

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: Olefin Energy, Inc. Well: STATE '36' Well No. 5
Contact: DICK MORTON Title: PROD. MGR. Phone: 210 196 2466
DATE IN 5-23-97 RELEASE DATE 6-9-97 DATE OUT 7-2-97

Proposed Injection Application is for: WATERFLOOD Expansion Initial

Original Order: R- Secondary Recovery Pressure Maintenance

SENSITIVE AREAS

☒ SALT WATER DISPOSAL Commercial Well

WIPP Capitan Reef

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

N/A AOR Repair Required

INJECTION FORMATION

Injection Formation(s) SAN ANDRES Compatible Analysis YES

Source of Water or Injectate GREG / SA

PROOF of NOTICE

YES Copy of Legal Notice

YES Information Printed Correctly

YES Correct Operators

YES Copies of Certified Mail Receipts

N/A Objection Received

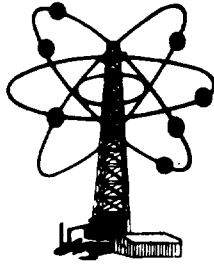
N/A Set to Hearing _____ Date

NOTES:

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? YES

COMMUNICATION WITH CONTACT PERSON:

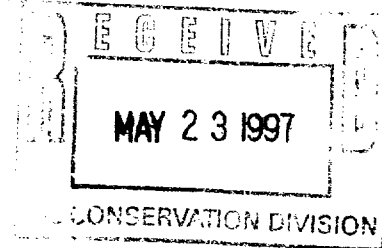
1st Contact:	<u>Telephoned</u>	<u>Letter</u>	<u>_____</u> Date	Nature of Discussion <u>_____</u>
2nd Contact:	<u>Telephoned</u>	<u>Letter</u>	<u>_____</u> Date	Nature of Discussion <u>_____</u>
3rd Contact:	<u>Telephoned</u>	<u>Letter</u>	<u>_____</u> Date	Nature of Discussion <u>_____</u>



OLSEN ENERGY, INC.

Oil & Gas Development
SAN ANTONIO, TEXAS 78232-2246

May 20, 1997



Mr. William J. LeMay
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Re: Application of Olsen Energy, Inc.
for Approval for Use of State "36"
No. 5 for Saltwater Disposal
Sec. 36-17S-33E
Lea County, New Mexico

Dear Mr. LeMay,

On behalf of Olsen Energy, Inc., please find enclosed a completed Division Form C-108 and attachments which represents our request for administrative approval of the referenced well for disposal purposes.

This application is for authority to dispose of produced water into the San Andres formation in the open hole 4600'-5300' in the State "36" No. 5 located 330' FSL and 2310' FWL of Section 36-17S-33E, Lea County, New Mexico.

In accordance with Division notice rules, copies of this application were sent to the surface owner and operators within a one-half mile radius of the well (notification list and return receipts - attachment #8). Notice was also published in the Hobbs Daily News-Sun (attachment #7).

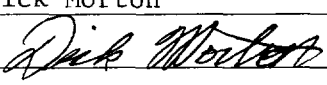
Yours truly,

OLSEN ENERGY, INC.

Dick Morton
Drilling/Production Manager

cc: Hobbs District Office

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ Yes ☐ No
- II. Operator: Olsen Energy, Inc.
Address: 16414 San Pedro, Suite 470, San Antonio, Texas 78232
Contact Party: Dick Morton Phone: (210)496-2466
- 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 a two mile radius 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 with 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 geological name, and depth to bottom of 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: Dick Morton Title: Drilling/Prod. Manager
Signature:  Date: 5/6/97
- If the information required under Sections VI, VIII, X, and XI above have 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 the Santa Fe Office with one copy to the appropriate Division Office

OLSEN ENERGY, INC.
STATE "36" NO. 5

III. Well Data (See Attachment No. 1)

A. 1. Name and Location

State "36" No. 5
330' FSL and 2310' FWL
Section 36-17S-33E
Lea County, New Mexico

2. Casing
Surface:

8-5/8" 24# at 375' (11" hole)
cemented with 275 sacks.
Cement circulated.

Long String:

4 1/2" 10.5# (7-7/8" hole) set
at 4600' (will re-enter and
clean out to old TD, deepen
to 5300' and set pipe at
4600'. Will circulate cement.

Open Hole:

7-7/8" open hole 4600'-
5300'

3. Tubing:

2-3/8" OD 4.7# J-55
internally coated with
plastic set at 4500'.

4. Packer:

Baker Lok-set set at 4500'

B. 1. Injection Formation:

San Andres

2. Injection Interval:

4600'-5300' open hole

3. Original Intent:

Well(originally McMahon,
Wiley & Lowe - Mobil State
No. 4) was drilled in 9-61 to
a depth of 4092' as a dry
hole.

4. Productive Zones:

Lower:

High:

Abo at 8800' (1/2 mile SW)

Queen at 3900' (1/2 mile S)

VII. Proposed Injection Operations

1. Rates:

Average - 400 BWPD

Maximum - 800 BWPD

2. System:

Closed

3. Pressure:

Average - 750 psi

Maximum - 1000 psi

4. Fluid:

Produced water from
Grayburg - San Andres (see
water analysis attachment
no. 6)

VIII. A. Injection Zone:

The injection zone will be in
the San Andres Formation
from 4600' to 5300', a dolo-
mite with some porous and
permeable zones and some
tight zones.

B. Fresh Water in Area:

Ogallala - base at 200'.

IX. Stimulation Program:

None planned

X. Logging Date:

Well will be logged upon
reaching TD.

XI. Fresh Water Analysis:

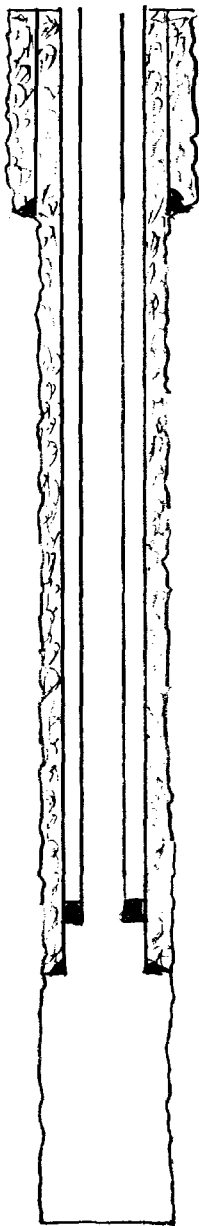
There are no water wells
within two miles of this well.

INJECTION WELL DATA SHEET

Olsen Energy, Inc.		State "36"		
OPERATOR		LEASE		
No. 5	330' FSL & 2310' FWL	36-17S-33E		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

SCHEMATIC

TUBULAR DATA



8-5/8" @ 305'

Old TD 4092'

Proposed
4 1/2" at 4600'

Proposed TD 5300'

SURFACE CASING @ 305'
SIZE 8-5/8 " CEMENTED WITH 275 SX.
TOC surf FEET DETERMINED BY circ
HOLE SIZE 11"
INTERMEDIATE CASING
SIZE " CEMENTED WITH SX.
TOC FEET DETERMINED BY
HOLE SIZE
LONG STRING @ 4600' volume to be determined
SIZE 4 1/2 " CEMENTED WITH logs SX.
TOC surf FEET DETERMINED BY
HOLE SIZE 7-7/8"
TOTAL DEPTH 5300'
INJECTION INTERVAL
4600 FEET TO 5300 FEET O.H.
(perforated or open-hole, indicate which)

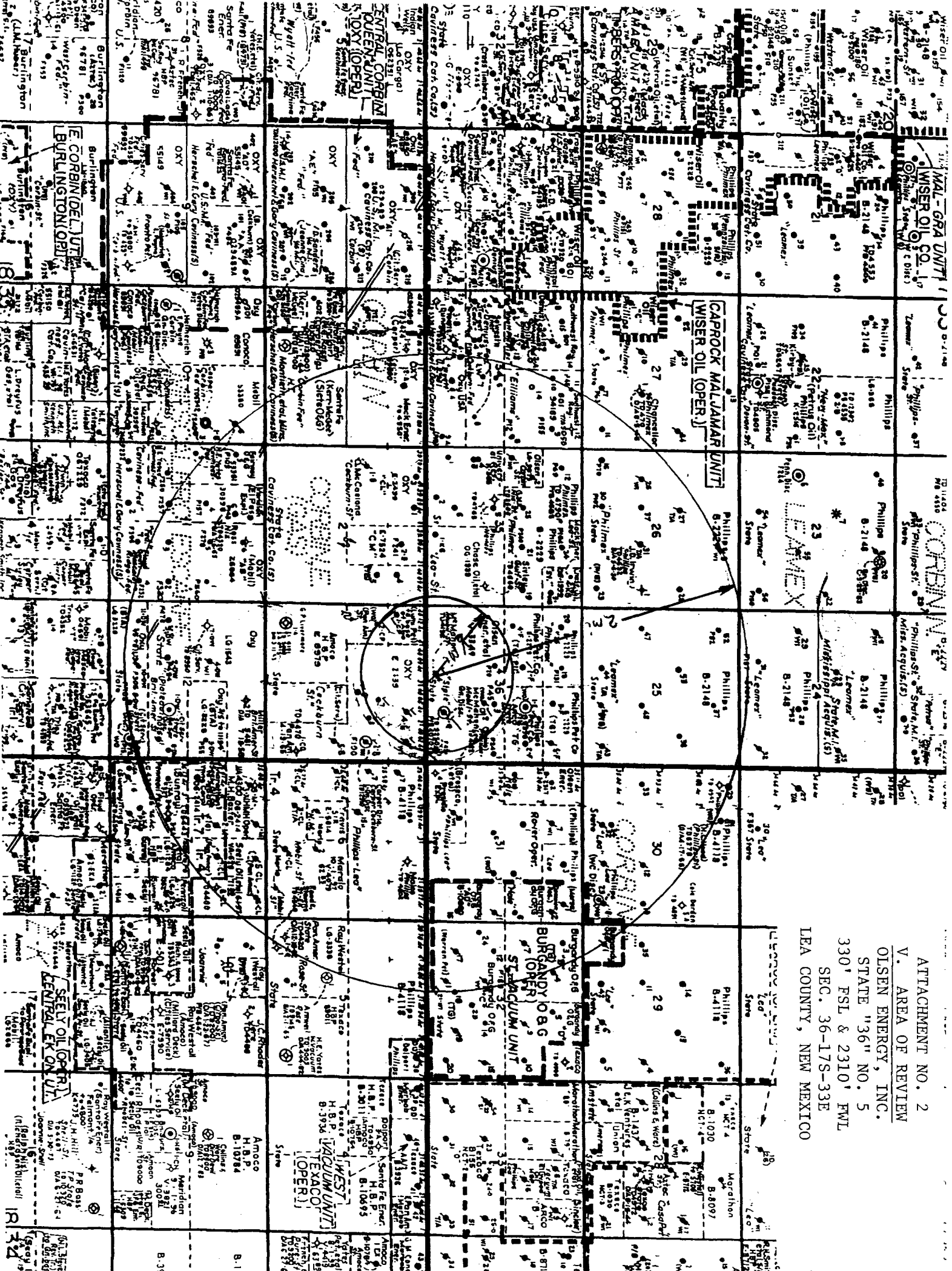
TUBING SIZE 2-3/8" LINED WITH Plastic SET IN A
(material)
Baker Lok-set PACKER AT 4500 FEET
(brand and model)

(or describe any other casing seal).

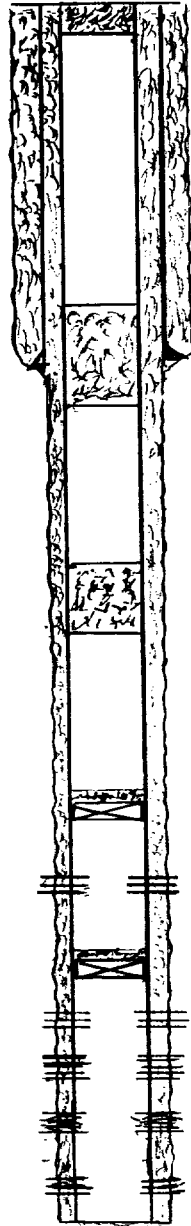
OTHER DATA

- Name of injection formation San Andres
- Name of Field or Pool (if applicable) Vacuum GB/SA
- Is this a new well drilled for injection? ☐ Yes ☒ No Re-enter 4092' dry hole and deepen to 5300'
If no, for what purpose was the well originally drilled? Drilled in 1961 to test Queen. Dry Hole.
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used: No
- Give the depth to and name or any overlying and/or underlying oil or gas zones (pools) in this area: Queen at 3900', ABO at 8800'

ATTACHMENT NO. 2
V. AREA OF REVIEW
OLSEN ENERGY, INC.
STATE "36" NO. 5
330' FSL & 2310' FWL
SEC. 36-17S-33E
LEA COUNTY, NEW MEXICO



OLSEN ENERGY, INC.
STATE "36" NO. 2
1980' FSL & 1980' FEL
Sec 36-17S-33E



10 sack plug at surface

7-5/8" 24# casing at 867' in 9-7/8" hole.
Cemented with 300 sacks. Circulated.

25 sack plug at 900'

25 sack plug at 1581'

CIBP at 3640' w/3 sacks on top

Perf 3882'-3902'

CIBP at 4500' w/10' of cement on top

Perf 4626'-4646'

Perf 4659'-4691'

Perf 4755'-4770'

Perf 4785'-4816' (Squeezed)
5½" 14# casing set at 4894' (TD) in 6-3/4"
hole. Cemented with 1600 sacks.
Circulated.

MURPHY H. BAXTER
N. EK QUEEN UNIT
TRACT NO. 1 WELL NO. 1
330' FSL & 330' FEL
Sec 36-17S-33E

Perf 8-5/8" @ 200'
Pump 110 sxs - Circ
Cement plug 248'-372'

25 sack plug in 5 1/2"
@ 1640'

5 1/2" CIBP @ 3900' w/35'
of cement on top.

Cement plug 4090'-4300'
Dressed Off to 4100'
before running 5 1/2"

13-3/8" OD set at 276' cemented
w/310 sacks. Circulated.

5 1/2" shot off at 1315' - Cement
plug 1260'-1365'.

8-5/8" OD set at 3100'. Cemented
w/250 sacks TOC 2250' (calc)

5 1/2" OD set @ 4100'. Cemented
w/250 sacks TOC 2800' (temp survey)

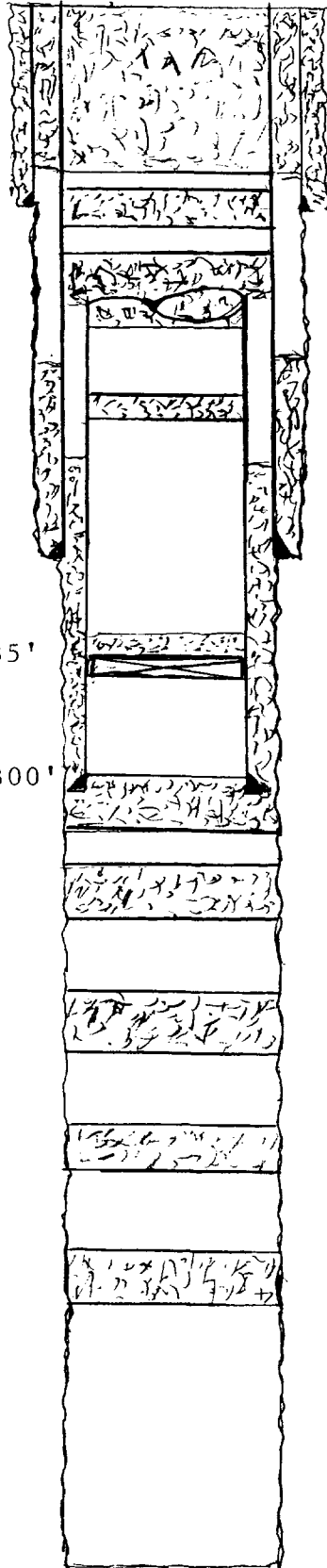
Cement plug 4450'-4720'

Cement plug 5050'-5310'

Cement Plug 6200'-6300'

Cement plug 6800'-6900'

TD 9250' 7-7/8" hole



.O.BOX 2187
HOBBS, N.M. 88240



PHONE: (505) 393-7726

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

Report for: Rusty Olson
cc: Frank Gardner
cc:
cc:
Company: Olson Energy
Address:
Service Engineer: Frank Gardner

Date sampled: 04/17/95
Date reported: 04/24/95
Lease or well # : State #36-3
County: State:
Formation:
Depth:
Submitted by: Frank Gardner

CHEMICAL COMPOSITION :	mg/L	meq/L
Chloride (Cl)	117000	3300
Iron (Fe) (total)	0.0	
Total hardness	11000	
Calcium (Ca)	2165	108
Magnesium (Mg)	1360	109
Bicarbonates (HCO ₃)	732	12
Carbonates (CO ₃)	0	
Sulfates (SO ₄)	4346	90
Hydrogen sulfide (H ₂ S)	94	
Carbon dioxide (CO ₂)	746	
Sodium (Na)	73269	3186
Total dissolved solids	198874	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	
Specific Gravity	1.142	
Density (#/gal.)	9.517	
pH	6.330	
IONIC STRENGTH	3.56	

Stiff-Davis (CaCO₃) Stability Index :
SI = pH - pCa - pAlk - K

SI @ 86 F = +0.37
104 F = +0.60
122 F = +0.86
140 F = +1.15
158 F = +1.47

This water is 381 mg/l (-5.82%) under ITS CALCULATED
CaSO₄ saturation value at 82 F.

SATURATION= 6541 mg/L PRESENT= 6160 mg/L

REPORTED BY JOY DUNCAN

LAB TECHNICIAN

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1 weeks.

Beginning with the issue dated

April 20 1997

and ending with the issue dated

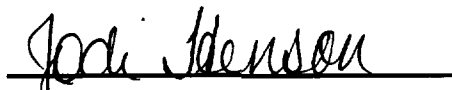
April 20 1997


Publisher

Sworn and subscribed to before

me this 21st day of

April 1997


Notary Public.

My Commission expires
October 18, 2000
(Seal)

LEGAL NOTICE

April 20, 1997

**Notice of Application to
Dispose of Produced Salt
Water**

Olsen Energy, Inc., 16414 San Pedro, Suite 470, San Antonio, Texas 78232, (210) 496-2466 (Contact: Dick Morton) has made application to dispose of produced salt water in the State "36" No. 5 well. The well location is 330' FSL and 2310' FWL of Sec. 36-17S-33E, Lea County, New Mexico. Disposal will be in the San Andres formation in the interval 4500-5300'. Maximum injection rate 800 BWPD with a maximum pressure of 1000 psi. Interested parties may file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505 within 15 days of this publication.
#15161

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

01101697000 01507219
Olsen Enerby, Inc.
16414 San Pedro, Suite 470
a/c 434005
San Antonio, TX 79232-2246

Attachment No. 8

Notification List

Surface Owners:

Pearce Trust
1717 Jackson
Pecos, Texas 79772

State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, New Mexico 87504

Operators within one-half mile radius:

Lynx Petroleum Consultants, inc.
Box 1979
Hobbs, New Mexico 88240

Oxy USA, Inc.
Box 50250
Midland, Texas 79710

Phillips Petroleum Co.
4001 Penbrook
Odessa, Texas 79762

Mack Energy Corp.
Box 960
Artesia, New Mexico 88211-0960

**These were mailed May 7, 1997. See attached return receipts.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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:

Oxy USA Inc
Box 50250
Midland TX 79710

4a. Article Number

7162561567

4b. Service Type

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

7. Date of Delivery

5. Signature (Addressee)

Robert J. Jensen

6. Signature (Agent)

D. McKee

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

PS Form 3811, December 1991

U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

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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:

Kunx Pet. Con.
Box 1979
Hobbs NM 88240

4a. Article Number

7162561568

4b. Service Type

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

7. Date of Delivery

5-9-99

5. Signature (Addressee)

Noem Villalobos

6. Signature (Agent)

Noem Villalobos

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

PS Form 3811, December 1991

U.S. GPO: 1992-323-402

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

Consult postmaster for fee.

3. Article Addressed to:

State of New Mexico
Comm. of Public Lands
PO Box 1148
Santa Fe NM 87504

4a. Article Number

7162561569

4b. Service Type

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

7. Date of Delivery

MAY 09 1997

5. Signature (Addressee)

Paul F. Smith

6. Signature (Agent)

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

PS Form 3811, December 1991

U.S. GPO: 1992-323-402

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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:
Phillips Pet. Co.
4001 Penbrook
Odessa TX 79762

4a. Article Number
Z162561566
4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise
7. Date of Delivery
5-12-97

5. Signature (Addressee)
Kathy Thomas
6. Signature (Agent)

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

PS Form 3811, December 1991 U.S. GPO: 1992-323-402 DOMESTIC RETURN RECEIPT

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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:
Pearce Trust
1717 Jackson
Pecos, TX 79772

4a. Article Number
Z162561565
4b. Service Type
☒ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise
7. Date of Delivery
MAY 13 1997

5. Signature (Addressee)
Fred Pearce
6. Signature (Agent)

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

PS Form 3811, December 1991 U.S. GPO: 1992-323-402 DOMESTIC RETURN RECEIPT

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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:
Mack Energy Corp.
Box 960
Artesia NM 88211

4a. Article Number
Z162561570
4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise
7. Date of Delivery
5-12-97

5. Signature (Addressee)
Sybil Hensley
6. Signature (Agent)
Arthur Hensley

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

PS Form 3811, December 1991 U.S. GPO: 1992-323-402 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.