ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 12265 Exhibit No. 5
Submitted By:
OXY USA, Inc.
Hearing Date: October 21, 1999

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling
❑ NSL ❑ NSP ❑ DD ❑ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
❑ DHC ❑ CTB ❑ PLC ❑ PC ❑ OLS ❑ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
❑ WFX ❑ PMX ☒ SWD ❑ IPI ❑ EOR ❑ PPR

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ❑ Does Not Apply

[A] ❑ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner - Legal Advertisement

[C] ❑ Application is One Which Requires Published Legal Notice

[D] ❑ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ❑ For all of the above, Proof of Notification or Publication is Attached, and/or, will be forwarded when received.

[F] ❑ Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE** - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Richard E. Foppiano	Richard E. Foppiano	Senior Advisor	7/26/99
Print or Type Name	Signature	Title	Date

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: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [X] no

II. Operator: OXY USA Inc. 16696

Address: P.O. Box 50250 Midland, TX 79710-0250

Contact party: David Stewart Phone: 915-685-5717

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 [X] 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.

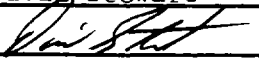
XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

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: David Stewart Title Regulatory Analyst

Signature:  Date: 7/26/99

* 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. Logs were filed 6/24/94.

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.

INJECTION WELL DATA SHEET

OXY USA Inc. 16696	Government AB			
OPERATOR	LEASE			
9	SL - 330 FNL 230 FEL BHL - 772 FNL 660 FEL	10	20S	28E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic

SEE OTHER SIDE

Tabular Data

Surface Casing

Size 13-3/8" @ 400'" Cemented with 614 sx.

TOC Surface feet determined by Circulated

Hole size 17-1/2"

Intermediate Casing

Size 8-5/8" @ 3005'" Cemented with 1400 sx.

TOC Surface feet determined by Circulated

Hole size 11"

Long string

Size 5-1/2" @ 6718'" Cemented with 910 sx.

TOC Surface feet determined by Circulated

Hole size 7-7/8"

Total depth 6725'

Injection interval

6378 feet to 6619 feet

(perforated or open-hole, indicate which)

Tubing size 2-7/8" N80 6.5# lined with N/A (material) set in a Baker Loc-Set (brand and model) packer at 6320 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Bone Spring

2. Name of Field or Pool (if applicable) Old Millman Ranch - Bone Spring Assoc. 48035

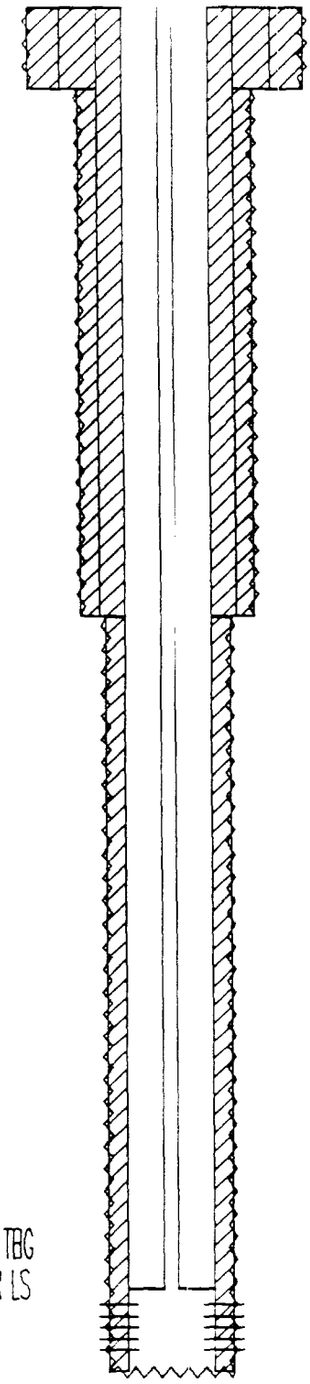
3. Is this a new well drilled for injection? [ ] Yes [X] No

   If no, for what purpose was the well originally drilled? Oil Producer

4. 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

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Yates-1024' Delaware-3266' Bone Spring-4579' 1st Bone Spring-6368'

OXY USA INC.
GOVERNMENT AB #9
SEC 10 T20S R28E EDDY CTY NM



0.0 - 400.0' 17 1/2" OD HOLE
0.0 - 400.0' CEMENT 614sx-CIRC
0.0 - 400.0' 13 3/8" OD SURF CSG

400.0 - 3005.0' 11" OD HOLE
0.0 - 3005.0' CEMENT 1400sx-CIRC
0.0 - 3005.0' 8 5/8" OD INT CSG

3005.0 - 6725.0' 7 7/8" OD HOLE
0.0 - 6718.0' CEMENT 910sx-CIRC
0.0 - 6718.0' 5 1/2" OD PROD CSG

0.0 - 6318.0' 2-7/8" OD 6.50#/ft N80 TBG
6318.0 - 6320.0' RETRV. PACKER BAKER LS

6378.0 - 6619.0' PERFS

PBTD: 6672'
TD: 6725'

ATTACHMENT C-108
OXY USA INC.
GOVERNMENT AB #9
SEC 10 T20S R28E

V. SEE ATTACHMENT A

VI. SEE ATTACHMENT B

VII. PROPOSED OPERATIONS

1. INJECTION RATE:
   AVERAGE - 500 BPD MAXIMUM - 1000 BPD

2. CLOSED SYSTEM

3. INJECTION PRESSURE:
   AVERAGE - 1000psi MAXIMUM - 1275psi

4. N/A

5. SEE ATTACHMENT C FOR COPY OF BONE SPRING WATER ANALYSIS.

VIII. GEOLOGICAL DATA:
SEE ATTACHMENT D FOR A COPY OF BONE SPRING LOG INTERVAL.
LITHOLOGY: SANDSTONE
INJECTION ZONE: BONE SPRING
THICKNESS: 259'
DEPTH: 6369-6628'
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE: 60'

IX. NONE

X. WELL LOGS ON FILE:
NMOCD POTENTIAL TEST 6/23/94 - 278-BO 62-BW 221-MCFD
FTP-250# CHK-26/64
CURRENT TEST 5/14/98 - 4-BO 3-BW 50-MCFD - PUMPING

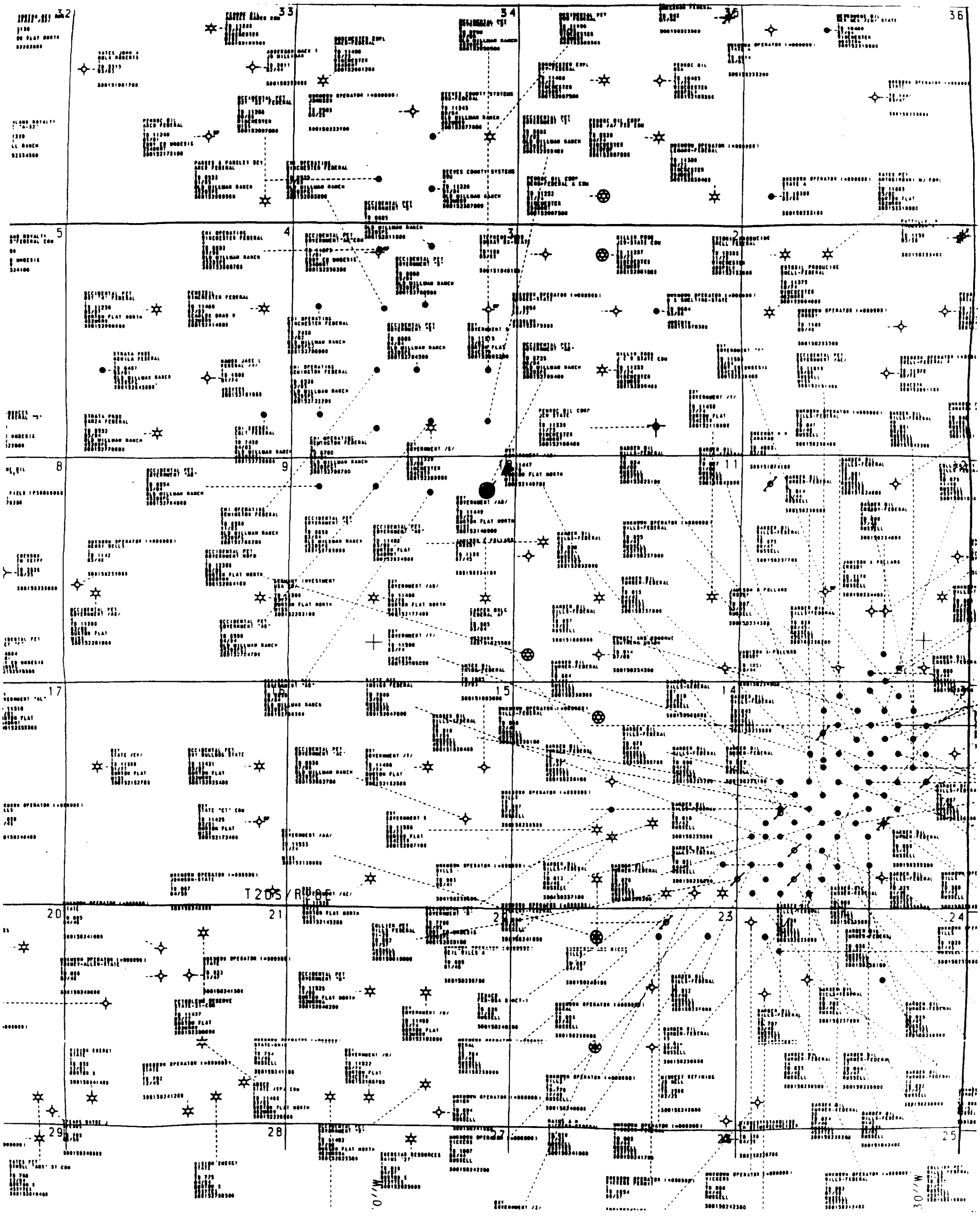
XI. WATER ANALYSIS - ATTACHMENT E

XII. I 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.

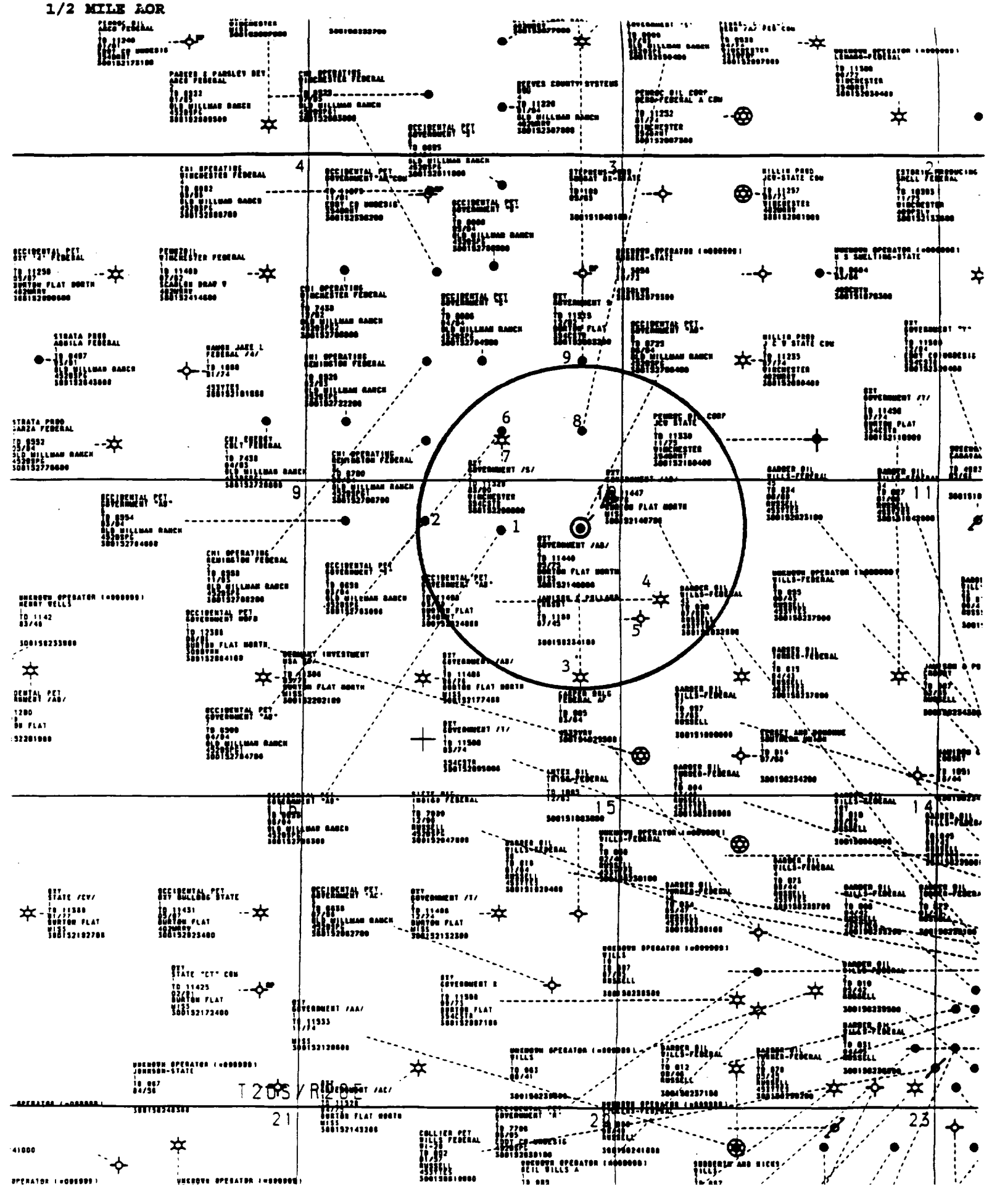
ROBERT L. DOTY - GEOLOGIST

XIII. SEE ATTACHED FOR SERVICE LIST. A COPY OF THIS APPLICATION HAS BEEN SENT CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO ALL PARTIES ON THE SERVICE LIST. THE LEGAL ADVERTISEMENT HAS BEEN REQUESTED AND PROOF OF PUBLICATION WILL BE FORWARDED AS SOON AS IT IS RECEIVED.

C-108 - ATTACHMENT A
OXY USA INC.
GOVERNMENT AB #9
SEC 10 T20S R28E
2 MILE MAP



C-108 - ATTACHMENT A
OXY USA INC.
GOVERNMENT AB #9
SEC 10 T20S R28E
1/2 MILE AOR



C-108 - ATTACHMENT B
GOVERNMENT AB #9
AREA OF REVIEW

OPERATOR	LEASE	PLAT	WELL NO.	LOCATION	DATE DRILLED	DEPTH	PERFS	CASING-CEMENT	STATUS	API NO. 30-015
OXY USA INC.	GOVERNMENT AB		9	SL-330 FNL 230 FEL	5/16/94	6725	6378-6619	13-3/8" @ 400' W/ 614sx	ACTIVE	27964
				BHL-772 FNL 660 FEL				8-5/8" @ 3005' W/ 1400sx	OLD MILLMAN RH	
				SEC 10 T20S R28E				5-1/2" @ 6718' W/ 910sx	BONE SPRING	
OXY USA INC.	GOVERNMENT AB	1	8	810 FNL 1980 FEL	4/26/94	6630	6300-6516	13-3/8" @ 418' W/ 500sx	ACTIVE	27863
				SEC 10 T20S R28E				8-5/8" @ 3010' W/ 1400sx	OLD MILLMAN RH	
								5-1/2" @ 6630' W/ 525sx	BONE SPRING	
OXY USA INC.	GOVERNMENT AB	2	7	660 FNL 1980 FWL	3/30/94	6590	6284-6483	13-3/8" @ 400' W/ 451sx	ACTIVE	27847
				SEC 10 T20S R28E				8-5/8" @ 3006' W/ 1350sx	OLD MILLMAN RH	
								5-1/2" @ 6590' W/ 750sx	BONE SPRING	
OXY USA INC.	GOVERNMENT AB	3	2	1980 FSL 660 FEL	2/28/75	11449	9114-9140	13-3/8" @ 614' W/ 650sx	ACTIVE	21480
				SEC 10 T20S R28E				9-5/8" @ 2770' W/ 2200sx	BURTON FLAT, N.	
								5-1/2" @ 11449' W/ 1025sx	WOLFCAMP	
OXY USA INC.	GOVERNMENT AB	4	5	1980 FNL 660 FWL	1/1/90	11400	11016-11259	13-3/8" @ 595' W/ 650sx	ACTIVE	26248
				SEC 11 T20S R28E				8-5/8" @ 3020' W/ 2200sx	BURTON FLAT	
								5-1/2" @ 11400' W/ 975sx	MORROW	
* JAMISON &	CROSBY	5	1	2310 FNL 330 FWL	Jul-45	1188	1178-1188	12-1/2" @ 250'	P&A	02341
POLLARD				SEC 11 T20S R28E				10" @ 460' W/ 50sx		
OXY USA INC.	GOVERNMENT S	6	3	810 FSL 1980 FEL	2/9/94	6650	6254-6515	13-3/8" @ 413' W/ 415sx	ACTIVE	27839
				SEC 3 T20S R28E				8-5/8" @ 3015' W/ 1450sx	OLD MILLMAN RH	
								5-1/2" @ 6550' W/ 725sx	BONE SPRING	
OXY USA INC.	GOVERNMENT S	7	2	660 FSL 1980 FEL	1/22/80	11329	11214-11237	13-3/8" @ 400' W/ 700sx	ACTIVE	22999
				SEC 3 T20S R28E				8-5/8" @ 3030' W/ 1850sx	WINCHESTER	
								5-1/2" @ 11320' W/ 850sx	MORROW	
OXY USA INC.	GOVERNMENT S	8	7	810 FSL 660 FEL	6/7/95	6680	6306-6560	13-3/8" @ 405' W/ 570sx	ACTIVE	28504
				SEC 3 T20S R28E				8-5/8" @ 3000' W/ 1080sx	OLD MILLMAN RH	
								5-1/2" @ 6680' W/ 545sx	BONE SPRING	
OXY USA INC.	GOVERNMENT S	9	8	1980 FSL 660 FEL	6/23/95	6700	6337-6583	13-3/8" @ 425' W/ 500sx	ACTIVE	28505
				SEC 3 T20S R28E				8-5/8" @ 3000' W/ 1100sx	OLD MILLMAN RH	
								5-1/2" @ 6700' W/ 520sx	BONE SPRING	

* WELLBORE DOES NOT PENETRATE PROPOSED INJECTION INTERVAL

Petrolite Corporation
5824 Lovington Highway
Hobbs, NM 88240 9143

TRETOLITE DIVISION

(505) 392-5711
Fax (505) 392-3759

WATER ANALYSIS REPORT

Company : OXY USA INC
Address :
Lease : GOVERNMENT AB
Well : BONE SPRINGS
Sample Pt. :

Date : 12/16/94
Date Sampled : 12/15/94
Analysis No. : 1281

	ANALYSIS		mg/L		* meq/L
1.	pH	6.5			
2.	H2S	NR			
3.	Specific Gravity	1.140			
4.	Total Dissolved Solids		228000.6		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)		434.0		
11.	Bicarbonate	HCO3	529.5	HCO3	8.7
12.	Chloride	Cl	137998.7	Cl	3892.8
13.	Sulfate	SO4	600.0	SO4	12.5
14.	Calcium	Ca	2637.3	Ca	131.6
15.	Magnesium	Mg	836.3	Mg	68.8
16.	Sodium (calculated)	Na	85374.4	Na	3713.5
17.	Iron	Fe	24.5		
18.	Barium	Ba	NR		
19.	Strontium	Sr	NR		
20.	Total Hardness (CaCO3)		10029.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

132	*Ca <----- *HCO3	9
	/------->	
69	*Mg -----> *SO4	12
	<---------/	
3714	*Na -----> *Cl	3893

Saturation Values Dist. Water 20 C

CaCO3	13	mg/L
CaSO4 * 2H2O	2090	mg/L
BaSO4	2.4	mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	8.7	703
CaSO4	68.1	12.5	850
CaCl2	55.5	110.4	6128
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	68.8	3275
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3713.5	217019

REMARKS:
-------- G. ARCHER / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TOM WILTON

[redacted]

SCALE TENDENCY REPORT

Company	: OXY USA INC	Date	: 12/16/94
Address	:	Date Sampled	: 12/15/94
Lease	: GOVERNMENT AB	Analysis No.	: 1281
Well	: BONE SPRINGS	Analyst	: TOM WILTON
Sample Pt.	:		

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. =	0.5	at	40 deg. F or	4	deg. C
S.I. =	0.5	at	60 deg. F or	16	deg. C
S.I. =	0.5	at	80 deg. F or	27	deg. C
S.I. =	0.5	at	100 deg. F or	38	deg. C
S.I. =	0.6	at	120 deg. F or	49	deg. C

****

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S =	3782	at	40 deg. F or	4	deg C
S =	4230	at	60 deg. F or	16	deg C
S =	4578	at	80 deg. F or	27	deg C
S =	4794	at	100 deg. F or	38	deg C
S =	4890	at	120 deg. F or	49	deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TOM WILTON

Petrolite Corporation
5624 Lovington Highway
Hobbs, NM 88240-9143

TRETOLITE DIVISION

(505) 392-5711
Fax (505) 392-3759

WATER ANALYSIS REPORT

Company : OXY USA INC
Address :
Lease : GOVERNMENT 3
Well : BONE SPRINGS
Sample Pt. :

Date : 12/16/94
Date Sampled : 12/15/94
Analysis No. : 1282

	ANALYSIS		mg/L		* meq/L
1.	pH	6.6			
2.	H2S	NR			
3.	Specific Gravity	1.135			
4.	Total Dissolved Solids		231316.1		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)		389.0		
11.	Bicarbonate	HCO3	474.6	HCO3	7.8
12.	Chloride	Cl	140110.5	Cl	3952.3
13.	Sulfate	SO4	550.0	SO4	11.5
14.	Calcium	Ca	2685.4	Ca	134.0
15.	Magnesium	Mg	846.0	Mg	69.6
16.	Sodium (calculated)	Na	86625.7	Na	3768.0
17.	Iron	Fe	24.0		
18.	Barium	Ba	NR		
19.	Strontium	Sr	NR		
20.	Total Hardness (CaCO3)		10189.2		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

134	*Ca <----- *HCO3	8
	/------->	
70	*Mg -----> *SO4	11
	<----------/	
3768	*Na -----> *Cl	3952

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	7.8	630
CaSO4	68.1	11.5	780
CaCl2	55.5	114.8	6368
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	69.6	3313
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3768.0	220200

REMARKS:
--------- G. ARCHER / PILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TOM WILTON

[redacted]

SCALE TENDENCY REPORT

Company	: OXY USA INC	Date	: 12/16/94
Address	:	Date Sampled	: 12/15/94
Lease	: GOVERNMENT 3	Analysis No.	: 1282
Well	: BONE SPRINGS	Analyst	: TOM WILTON
Sample Pt.	:		

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. =	0.5	at	40 deg. F or	4	deg. C
S.I. =	0.5	at	60 deg. F or	16	deg. C
S.I. =	0.5	at	80 deg. F or	27	deg. C
S.I. =	0.6	at	100 deg. F or	38	deg. C
S.I. =	0.6	at	120 deg. F or	49	deg. C

****

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S =	3710	at	40 deg. F or	4	deg C
S =	4153	at	60 deg. F or	16	deg C
S =	4498	at	80 deg. F or	27	deg C
S =	4712	at	100 deg. F or	38	deg C
S =	4807	at	120 deg. F or	49	deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TOM WILTON

COMPANY: OXY USA INC.

WELL: GOVERNMENT "AB" #9

FIELD: OLD MILLMAN RANCH

COUNTY: EDDY STATE: NEW MEXICO

Company: OXY USA INC.
Well: GOVERNMENT "AB" #9
Location: 330' FNL & 230' FEL
Field: OLD MILLMAN RANCH

Schlumberger

COMPENSATED NEUTRON
LITHO-DENSITY
GAMMA RAY

LOCATION

330' FNL & 230' FEL

Elev.: K.B. 3284.5 F
G.L. 3268 F
D.F. 3283.5 F

Permanent Datum: GROUND LEVEL Elev.: 3268 F
Log Measured From: KELLY BUSHING 16.5 F above Perm. Datum
Drilling Measured From: KELLY BUSHING

API Serial No.	SECTION	TOWNSHIP	RANGE
	10	20S	28E

	Run 1	Run 2	Run 3	Run 4
Logging Date	4-JUN-1994			
Run Number	1			
Depth Driller	6725 F			
Schlumberger Depth	6720 F			
Bottom Log Interval	6717 F			
Top Log Interval	390 F			
Casing Driller Size @ Depth	8.625 IN @ 3005 F	@	@	
Casing Schlumberger	3016 F			
Bit Size	7.875 IN			
Type Fluid In Hole	MY-LO-GEL			
MUD Density / Viscosity	9.1 LB/G / 29 S			
MUD Fluid Loss / PH	12.4 C3 / 8.5			
MUD Source Of Sample	SHAKER			
RM @ Measured Temperature	0.109 OHMM @ 78 DEGF	@	@	
RMF @ Measured Temperature	0.095 OHMM @ 78 DEGF	@	@	
RMC @ Measured Temperature	@	@	@	
Source RMF / RMC	MEAS.			
RM @ MRT / RMF @ MRT	0.077 @ 113 / 0.067 @ 113	@ / @	@ / @	
Maximum Recorded Temperatures	113 DEGF			
Circulation Stopped / Time	3-JUN-1994 / 20:30			
Logger On Bottom / Time	4-JUN-1994			
Unit Number / Location	3005 / ROSWELL			
Recorded By	MARK LIEBERENZ			
Witnessed By	TOM TINNEY			

	Run 1	Run 2	Run 3	Run 4
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	@		@	
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
MUD Density / Viscosity				
MUD Fluid Loss / PH				
MUD Source Of Sample				
RM @ Measured Temperature	@		@	
RMF @ Measured Temperature	@		@	
RMC @ Measured Temperature	@		@	
Source RMF / RMC				
RM @ MRT / RMF @ MRT	@ / @		@ / @	
Maximum Recorded Temperatures				
Circulation Stopped / Time				
Logger On Bottom / Time				
Unit Number / Location				
Recorded By				
Witnessed By				

OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

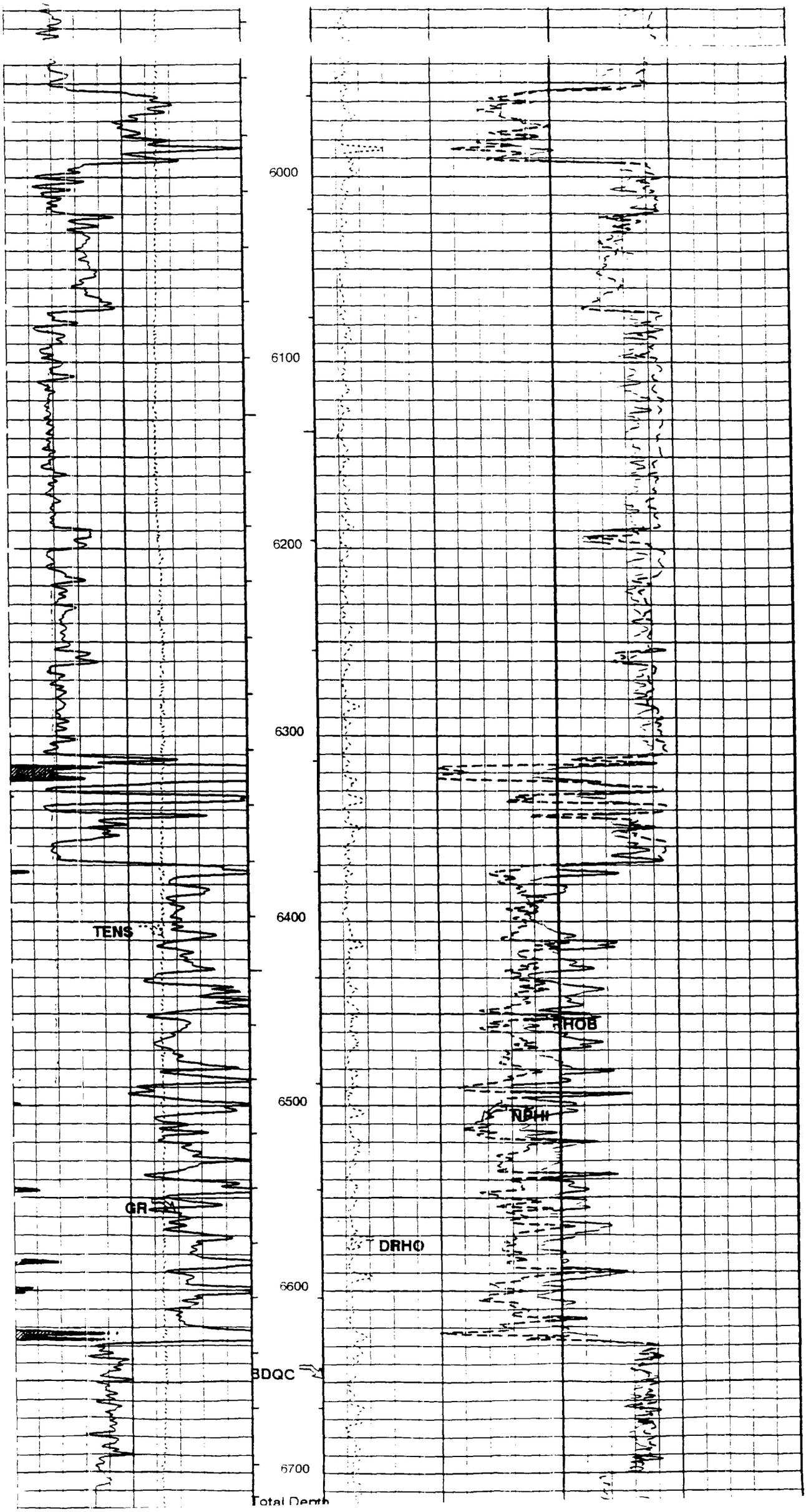
OTHER SERVICES1
OS1: DLL/MSFL
OS2: LDT/CNL
OS3: CORES •
OS4:
OS5:

REMARKS: RUN NUMBER 2

REMARKS: RUN NUMBER 1
ALL SCALES AT CLIENT REQUEST.
CEMENT VOLUME SHOWN RIGHT SIDE OF DEPTH TRACK.

RIG: MOC #1
OPERATORS: GOMEZ AND VASQUEZ

THANK YOU FOR CALLING SCHLUMBERGER!


6000
6100
6200
6300
6400
6500
6600
6700
TENS
GR
RHOB
NPHI
DRHO
BDQC
Total Depth

Water Analysis Report by Baker Petrolite

OXY USA INCORPORATED

WINDMILL ± 660 FSL 2380 FEL

SECTION 2 TOWNSHIP 20 SOUTH

Range 28 East, Eddy County New Mexico

Account Manager
WAYNE PETERSON

Summary		Analysis of Sample 106240 @ 75°F					
Sampling Date	02-02-99	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date	03-02-99	Chloride	57.0	2.45	Sodium	126	5.42
Analyst	JOANNA RAGAN	Bicarbonate	70.0	1.15	Magnesium	66.0	5.43
		Carbonate	0.00	0.00	Calcium	479	23.5
TDS (mg/l or g/m³)	2320.46	Sulfate	1490	31.0	Strontium	6.00	0.14
Density (g/cm³ or tonne/m³)	1.003	Phosphate	N/A	N/A	Barium	0.05	0.00
Anion/Cation Ratio	1.00	Borate	N/A	N/A	Iron	0.80	0.03
		Silicate	N/A	N/A	Potassium	6.00	0.15
Carbon Dioxide					Aluminum	N/A	N/A
Oxygen					Chromium	N/A	N/A
					Copper	N/A	N/A
		pH at time of sampling			Lead	N/A	N/A
		pH at time of analysis		7.75	Manganese	N/A	N/A
		pH used in Calculations		7.75	Nickel	N/A	N/A

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000bbl										CO2
Temp.	Gauge Press.	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		Press.
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0.	0.40	1.88	-0.14		-0.21		-0.38		0.70	0.02	0.02
100	0.	0.48	2.57	-0.11		-0.14		-0.37		0.55	0.02	0.02
120	0.	0.58	3.44	-0.13		-0.08		-0.35		0.43	0.02	0.03
140	0.	0.68	4.49	-0.11		0.05	56.2	-0.32		0.33	0.02	0.04

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

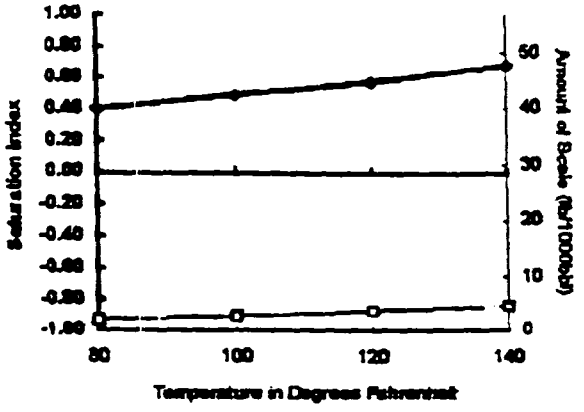
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

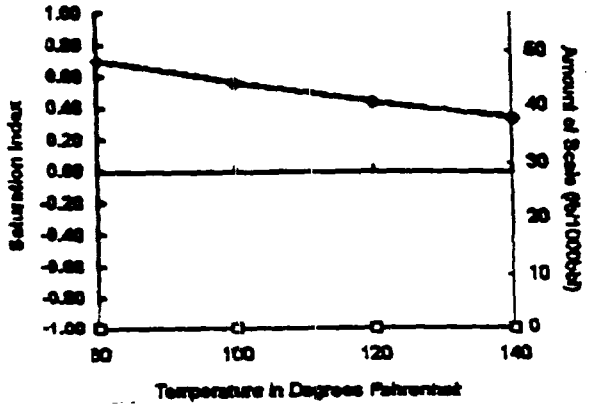
Scale Predictions from Baker Petrolite

Analysis of Sample 108240 @ 75°F for OXY USA INCORPORATED , Feb/05/99

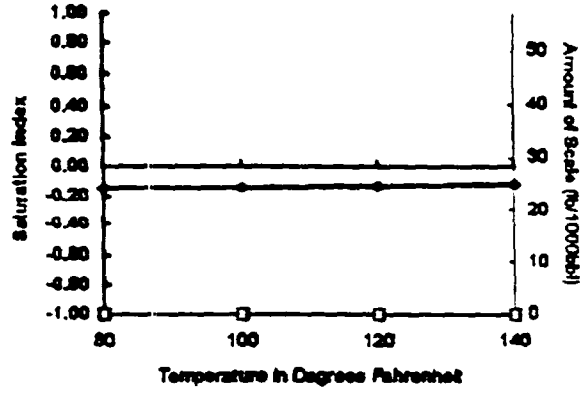
Calcite - $CaCO_3$



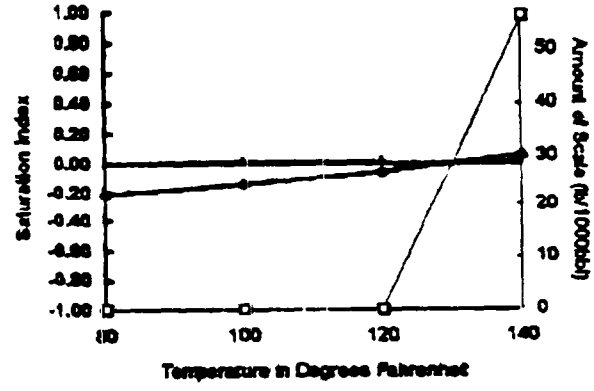
Barite - $BaSO_4$



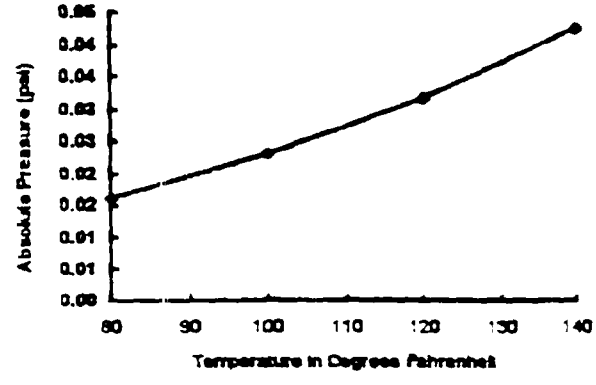
Gypsum - $CaSO_4 \cdot 2H_2O$



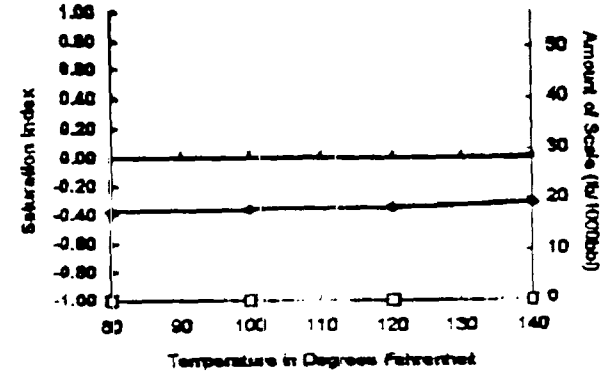
Anhydrite - $CaSO_4$



Carbon Dioxide Partial Pressure



Celestite - $SrSO_4$



SERVICE LIST - C-108 APPLICATION
OXY USA INC.
GOVERNMENT AB #9
SEC 10 T20S R28E

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE, NM 87505

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
811 S. 1ST STREET
ARTESIA, NM 88210-2834

SURFACE OWNER:

UNITED STATES DEPT OF INTERIOR
BUREAU OF LAND MANGEMENT
2909 WEST SECOND STREET
ROSWELL, NM 88201

PARDUE LTD.
P.O. BOX 2018
CARLSBAD, NM 8821-2018

OFFSET OPERATORS:

CHI OPERATING INC.
P.O. BOX 1799
MIDLAND, TX 79702

HILLIN PRODUCTION CO.
P.O. BOX 152
ODESSA, TX 79760

OXY USA INC.
P.O. BOX 50250
MIDLAND, TX 79710-0250

Affidavit of Publication

№ 19980

State of New Mexico,
County of Eddy, ss.

Amy McKay,
being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

July 22, 19 99
_____, 19___
_____, 19___
_____, 19___
_____, 19___
_____, 19___

That the cost of publication is $ 28.03, and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this 22 day of July 19 99

Lorraine Peperte

My commission expires 5/25/03
Notary Public

July 22, 1999

NOTICE OF APPLICATION FOR FLUID DISPOSAL

APPLICANT:
OXY USA INC.
P.O. BOX 50250
MIDLAND, TX 79710-0250
ATTN; DAVID STEWART
915-685-5717

PURPOSE - WELL:
DISPOSAL OF PRODUCED SALT WATER INTO A ZONE PRODUCTIVE OF OIL & GAS
GOVERNMENT AB #9
SURFACE LOCATION - 330 FNL 230 FEL (A)
SEC 10 T20S R28E

FORMATION:
BONE SPRINGS - 6378-6619'
MAXIMUM INJECTION RATE - 1000 BWPD
MAXIMUM SURFACE INJECTION PRESSURE - 1275 PSI.

INTERESTED PARTIES MUST FILE OBJECTIONS OR REQUEST FOR HEARING WITH THE NEW MEXICO OIL CONSERVATION DIVISION, 2040 S. PACHECO, SANTA FE, NM 87505, WITHIN 15 DAYS OF THIS APPLICATION.