

W F X

3/28/97

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# J.O. EASLEY, INC.

ESTABLISHED 1979  
P.O. Box 245 88211-0245  
119 South Roselawn, Suite 302  
Artesia, New Mexico 88210

Telephone (505) 746-1070  
Fax (505) 746-1073

March 12, 1997

EX-13 EST

Mr. David Catanach  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: C-108  
Maljamar Grayburg Waterflood Unit  
Lea County, New Mexico

Dear Mr. Catanach:

Enclosed is an original and one copy of the C-108 for 2 new injection wells within The Wiser Oil Company's Maljamar Grayburg Waterflood Unit.

If you have any questions, please feel free to give me a call at 505-624-9677.

Sincerely,

J. O. EASLEY, INC.

Bonita L. Limpus Jones  
Consulting Landman

/bj

Enclosures

cc/enclosure Mr. Jerry Sexton  
New Mexico Oil Conservation Division  
P. O. Box 1980  
Hobbs, New Mexico 88241

Mr. Matt Eagleston  
The Wiser Oil Company  
8115 Preston Road, Suite 400  
Dallas, Texas 75225

Mr. Mike Jones  
The Wiser Oil Company  
P. O. Box 2568  
Hobbs, New Mexico 88241

# CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: Al Unser - 2000 Well: Al Unser - 2 wells

Contact: Ronald Taylor Title: \_\_\_\_\_ Phone: 505-624-7677

DATE IN 3-17-97 RELEASE DATE 3-28-97 DATE OUT 5-20-97

Proposed Injection Application is for:  WATERFLOOD  Expansion  Initial

Original Order: R- 1536  Secondary Recovery  Pressure Maintenance

**SENSITIVE AREAS**  SALT WATER DISPOSAL  Commercial Well

WIPR  Capitan Reef

Data is complete for proposed well(s)? Yes Additional Data Req'd \_\_\_\_\_

## AREA of REVIEW WELLS

76 Total # of AOR 11 # 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) 3RB - 10' Compatible Analysis Yes

Source of Water or Injectate AREA - 100' - 150'

## PROOF of NOTICE

Yes Copy of Legal Notice  Information Printed Correctly

Yes Correct Operators  Copies of Certified Mail Receipts

No Objection Received Yes 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 \_\_\_\_\_

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  
Application qualifies for administrative approval?  Yes  No
- II. OPERATOR: The Wiser Oil Company  
ADDRESS: P. O. Box 2568, Hobbs, NM 88241  
CONTACT PARTY: Mike Jones PHONE: (505) 392-9797
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 R-1538 Maljamar Grayburg Unit
- 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 sources 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: Michael R. Burch, GPL TITLE: Agent  
SIGNATURE: Michael R. Burch, GPL DATE: 3-12-97
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. \_\_\_\_\_

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, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days.

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

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**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.**

C-108  
APPLICATION FOR AUTHORIZATION TO INJECT

MALJAMAR GRAYBURG UNIT

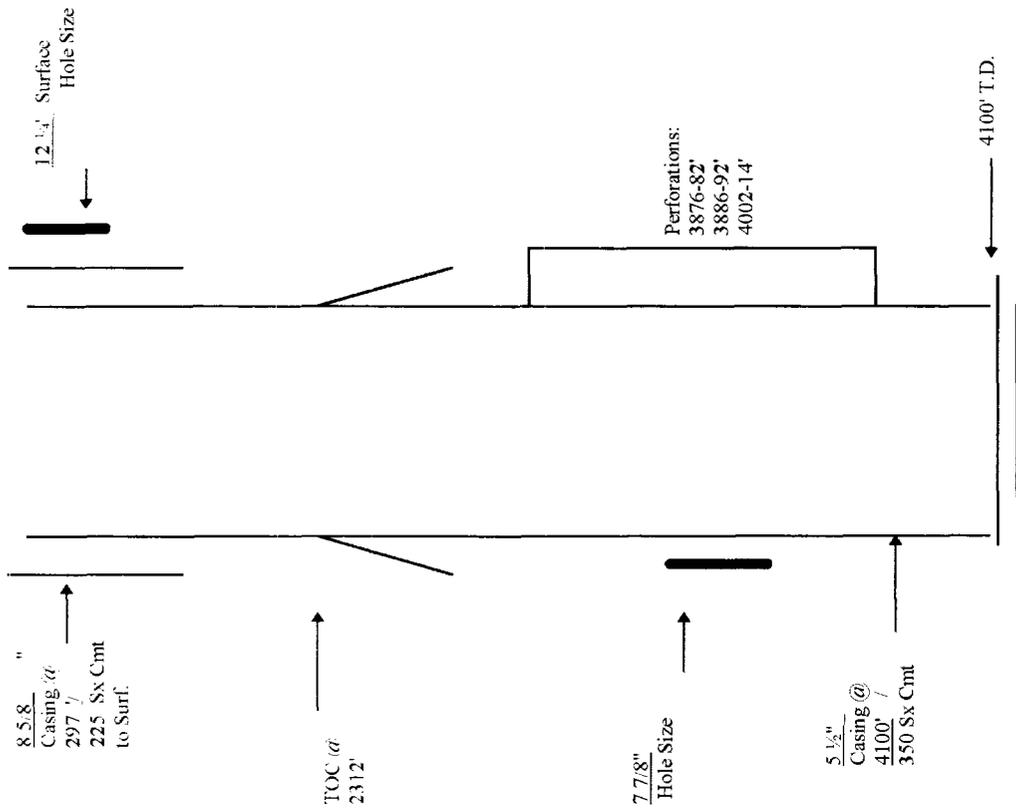
III. WELL DATA

The following data sheets describe the 2 Water Injection Wells for which this application is submitted by The Wiser Oil Company.

# INJECTION WELL DATA SHEET

OPERATOR The Wiser Oil Co. LEASE Majjamar Grayburg Unit SECTION 10 TOWNSHIP 17S RANGE 32E  
 WELL NO. #63 FOOTAGE LOCATION 660' FSL, 1980' FEL, Unit O

Schematic



Well Construction Data

Surface Casing Size 8 5/8 " Cemented with Set @ 297' feet determined by 225 **SX**.  
 TOC Surface  
 Hole Size 12 1/4 "  
 Intermediate Casing Size 12 1/4 " Cemented with Set @ 4100' feet determined by 350 **SX**.  
 TOC Surface  
 Hole Size 12 1/4 "  
 Long String Size 5 1/2 " Cemented with Set @ 4100' feet determined by 350 **SX**.  
 TOC 2312  
 Hole Size 7 7/8 "  
 Total Depth 4100  
 Injection Interval 4100 feet to \_\_\_\_\_ feet  
 (perforated or open-hole; indicate which) \_\_\_\_\_ set in a \_\_\_\_\_ feet  
 Tubing Size 2 3/8" lined with \_\_\_\_\_ (type of internal coating) \_\_\_\_\_ feet  
 Other type of tubing / casing seal if applicable \_\_\_\_\_  
 Other Data \_\_\_\_\_

1. Is this a new well drilled for injection? Yes  No   
 If no, for what purpose was the well originally drilled? Oil Production - TA
2. The Wiser Oil Company plans to convert this well to WIW
3. Name of the Injection formation Grayburg-San Andres Vacuum
4. Name of Field or Pool (if applicable) Majjamar Grayburg San Andres
5. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e., sacks of cement or plug(s) used 3876-82', 3886-92', 4002-14'
6. Give the names and depths of any over or underlying oil or gas zones (pools) in this area. \_\_\_\_\_

# INJECTION WELL DATA SHEET

OPERATOR The Wiser Oil Co. LEASE Maljamar Grayburg Unit FOOTAGE LOCATION 1880' FNL, 2080' FWL, Unit F SECTION 10 TOWNSHIP 17S RANGE 32E  
 WELL NO. #155 (Drilling is Pending) (Replaces MGBU

Schematic

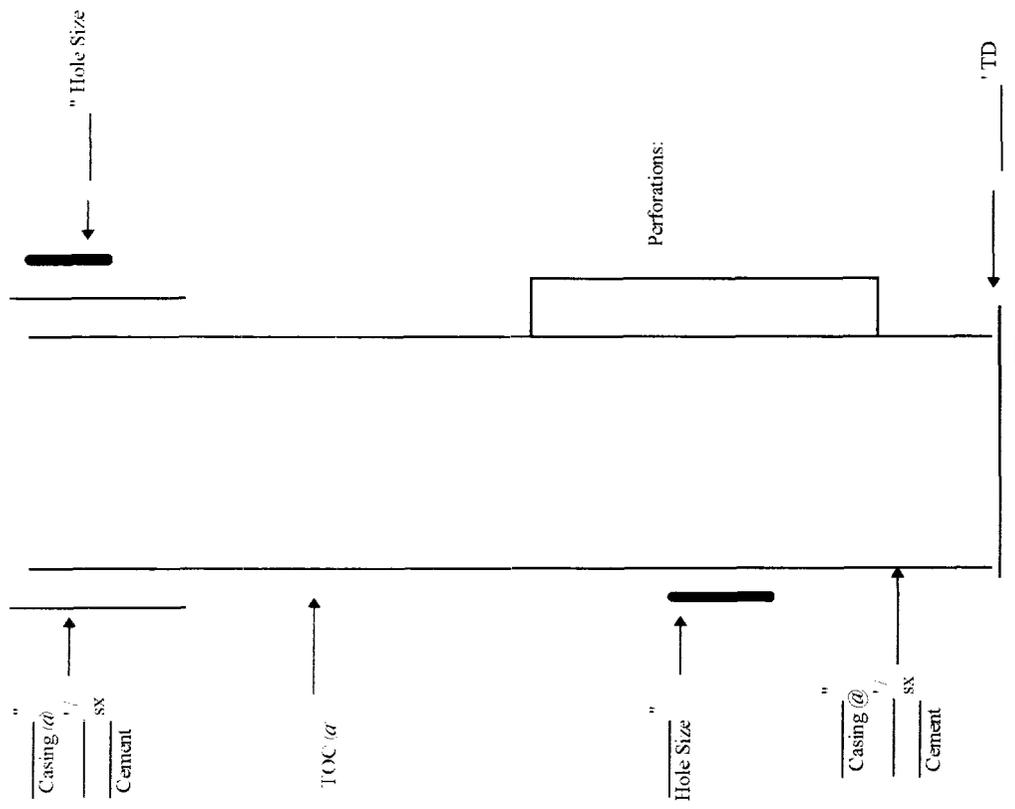
Well Construction Data

Surface Casing  
 Size \_\_\_\_\_ Set (a) \_\_\_\_\_ Cemented with \_\_\_\_\_ SX.  
 TOC \_\_\_\_\_ feet determined by \_\_\_\_\_  
 Hole Size \_\_\_\_\_"  
Intermediate Casing  
 Size \_\_\_\_\_ Cemented with \_\_\_\_\_ SX.  
 TOC \_\_\_\_\_ feet determined by \_\_\_\_\_  
 Hole Size \_\_\_\_\_"  
Long String  
 Size \_\_\_\_\_ Set (a) \_\_\_\_\_ Cemented with \_\_\_\_\_ SX.  
 TOC \_\_\_\_\_ feet determined by \_\_\_\_\_  
 Hole Size \_\_\_\_\_"  
 Total Depth \_\_\_\_\_  
 Injection Interval \_\_\_\_\_

\_\_\_\_\_ feet to \_\_\_\_\_ feet  
 (perforated or open-hole; Indicate which)  
 Tubing Size \_\_\_\_\_ lined with \_\_\_\_\_ packer at \_\_\_\_\_ feet  
 set in a \_\_\_\_\_  
 (type of internal coating)

Other type of tubing / casing seal if applicable \_\_\_\_\_  
 Other Data \_\_\_\_\_  
 1. Is this a new well drilled for injection?  Yes  No  
 If no, for what purpose was the well originally drilled? \_\_\_\_\_  
 \_\_\_\_\_ Drilling is pending

2. Name of the Injection formation Grayburg-San Andres Vacuum
3. Name of Field or Pool (if applicable) Maljamar Grayburg San Andres
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e., sacks of cement or plug(s) used \_\_\_\_\_
5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area. \_\_\_\_\_



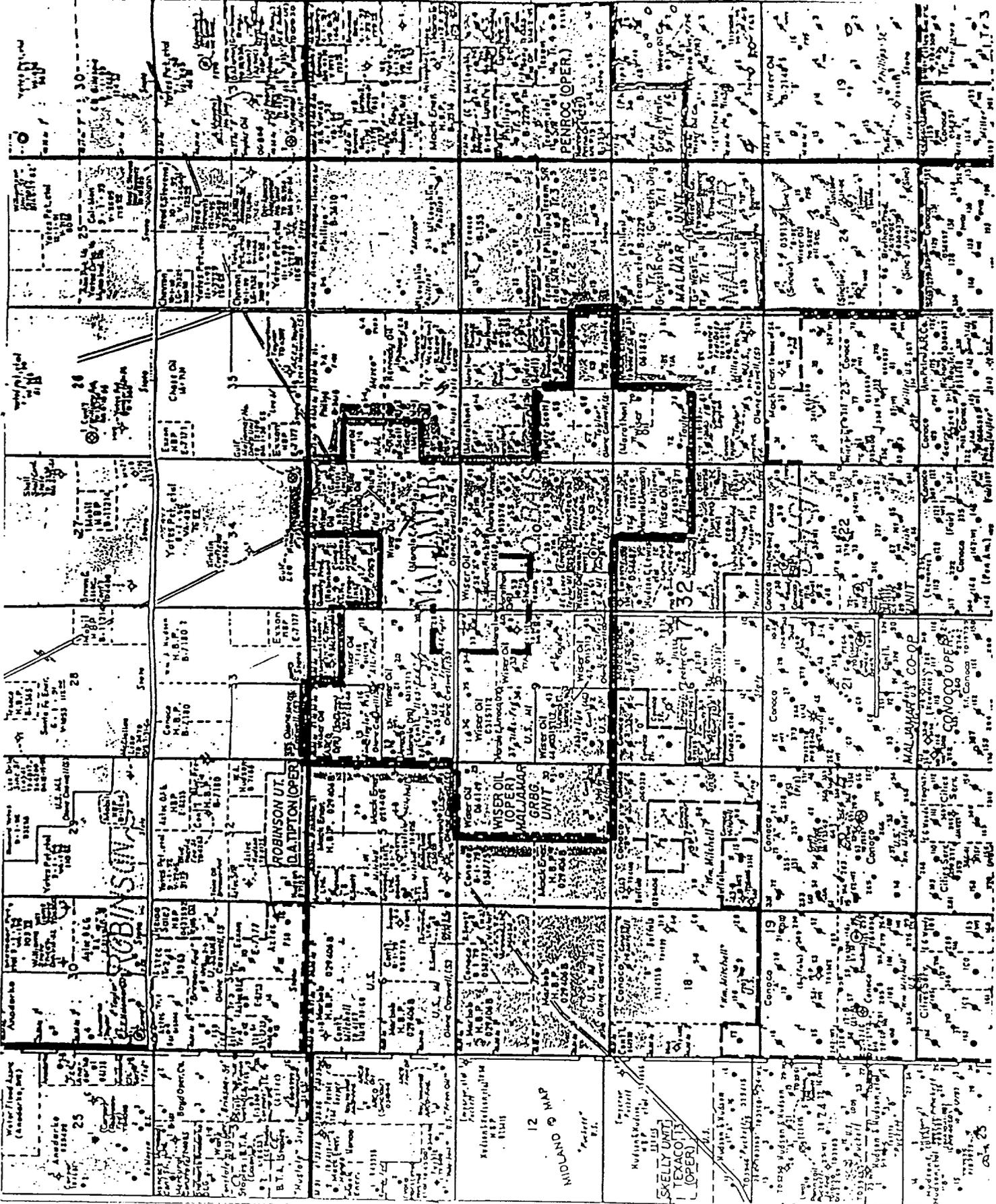
Perforations:

C-108  
APPLICATION FOR AUTHORIZATION TO INJECT

MALJAMAR GRAYBURG UNIT

V. AREA OF REVIEW

The attached maps show all wells and leases within two miles of the proposed injection wells with a one-half mile radius circle drawn around each proposed injection well.



Water Flood Area (Anderson)

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Anderson

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APPLICATION FOR AUTHORIZATION TO INJECT

MALJAMAR GRAYBURG UNIT

VI. HALF MILE WELLS

The following is a table showing data for all wells which penetrate the proposed injection zone and which lie within the area of review.

Immediately following the table are schematics for the 42 wells within the area of review which have been plugged and abandoned as noted on the table.

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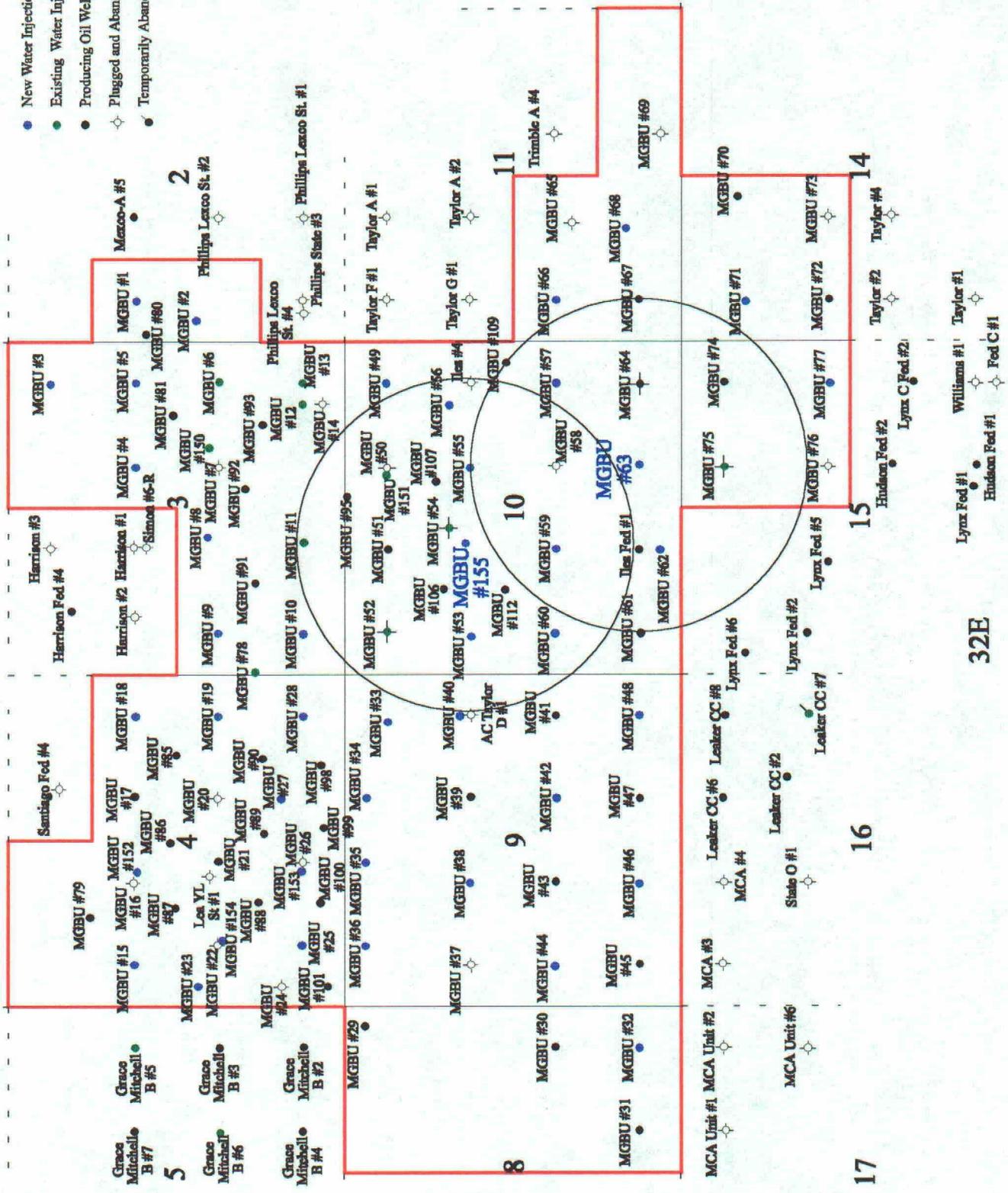
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# Maljamar Grayburg Unit Lea County, New Mexico

- New Water Injection Well
- Existing Water Injection Well
- Producing Oil Well
- Plugged and Abandoned Well
- Temporarily Abandoned Well



17S

32E

C-108  
APPLICATION FOR AUTHORIZATION TO INJECT

MALJAMAR GRAYBURG UNIT

VI. HALF MILE WELLS

The following is a table showing data for all wells which penetrate the proposed injection zone and which lie within the area of review.

Immediately following the table are schematics for the 11 wells within the area of review which have been plugged and abandoned as noted on the table.

**WELLS WITHIN MGBU AREA OF REVIEW**

N.A.M.E. OPERATOR LOCATION SEC TSHIP RG COMPL. DATE TYPE TOTAL DEPTH HOLE SIZE CSG DEPTH SET SS. CNT PERFS TBR COMMENTS LEASE

**Township 17 South, Range 32 East**

**Section 3**

MGBU #11	The Wisser Oil Co.	660' FSI, 2080' FWL, Unit N	3	17S	32E	12-10-93	Ø WTW	4290'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	1245' 3964'	50 100	3959-4263'	4" @ 3855'	Converted to WTW	IC-059576
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**Section 10**

MGBU #95	The Wisser Oil Co.	15' FNL, 2478' FEL, Unit B	10	17S	32E	7-26-93	Ø WTW	4426'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	1129' 4426'	630 450	3961-4120' 4171-4338'	2 7/8" @ 4275'	Estimated TOC 2127'	IC-059576
MGBU #50	The Wisser Oil Co.	660' FNL, 1980' FEL, Unit B	10	17S	32E	Conv. 12-5-61	Ø WTW P&A	4124'	Unk 7 7/8" 7 7/8"	8 5/8" 5 1/2" 4"	1161' 3975' 3982'	75 100 375	3958-62'		TOC 2600' by Temp Log Conv to WTW 12-5-61 P&A 10-8-76	IC-059576
MGBU #151	The Wisser Oil Co.	660' FNL, 2127' FEL, Unit B	10	17S	32E	11-9-93	Ø WTW	4439' PB 4403'	12 1/2" 7 7/8"	8 5/8" 5 1/2"	1141' 4439'	600 975	3946-4246' 4337-48'	2 3/8" @ 3864'	SI	BLM IC-059576
MGBU #51	The Wisser Oil Co.	660' FNL, 1980' FWL, Unit C	10	17S	32E	11-10-93	Ø	4233'		8 5/8" 5 1/2"	1056' 3863'	50 100	3903-4203'	2 3/8" @ 3641'	Estimated TOC 3352'	IC-064150
MGBU #52	The Wisser Oil Co.	660' FNL, 690' FWL, Unit D	10	17S	32E	pre 1948	Ø WTW P&A	4301'		8 5/8" 5 1/2"	1161' 3986'	75 100	Unknown		Estimated TOC 3475' Conv to WTW 2-1-62 P&A 10-8-76	IC-064150
MGBU #53	The Wisser Oil Co.	1980' FNL, 610' FWL, Unit E	10	17S	32E	11-9-62	Ø	4070'	11" 7 7/8"	8 5/8" 5 1/2"	302' 4070'	200 350	3882-96' 3988-94' 4010-20'	2 3/8" @ 3980'	Estimated TOC 2282' TA 4-5-89	Fee
MGBU #54	The Wisser Oil Co.	1650' FNL, 2310' FWL, Unit F	10	17S	32E	1-6-51	Ø WTW P&A	4221'		8 5/8" 5 1/2"	1100' 3820'	100 100	Unknown		Estimated TOC 3309' Conv to WTW 11-8-62 P&A 10-6-76	IC-064150
MGBU #106	The Wisser Oil Co.	1534' FNL, 1372' FWL, Unit F	10	17S	32E	2-7-96	Ø	4425' PB 4380'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	460' 4425'	300 1800	3881-4041' 4139-79' 4261-4336'	2 7/8" @ 4200'		IC-064150
MGBU #112	The Wisser Oil Co.	2497' FNL, 1335' FWL, Unit F	10	17S	32E	6-4-96	Ø	4450'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	495' 4452'	300 1350	3861-4034'	2 3/8" @ 4041	Estimated TOC 3173'	IC-064150
MGBU #55	The Wisser Oil Co.	1980' FNL, 1980' FEL, Unit G	10	17S	32E	8-18-62	Ø P&A	4120'	11" 7 7/8"	8 5/8" 5 1/2"	302' 4218'	200 350	3894-3900' 3923-33' 4018-34' 4046-52'	2 3/8" @ 3988'	Estimated TOC 2332' P&A 10-15-76 Re-entry for WTW Pending	IC-059576
MGBU #107	The Wisser Oil Co.	1413' FNL, 2238' FEL, Unit G	10	17S	32E	6-2-96	Ø	4450'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	495' 4450'	300 1700	3910-4070'	2 3/8" @ 4119'	Estimated TOC 2918'	NIM 059576

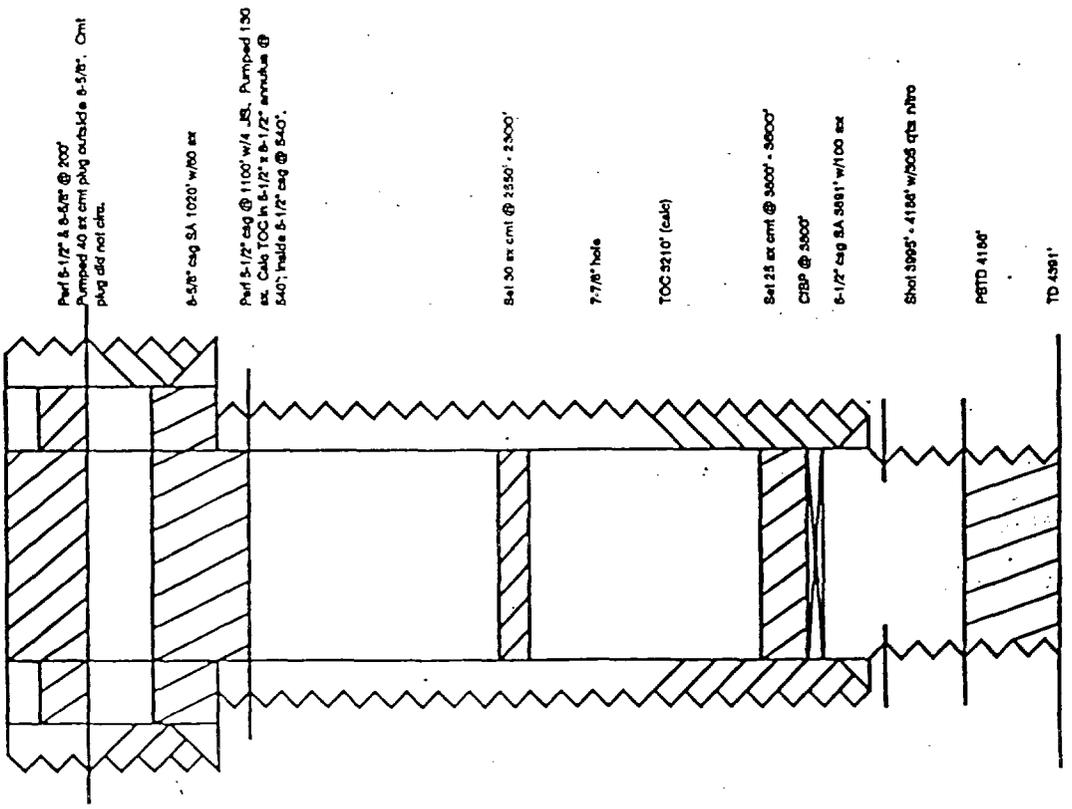
WELLS WITHIN MGBU AREA OF REVIEW

NAME	OPERATOR	LOCATION	SEC	TSHIP	RG	COMPL DATE	TYPE	TOTAL DEPTH	HOLE SIZE	CSG SIZE	DEPTH SET	SX CMT	PERIS	TBG PAKR	COMMENTS	LEASE
Iles Lease #4	Boller & Rutledge 901 Merchantile Securities Bldg, Dallas 1, TX	1980' FNL, 660' FEL, Unit H	10	32E	2-9-48	4241'	4241'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	3952'	100			Estimated TOC 3288' File incomplete	LC-059576
MGBU #56	The Wisser Oil Co.	1650' FNL, 990' FEL, Unit II	10	32E	9-11-62	4190'	4190'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	4190'	200 350	3970-82' 4083-87' 4093-4105'	2 3/8" @ 4007'	Estimated TOC 2402' Conv to WIW 9-10-64 P&A 10-18-76 Re-entry for WIW Pending	LC-059576
MGBU #109	The Wisser Oil Co.	2509' FNL, 330' FEL, Unit H	10	32L	9-7-96	4400'	4400'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	436' 4400'	300 1150	3907-4077'	2 3/8" @ 4121'		LC 059576
MGBU #57	The Wisser Oil Co.	1980' FSL, 660' FEL, Unit I	10	32E	10-19-62	4100'	4100'	11" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	329' 4100'	200 350	3916-26' 4014-20' 4048-60'	2 3/8" @ 3948'	Estimated TOC 2312'	LC-059576
MGBU #58	The Wisser Oil Co.	1980' FSL, 1980' FEL, Unit J	10	32E	11-20-62	4100'	4100'	11" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	293' 4100'	200 350	3908-20' 4036-48'	2 3/8" @ 3952'	P&A 9-28-74	LC-059576
MGBU #59	The Wisser Oil Co.	1980' FSL, 1980' FWL, Unit K	10	32E	9-5-64	4050'	4050'	11" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	297' 4050'	225 350	3856-94' 3904-98' 4016-26'	2 3/8" @ 3968'	Estimated TOC 2262' T/A 1-22-95	LC-064150
MGBU #60	The Wisser Oil Co.	1980' FSL, 660' FWL, Unit L	10	32E	5-11-65	4237'	4237'	11" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	1000' 4500'	500 400	3835-41' 3872-93' 3955-73' 4004-08'	2 7/8" @ 4010'	Estimated TOC 2457' Conv to WIW 3-31-66 P&A 10-12-76 Re-entry for WIW Pending	Fee
MGBU #61	The Wisser Oil Co.	660' FSL, 660' FWL, Unit M	10	32E	7-12-65	4200'	4200'	11" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	308' 4200'	200 550	3819-96' 3985-89'	2 3/8" @ 3690'	Estimated TOC 1391'	LC 064150
Iles Federal #1	Walsh & Watts Inc.	660' FSL, 1980' FWL, Unit N	10	32E	11-7-62	11,713'	11,713'	17 1/2" 12 1/2" 8 3/4"	13 3/8" 9 5/8" 5 1/2"	5 1/2"	412' 4769' 11,072'	380 2000 725	10834-52' 10865-76'	2" @ 10,885'	Estimated TOC 6775'	NM 064150
MGBU #62	The Wisser Oil Co.	330' FSL, 1980' FWL, Unit N	10	32E	6-24-65	4183'	4183'	11" 7 7/8"	8 5/8" 4 1/2"	4 1/2"	315' 4500'	Unk 400	3819-83' 3905-83' 4117-27'	2 3/8" @ 3878'	Estimated TOC 2946' Conv to WIW 4-22-66 P&A 10-21-76 Re-entry for WIW Pending	LC-064150
MGBU #64	The Wisser Oil Co.	660' FSL, 660' FEL, Unit P	10	32E	8-29-64	4100'	4100'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	5 1/2"	294' 4100'	225 350	3886-96' 3992-96' 4016-20' 4028-36'	2 3/8" @ 3964'	Estimated TOC 2312' P&A 9-14-74	LC-059576

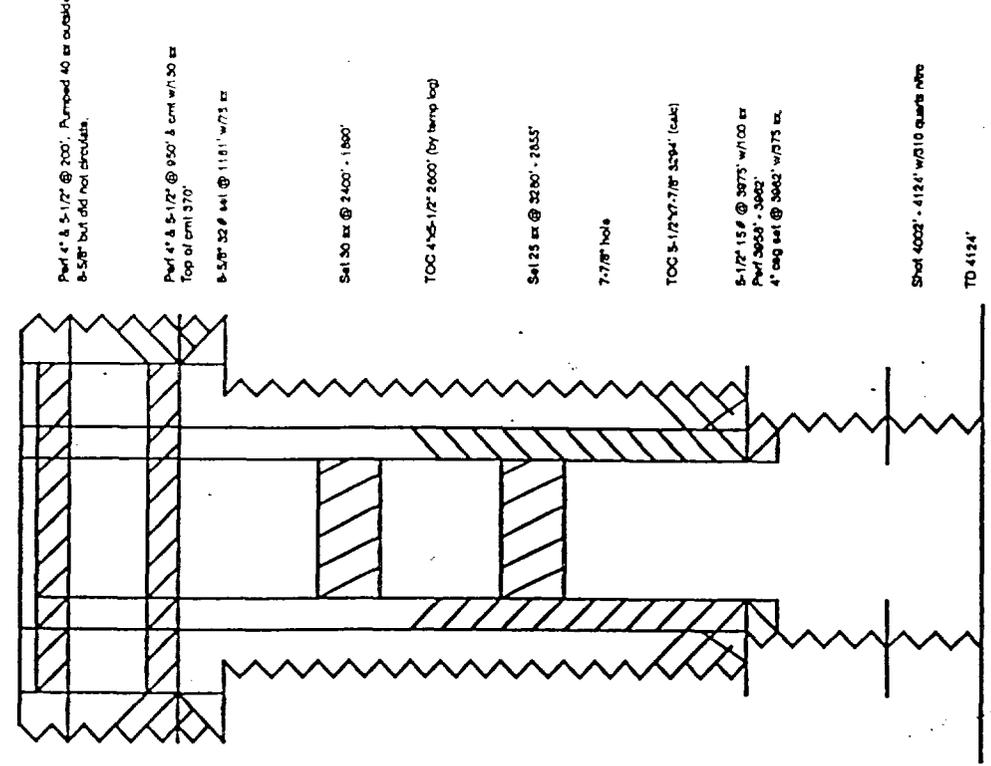
WELLS WITHIN MGBU AREA OF REVIEW

N. NAME	OPERATOR	LOCATION	SIC	USHP	RG	COMPL. DATE	TYPE	TOTAL DEPTH	HOLES SIZE	CSG SIZE	DEPTH SET	SX CNT	PERFS	TBG PAKR	COMMENTS	LEASE
<b>Section 11</b>																
MGBU #67	The Wiser Oil Co.	660' FNL., 660' FWL., Unit M	178	32E	4-6-63	O	4110'	12 1/4" 7 7/8"	8 5/8" 5 1/2"	322' 4110'	225 350	3904-19' 4033-4055'	2 3 8' (@) 4062'	Estimated TOC 2322'	Fee	
<b>Section 15</b>																
MGBU #74	The Wiser Oil Co.	660' FNL., 660' FWL., Unit A	178	32E	5-2-65	O	4358'	11" 7 7/8"	8 5/8" 5 1/2"	1027' 4358'	400 400	3829-99' 3901-57'	2 3 8' (@) 4017'	Estimated TOC 2315'	NM- 0315712	
MGBU #75	The Wiser Oil Co.	660' FNL., 1980' FWL., Unit B	178	32E	7-21-65	⊖ WTW P&A	4200'	11" 7 7/8"	8 5/8" 4 1/2"	309' 4200'	200 650	3809-79' 3903-93' 4133-35'	2 3 8' (@) 3898'	Estimated TOC 2157' Conv to WTW 4-22-66 P&A 10-4-76	NM- 0315712	

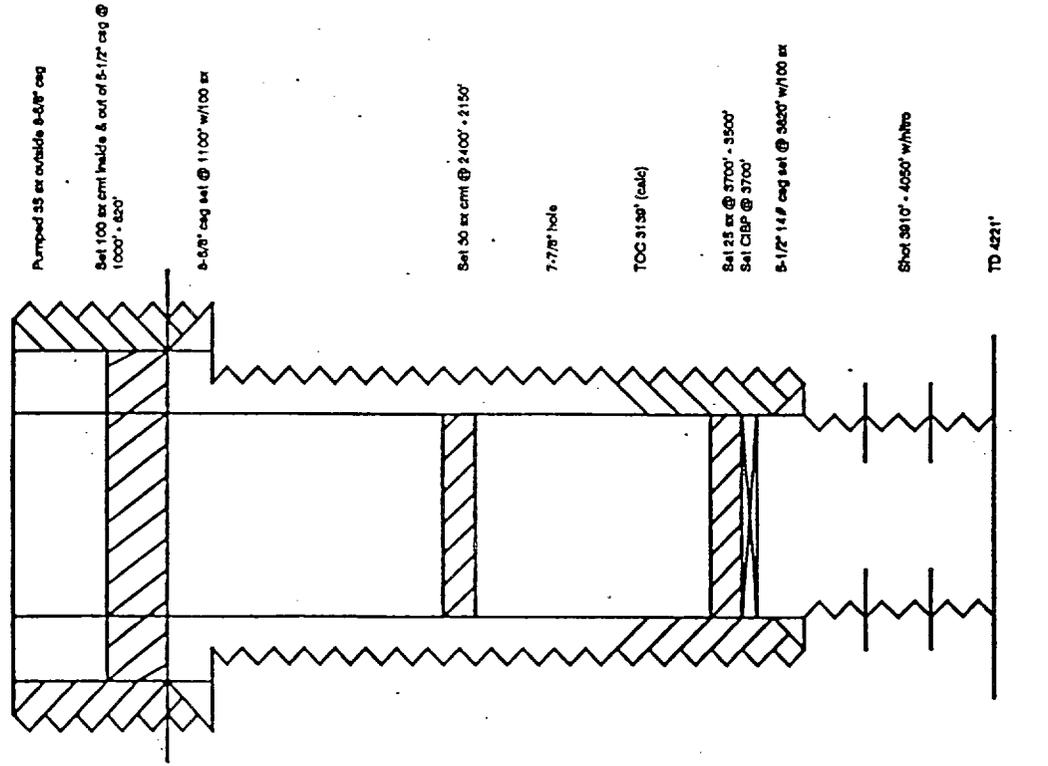
MGBU #52



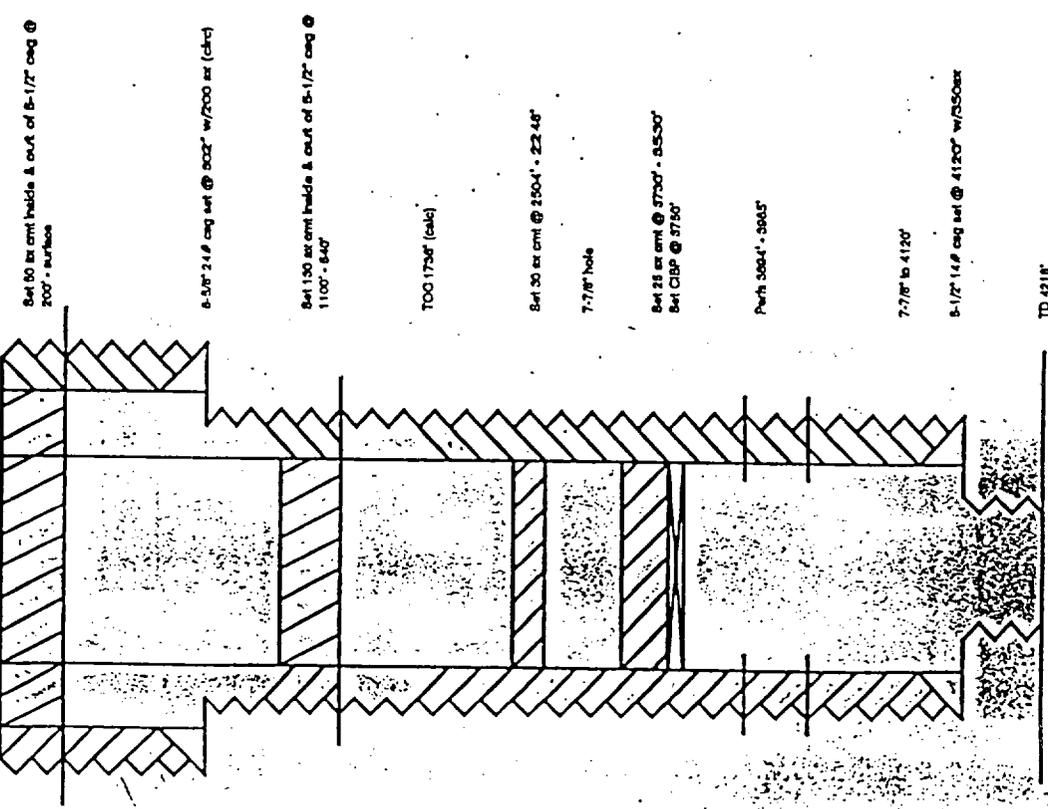
MGBU #50  
660' FNL, 1980' FEL, Unit B, Sec. 10, T15-32E  
P+A 10-8-76



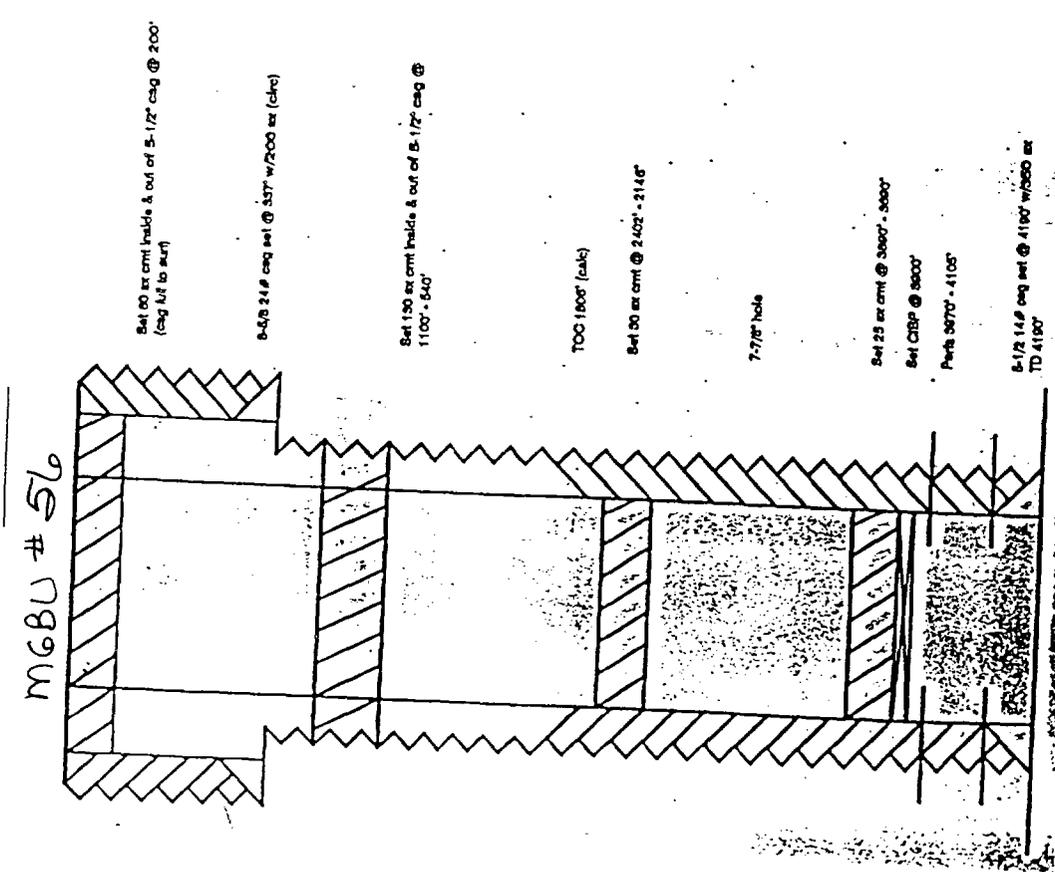
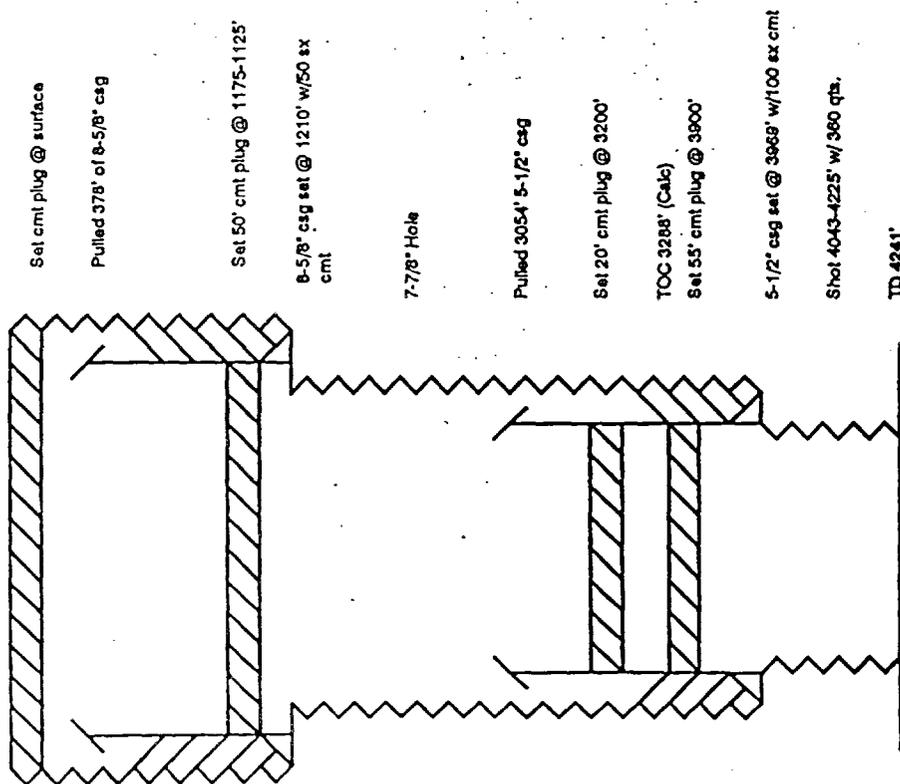
MGBU # 54



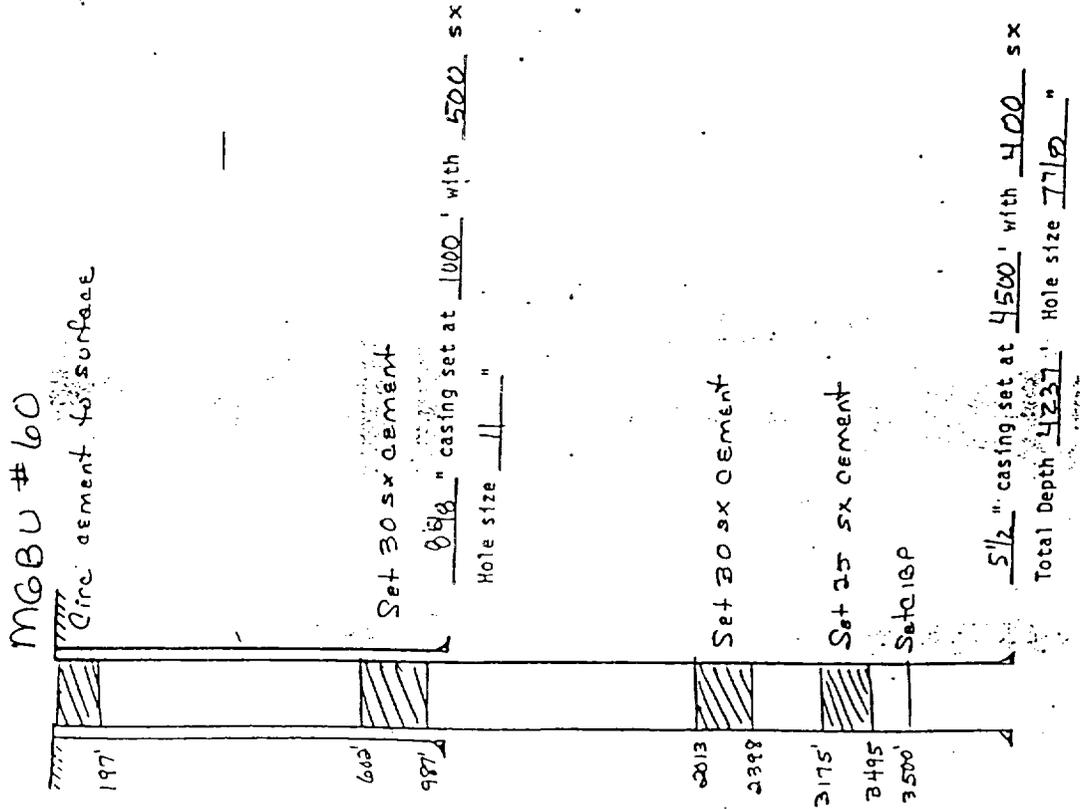
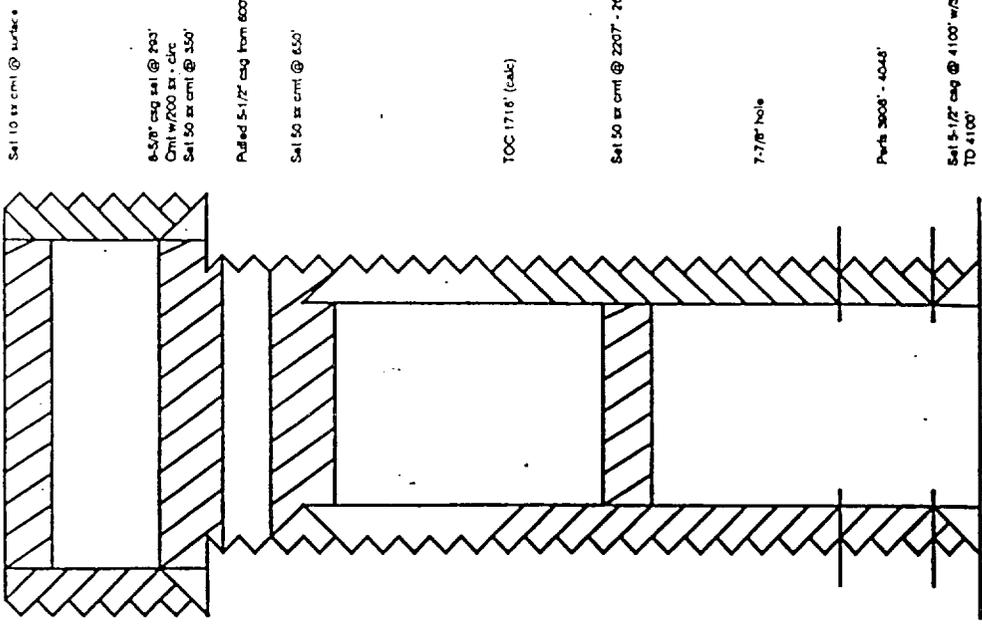
MGBU # 55



Well #4  
 Bollar & Nichols  
 1380' FNL & 660' FEL, Unit 2, Sec 10-T17S-R32E  
 Lea County, New Mexico  
 Completed 9/47 TD 4241'  
 Plugged & Abandoned 09/28/58



Maljamar Grayburg Unit #58  
 Chevron Oil Co.  
 Unit J 1980' FSL & 1980' FEL Sec 10-17S-32E  
 Completed 11/20/93 TD 4100'  
 Plugged & Abandoned 09/28/74



MGBU #60

Circ. cement to surface

Set 30 s x cement

8 1/2" casing set at 1000' with 500' s x

Hole size 11"

Set 30 s x cement

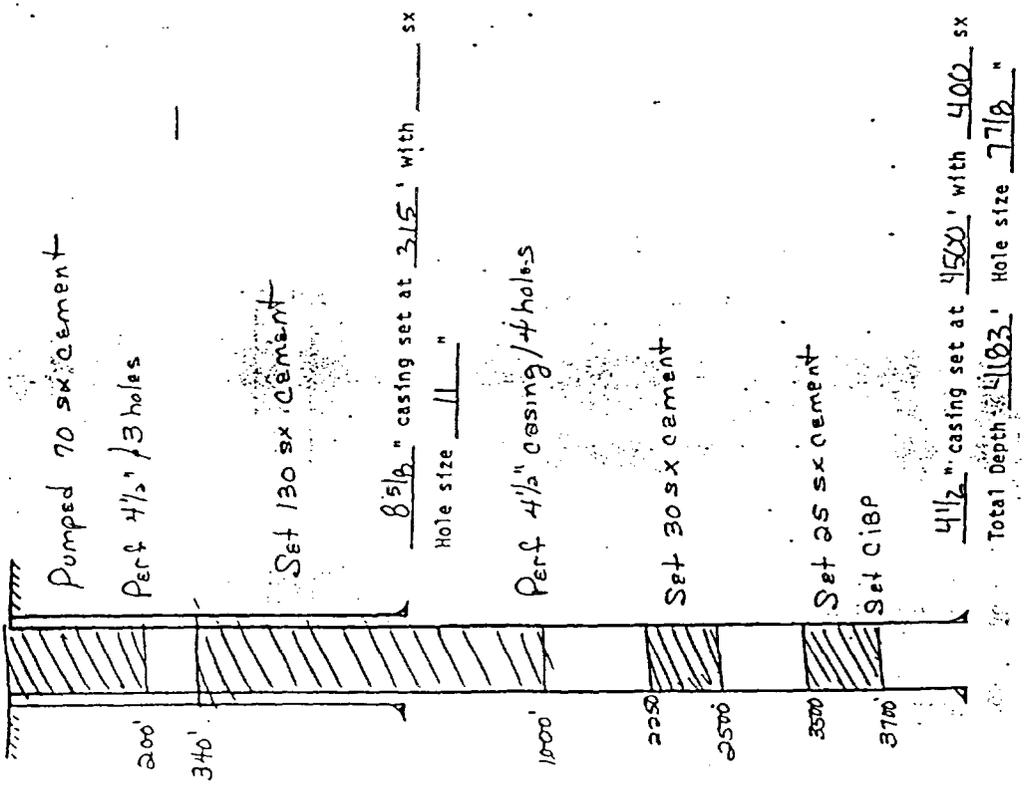
Set 25 s x cement

Set 10 s x

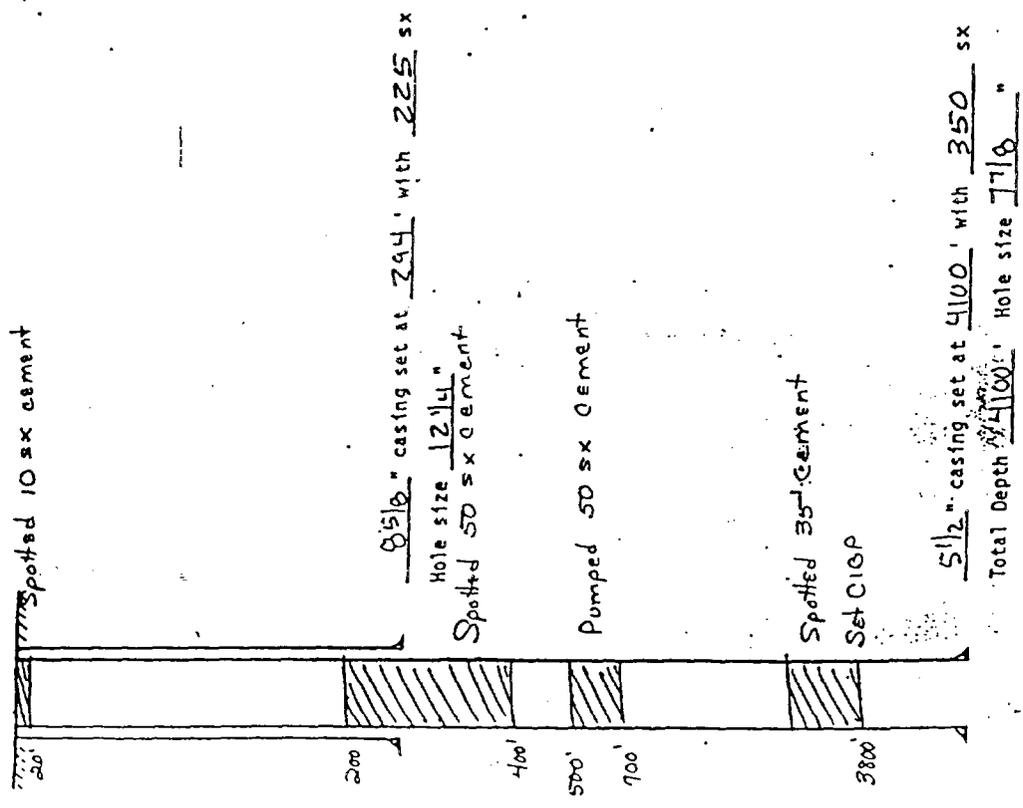
5 1/2" casing set at 4500' with 400' s x

Total Depth 4237' Hole size 7 7/8"

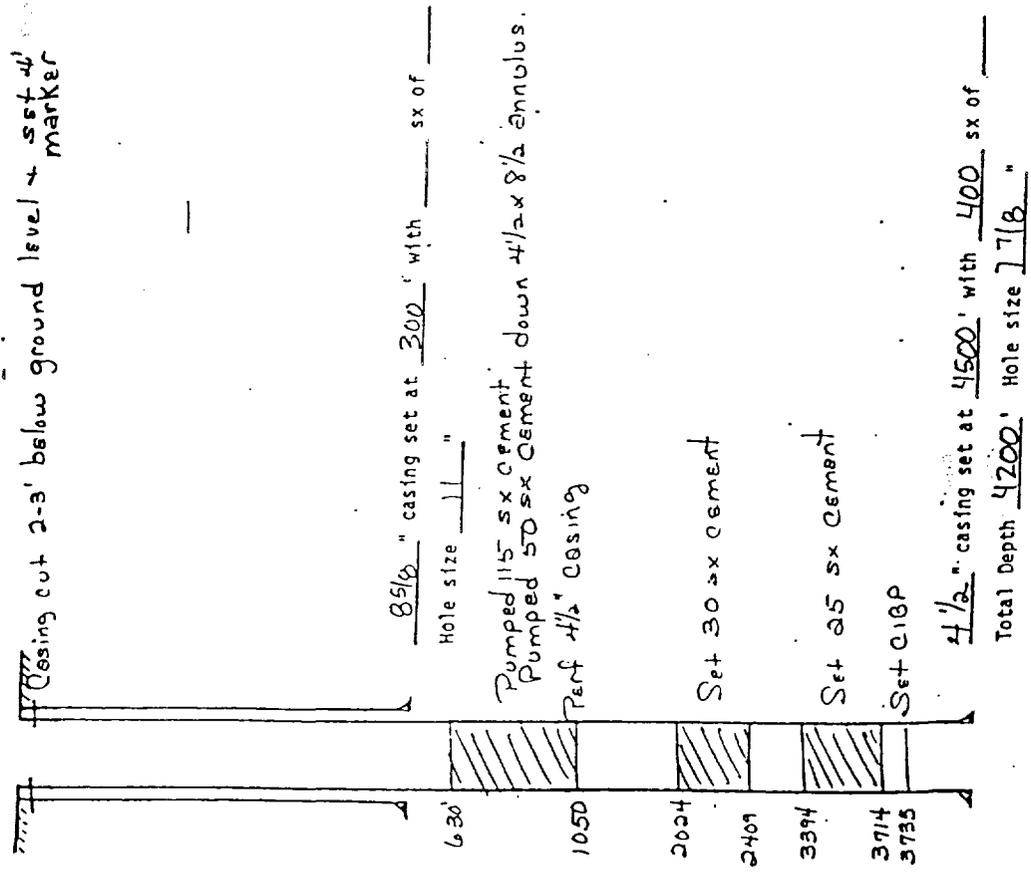
MGBU #62



MGBU #64



MGBU #175



APPLICATION FOR AUTHORIZATION TO INJECT  
MALJAMAR GRAYBURG UNIT

VII. PROPOSED OPERATION

1. Average Daily Rate of Fluids to be Injected: 250 BWPD  
Maximum Daily Rate of Fluids to be Injected: 500 BWPD

2. This is to be a closed injection system.

3. Average Injection Pressure: 1850 psi  
Maximum Injection Pressure; 2500 psi

4. Injection fluid will be obtained from the following sources:

a. Produced Water

b. Fresh Water from The Wiser Oil Company's three water wells in Section 1, T17S-R32E.

Water compatibility studies of produced water from the Maljamar Grayburg Unit and the fresh water from The Wiser Oil Company's Ogalala source in Section 1 have previously been conducted. No incompatibility has been found in these tests or others conducted for waterfloods in this area when testing Ogalala water and produced Grayburg and San Andres water.

5. Not Applicable.

## VIII. GEOLOGIC DATA OF INJECTION ZONE:

The proposed injection interval is in the Grayburg-San Andres from 3314' to 4400'. The Grayburg formation consists primarily of quartz sand with dolomite cementation. The San Andres formation consists primarily of dolomite with intermingled stringers of quartz sand with dolomite cementation.

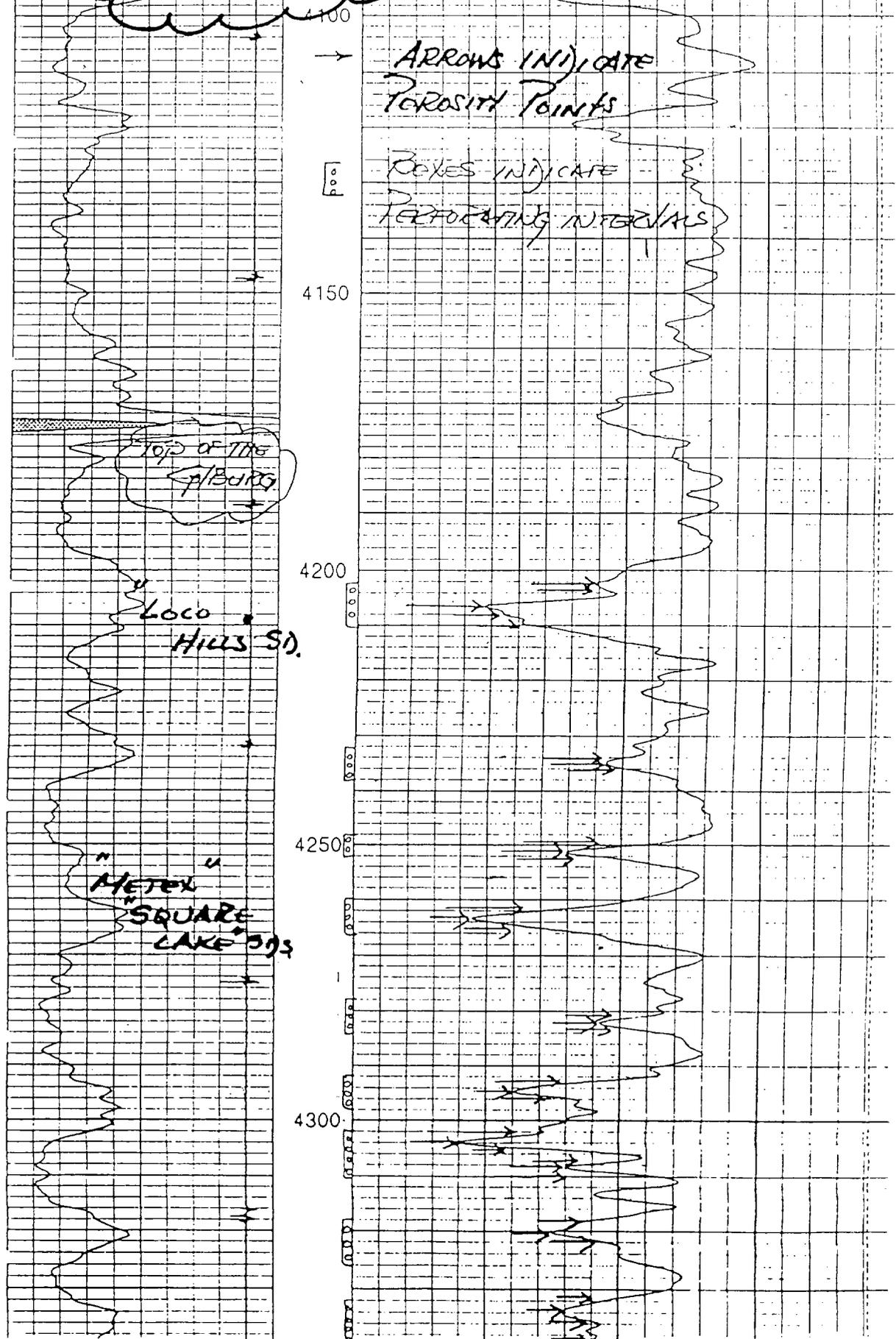
The surface formation is Cretaceous and has no known sources of drinking water. The Ogallala aquifer and the Caprock overlies the northeastern portion of the Unit Area; there are no known sources of drinking water underlying the injection interval.

Attached, as Exhibits VIII-A and VIII-B, are two Type Logs illustrating geology, lithology, thickness, and depths.

TYPE LOG FOR  
GMI PRODUCING  
INTERVALS

CMU 1001  
1) SN LOG  
(BY HLS)  
(6/13/96)

Exhibit  
VIII-A





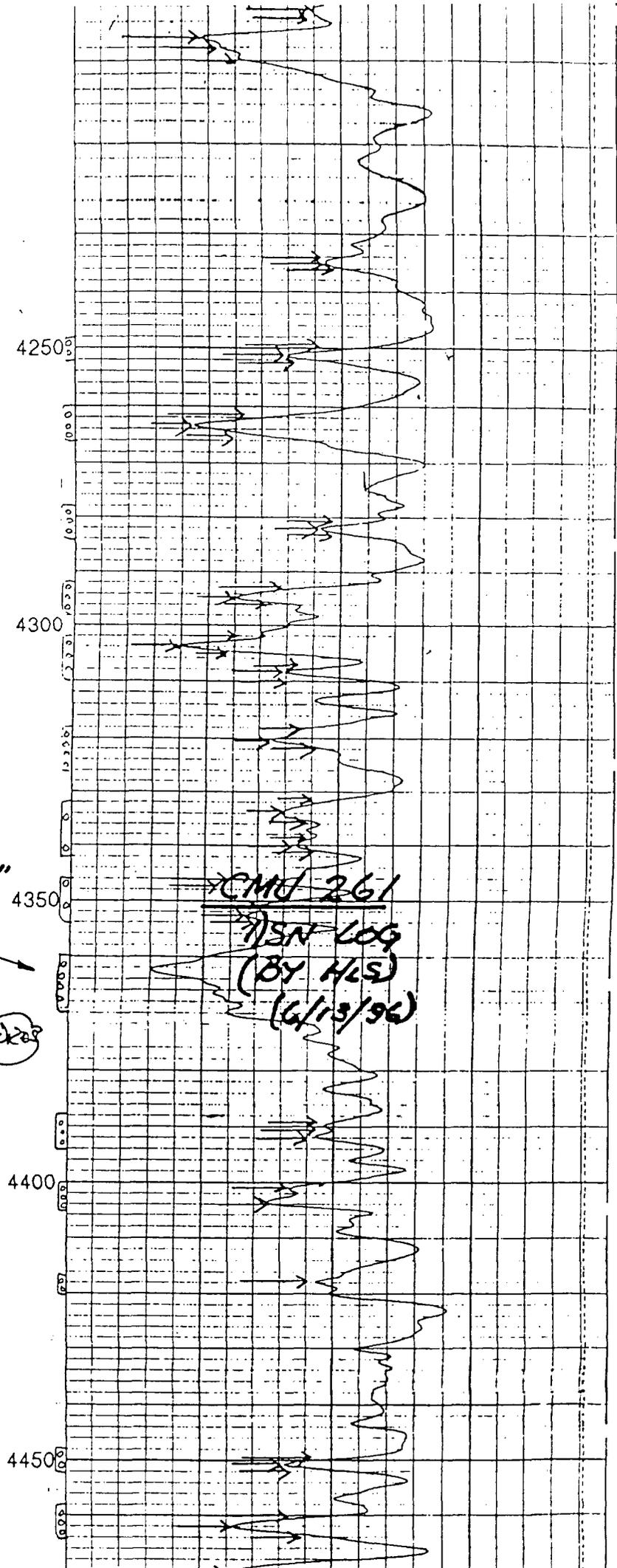
METEX /  
"SQUARE  
LAKE"  
S1)

"PREMIER"  
SAND  
These  
logs  
folded

TOP OF SAN ANDRES

DOLOMITE

"VACUUM"



CMU 261  
SN LOG  
(BY H/S)  
(6/13/96)



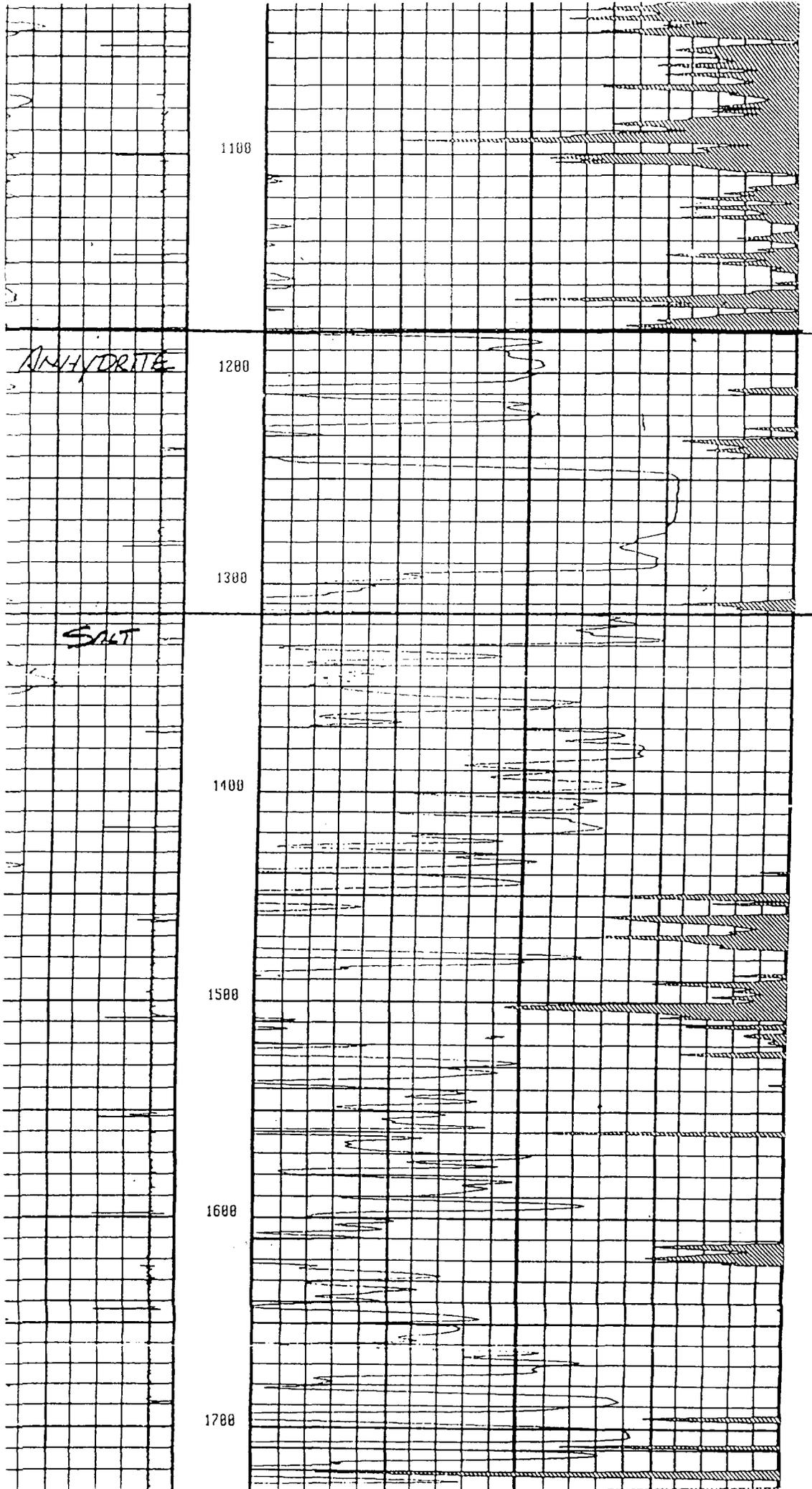
TYPE LOG FOR CMU SITOWING  
FORMATION TOPS

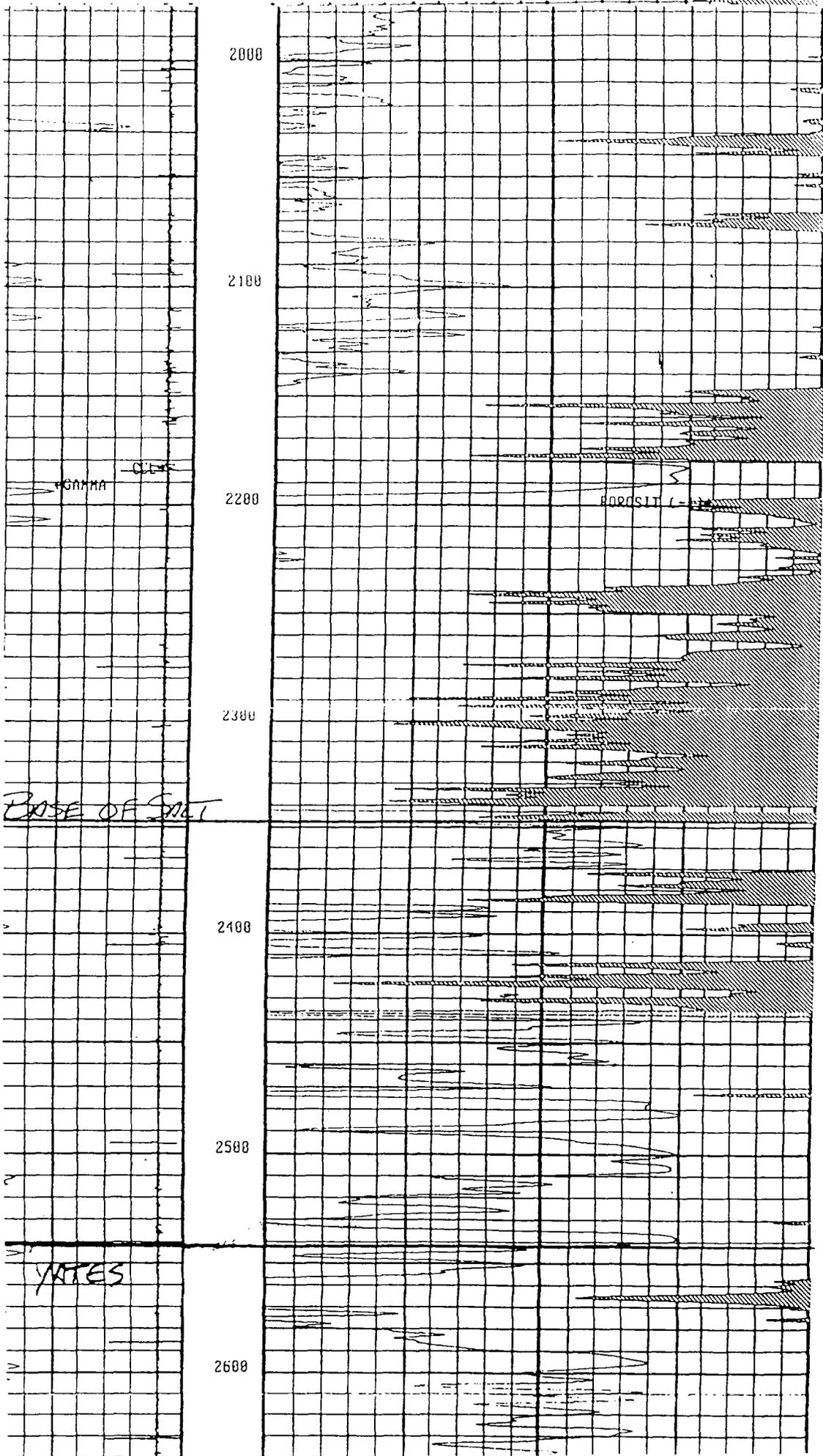
Exhibit VIII-B

TYPE LOG

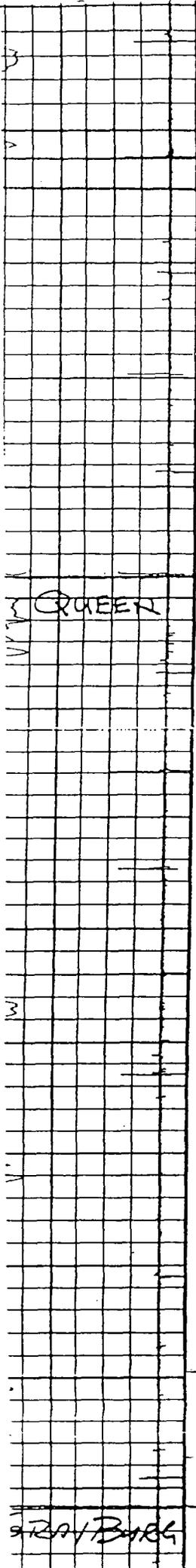
 HALLIBURTON		GAMMA COLLAR					
		DSN 1					
COMP. : HISER OIL COMPANY INC. WELL : CMU #160 FIELD : MALJAMAR GRAYBURG COUNTY : LEA ST. N.M.	COMPANY HISER OIL COMPANY INC.						
	WELL CMU #160						
	FIELD MALJAMAR GRAYBURG			SAN ANDRES			
	COUNTY LEA			STATE N.M.			
	API NO. 38-025-32927						
	LOCATION : 48' PSL & 157' FWL UNIT LETTER M						
	OTHER SERVICES						
	CBL. PERF.						
	SEC. 18		TWP. 17-S		RGE. 33-E		
	PERMANENT DATUM		GL	ELEV. 4137'	ELEV. K.B. 4145'		
LOG MEASURED FROM		KB	12.0 FT. ABOVE PERM. DATUM	D.F.			
DRILLING MEAS FROM		KB		G.L. 4137'			
DATE & TIME LOGGED		12/08/95 @ 38:00		TYPE OF FLUID IN HOLE WATER			
RUN No.		ONE		DENSITY OF FLUID NA			
DEPTH - DRILLER		4850		FLUID LEVEL FULL			
DEPTH - LOGGER		4788		CEMENT TOP EST/LOGGED NA			
BIT LOGGED INTERVAL		4787		EQUIPMENT : LOCATION 7634 10395			
TOP LOGGED INTERVAL		SURF		RECORDED BY HILL			
MAX RECORDED TEMP.		NA		WITNESSED BY MR. G. NEWTON			
CEMENTING DATA		SURF. STRING	INT. STRING	PROD. STRING	LOWER		
DATE/TIME CEMENTED		/	/	/	/		
PRIMARY/SQUEEZE							
COMPRESSIVE STR. EXPECTED @		: Hrs	: Hrs	: Hrs	: Hrs		
CEMENT VOLUME							
CEMENT TYPE/WEIGHT							
MUD TYPE/MUD WGT. FORMULATION							
RUN		BOREHOLE RECORD			CASING AND TUBING RECORD		
No.	BIT SZ.	FROM	TO	SIZE	WGT.	FROM	TO
ONE				8.625	NA	0	1200
TWO	7.675	1200	4850	5.5	17.0	0	4850

FORM 11/80









3300

3400

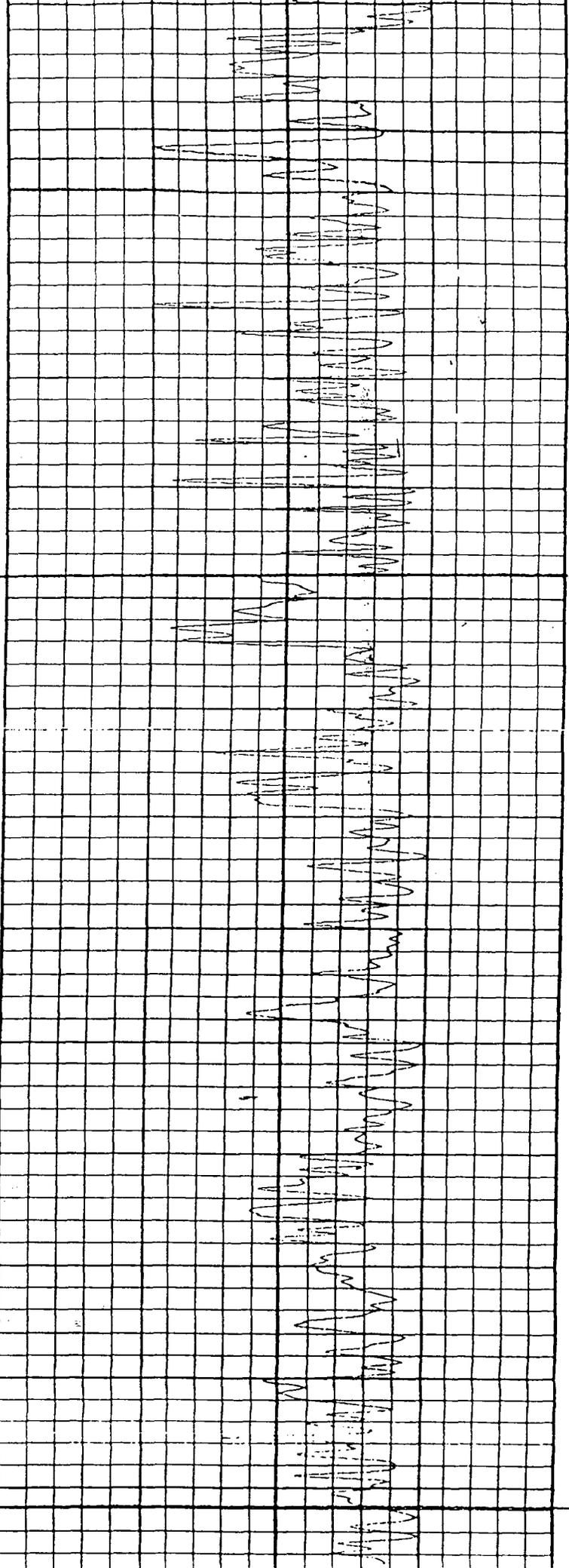
3500

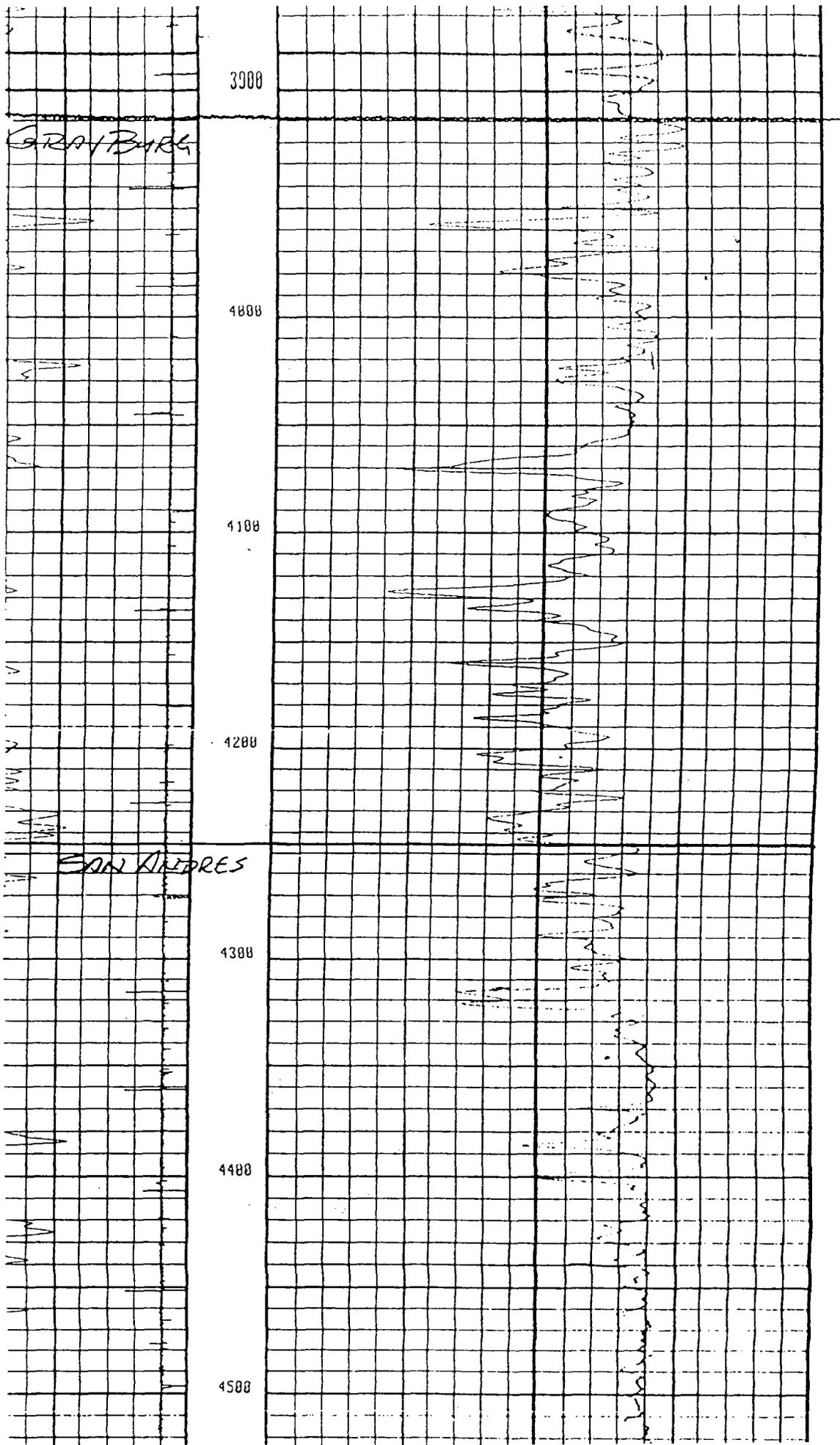
3600

3700

3800

3900





3900

GRANTBURG

4000

4100

4200

SAN ANDRES

4300

4400

4500

## IX. PROPOSED STIMULATION PROGRAM

Small acid clean-out jobs of approximately 2500 gallons/well are anticipated.

## X. LOGGING DATA

The available logs are those on file with the Oil Conservation Division. Logs for the pending well will be filed upon completion.

## XI. FRESH WATER WELLS WITHIN ONE MILE OF INJECTION WELLS

There is one water well in the SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 3, and four water wells in the NE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 10, T17S-R32E. Attached as Exhibit XI-A is a copy of the water analysis done on one of these wells. Several attempts were made to obtain samples from the other wells, but the wells were not running and the owners were unavailable to assist the representative from Capitan Chemicals.

# Capitan Chemicals

EXHIBIT "XI-A"

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : The Wiser Oil Co.  
 Lease : Ben Lindsey  
 Well No. : Fresh Water  
 Salesman :

Sample Loc. :  
 Date Analyzed: 01-November-1996  
 Date Sampled :

### ANALYSIS

1. pH 8.130
2. Specific Gravity 60/60 F. 1.003
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +1.137  
 @ 140 F. +1.737

#### 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 <sup>++</sup> )	50	/ 20.1 =	2.49
8. Magnesium (Mg <sup>++</sup> )	30	/ 12.2 =	2.46
9. Sodium (Na <sup>+</sup> ) (Calculated)	190	/ 23.2 =	8.26
10. Barium (Ba <sup>++</sup> )	5	/ 68.7 =	0.07

#### Anions

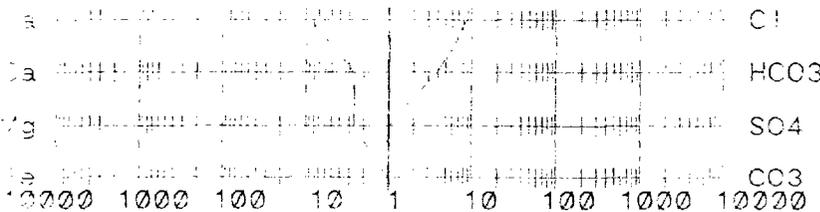
11. Hydroxyl (OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate (CO <sub>3</sub> <sup>=</sup> )	0	/ 30.0 =	0.00
13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	229	/ 61.1 =	3.75
14. Sulfate (SO <sub>4</sub> <sup>=</sup> )	48	/ 48.8 =	0.98
15. Chloride (Cl <sup>-</sup> )	300	/ 35.5 =	8.45
16. Total Dissolved Solids	852		
17. Total Iron (Fe)	2	/ 18.2 =	0.08
18. Total Hardness As CaCO <sub>3</sub>	250		
19. Resistivity @ 75 F. (Calculated)	2.835	/cm.	

#### LOGARITHMIC WATER PATTERN

\*meq/L.

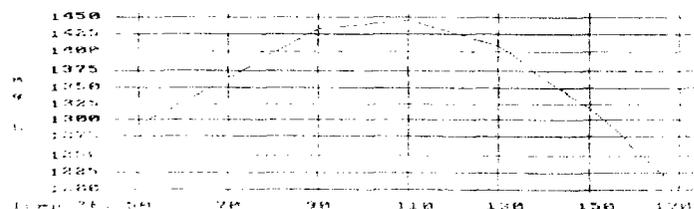
#### PROBABLE MINERAL COMPOSITION

COMPOUND EQ. WT. X \*meq/L = mg/L.



Cl	Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	2.49	202
HCO3	CaSO <sub>4</sub>	68.07	0.00	0
SO4	CaCl <sub>2</sub>	55.50	0.00	0
CO3	Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	1.26	92
	MgSO <sub>4</sub>	60.19	0.91	55
	MgCl <sub>2</sub>	47.62	0.29	14
	NaHCO <sub>3</sub>	84.00	0.00	0
	NaSO <sub>4</sub>	71.03	0.00	0
	NaCl	58.46	8.16	477

#### Calcium Sulfate Solubility Profile



\*Milli Equivalents per Liter

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

XII. Not applicable

XIII. PROOF OF NOTICE

Copies of this C-108 Application have been mailed to the surface owners and to each leasehold operator within one-half mile of the proposed injection wells as identified on the mailing list attached as Exhibit XIII-A. An Affidavit of such notice is attached as Exhibit XIII-B. Copies of the certified receipts will be furnished upon request. The notice attached as Exhibit XIII-C is being published in the Hobbs Daily News-Sun, and an Affidavit of Publication will be forwarded as soon as available.

## EXHIBIT XIII-A

### MAILING LIST

#### OFFSET LEASEHOLD OPERATORS:

Edward R. Hudson Trust NationsBank of Texas, N.A., Trustee U/W of S. J. Iverson Messrs. Peter C. & Alvin Iverson, Independent Executors of the Estate of Dorothy Iverson c/o Iverson III Inc.	616 Texas Street Acct. #01/0258100 P. O. Box 830308 3454 S. Zunis	Ft. Worth, TX 76102 Dallas, Texas 75283-0308  Tulsa, OK 74105
Marjorie W. Iverson Rev. Trust Iverson, Inc. Jewell D. Iverson Delmar H. Lewis Lindy's Living Trust Moore & Shelton Co., Ltd. C/o Donald B. Moore	27 Oaklawn Park P. O. Box 664 3131 S. Lewis Street 616 Texas Street 616 Texas Street 1414 Sugar Creek Blvd.	Midland, TX 79705-6546 Huntington Beach CA92648 Tulsa, OK 74145 Ft. Worth, TX 76102 Ft. Worth, TX 76102 Sugar Land, TX 77478

#### OFFSET WELL OPERATORS:

Lynx Petroleum, Inc. Walsh & Watts, Inc.	P. O. Box 1979 500 W. 7 <sup>th</sup> St., #1007	Hobbs, NM 88241 Fort Worth, TX 76102
---	---	---

#### SURFACE OWNERS FOR INJECTION WELLS

Bureau of Land Management	2901 W. 2 <sup>nd</sup> St.	Roswell, NM 88201
---------------------------	-----------------------------	-------------------

EXHIBIT XIII-B

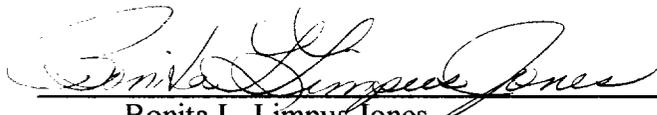
AFFIDAVIT OF MAILING

STATE OF NEW MEXICO

COUNTY OF CHAVES

SS.

I, Bonita L. Limpus Jones, do solemnly swear that a copy of this Application has been mailed by certified mail, to each of the interested parties listed on Exhibit XIII-A.

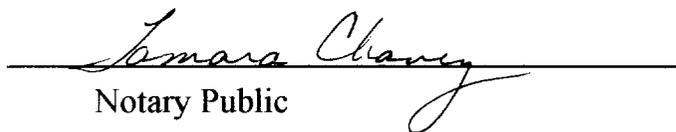


Bonita L. Limpus Jones  
Consulting Landman with J. O. Easley, Inc.  
on behalf of The Wisser Oil Company

SWORN AND SUBSCRIBED TO before me this 12<sup>th</sup> day of March, 1997.

My Commibision Expires:

December 18, 1999



Tamara Chaney  
Notary Public

## EXHIBIT VIII-C

NOTICE TO BE PUBLISHED IN THE HOBBS DAILY NEWS-SUN  
ON WEDNESDAY, MARCH 12, 1997

### PROPOSED INJECTION WELLS

The Wiser Oil Company proposes to expand its Maljamar Grayburg Unit and inject water into 2 wells in Section 10, T17S-R32E, Lea County, New Mexico, to provide injection service for the existing Maljamar Grayburg Unit Waterflood, Order No. R-1538. The zones to be injected into are the Grayburg and San Andres from 3314' to 4400' with a maximum injection rate of 500 BWPD/well at a maximum pressure of 2500 psi. Any interested parties with objection or request for hearing should notify the Oil Conservation Division at P. O. Box 2088, Santa Fe, New Mexico 87501, within 15 days of this notice. Any questions should be directed to Mike Jones with The Wiser Oil Company, at P. O. Box 2568, Hobbs, New Mexico 88241, 505-392-9797.



# J.O. EASLEY, INC.

ESTABLISHED 1979

P.O. Box 245 88211-0245  
119 South Roselawn, Suite 302  
Artesia, New Mexico 88210

April 4, 1997

Telephone (505) 746-1070  
Fax (505) 746-1073

Mr. David Catanach  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: C-108  
Maljamar Grayburg Waterflood Unit  
Eddy County, New Mexico

Dear Mr. Catanach:

Enclosed is the Affidavit of Publication for notice of the C-108 for additional water injection wells within the Maljamar Grayburg Waterflood Unit which was filed with your office on March 12, 1997.

Sincerely,

J. O. EASLEY, INC.

Bonita L. Limpus Jones  
Consulting Landman

/bj

Enclosures

cc/enclosure Mr. Jerry Sexton  
New Mexico Oil Conservation Division  
P. O. Box 1980  
Hobbs, NM 88241

Mr. Matt Eagleston  
The Wiser Oil Company  
8115 Preston Road, Suite 400  
Dallas, Texas 75225

Mr. Mike Jones  
The Wiser Oil Company  
P. O. Box 2568  
Hobbs, New Mexico 88241

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 March 13, 1997 and ending with the issue dated

March 13, 1997



Publisher

Sworn and subscribed to before

me this 14th day of

March, 1997



Notary Public.

My Commision expires  
October 18, 2000  
(Seal)

**LEGAL NOTICE  
March 13, 1997  
PROPOSED INJECTION  
WELLS**

The Wiser Oil Company proposes to expand its Maljamar Grayburg Unit and inject water into 2 wells in Section 10, T17S-R32E, Lea County, New Mexico, to provide injection service for the existing Maljamar Grayburg Unit Waterflood, Order No. R-1538. The zones to be injected into are the Grayburg and San Andres from 3314' to 4400' with a maximum injection rate of 500 BWPD/well at a maximum pressure of 2500 psi. Any interested parties with objection or request for hearing should notify the Oil Conservation Division at P.O. Box 2088, Santa Fe, New Mexico 87501, within 15 days of this notice. Any questions should be directed to Mike Jones with the Wiser Oil Company, at P.O. Box 2568, Hobbs, New Mexico 88241, 505-392-9797.  
#15086

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.

01100659000      01506399  
J O Easley, Inc.-Consulting La  
705 W. Mescalero Rd.  
a/c 434005  
Roswell NM, NM 88201



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

3/14/97

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

GOVERNOR

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC	_____
DHC	_____
NSL	_____
NSP	_____
SWD	_____
WFX	_____ <i>X</i>
PMX	_____

Gentlemen:

I have examined the application for the:

<i>Wiser Oil Co</i>	<i>Maljamar GB Unit</i>	<i>#63-D -10-17s-32e</i>
Operator	Lease & Well No. Unit	S-T-R
		<i>#155-F -10-17s-32e</i>

and my recommendations are as follows:

*OK*

Yours very truly,

Jerry Sexton  
Supervisor, District 1

/ed