged before me this 19th day of March, 1998 by Scott M. Webb, Regulatory Coordinator, UMC Petroleum Corporation, on behalf of said corporation.

My commission expires: My Commission Expires Feb. 8, 2000

Notary Public

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

Lea County New Mexico

and ~~numbered~~ .....

..... ~~County of Lea~~

~~State of New Mexico~~, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, ~~once each week~~ ~~on the same day~~ ~~of each week~~, for one (1) day ~~consecutive weeks~~, beginning with the issue of March 13, 19 98

and ending with the issue of March 13, 19 98

And that the cost of publishing said notice is the sum of $ 14.00

which sum has been (Paid) (Assessed) as Court Costs

Joyce Clemens

Subscribed and sworn to before me this 13th day of March, 19 98

Jean Lewis

Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 19 98

LEGAL NOTICE
LEA COUNTY
NEW MEXICO

UMC Petroleum Corporation proposes to convert the plugged and abandoned Cole 25 State #1 well to water disposal. The Cole 25 #1 is located in Unit A, Section 25, Township 10 South, Range 37E, 990 feet FNL and 990 feet FEL, Lea County, New Mexico, 2000 barrels of water per day maximum shall be injected at 900 psi maximum in to the San Andres zone between 4297' to 5700'.

Interested parties can file objections or request a hearing with the State of New Mexico, Energy, Minerals & Natural Resources Department, Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501, within 15 days.

Published in the Lovington Daily Leader March 13, 1998.

Dated: March 19, 1998
Operator: UMC Petroleum Corporation

III Injection Well Data:

A)
1. Cole 25 State #1
Unit A Sec 25-T10S-R37E
990' FNL & 990' FEL
Lea County, New Mexico
2. Casing Detail: Surface casing: Hole Size 17-1/2", 13-3/8" 68# J-55 @ 359'
Cemented to surface with 380 sx "C".
Intermediate: Hole Size 11', 8-5/8" 32# J-55 @ 4297'
Cemented to surface with 1350sx PP Lite.
Both cement jobs were circulated to the surface.
3. Tubing size: 2-7/8" set at 4297', lined with Tuboscope TK-21.
4. Packer: Baker AD-1 set at 4292'.

B)
1. Injection Formation: San Andres
2. Injection Interval: 4297' to 5700' Open Hole
3. Originally drilled as oil test in Devonian. Dry hole, plugged and abandoned.
4. TD 12,300', cement plugs at 12,900' 35 sx, 9662' 35 sx, 7222' 35 sx, 5736' 35 sx. 4340' 30 sx, 2252' 30 sx, 420' 30 sx & 10 sx plug at surface. No casing was set below 4297', see attached wellbore diagram.
5. Underlying: Devonian / Overlying: None.

V Map: Attached: 2 mile radius well data & offset lease map

VI Wells within ½ mile area of review:

Hood State #1 Type: Oil well (Devonian) Date Drilled: 1/25/98*
API# 30-025-34154
Unit F Section 25-T10S-R37E
2250' FNL & 2310' FWL
TD: 12,180'
Surface Casing: 13-3/8", 48#, H-40 @ 400'. Cemented with 415 sx to surface.
Intermediate Casing: 8-5/8", 32#, K55 @ 4380'. Cemented with 1515 sx to surface.
Production Casing: 5-1/2", 17#, S-95 & N-80 @ 12,180'. Cemented with 690 sx, TOC @ 10,500'.

* Completion report will be filed as soon as well ready.

VII Proposed Operation:

Average Injection Pressure:	500 psi	Maximum Pressure:	900 psi
Maximum Volume/Day:	2000 bbls		
System Type:	Closed		
Disposal Water Sources:	Hood State #1	F-25-T10S-R37E	Devonian*
	Rainier State #1	B-28-T10S-R37E	Devonian*

*water analysis attached (Devonian & San Andres)

VIII Injection ZoneGeological Data:

The proposed disposal injection zone is the San Andres between 4297' to 5700' in the Cole 25 State #1 well. The porous interval (1403') consists of Dolomite. The closest San Andres production is 4.5 miles north-northeast of the well.

The maximum USDW depth is 300'. There are no drinking water zones underlying the San Andres Zone in this area.

IX Stimulation Program: None proposed.

X Test Data:

There is no test data available for the San Andres at this time. Well logs have been filed for the well at the time of the original completion by Grover-McKinney Oil Co.

XI Fresh Water Data: Analysis Attached

XII UMC Petroleum Corporation has examined the available engineering and geological data in the immediate area of the proposed disposal well. There is no evidence of faulting or cross-zonal hydrological communication between the disposal zone and the USDW zone above.

XIII Proof of Notice: Affidavit of mailing and publication attached.

Wells within a 2 mile radius of the Cole 25 State #1

Signal 71 State #1	Sec 25-T10S-R37E	1980' FSL & 1980' FWL	TD 12355'
Lea State #1 AY NCT-2	Sec 26-T10S-R37E	1980' FNL & 660' FEL	TD 12139'
State AY #1	Sec 35-T10S-R37E	660' FNL & 660' FWL	TD 12145'
November State #1	Sec 36-T10S-R37E	1980' FNL & 1980' FEL	TD 12140'
Simmons #1	Sec 18-T10S-R38E	660' FSL & 660' FEL	TD 5237'
Landreth Fed #1	Sec 29-T10S-R38E	1980' FNL & 1980' FWL	TD 12540'
Curtis Evans #1	Sec 30-T10S-R38E	660' FSL & 1980' FEL	TD 1257'
RK Field #1	Sec 31-T10S-R38E	660' FNL & 19809' FWL	TD 12208'
Mattie Field #1	Sec 31-T10S-R38E	2310' FNL & 990' FWL	TD 12200'

Wells within a ½ mile radius of the Cole 25 State #1

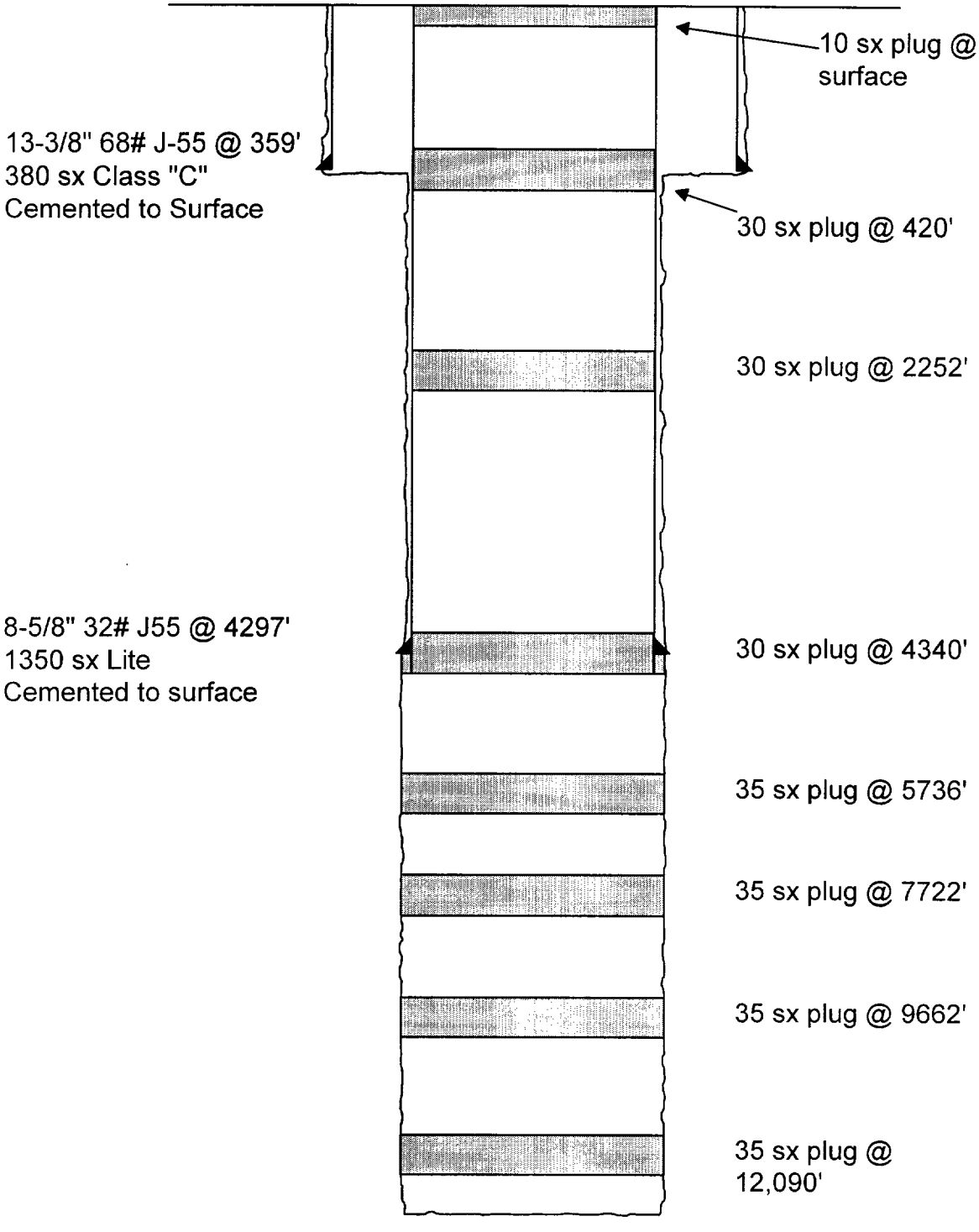
Hood State #1	Sec 25-T10S-R37E	2250' FNL & 2310' FWL	TD 12180'

Cole 25 State #1

A-25-T10S-R37E

Lea County, NM

Current Well Status PA

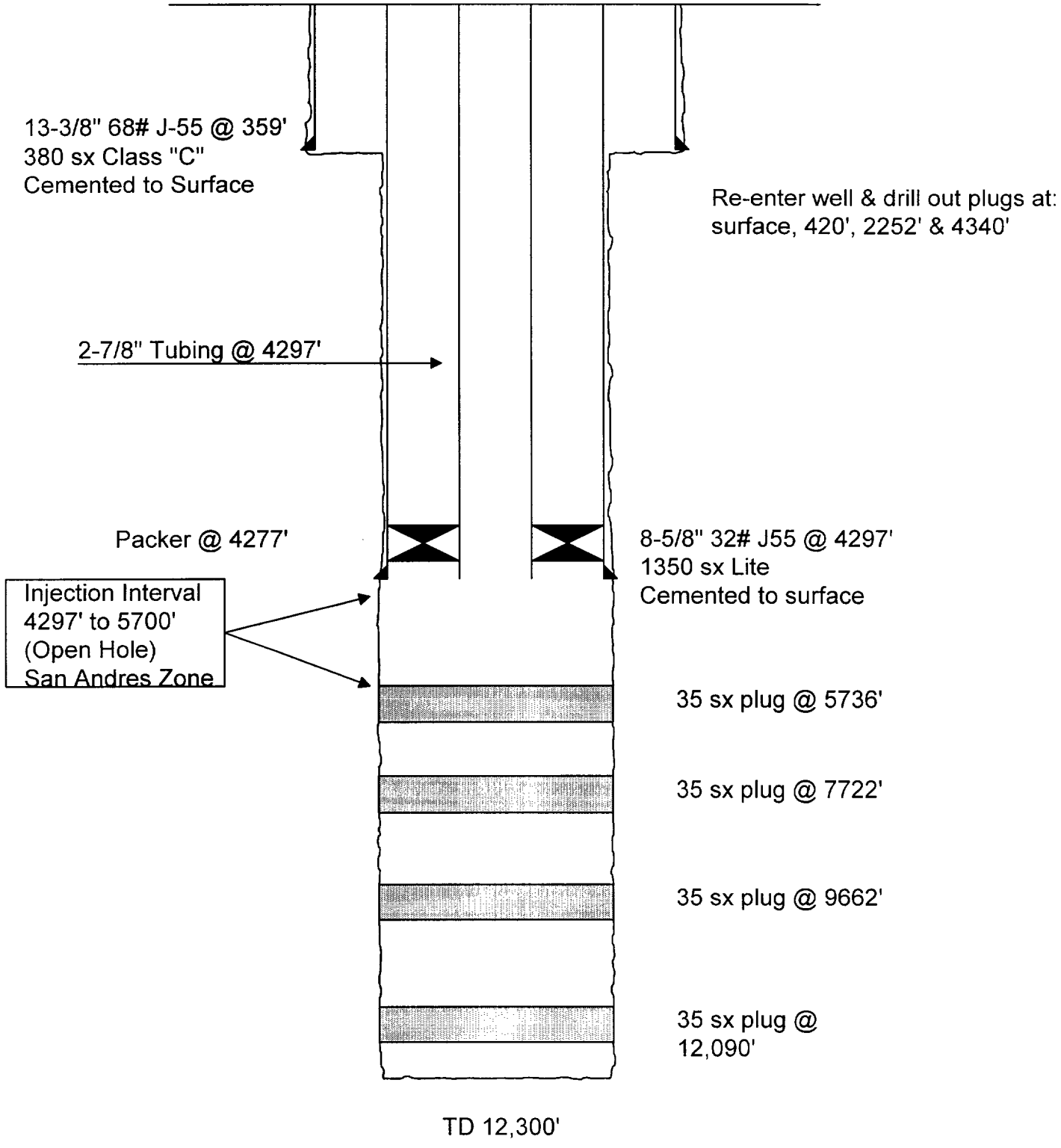


Cole 25 State #1

A-25-T10S-R37E

Lea County, NM

Proposed Injection Well Conversion



FRESH WATER ANALYSIS

Fresh Wtr - T10S-R37E-Lea Co, NM

Permian Treating Chemicals

WATER ANALYSIS REPORT

SAMPLE

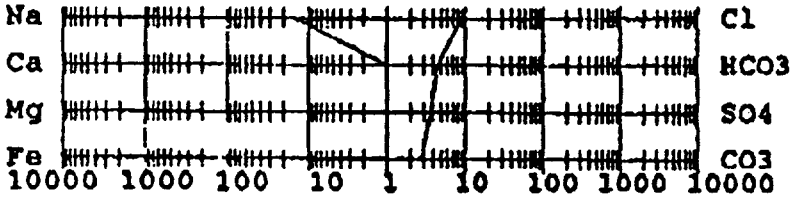
Oil Co. : Devon Energy
Lease : CW Trainer
Well No.: Fresh Water Well
Salesman:

Sample Loc. :
Date Analyzed: 04-January-1996
Date Sampled :

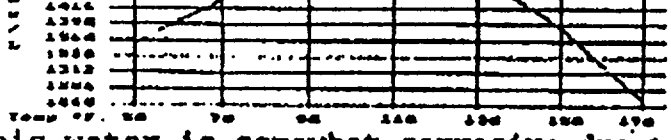
ANALYSIS

1.	pH		9.090		
2.	Specific Gravity 60/60 F.		1.003		
3.	$CaCO_3$ Saturation Index @ 80 F.		+0.906		
	@ 140 F.		+1.606		
	Dissolved Gasses		**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide		Not Present		
5.	Carbon Dioxide		Not Determined		
6.	Dissolved Oxygen		Not Determined		
	Cations				
7.	Calcium	(Ca^{++})	10	/ 20.1 =	0.50
8.	Magnesium	(Mg^{++})	6	/ 12.2 =	0.49
9.	Sodium	(Na^{+}) (Calculated)	348	/ 23.0 =	15.13
10.	Barium	(Ba^{++})	Below 10 (6)		
	Anions				
11.	Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate	(CO_3^{--})	77	/ 30.0 =	2.57
13.	Bicarbonate	(HCO_3^{-})	259	/ 61.1 =	4.24
14.	Sulfate	(SO_4^{--})	165	/ 48.8 =	3.38
15.	Chloride	(Cl^{-})	300	/ 35.5 =	8.45
16.	Total Dissolved Solids		1,088		
17.	Total Iron (Fe)		1	/ 18.2 =	0.05
18.	Total Hardness As $CaCO_3$		50		
19.	Resistivity @ 75 F. (Calculated)		2.963 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	0.50	40
$CaSO_4$	68.07	0.00	0
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.49	36
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	0.00	0
$NaHCO_3$	84.00	3.25	273
$NaSO_4$	71.03	3.38	240
NaCl	58.46	8.45	494

*Milli Equivalents per Liter

This water is somewhat corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts in solution.

DEVONIAN ANALYSIS

HE WESTERN COMPANY OF NORTH AMERICA

WATER ANALYSIS

HOBBS, NEW MEXICO LAB — ANALYSIS #: HB010501

GENERAL INFORMATION

OPERATOR:	MANZANO OIL CORP.	DEPTH:	0
WELL:	SV SUNDOWN ST. #1	DATE SAMPLED:	3/30/95
FIELD:		DATE RECEIVED:	3/30/95
FORMATION:		SUBMITTED BY:	
COUNTY:		WORKED BY:	MIKE LEE
STATE:		PHONE #:	505-392-5556

Send Data Set. Devonian

SAMPLE DESCRIPTION: MORNING SAMPLE

Rw w/Eq. NaCl @ 190° = .204

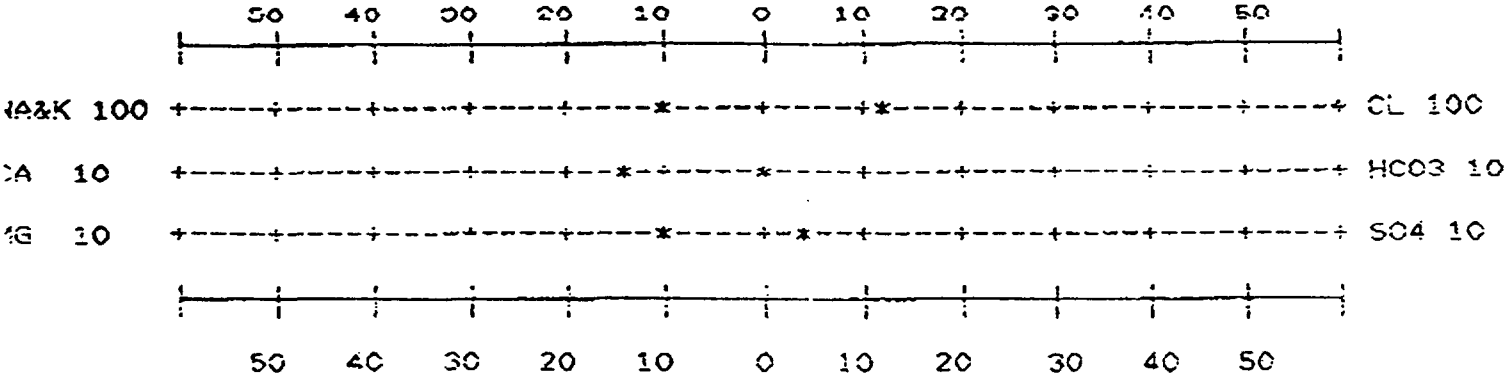
PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.050 @ 62 °F	PH:	5.65
RESISTIVITY (CALC.):	.095 OHMS @ 75 °F		
ON (FE++):	2500 PPM	SULFATE:	1571 PPM
ALCIUM:	2667 PPM	TOTAL HARDNESS:	11905 PPM
MAGNESIUM:	1273 PPM	BICARBONATE:	465 PPM
CHLORIDE:	39991 PPM	SODIUM CHLORIDE (CALC)	65785 PPM
SODIUM+POTASS:	21398 PPM	TOT. DISSOLVED SOLIDS:	75330 PPM
		H2S	:NONE

REMARKS: 3PM SAMPLES DID NOT HAVE ENOUGH WATER FOR ANALYSIS.

API OIL GRAVITY FOR AFTERNOON SAMPLES WAS 37.5

STIFF TYPE PLOT (IN MEQ/L)



ANALYST _____

MIKE LEE

DATE TAKEN	01-26-96	
REMARKS	Devonian Formation	
Barium as Ba	0.00	
Carbonate alkalinity PPM	0	
Bicarbonate alkilinity PPM	64	
pH at Lab	6.15	
Specific Gravity @ 60° F	1.042	
Magnesium as Mg	3,422	
Total Hardness as CaCO3	5,900	
Chlorides as Cl	25,063	
Sulfate as SO4	2,875	
Iron as Fe	72.50	
Potassium	12.00	
Hydrogen Sulfide	0.00	
Resistivity Ohms	0.2490	25.7° C
Total Dissolved Solids	42,250	
Calcium as CA	2,478	
Nitrate	22.00	

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.69

Analysis by Vickie Walker
Date: 01-31-96

DEVONIAN ANALYSIS

Permian Treat:

WATER ANALYSIS REPORT

SAMPLE Devonian

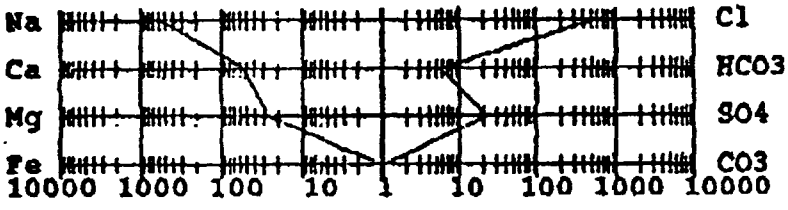
Oil Co. :
Lease : CW Trainer
Well No.: Morse #1 SW/NW Sec 27-19S-37E
Salesman:

Sample Loc. : Lea Co, New Mexico
Date Analyzed: 04-January-1996
Date Sampled :

ANALYSIS

1.	pH	7.280		
2.	Specific Gravity 60/60 F.	1.028		
3.	$CaCO_3$ Saturation Index @ 80 F.	+0.094		
	@ 140 F.	+1.064		
	Dissolved Gasses	**MG/L**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide	Not Present		
5.	Carbon Dioxide	Not Determined		
6.	Dissolved Oxygen	Not Determined		
	Cations			
7.	Calcium (Ca^{++})	1,002	/ 20.1 =	49.85
8.	Magnesium (Mg^{++})	304	/ 12.2 =	24.92
9.	Sodium (Na^{+}) (Calculated)	11,869	/ 23.0 =	516.04
10.	Barium (Ba^{++})	Not Determined		
	Anions			
11.	Hydroxyl (OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate (CO_3^{--})	0	/ 30.0 =	0.00
13.	Bicarbonate (HCO_3^{-})	332	/ 61.1 =	5.43
14.	Sulfate (SO_4^{--})	1,050	/ 48.8 =	21.52
15.	Chloride (Cl^{-})	19,995	/ 35.5 =	563.24
16.	Total Dissolved Solids	34,552		
17.	Total Iron (Fe)	4	/ 18.2 =	0.19
18.	Total Hardness As $CaCO_3$	3,753		
19.	Resistivity @ 75 F. (Calculated)	0.235 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT. X	*meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	5.43	440
$CaSO_4$	68.07	21.52	1,465
$CaCl_2$	55.50	22.90	1,271
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	24.92	1,187
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	515.42	30,131

*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts in solution.

SAN ANDRES ANALYSIS

Permian Treating Chemicals

WATER ANALYSIS REPORT

San Andres

SAMPLE

Oil Co. : Coastal Oil & Gas
Lease : Sawyer
Well No.: Marr #3 NE/SE Sec 33-T9S-R37E
Salesman: Lea Co, NM

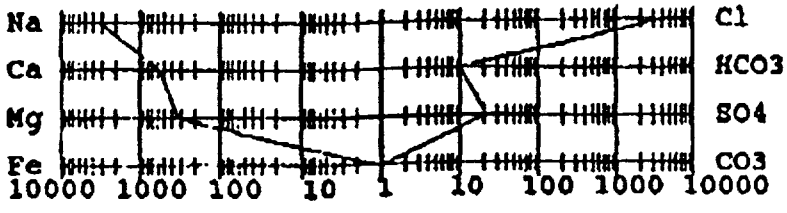
Sample Loc. :
Date Analyzed: 04-January-1996
Date Sampled :

ANALYSIS

1.	pH	5.840	
2.	Specific Gravity 60/60 F.	1.155	
3.	$CaCO_3$ Saturation Index @ 80 F.	+0.978	
	@ 140 F.	+2.738	

	Dissolved Gasses		MG/L	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide		Present		
5.	Carbon Dioxide		Not Determined		
6.	Dissolved Oxygen		Not Determined		
	Cations				
7.	Calcium	(Ca^{++})	11,022	/ 20.1 =	548.36
8.	Magnesium	(Mg^{++})	3,890	/ 12.2 =	318.85
9.	Sodium	(Na^{+}) (Calculated)	71,489	/ 23.0 =	3,108.22
10.	Barium	(Ba^{++})	Not Determined		
	Anions				
11.	Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate	(CO_3^{--})	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})	596	/ 61.1 =	9.75
14.	Sulfate	(SO_4^{--})	1,050	/ 48.8 =	21.52
15.	Chloride	(Cl^{-})	139,968	/ 35.5 =	3,942.76
16.	Total Dissolved Solids		228,015		
17.	Total Iron (Fe)		1	/ 18.2 =	0.05
18.	Total Hardness As $CaCO_3$		43,539		
19.	Resistivity @ 75 F. (Calculated)		0.001 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	9.75	791
$CaSO_4$	68.07	21.52	1,465
$CaCl_2$	55.50	517.09	28,698
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	0.00	0
$MgCL_2$	47.62	318.85	15,184
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	3,106.82	181,625

*Milli Equivalents per Liter

This water is somewhat corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H2S in solution.

Comparison Between Two Waters

04-January-1996

TO: Permian Treating Chemicals Company : Devon Energy

Sample # 1: Morse #1 (Devonian ufr) Sample # 2: Marr #3 (San Andres ufr)

Percent of #1 & #2	pH	TDS mg/L	SpGr	Saturation Index @80°F.	Saturation Index @140°F.	Calcium Sulfate Scaling Potential
100 - 0	7.280	34,552	1.028	+0.336	+1.140	Nil
95 - 5	7.208	44,225	1.034	+0.281	+1.120	Nil
90 - 10	7.136	53,898	1.041	+0.246	+1.027	Nil
85 - 15	7.064	63,571	1.047	+0.229	+0.967	Nil
80 - 20	6.992	73,245	1.053	+0.305	+1.056	Nil
75 - 25	6.920	82,918	1.060	+0.368	+1.132	Nil
70 - 30	6.848	92,591	1.066	+0.422	+1.198	Nil
65 - 35	6.776	102264	1.072	+0.469	+1.257	Nil
60 - 40	6.704	111937	1.079	+0.509	+1.311	Nil
55 - 45	6.632	121610	1.085	+0.545	+1.359	Nil
50 - 50	6.560	131284	1.092	+0.577	+1.404	Nil
45 - 55	6.488	140957	1.098	+0.605	+1.445	Nil
40 - 60	6.416	150630	1.104	+0.631	+1.483	Nil
35 - 65	6.344	160303	1.111	+0.654	+1.519	Nil
30 - 70	6.272	169976	1.117	+0.675	+1.553	Marginal
25 - 75	6.200	179649	1.123	+0.694	+1.584	Marginal
20 - 80	6.128	189322	1.130	+0.711	+1.614	Marginal
15 - 85	6.056	198996	1.136	+0.726	+1.642	Marginal
10 - 90	5.984	208669	1.142	+0.740	+1.669	Marginal
5 - 95	5.912	218342	1.149	+0.753	+1.694	Marginal
0 - 100	5.840	228015	1.155	+0.765	+1.718	Marginal

NE ..EXICO OIL CONSERVATION COMMISS

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
GROVER OIL COMPANY	COLE-STATE 25 A	1

Unit Letter	Section	Township	Range	County
A	25	10 SOUTH	37 EAST	LEA

Actual Footage Location of Well:
990 feet from the NORTH line and 990 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3918.0'	Proposed Devonian	Wildcat	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

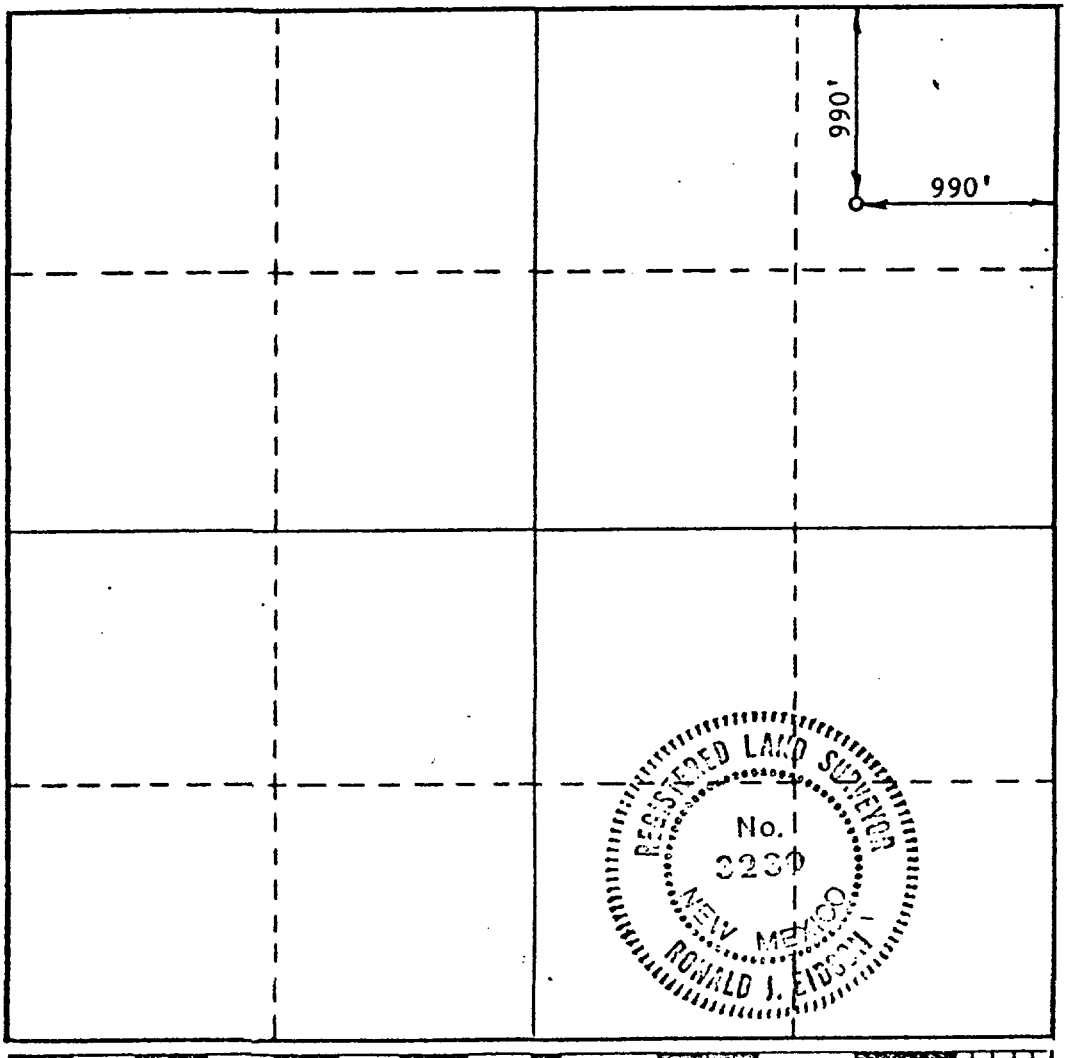
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: Gary Mullaney

Position: Vice President

Company: Grover Oil Company

Date: October 2, 1987

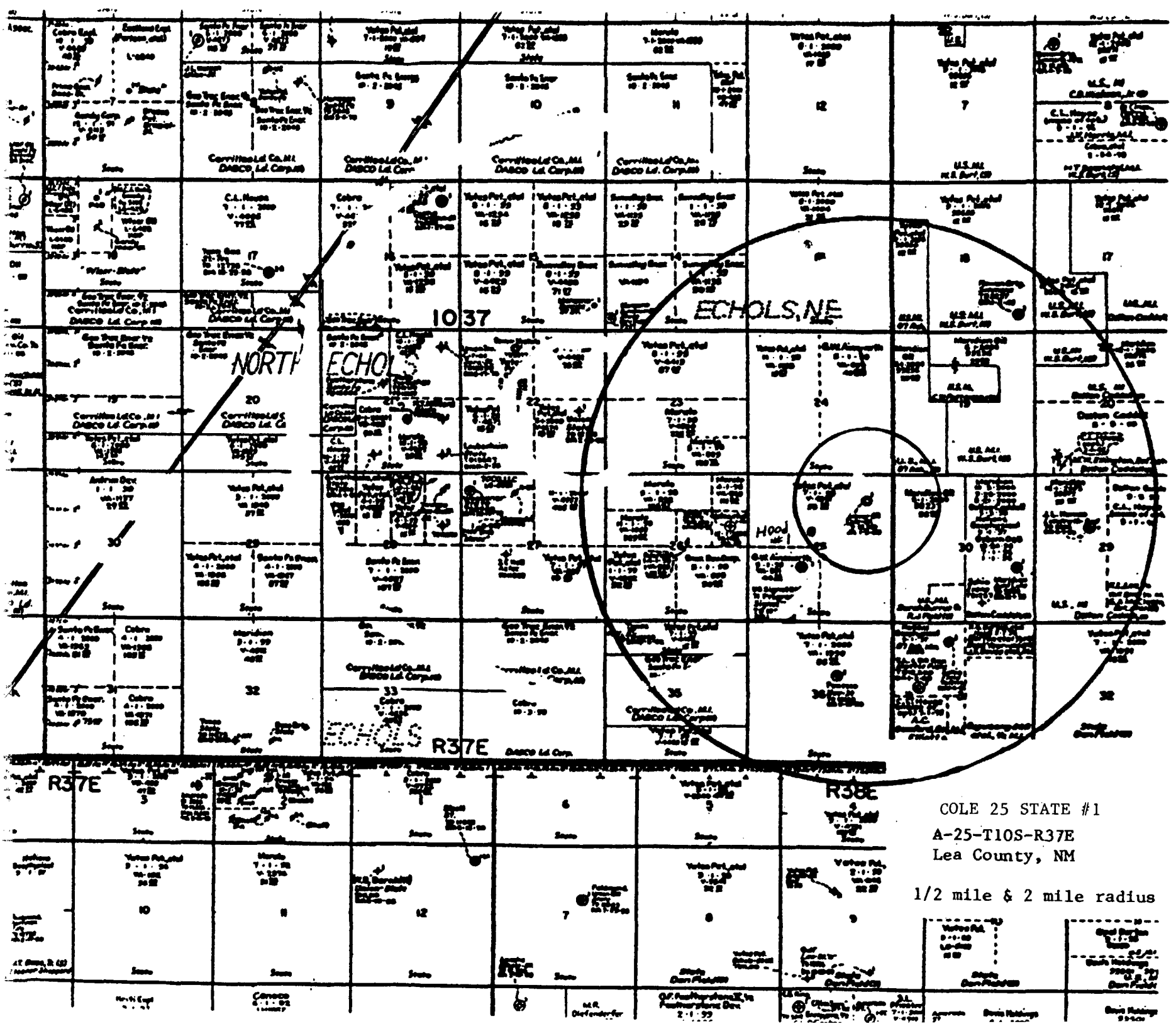
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: SEPTEMBER 30, 1987

Registered Professional Engineer and/or Land Surveyor

Ronald J. Eidson

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239



COLE 25 STATE #1

A-25-T10S-R37E

Lea County, NM

1/2 mile & 2 mile radius

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Robert Bullock
Yates Petroleum Corp.
105 South 4th Street
Artesia, NM 88210

4a. Article Number

Z 096 599 115

4b. Service Type

☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*

X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Richard Lowery
Maralo Petroleum Inc.
P.O. Box 832
Midland, TX 79702

4a. Article Number
Z 096 599 116

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Ben Alexander
DASCO Land Corp.
P.O. Box 947
Hobbs, NM 88241-0947

4a. Article Number
Z 096 599 114

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
G.W. Ainsworth
9106 Cumberland Drive
Irving, TX 75063

4a. Article Number
Z 096 599 118

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Meridian Oil Co.
P.O. Box 51810
Midland, TX 79705

4a. Article Number
Z 096 599 117

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.