

**BW - 6**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

1988 → 1978

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

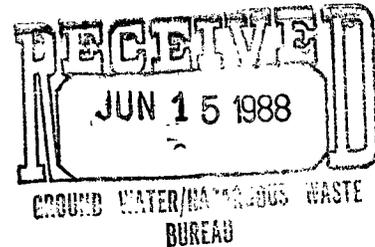
# B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 10, 1988

Environmental Improvement Division  
P.O. Box 968  
Santa Fe, NM 87504-0968



RE: DP-323 Discharge Plan  
Eugenie Brine Station

ATT: Kevin Lambert

Attached please find the information to the 10 questions and comments that you requested for renewal and approval in conformance to Part V of the Water Quality Control Commission on the above referenced brine well.

We hope the information submitted is satisfactory to you.

Thank you for your consideration. If you have any further question please don't hesitate to contact us.

Sincerely,

A handwritten signature in cursive script, appearing to read "Phil Withrow".

Phil Withrow  
Owner/Manager  
B & E, Inc.

PW/va1

Attachments

XC: file

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

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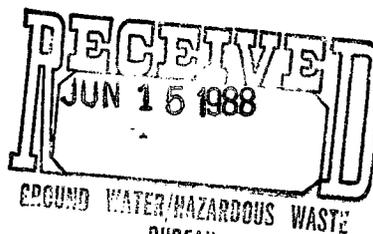
Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 10, 1988

Environmental Improvement Division  
P.O. Box 968  
Santa Fe, NM 87504-0968

RE: State 24 #1 - Loco Hills Brine Station  
Sec. 24 T 18S R 28E  
Eddy County, New Mexico

ATT: Kevin Lambert



Attached please find a water analysis report on the sample submitted to Unichem International Laboratory. The Lab Technician who did the analysis is Sharon Wright.

Thank you for your consideration and if you have any further questions, please don't hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Valerie Lemon".

Valerie Lemon  
Sec/Clerk  
B & E, Inc.

Attachment

XC: file

Unichem International

707 North Leech

P.O. Box 1499

Hobbs, New Mexico 88240

Company : B & E, Inc.  
 Date : 03-01-1988  
 Location: State 24 - Well #1 (on 02-29-1988)

Sample 1

Specific Gravity: 1.242  
 Total Dissolved Solids: 338820  
 PH: 7.29  
 IONIC STRENGTH: 5.907

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	52.0	1040
Magnesium	(Mg <sup>+2</sup> )	45.2	549
Sodium	(Na <sup>+1</sup> )	5680	131000
Iron (total)	(Fe <sup>+2</sup> )	0.015	0.420
Barium	(Ba <sup>+2</sup> )	0.003	0.240

ANIONS:

Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	2.80	171
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	134	6450
Chloride	(Cl <sup>-1</sup> )	5640	200000

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>	<u>Calcium Carbonate</u>	<u>Calcium Sulfate</u>
86°F 30°C	2.8	-3.0



CHEMICAL and PHYSICAL ANALYSES  
for WATER SAMPLES

Sample #8  
Date received 10/29/85  
Lab No. HW-1808  
SLD user code No.

CONSULT SLD Lab Annex L for proper presentation of samples. TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: Check individual items for analysis INTERIM PRIMARY PARAMETER GROUP TYPE of CHEMICAL ANALYSIS  
 1  2  3  Complete Secondary  Organic  Radiological

Water Supply System Name Water Supply System Code No. 20608 City or Location County

Carlsbad Collection Date 10-7-85 Collection Time 9:30 a.m. Collection Point No. 2 Stock Watering  
 Collector's remarks Double Eagle Eddy  
 Nitric Acid Added

Report to Don Patterson  
 Address P. O. Box 1569  
 Carlsbad, New Mexico 88220

Collected by Max Cordova City of Carlsbad

TYPE OF SYSTEM (Check one) PRIVATE PUBLIC:  Community  Non-community

SOURCE:  Spring  Lake  Well-Depth  Drain  Stream  Pool  Other (specify)

LAT. ° ' " LONG. ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL	HEAVY METALS	mg/l	PARAMETER	ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filterable Residue	X 01000 Arsenic	0.005		39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Las)	X 01005 Barium	2.1		39732 Lindane	
00900 Tot.Hardness (as CaCO <sub>3</sub> )		00620 Nitrate (as N)		00095 Conductance Micromhos 25°C	X 01025 Cadmium	2.001		38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as CaCO <sub>3</sub> )		00400 pH	X 01030 Chromium	<0.005	RADIOLOGICAL PCI/I 01501 Gross Alpha	39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO <sub>3</sub> )		01330 Odor	X 01049 Lead	<0.01	03501 Gross Beta	39730 2,4-D	
00445 Iron, Total (as Fe)		00445 Carbonate (as CO <sub>3</sub> )		00080 Color	X 07180 Mercury	<0.0005	09501 Radium-226	39740 2,4,5-TP (Silvex)	
01056 Manganese (as Mn)		00945 Sulfate (as SO <sub>4</sub> )		00070 Turbidity	X 01145 Selenium	<0.005	11501 Radium-228		
					X 01075 Silver	<0.001			

LABORATORY REMARKS:

.....

Reviewed by [Signature]  
 Date reported 12/20/85



CHEMICAL and PHYSICAL ANALYSES  
for WATER SAMPLES

Date received: 1/29/84  
Lab No.: 144-2795  
SLD user code No.

FOR PROPER PRESERVATION OF SAMPLES, CONSULT DEFINITIONS ON REVERSE. TYPE OR PRINT WITH BALL POINT PEN.

CHEMICAL ANALYSES:  Check individual items for analysis  INTERIM PRIMARY PARAMETER GROUP  TYPE OF CHEMICAL ANALYSIS:  Complete,  Secondary,  Organic,  Radiological

Water Supply System Name: [Blank] Water Supply System Code No.: 20609 City of Location: [Blank] County: PUDY

Collection Date: 1-25-84 Collection Time: 10:30 AM Collection Point: [Blank] Collector's Remarks: [Blank] Report to: [Blank]

Owner: [Blank] City of Origin: [Blank] Address: [Blank] City: [Blank] State: [Blank] Zip: [Blank]

TYPE OF SYSTEM:  PRIVATE  PUBLIC  Community  Non-community SOURCE:  Spring  Lake  Well-Depth  TREATED WATER  RAW WATER

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL	HEAVY METALS	mg/l	PARAMETER	ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filtrable Residue	01000 Arsenic	<0.005		39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Lbs)	01005 Barium	<0.1		39732 Lindane	
00900 Tot. Hardness (as CaCO <sub>3</sub> )		00620 Nitrate (as N)		00095 Conductance Micromhos 25°C	01025 Cadmium	<0.001		38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as CaCO <sub>3</sub> )		00400 PH	01030 Chromium	<0.005	RADIOLOGICAL	39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO <sub>3</sub> )		01330 Odor	01049 Lead	<0.01	03501 Gross Beta	39730 2,4-D	
01045 Iron-Total (as Fe)		00445 Carbonate (as CO <sub>3</sub> )		00080 Color	07180 Mercury	<0.005	09501 Radium-226	39740 2,4,5-TP (Silver)	
01056 Manganese (as Mn)		00945 Sulfate (as SO <sub>4</sub> )		00070 Turbidity	01145 Selenium	<0.005	11501 Radium-228		
					01055 Silver	<0.001			

LABORATORY REMARKS: [Blank]

Reviewed by: [Signature] Date Reported: 2/9/84

CITY OF CARLSBAD  
 - WATER ANALYSIS REPORT -  
 CARLSBAD CITY LABORATORY  
 WASTEWATER TREATMENT PLANT  
 Carlsbad, New Mexico 88220

SAMPLE SENT BY City of Carlsbad ANALYSTS NO. \_\_\_\_\_  
 FROM Water Well Field SAMPLE RECEIVED 1/28/88  
 ADDRESS \_\_\_\_\_ SAMPLE REPORTED 1/29/88  
 WATER SOURCE Composite

PHYSICAL CHARACTERISTICS AS RECEIVED

Color \_\_\_\_\_ Odor \_\_\_\_\_ Turbidity 2

CHEMICAL CHARACTERISTICS

	PARTS per MILLION	PPM as CaCO <sub>3</sub>	As CaCO <sub>3</sub> GRAINS per Gallon
Alkalinity-M: . . . . .		220	
Alkalinity-P: . . . . .		0	
Calcium-Ca: . . . . .	72	180	10.5
Magnesium-MG: . . . . .	39	156	9.1
Sodium-Na: . . . . .			
Sulphates-So <sub>4</sub> : . . . . .	78		
Chlorides-Cl: . . . . .	28		
Sp. Cond.: . . . . .	430		
Iron-Fe: . . . . .			
Free Chlorine: . . . . .			
Fluoride: . . . . .	0.47		
PH: As received: . . . . .	7.77		
Aquapoise (PHs) at 70°F: . . . . .			
TOTAL HARDNESS: (As CaCO <sub>3</sub> ): . . . . .		336	19.6
TOTAL DISSOLVED SOLIDS (As CaCO <sub>3</sub> ):			

Jose A. Renteria

COPIES RECEIVED	5
TRIBUTION	
FE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
OPERATOR	3

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

RECEIVED

DEC 23 1974

a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR  
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

O.C.C.

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER- <b>ARTESIA, OFFICE</b>	7. Unit Agreement Name
2. Name of Operator <b>Cities Service Oil Company</b>	8. Firm or Lease Name <b>Tracy B Com.</b>
3. Address of Operator <b>Box 1919 - Midland, Texas 79701</b>	9. Well No. <b>1</b>
4. Location of Well UNIT LETTER <b>I</b> <b>2045</b> FEET FROM THE <b>South</b> LINE AND <b>479</b> FEET FROM THE <b>East</b> LINE, SECTION <b>18</b> TOWNSHIP <b>22S</b> RANGE <b>27E</b> N.M.P.M.	10. Field and Pool, or Wildcat <b>Undesignated Morrow</b>
15. Elevation (Show whether DF, RT, GR, etc.) <b>3108' GR</b>	12. County <b>Eddy</b>

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK

TEMPORARILY ABANDON

PULL OR ALTER CASING

OTHER \_\_\_\_\_

PLUG AND ABANDON

CHANGE PLANS

SUBSEQUENT REPORT OF:

REMEDIAL WORK

COMMENCE DRILLING OPNS.

CASING TEST AND CEMENT JOB

OTHER \_\_\_\_\_

ALTERING CASING

PLUG AND ABANDONMENT

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

T.D. 1843' Lime. Preparing to drill ahead. Drilled to a T. D. of 1843'. Ran 3 fts. (143 10-3/4" OD 40.5# K55 casing, 2 fts. (51.58') 10-3/4" OD 40.5# H<sub>2</sub>O casing, 11 fts. (467.53' 10-3/4" OD 40.48# casing & 36 fts. (1157.06') 10-3/4" OD 32.75# H<sub>2</sub>O casing - a total of 52 fts. (1819.43') - set at 1842.89' & cemented with 400 sacks Halliburton Lite w/5# Gilson & 1/4# Flocele/sack followed by 440 sacks Class C with 2% CaCl. Plug down at 11:30 A.M., 12/18/74. WOC 5 hours. Tagged top of cement at 550'. Cemented with 450 sacks Class C with 2% CaCl. Circulated 10 sacks. Job complete 12:00 P.M., 12/18/74. WOC 24 hours. Tested 10-3/4" casing to 500# for thirty minutes--OK.

Job witnessed by Gerald Lynch, City of Carlsbad Oil & Gas inspector, and Leland Mermis and Leon Bergstrom of the NMOCC.

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

SIGNED *E. Spiller* TITLE Region Operation Manager DATE 12/20/74

APPROVED BY *W. A. Gressett* TITLE OIL AND GAS INSPECTOR DATE DEC 23 1974

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <i>Cities Service Oil Co.</i>		Lease <i>Gracy B Com.</i>		Well # <i>1</i>	
Location of Well	Unit <i>2045 4778</i>	Section <i>18</i>	Township <i>22</i>	Range <i>27</i>	County <i>Eddy</i>
Drilling Contractor		Type of Equipment <i>Rotary to start 12-15-74</i>			
<u>APPROVED CASING PROGRAM</u>					
Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
<i>20"</i>	<i>16"</i>	<i>65</i>		<i>350</i>	<i>350 cwt.</i>
<i>14 3/4"</i>	<i>10 3/4"</i>	<i>40.5</i>		<i>1850</i>	<i>1500 "</i>
<i>9 1/2"</i>	<i>7 3/8"</i>	<i>26-29-33</i>		<i>8850</i>	<i>950</i>
<i>6 1/2"</i>	<i>5 1/2" line</i>	<i>19.8"</i>		<i>8600-11700</i>	<i>200</i>
Casing Data:			<i>36 JTS 32" H-40 STFC</i> <i>11 JTS 40" H-40 STFC</i> <i>2 JTS 40.5" H-40 STFC</i> <i>9 JTS 40.5" H-50 STFC</i>		
<i>INT 52</i> joints of <i>10 3/4</i> inch — # Grade					
<i>YES NEW API (Approved) (Rejected)</i>					
Inspected by <i>Louis Bergstrom</i>			date <i>12-16-74</i>		
Cementing Program					
Size of hole <i>14 3/4"</i> Size of Casing <i>10 3/4"</i> Sacks cement required _____					
Type of Shoe used <i>GUIDE</i> Float collar used <i>YES</i> Btm 3 jts <del>_____</del> <i>THREAD LOK</i>					
ID of hole <i>18 1/2" NB</i> Set <i>1823 G.L.</i> Feet of <i>10 3/4</i> Inch — # Grade <i>AS ABOVE</i>					
New-used csg. @ <i>1823 G.L.</i> with <i>420</i> sacks neat cement around shoe w/2% CACL <sub>2</sub> + <i>400</i> sax <i>Howcolite</i> additives <i>4/5" GILSONITE + 1/4" FLOCELE + 2% CACL<sub>2</sub></i>					
Plug down @ <i>10:30</i> (AM) <del>_____</del> Date <i>12-18-74</i>					
Cement circulated <i>No</i> No. of Sacks _____					
Cemented by <i>HOWCO</i> Witnessed by <i>Louis Bergstrom</i>					
Temp. Survey ran @ <i>500</i> (PM) Date <i>12-18-74</i> top cement @ <i>550</i>					
Casing test @ _____ (AM) (PM) Date _____					
Method Used _____ Witnessed by _____					
Checked for shut off @ _____ (AM) (PM) Date _____					
Method used _____ Witnessed by _____					
Remarks: <i>3-10 3/4" BASKETS @ 500'-800' &amp; 1100'</i>					
<i>SURFACE HOLE 20" TO 342' SET 17 JTS 16" X 65" @ 322' G.L. (CMT W/300 SX</i>					
<i>CLASS C 1/4" &amp; 2% C.C.) + (150 SX CLASS C W/2% C.C. W/1" &amp; CIRC CMT TO SURFACE)</i>					

\* 1<sup>ST</sup> STAGE CONVENTIONAL DOWN 16" CSG.

\* 2<sup>ND</sup> STAGE DOWN 1" @ 150 FT.

RAN 1" DOWN ANNULUS BETWEEN 16" CSG & 10 3/4" CSG TO 541' CMT W/420 SX CLASS C CMT W/2% CACL<sub>2</sub>. HAD GOOD RETURNS THROUGHOUT, & CIRC EST. 1 BBL CMT TO SURFACE

COPIES RECEIVED	✓
CONTRIBUTION	
FILE	✓
U.S.G.S.	
LAND OFFICE	
OPERATOR	2

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

RECEIVED

DEC 18 1974

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT DEPTH; USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	30. Indicate Type of Lease State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
2. Name of Operator Cities Service Oil Company ✓	5. State Oil & Gas Lease No.
3. Address of Operator Box 1919 - Midland, Texas 79701	7. Unit Agreement Name
4. Location of Well UNIT LETTER <u>I</u> <u>2045'</u> FEET FROM THE <u>South</u> LINE AND <u>479</u> FEET FROM THE <u>East</u> LINE, SECTION <u>18</u> TOWNSHIP <u>22S</u> RANGE <u>27E</u> RMPM.	8. Farm or Lease Name Tracy B Com.
	9. Well No. 1
	10. Field and Prod. or Wildcat Undesignated Morrow
	11. Elevation (Show whether DF, RT, GR, etc.) 3108' GR
	12. County Eddy

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUS AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPHS. <input checked="" type="checkbox"/>	PLUS AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

T.D. 342' Anhydrite. Prep to drill ahead. This well was spudded @ 3:00 PM on 12-9-74 and drilled to a T.D. 342'. Ran 16 Jts. (322,20') 16" OD 65# K-55 casing set and cemented @ 342' w/300 sacks Class C w/1/4# Flocele/sack and 2% CaCl. cement. Plug down @ 5:05 AM on 12-12-74. Cement did not circulate to the surface. WOC 6 Hrs. Ran Temp. Survey. Top of the cement @ 150'. Ran 1" tubing in the annulus and cemented w/150 sacks of Class C w/1/4# Flocele/sack and 2% CaCl. cement. Cement circulated to the surface. WOC 16 Hrs. Total WOC time of 22 Hrs. Tested 16" casing to 1000# for 30 minutes with no drop in pressure.

NMOCC and The City of Carlsbad was notified but did not witness cementing job.

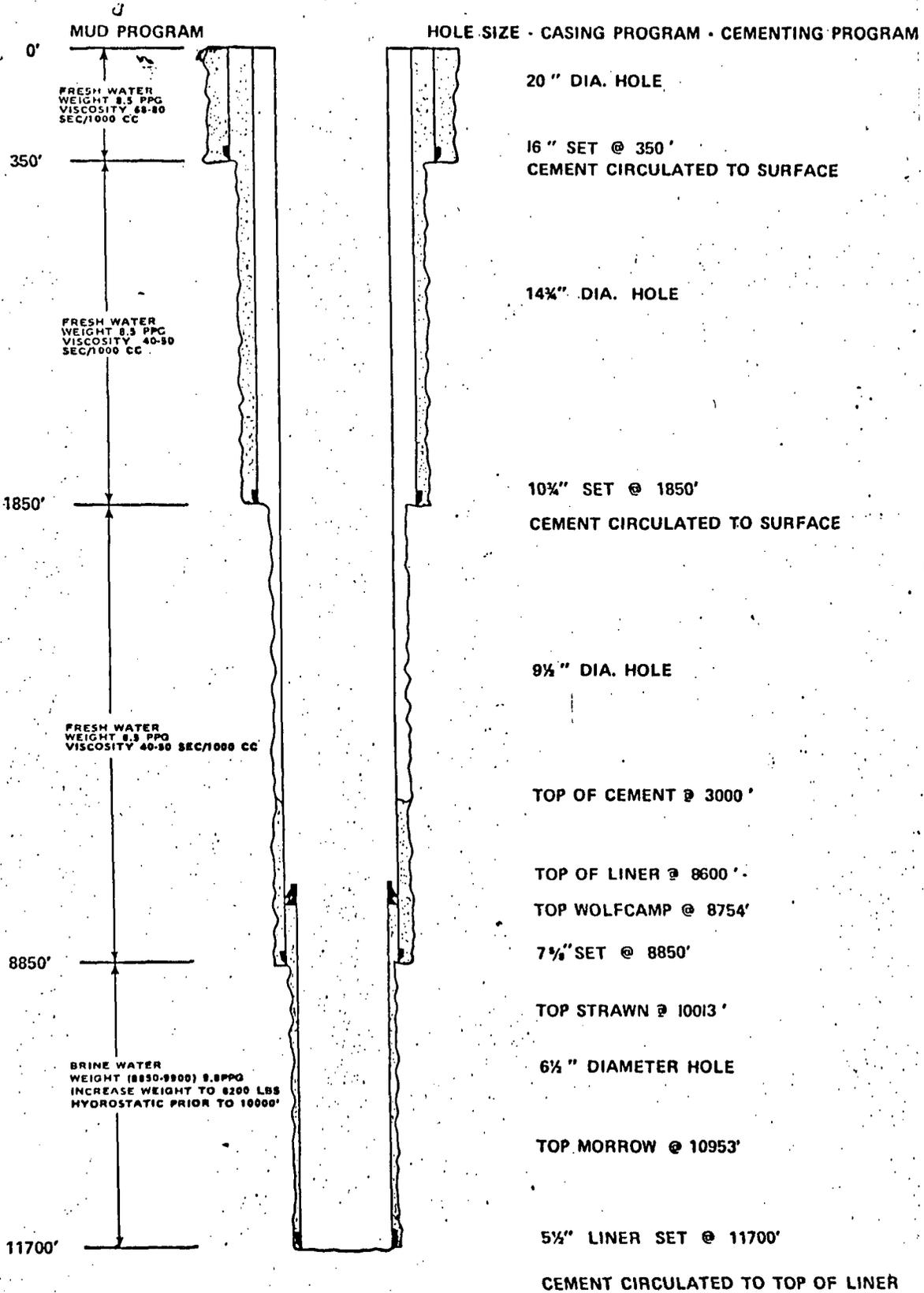
18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED ORIGINAL SIGNED BY E. Y. WILDER	TITLE Region Operation Manager	DATE December 16, 1974
APPROVED BY <i>W.A. Gueseth</i>	TITLE OIL AND GAS INSPECTOR	DATE DEC 19 1974

CONDITIONS OF APPROVAL, IF ANY:

CSOC TRACY B NO. 1  
EDDY COUNTY, NEW MEXICO

CASING SCHEMATIC



Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

# B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

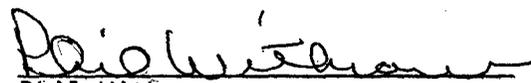
Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 9, 1988

RE: Eugenie Brine Station

B & E, Inc. firmly commits to take such steps (corrective action) as necessary to eliminate conduits for the migration of contaminants into ground water. (5-203.A.; 5-210.B.3).

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

  
Phil Withrow  
Owner/Manager

SUBSCRIBED AND SWORN TO before me this 10<sup>th</sup> day of June,  
1988 by Phil Withrow.

My commission expires:

Feb. 21, 1989

  
Valerie Lerner  
Notary Public  
State of New Mexico



2-13-88

Rigged-up Bell Pel. Surveys logging truck & mast pole truck @ 9 am to run tracer survey on the Eugenie #2 well. We tied B-E Truck's pump truck into pumping line & dropped R.A. material down ~~100'~~, ran tool into hole & established a pump rate of  $\frac{3}{10}$ <sup>th</sup> bbls per minute.

Dropped logging tool to 100' from surface and started logging. Hogged every 100' to bottom of casing, which was @ 500' +/- . Hog showed that 2 7/8 x 5" csg. was intact and R.A. material went out into salt bed formation.

Rigged down all equipment & shut well in. Moved all equipment over to well #2.

Rigged same equipment up on the Eugenie #2 brine well. Tied pump truck into csg. dropped R.A. material down csg. & logged thru tubing. Started logs @ 100' from surface & continued @ 100' intervals to T.D. which was @ bottom of csg. 450' +/- . Hog showed that R.A. material went to bottom of csg. into salt bed section. Hog showed casing was intact.

Rigged all equipment & general down & ended operations.

W.R. Budwin  
Pel. Consultant

P. O. Box 2988, Midland, Texas 79702

DATE 2-13-88

CUSTOMER B.E.F. INC CUSTOMER NO. \_\_\_\_\_

ADDRESS P.O. Box 2292 Hobbs N.MEX. 88240 LEASE \_\_\_\_\_

WELL NO. #1  
 COUNTY Eddy  
 STATE N. MEX.

All invoices are Payable in Midland, Midland County, Texas  
 TERMS: NET 30 DAYS  
 All services are supplied subject to our General Terms and Conditions as stated in our Current Price Schedule and reverse side.  
 Concerning irretrievable loss of sealed sources, both Bell Petroleum Surveys and customer agree to abide by TRCR Parts 36, Sections 36.4 and 36.501, and NRC 10 CFR Parts 30 and 70.

Subject to correction of clerical errors.

TRUCK T-911 STATION Hobbs (L.)

CODE	DATE	DESCRIPTION	NUMBER OF UNITS	UNIT OF MEASURE	UNIT PRICE	TOTAL
001	2-13	Service Charge <u>SET UP</u> Instrument Protection Charge	ONE	SET UP	600.00	600.00
005	2-13	Pressure Control Equipment <u>2" lubricator</u> Materials Charge	0-500	PSI	700.00	700.00
101	2-13	<u>BRADENHEAD TRACER OPER. CHARGE.</u>	MIN	F.T.	450.00	450.00
101	2-13	<u>BRADENHEAD TRACER Depth charge.</u>	438'	F.T.	.18	78.84
				Est Field Total		1807.84
009	2-13	<u>R/A mat. 5 MC T-181</u>		Bid PRICE @		700.00
			5mc	R/A	50.00	
			SUB EST	EST FIELD TOTAL		700.00

THANKS

Perforations:

TYPE OF JOB: ( ) PRODUCTION LOGGING ( ) PIPE RECOVERY:  
 ( ) NEW WELL COMPLETION ( ) RECOMPLETION: ( ) PLUG AND ABANDONMENT:  
 INJECTION PROFILE: ( ) O/H LOGGING: ( ) CASED HOLE LOGGING

BPS Engineer M. Combs  
 BPS Service Man M. Blythe . C. TICE  
 Authorized Agent Radio

SUB TOTAL  
 OCCUPATIONAL TAX  
 STATE SALES TAX  
 TOTAL

# Bell PETROLEUM SURVEYS

FIELD DELIVERY TICKET  
(Invoice to Follow)

No 26927

P. O. Box 2988, Midland, Texas 79702

DATE 2-13-88

CUSTOMER B & E INC CUSTOMER NO. \_\_\_\_\_

ADDRESS P.O. Box, 2292 Hobbs N.MEX. LEASE \_\_\_\_\_

88240

WELL NO. # 2

COUNTY Rddy

STATE N. MEX

All invoices are Payable in Midland, Midland County, Texas  
TERMS: NET 30 DAYS  
All services are supplied subject to our General Terms and Conditions as stated  
in our Current Price Schedule and reverse side.  
Concerning irretrievable loss of sealed sources, both Bell Petroleum Surveys and  
customer agree to abide by TRCR Parts 36, Sections 36.4 and 36.501, and NRC 10  
CFR Parts 30 and 70.

Subject to correction of clerical errors.

TRUCK T-911

STATION Hobbs (6)

CODE	DATE	DESCRIPTION	NUMBER OF UNITS	UNIT OF MEASURE	UNIT PRICE	TOTAL
001	2-13	Service Charge <u>SET UP</u>	ONE	SET UP	600. <sup>00</sup>	600. <sup>00</sup>
		Instrument Protection Charge				
005	2-13	Pressure Control Equipment <u>2" Lubricator</u>	0-500	ft.	200. <sup>00</sup>	200. <sup>00</sup>
		Materials Charge				
101	2-13	<u>BRADENHEAD TRACER OPER CHARGE</u>	MIN	ft.	450. <sup>00</sup>	450. <sup>00</sup>
101	2-13	<u>BRADENHEAD TRACER Depth CHARGE</u>	583	ft.		94.94
			EST FIELD TOTAL			1344.94
			BKD PRICE			700.00
009	2-13	<u>R/A mat SMC I-131</u>	SMC	R/A	50. <sup>00</sup>	
			SUB EST FIELD TOTAL			200.00

Perforations:

TYPE OF JOB: ( ) PRODUCTION LOGGING ( ) PIPE RECOVERY:  
( ) NEW WELL COMPLETION ( ) RECOMPLETION: ( ) PLUG AND ABANDONMENT:  
 INJECTION PROFILE: ( ) O/H LOGGING: ( ) CASED HOLE LOGGING

BPS Engineer m. Combs

BPS Service Man m. Blythe, C, TICE

Authorized Agent Dickinson

SUB TOTAL

OCCUPATIONAL TAX

STATE SALES TAX

TOTAL

Phil

8/P

Mechanical  
Integrity (or) Seal Integrity 1982

#### BRINE WELL PRESSURE TEST

1. Attach pressure recorder to well head assembly.
  2. Attach separate pressure gauge to well head.
  3. Pressurize casing, tubing and cavity to maximum operating pressure.
  4. Shut well in. Well head fittings and valves must be free of leakage.
  5. Monitor pressure change every ten minutes for one hour.
  6. If initial pressure drops - repressurize to starting pressure.
  7. Record pressure for two to four hours, using continuous pressure recorder.
  8. Read pressure gauge and record at two hour intervals.
  9. Note any leaks around well head, and repair after test
- Pressure gauge should be of sufficient accuracy to read two psi changes (1%)
- If well pressure changes greater than 3% per hour then suspect problem. May need to pull tubing and run test packer for pressure test.

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

# B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

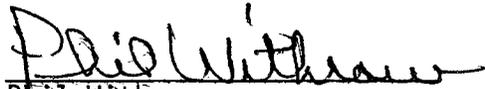
Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 1988

RE: Eugenie Brine Station

B & E, Inc. firmly commits to notify the Environmental Improvement Division office to conduct a cement bond log or equivalent procedure during the five year renewal period. (5-204.B.2.; 5-205.A.4.b.)

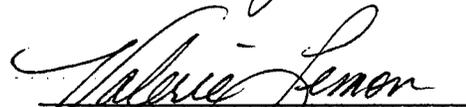
"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

  
Phil Withrow  
Owner/Manager

SUBSCRIBED AND SWORN TO before me this 10<sup>th</sup> day of June,  
1988 by Phil Withrow.

My commission expires:

Feb 21, 1989

  
Notary Public  
State of New Mexico



*Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal*

## **B & E, INC.**

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

*Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks*

June 9, 1988

RE: Eugenie Brine Station

Injection procedure for the well specifying average and maximum injection pressure, injection volume, and other pertinent procedures (5-205.A.3.b.,f.; 5-210.B.8.,12.)

Brine is produced according to our present demand. The injection and discharge procedure is monitored continuously by the level in our 4-1000 bbl storage tanks. There is approximately 3500-4000 bbls kept in storage at all times.

City water line pressure is approximately 58# pressure for normal brine production.

Centrifugal pump pressure is approximately 125# pressure for accelerated brine production for increased demand.

Injection procedure:

Inject fresh water from the City of Carlsbad main line to the well house. A manifold exists allowing us to inject water into well #2 at an estimated 58# pressure. Switching valves allows us to divert to the high pressure centrifugal pump. Turning the pump on we inject water down well #2 at the rate of 125# pressure.

- Procedure #1: City main line at 58# pressure producing brine at the rate of  $\frac{1}{2}$  bbl per minute.  
Procedure #2: Centrifugal pump at 125# pressure producing brine at the rate of 1.6 bbl per minute.

May 1988 - injected 3,690 bbls of fresh water from city main line.

May 1988 - sold 3,440 bbls of brine water.

This is approximately 7-10% lose in the injection and discharge process.

*Equipment & Supplies*  
*Fresh Water*  
*Brine Supply Wells*  
*Salt Water Disposal*

## **B & E, INC.**

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

*Vacuum Trucks*  
*Winch Truck*  
*Kill Truck*  
*Frac Tanks*

June 9, 1988

RE: Eugenie Brine Station

Comparison of fracture pressure for salt at the injection interval (approximately 663 ft.) with the down-hole pressure resulting from the maximum operating pressure. (5-205.A.3.i., 5-206.A.1.).

The surface pressure with high pressure surface centrifugal pump at the point of entry (surface of well #2) is approximately 125#.

The bottom hole PSI would be approximately 180# at the injection interval at 663 feet.

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

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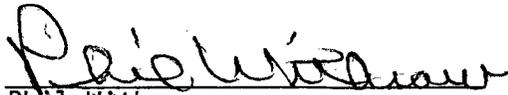
Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 1988

RE: Eugenie Brine Station

B & E, Inc. firmly commits to notify the Environmental Improvement Division office prior to any commencement of drilling, cementing and casing, well loggings, mechanical integrity tests and any other well workovers that may be done in the future. (5-205.A.5.)

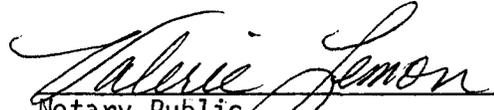
"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

  
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Owner/Manager

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Feb 21, 1989

  
Notary Public  
State of New Mexico

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

# B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 1988

RE: Eugenie Brine Station

B & E, Inc. firmly commits to making quarterly reports on our Eugenie Brine Station on injected and produced fluid volumes (5-208.B.2) and we firmly committ that all reports submitted will meet the signatory requirements. (5-208.C.1.; 5-210.B.16.).

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

  
Phil Withrow  
Owner/Manager

SUBSCRIBED AND SWORN TO before me this 10th day of June,  
1988 by Phil Withrow.

My commission expires:

Feb 21, 1989

  
Notary Public  
State of New Mexico

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

# B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

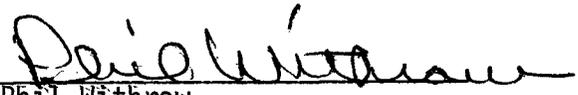
Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

June 1988

RE: Eugenie Brine Station

B & E, Inc. makes a firm committment to notify the Enviornmental Improvement Division within 48 hours of a leak, spill or other un-anticipated discharge on the surface or underground at our facility. (5-208.B.1.)

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

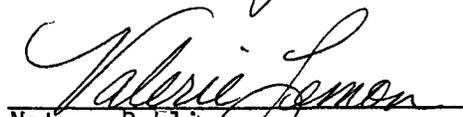


Phil Withrow  
Owner/Manager

SUBSCRIBED AND SWORN TO before me this 10<sup>th</sup> day of June  
1988 by Phil Withrow.

My commission expires:

Feb 21, 1989



Notary Public  
State of New Mexico

*Equipment & Supplies*  
*Fresh Water*  
*Brine Supply Wells*  
*Salt Water Disposal*

## **B & E, INC.**

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

*Vacuum Trucks*  
*Winch Truck*  
*Kill Truck*  
*Frac Tanks*

June 9, 1988

Plugging and abandonment plan. (5-209.A.,D.; 5-210.B.17.).

Plugging procedure for B & E's dual line well Eugenie #1 would be to rig up pulling machine on well #1, spot 25 sack cement plug down tubing of Class C cement; pull tubing to bottom intermediate pipe at approximately 500 ft. Pump 50 sack plug of Class C cement. Pull tubing, 150 ft., pump cement, circulate back to surface, pull and finish laying down tubing, remove wellhead and install dry hole marker, Fill cellar with approximately 2 yards redi-mix and abandon well #1.

Plugging procedure for Eugenie #2; do to the fact that the tubing is cemented in the hole, we would rig up a cement truck twice capacity of tubing; drop standing valve and continue to pump cement until hit pressure. Hole at 200# pressure on tubing and hole for 15 minutes. Rig down cement truck. Cut tubing off top of surface pipe and fill cellar with cement. Install dry hole marker, filling cellar with redi-mix and complete procedure.



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

JERRY APDACA  
GOVERNOR

NICK FRANKLIN  
SECRETARY

June 6, 1978

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-8434

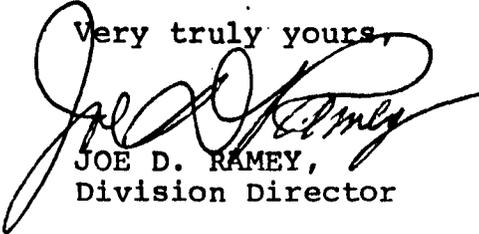
Mr. A. L. Hickerson  
Permian Brine Sales &  
Service, Inc.  
P. O. Box 1591  
Odessa, Texas 79760

Re: \$5,000 One-Well Plugging Bond  
Permian Brine Sales & Service,  
Inc., Principal  
United States Fire Insurance  
Company, Surety  
641' FWL and 995' FSL of  
Sec. 17, T-22-S, R-27-E,  
Eddy County, Depth: 5,000 ft.  
Bond No. 610 003738 8

Dear Mr. Hickerson:

The Oil Conservation Division hereby approves the  
above-captioned one-well plugging bond.

Very truly yours,



JOE D. RAMEY,  
Division Director

JDR/LT/dr

cc: Oil Conservation Division  
Artesia, New Mexico

United States Fire Insurance  
Company  
P. O. Box 2639  
Dallas, Texas 75221

6/8/88

8:15 AM

B&E, Inc / Phil Withrow

885-6663

Val

DP Submittal In next week or two, need to get Phil to sign a few things, hard time getting him to sit still

I told her we have developed bond forms and will be sending them w/ our questions & comments associated w/ this next submittal. Want to let you know that special bonding requirements are going to be necessary

Will be looking for your ~~submittal~~ submittal

Kevin

5-31-88

*Quality* 2980227 Well Plugging renews 02/22 annually  
(B & E, Inc. and Watson Treating on this) premium \$ 50.00

*State 24* 4477509 Well Plugging renews 07/27 annually  
premium \$ 50.00

*Eugenie* 447513 Well Plugging renews 09/01 annually  
premium \$ 50.00

*State 24* 4477516 Mining Permit renews 06/26 annually  
premium \$ 30.00

*Eugenie* 4719382 Well Plugging renews 03/28 annually  
premium \$ 50.00

*T.K. ?* 4719384 Right of Way/Water Lease renews 06/10 annually  
premium \$ 50.00

*NO copy  
bond*

Revised 6-17-77

*Eugene*

STATE OF NEW MEXICO  
ONE-WELL PLUGGING BOND

FOR CHAVIS, EDDY, LEA, McKINLEY, RIO ARriba, ROOSEVELT,  
SANDOVAL, AND SAN JUAN COUNTIES ONLY

BOND NO. 4477513  
*(For Use of Surety Company)*

AMOUNT OF BOND \$5,000.00

COUNTY Lea

NOTE: For wells less than 5,000 feet deep, the minimum bond is \$5,000.00\*  
For wells 5,000 feet to 10,000 feet deep, the minimum bond is \$7,500.00\*  
For wells more than 10,000 feet deep, the minimum bond is \$10,000.00

\*Under certain conditions, a well being drilled under a \$5,000.00 or \$7,500.00 bond may be permitted to be drilled as much as 500 feet deeper than the normal maximum depth, i.e., a well being drilled under a \$5,000.00 bond may be permitted to go to 5,499 feet, and a well being drilled under a \$7,500.00 bond may be permitted to go to 10,499 feet.

File with Oil Conservation Commission, P. O. box 2088, Santa Fe 87501

KNOW ALL MEN BY THESE PRESENTS:

That B & E, Inc (An individual) (a partnership) (a corporation organized in the State of New Mexico, with its principal office in the city of Hobbs, State of New Mexico, and authorized to do business in the State of New Mexico), as PRINCIPAL, and Safeco Insurance Company a corporation organized and existing under the laws of the State of Washington and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 05-3-11, New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Five Thousand & No/100 Dollars lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals, and

WHEREAS, The above principal, individually or in association with one or more other parties, as mentioned or may commence the <sup>1</sup>drilling of one well not to exceed a depth of 5,000 feet, to prospect for and produce oil or gas, or carbon dioxide (CO<sub>2</sub>) gas or helium gas, or does own or may acquire, own or operate such well, or such well started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO<sub>2</sub>) leases, or helium gas leases, and on land patented by the United States of America to private individuals, and on land otherwise owned by private individuals, the identification and location of said well being 995 feet from South line and 641' from West line (All of state exact legal subdivision by 40 acre tract or lot) Section 17, Township 22 (South), Range 27 (East) ~~West~~ NMPM County, New Mexico

That the above bonded principal and surety or either of them or their successors or assigns or any other person shall plug and abandon said well when they or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to conform to the laws, rules, and orders of the state of New Mexico and the laws, rules, regulations, and orders of the Oil Conservation Commission of New Mexico.

That the above bonded principal and surety or either of them or their successors or assigns or any other person shall be held liable for the cost of plugging and abandoning said well in accordance with the laws, rules, regulations, and orders of the state of New Mexico and the laws, rules, regulations, and orders of the Oil Conservation Commission of New Mexico.

*Quality* 2980227 Well Plugging renews 02/22 annually  
(B & E, Inc. and Watson Treating on this) premium \$ 50.00

*State 24* 4477509 Well Plugging renews 07/27 annually  
premium \$ 50.00

*Eugenie* 447513 Well Plugging renews 09/01 annually  
premium \$ 50.00

*State 24* 4477516 Mining Permit renews 06/26 annually  
premium \$ 30.00

*Eugenie* 4719382 Well Plugging renews 03/28 annually  
premium \$ 50.00

*T.K. ?* 4719384 Right of Way/Water Lease renews 06/10 annually  
premium \$ 50.00

*no copy  
bond*

MAY 31 198

Revised 6-17-77

*Leggins*

STATE OF NEW MEXICO  
ONE WELL PLUGGING BOND

FOR CHAVES, EDDY, LEA, McKITTRICK, RIO ARriba, ROOSEVELT,  
SABIKVAL, AND SAN JUAN COUNTIES ONLY

BOND NO. 4719382  
(For Use of Surety Company)

AMOUNT OF BOND \$5,000.00

COUNTY Eddy

NOTE: For wells less than 5,000 feet deep, the minimum bond is \$5,000.00\*  
For wells 5,000 feet to 10,000 feet deep, the minimum bond is \$7,500.00\*  
For wells more than 10,000 feet deep, the minimum bond is \$10,000.00

\*Under certain conditions, a well being drilled under a \$5,000.00 or \$7,500.00 bond may be permitted to be drilled as deep as 300 feet deeper than the normal maximum depth, i.e., a well being drilled under a \$5,000.00 bond may be permitted to go to 5,300 feet, and a well being drilled under a \$7,500.00 bond may be permitted to go to 10,300 feet.

File with Oil Conservation Commission, P. O. Box 2088, Santa Fe 87501

KNOW ALL MEN BY THESE PRESENTS:

That B&E, Inc. (An individual) (a partnership) (a corporation organized in the State of New Mexico with its principal office in the city of Hobbs, State of New Mexico, and authorized to do business in the State of New Mexico), as PRINCIPAL, and Safeco Insurance Company a corporation organized and existing under the laws of the State of Washington, and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 65-3-11, New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Five Thousand dollars and no/100 Dollars lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals; and

WHEREAS, The above principal, individually, or in association with one or more other parties, as hereinbefore or may hereafter, may commence the drilling of one well not to exceed a depth of 5,000 feet, to prospect for and produce oil or gas, or carbon dioxide (CO<sub>2</sub>) gas or helium gas, or does own or may acquire, own or operate such well, or such well started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO<sub>2</sub>) leases, or helium gas leases, and on land patented by the United States of America to private individuals, and on land otherwise owned by private individuals, the identification and location of said well being 497' from the West Line and 1288' from the South Line Section 17, Township 22 (North) (South), Range 27 (East) (West) (N.M.S.M.) County, New Mexico.

NOW, THEREFORE, If the above bounden principal and surety or either of them or their successors or assigns, or any of them, shall plug said well when dry or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to confine the oil, gas, and water in the strata in which they are found, and to prevent them from escaping into other strata;

THEN, THEREFORE, This obligation shall be null and void; otherwise and in default of complete compliance with any and all of said obligations, the same shall remain in full force and effect.

<i>Quality</i>	2980227	Well Plugging (B & E, Inc. and Watson Treating on this)	renews 02/22 annually premium \$ 50.00
<i>State 24</i>	4477509	Well Plugging	renews 07/27 annually premium \$ 50.00
<i>Eugenie</i>	447513	Well Plugging	renews 09/01 annually premium \$ 50.00
<i>State 24</i>	4477516	Mining Permit	renews 06/26 annually premium \$ 30.00
<i>Eugenie</i>	4719382	Well Plugging	renews 03/28 annually premium \$ 50.00
<i>T.K. ?</i>	4719384	Right of Way/Water Lease	renews 06/10 annually premium \$ 50.00

*No copy  
bond*

STATE OF NEW MEXICO  
ONE-WELL PLUGGING BOND

FOR ALL COUNTIES EXCEPT:  
CHAVES, EDDY, LEA, MCKINLEY, RIO ARriba, ROOSEVELT,  
SANDOVAL, AND SAN JUAN

BOND NO. 4477509  
(the Surety Company)  
AMOUNT OF BOND \$5,000.00  
COUNTY Eddy

NOTE: For wells less than 5,000 feet deep, the minimum bond is \$7,500.00\*  
For wells 5,000 to 10,000 feet deep, the minimum bond is \$10,000.00\*  
For wells more than 10,000 feet deep, the minimum bond is \$12,500.00\*  
\* Under certain conditions, a well being drilled under a \$7,500.00 or \$10,000.00 bond may be permitted to be drilled as much as 500 feet deeper than the normal maximum depth, and a well being drilled under a \$7,500.00 bond may be permitted to go to 10,500 feet. (See Rule 101.)

File with Oil Conservation Commission, P. O. Box 2088, Santa Fe 87501

KNOW ALL MEN BY THESE PRESENTS:

That B & E, Incorporated (An individual) (a partnership)  
a corporation organized in the State of New Mexico, with its principal office in the city of  
Hobbs, State of New Mexico, and authorized to do business  
in the State of New Mexico), as PRINCIPAL, and Safeco Insurance Company, a  
corporation organized and existing under the laws of the State of Washington,  
and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New  
Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 65-3-11, New  
Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Five Thousand Dollars and no/100  
Dollars lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and  
SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

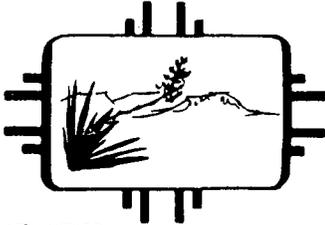
WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or  
helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO<sub>2</sub>) gas leases, or  
helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private  
individuals; and

WHEREAS, The above principal, individually, or in association with one or more other parties, has commenced or  
may commence the drilling of one well not to exceed a depth of 5,000 feet, to prospect for and produce oil  
or gas, or carbon dioxide (CO<sub>2</sub>) gas or helium gas, or does own or may acquire, own or operate such well, or such well  
started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO<sub>2</sub>) leases, or helium gas leases,  
and on land patented by the United States of America to private individuals, and on land otherwise owned by private  
individuals, the identification and location of said well being 1987.9 feet from the South line and 1930.4 feet from  
(Here state exact legal subdivision by acre tract or lot)  
the East line Section 24, Township 18 (North)(South), Range 28 (East)(West), N.M.P.M.  
Eddy County, New Mexico.

NOW, THEREFORE, If the above bounden principal and surety or either of them or their successors or assigns, or any of them, shall  
plug said well when dry or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New  
Mexico in such way as to confine the oil, gas, and water in the strata in which they are found, and to prevent them from escaping into other  
strata;

THEN, THEREFORE, This obligation shall be null and void; otherwise and in default of complete compliance with any and all of said  
obligations, the same shall remain in full force and effect.



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhardt  
Director

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

January 4, 1988

Phil Withrow  
B & E, Inc.  
P.O. Box 756  
Hobbs, NM 88220

Dear Mr. Withrow:

The Underground Injection Control staff of the New Mexico Environmental Improvement Division Ground Water Section would like to thank you for your cooperation during our recent inspections of B & E Carlsbad and B & E Loco Hills brine facilities. Copies of the inspection forms are attached for your reference. Deficiencies noted during the inspections are as follows:

**B & E Carlsbad**

1. Evidence of oil spillage/dumping near fresh water tank. Recent brine spills also evident. Need to keep facility free of spilled brine/produced waters.
2. Gauge on top of injection well not working. Need to repair or replace.

**B & E Loco Hills**

1. Two pits (approximately 15' x 40' x 3') containing produced waters with oily residues observed near wellhead. Pits should be kept free of produced waters either by fencing or frequent patrolling.
2. Need to keep brine storage free of weeds and debris. Lack of maintenance can lead to premature deterioration of liner and berm.

Thank you for your continued cooperation. Should you have any questions feel free to contact me (827-2902) or John Parker (827-0027).

Sincerely,

Kevin Lambert  
Hydrologist  
Ground Water Section

KL:JP:egr

BRINE STATION INSPECTION FORM

DATE 11/30 1987 EID INSPECTOR Lambert/Parker  
FACILITY B+E Carlsbad LOCATION Carlsbad South Y  
FACILITY REP ON SITE VAL of Gene COUNTY Eddy

WELL OPERATION 2 well system

WELL IS INJECTING: THROUGH ANNULUS THROUGH TUBING  
SOURCE OF FRESH WATER City of Carlsbad  
TRACE INJECTION/PRODUCTION LINES Buried lines Above grade  
looksgood  
WELL HEAD PRESSURE Not working PSIG PUMP PRESSURE 1300 PSIG  
LEAKS AROUND WELL OR PUMP None visible

STORAGE AREA

FOR PONDS:

GENERAL LINER APPEARANCE \_\_\_\_\_

AMOUNT OF FREEBOARD \_\_\_\_\_

ANY SIGN OF OVERFLOW OR LEAKS \_\_\_\_\_

LEAK DETECTION SYSTEM FLUIDS DRY

FOR TANKS:

GENERAL APPEARANCE 4 Brine tanks silver  
1 black tank w/ petroleum by-products  
LABELED PLAINLY standing around base  
BERMED TO PREVENT RUNOFF YES NO  
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH \_\_\_\_\_

NUMBER OF TANKS FOR BRINE 4 FRESH WATER 1 black  
silver

LOADING AREA

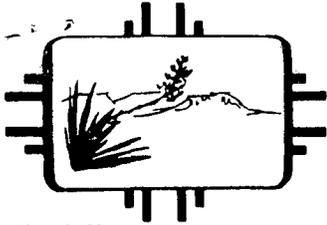
PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE YES NO  
ANY EVIDENCE OF RECENT SPILLAGE YES NO  
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM YES NO  
ANY EVIDENCE OF OIL SPILLING/DUMPING YES NO

MONITORING WELLS

DEPTH \_\_\_\_\_ FT STATIC WATER LEVEL \_\_\_\_\_ FT BELOW CASING  
SAMPLED THIS VISIT YES NO TEMP \_\_\_\_\_ Ec \_\_\_\_\_

COMMENTS

Evidence of oil spilling/dumping near fresh water tank  
Also recent spillage of brine  
Need to do better job of keeping  
surface spills under control  
Imformed dispatcher of oil spillage. He stated they would  
clean up oil ASAP



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhardt  
Director

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

December 16, 1987

B&E, Inc.  
Phil Withrow, Owner-Manager  
South Y  
P.O. Box 756  
Carlsbad, New Mexico 88220

RE:DP-323

Dear Mr. Withrow:

The Environmental Improvement Division's (EID) Ground Water Section has completed review of B&E, Inc.'s. (B&E) May 28, 1987, submittal for renewal of your previously approved discharge plan DP-323. The focus of our review for renewal is on conformance to Part V of the Water Quality Control Commission (WQCC) regulations. Before the evaluation can be completed the following comments and informational requests need to be addressed.

Comments and questions are itemized as follows (WQCC regulatory reference in parenthesis):

1. Please submit a detailed map showing the "area of review" that identifies the location of all known wells and fractures which may penetrate the injection zone (5-202.A.). The area of review must be at least a quarter mile radius around the injection well and the map must include appropriate scales (5-202.B.2.; 5-210.B.2.). We suggest you contact the local Oil Conservation Division (OCD) office to solicit this information since oil and gas wells would be likely to penetrate the injection zone.
2. Please submit documentation which demonstrates that all known wells, drill holes, and other conduits within the area of review which may penetrate the injection zone are properly sealed, completed, plugged or abandoned (5-203.A.; 5-210.B.3.). Also, B&E needs to make a commitment to take such steps (corrective action) as necessary to eliminate conduits for the migration of contaminants into ground water (5-203.B.; 5-210.B.4.). The OCD may be able to provide information regarding the proper completion or plugging and abandonment of oil and gas wells which may penetrate the injection zone.

Phil Withrow  
December 16, 1987  
PAGE 2

3. Please provide this office with a copy of the results of a pressure test, using the attached "Brine Well Pressure Test" procedure (5-204.B.1.b.). If you wish you can use a different procedure, but you must provide us with a copy of the alternate procedure used as well as a copy of the test results (5-204.C.). Also, in order to determine existence of possible conduits for fluid movement, EID needs a commitment from you to conduct a cement bond log or equivalent procedure during the five year renewal period (5-204.B.2.; 5-205.A.4.b.).
4. Please clarify the injection procedure for the well specifying average and maximum injection pressure, injection volume, and other pertinent procedures (5-205.A.3.b.,f.; 5-210.B.8.,12.). Your submittal is unclear in regard to the actual injection pressure and EID would appreciate an estimate of the injected and produced fluid volumes for the record.
5. Please provide a comparison of fracture pressure for salt at the injection interval (approximately 663 feet) with the down-hole pressure resulting from the maximum operating pressure (5-205.A.3.i.; 5-206.A.1.).
6. B&E needs to make a commitment to notify this office "prior to commencement of drilling, cementing and casing, well loggings, mechanical integrity tests, and any other well workover..." (5-205.A.5.).
7. B&E must make a commitment to report quarterly injected and produced fluid volumes (5-208.B.2.). Also, all reports submitted must meet the report signatory requirements (5-208.C.1.; 5-210.B.16.).
8. B&E needs to make a firm commitment to notify EID within 48 hours of a leak, spill, or other unanticipated discharge on the surface or underground at your facility (5-208.B.1.). In your submittal you stated "We would definitely commit to notifying the EID...". This does not satisfy EID requirements. Therefore, we need an unequivocal commitment from you to notify EID concerning unanticipated discharges.

Phil Withrow  
December 16, 1987  
PAGE 3

9. Please provide this office with a plugging and abandonment plan for our review. This plan must explain plugging and abandonment procedures and include a plan for decommissioning of surface facilities. Also, please submit copies of the blanket/surety bond and documentation that demonstrates the sum of the bond is adequate to properly plug and abandon the brine well (5-209.A.,D.; 5-210.B.17.).
10. Please provide a map showing a generalized cross-section of the vertical limits of ground water in the area (5-210.B.5.). Also, please submit maps and cross-section of regional geology (5-210.B.7.).

Should you have any questions, please feel free to contact me (827-2902).

Sincerely,

*Kevin Lambert*  
Kevin Lambert  
Hydrologist  
Ground Water Section

KL:kl

cc: Garrison McCaslin, EID District IV Manager, Roswell  
Roelf Ruffner, EID Field Office, Hobbs

Enclosure

P-484 097 800

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

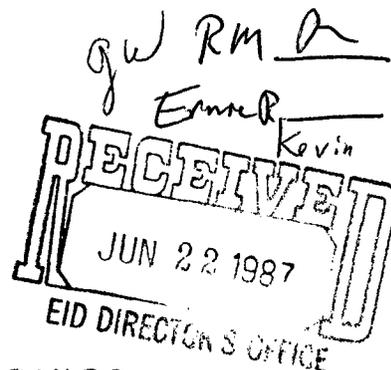
(See Reverse)

U.S.G.P.O. 153-506	Send to	<i>Phil Withrow</i>
	Street and No.	<i>P.O. Box 756</i>
	P.O. State and ZIP Code	<i>Carlsbad, NM</i>
	Postage	S
	Certified Fee	
Special Delivery Fee		



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE**

Ecological Services  
Suite D, 3530 Pan American Highway NE  
Albuquerque, New Mexico 87107



RECEIVED

June 19, 1987

JUN 22 1987

Mr. Michael J. Burkhardt, Director  
New Mexico Health and Environment Department  
Environmental Improvement Division  
P. O. Box 968-Crown Building  
Santa Fe, New Mexico 87504-0968

GROUND WATER/HAZARDOUS WASTE  
BUREAU

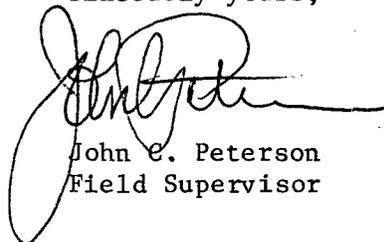
Dear Mr. Burkhardt:

This responds to your public notice dated June 18, 1987 in which several proposed groundwater discharge plans were described. We have reviewed all of the plans and have not identified any resource issues of concern to our agency in the following:

- DP-323, B & E Inc., Eddy County, Carlsbad, NM. ✓
- DP-495, Steve Franzoy, Dona Ana County, Salem, NM.
- DP-91, Gadsden Independent School District No. 16, Chaparral Elementary School, Dona Ana County, Anthony, NM.
- DP-494, The City of Las Vegas, San Miguel County, Las Vegas, NM.
- DP-48, Karler Packing Company, Bernalillo County, Albuquerque, NM.
- DP-442, Sixty Six Packing Company, Quay County, Tucumcari, NM.
- DP-492, U.S. Army White Sands Missile Range, Otero County, NM.

These comments represent the views of the Fish and Wildlife Service. If you have any questions concerning our comments, please contact Tom O'Brien at FTS 474-7877 or (505) 883-7877.

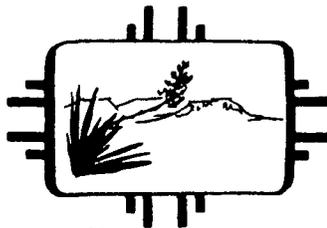
Sincerely yours,



John C. Peterson  
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico  
Regional Administrator, Environmental Protection Agency, Dallas, Texas  
Regional Director, FWS, FWE, Albuquerque, New Mexico



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 10, 1987

B & E Incorporated  
Carlsbad Brine Station  
Phil Withrow, Owner-Manager  
P.O. Box 756  
Carlsbad, New Mexico 88220

Dear Mr. Withrow:

Enclosed is a copy of the public notice pertaining to your proposed discharge which was issued by this division pursuant to New Mexico Water Quality Control Commission Regulations, Section 3-108.

If you have any questions, please do not hesitate to contact me at the address listed above or at phone number (505) 827-2900.

Sincerely,

Ernest C. Rebuck  
Program Manager  
Ground Water Section

ECR/mp

Enclosure

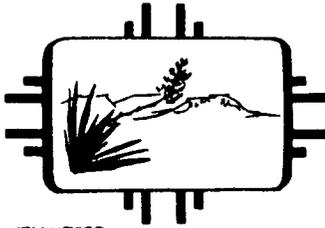
P-573 875 545

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

Sent to	B & E Incorporated
Street and No.	Carlsbad Brine Station
City, State and ZIP Code	Phil Withrow, Owner-Manager
Post Office	Box 756
Post Office Name	Carlsbad, New Mexico 88220

U.S.G.P.O. 153-506



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 10, 1987

The Honorable Bob Forrest, Mayor  
City of Carlsbad  
P.O. Box 1569  
Carlsbad, New Mexico 88220

Dear Mayor Forrest:

Enclosed is a public notice which includes notice of a proposed discharge plan(s) for one or more operations in or near your city.

If you have any questions, please do not hesitate to contact me at the address given above or at 827-2900.

Sincerely,

Ernest C. Rebeck  
Program Manager  
Ground Water Section

ECR/mp

Enclosure

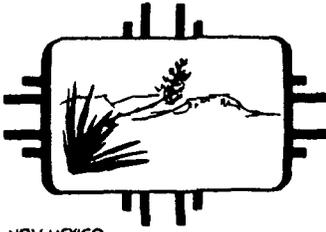
P-573 875 541

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

Sent to	Bob Forrest, Mayor
Street and No.	City of Carlsbad
P.O. Stat Box	1569
City	Carlsbad, New Mexico 88220
Certified Fee	

U.S.G.P.O. 153-506



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 10, 1987

Board of County Commissioners  
Eddy County Courthouse  
Carlsbad, New Mexico 88220

Board of County Commissioners:

Enclosed is a public notice for one or more operations located in your county.

If you have any questions, please do not hesitate to contact me at the address listed above or at phone number (505) 827-2900.

Sincerely,

Ernest C. Rebeck  
Program Manager  
Ground Water Section

ECR/mp

Enclosure

P-573 875 552  
RECEIPT FOR CERTIFIED MAIL  
NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

Sent to	Board of County Commissioners
Street and No.	Eddy County Courthouse
P.O. State and ZIP	Carlsbad, New Mexico 88220
Postage	\$
Certified Fee	

U.S.G.P.O. 153-506

JUNE 8, 1987

TO BE PUBLISHED ON OR BEFORE JUNE 18, 1987

**PUBLIC NOTICE**  
**NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION**

Notice is hereby given that, pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plans have been submitted for approval to the Director of the New Mexico Environmental Improvement Division, P.O. Box 968, Santa Fe, New Mexico 87504-0968; telephone (505) 827-2900.

(DP-323) B & E INCORPORATED, Carlsbad Brine Station, Phil Withrow, Owner-Manager, P.O. Box 756, Carlsbad, New Mexico 88220, proposes to renew its approved discharge plan (DP-323) for their brine in situ extraction well and surface facility located in T22S, R27E, Section 17, SW $\frac{1}{4}$  of SW $\frac{1}{4}$ , Eddy County, New Mexico. Brine is manufactured by injecting fresh water down their injection well to an underlying salt formation. The brine water solution has a total dissolved solids content of approximately 300,000 mg/l. Ground water most likely to be affected is at a depth of 50 ft. with a total dissolved solids concentration of about 1000 mg/l.

(DP-495) FRANZOY, STEVE, P.O. Box 122, Salem, New Mexico 87941, proposes to discharge chili wash water from a proposed chili processing plant to be located in Section 6, SE $\frac{1}{4}$  of NW $\frac{1}{4}$ , T19S, R3W, Dona Ana County. Up to 4,000 gallons per day of wash water, containing 40 to 50 mg/l of nitrogen, will be mixed with 15 parts of well water and disposed on a two acre field of alfalfa crop. The plant will operate for only 48 days per year, from early August through September. Ground water most likely to be affected occurs at a depth of about six feet and has a total dissolved solids concentration of about 500 mg/l.

(DP-91) GADSDEN INDEPENDENT SCHOOL DISTRICT NO. 16 CHAPARRAL ELEMENTARY SCHOOL, Alfred Fierro, Maintenance and Construction Coordinator, P.O. Drawer 70, Anthony, New Mexico 88021, has submitted a discharge plan renewal application for the septic tank/leachfield system at Chaparral Elementary School. Approximately 13,000 gallons per day is discharged. The school is located in Chaparral at T26S, R5E, in the SW $\frac{1}{4}$  of SW $\frac{1}{4}$  of Section 14, NMPM in Dona Ana County. The ground water most likely to be affected is at a depth of approximately 300 feet with an estimated total dissolved solids content of 500 mg/l.

(DP-494) LAS VEGAS, THE CITY OF, Les Montoya, Utilities Administrator, P.O. Box 179, Las Vegas, New Mexico 87701, proposes to discharge 7,000 gpd of aerobically digested sludge from the municipal wastewater treatment plant to 94 acres of cropland and semi-plowed land area located in T16N, R16E, Section 35, San Miguel County, New Mexico. The ground water most likely to be affected occurs 40 feet beneath the ground surface and has a total dissolved solids concentration of 1,000 mg/l.

(DP-48) KARLER PACKING COMPANY, Jess Karler, President, P.O. Box 1005, Albuquerque, New Mexico 87103, proposes to modify its approved ground-water discharge plan (DP-48) for effluent derived from its slaughterhouse and meat packing facility located on South Broadway Boulevard, T9N, R3E, Section 31, Bernalillo County, New Mexico. The currently approved plan involves the land application of effluent to four disparate parcels of land, parcels A, B, and D located in T9N, R3E, Section 31, and Parcel C located in portions of T8N, R2E, Section 1, and T8N, R3E, Section 6. The proposed modification involves the permanent elimination of Parcel A from the land application regimen, and the elimination of Parcel B, unless ground-water quality significantly improves beneath that site so that Water Quality Control Commission standards are achieved. The proposed modification involves the land application of effluent to: 234 acres of irrigated farmland leased to a Leo Rizzo, 57 acres of irrigated farmland owned and leased by a Jerry Jaramillo, and 1225 acres of grazing land owned and leased by W.E. Bilbrey and J.R. French. The Rizzo farmland is located in T9N, R3E, portions of Sections 5, 7, and 8. Twenty-four acres of the Jaramillo farmland is located in T8N, R2E, portions of Sections 1 and 2, and 33 acres is located in T9N, R2E, Pajarito Grant. The 1225 acres of Bilbrey and French land is located in Sections 34, 33, 32, and 19, T9N, R2E (95 acres), and Sections 20, 22, 23, 24, 25, and 27, T9N, R1E (1130 acres). As a contingency, 120 acres of irrigated farmland leased to Leo Rizzo is proposed, located in T9N, R3E, Section 6. The proposed discharge is 60,000 gallons per day of washwater with a total nitrogen content of less than 170 mg/l, and a total dissolved solids content of approximately 1500 mg/l. The ground water most likely to be affected by the discharge is at a depth ranging from less than 5 feet to greater than 500 feet, and has a total dissolved solids content ranging from approximately 250 mg/l to greater than 4000 mg/l.

(DP-442) SIXTY SIX PACKING COMPANY, Lawrence E. Leonard, Owner, Box T, Tucumcari, New Mexico 88401, proposes to modify the original public notice published on or before August 17, 1986. The modification consists of changing the land application site for whole blood disposal from 39 acres in Section 20 to 95 acres in Section 1, T11N, R30E, Quay County, New Mexico. Disposal of washdown water will be as described in the original public notice or discharged into a lined evaporation lagoon located at the plant site in Section 14, T11N, R30E. The ground water below Section 1 is at a depth of approximately 30 feet and has a total dissolved solids concentration of approximately 700 mg/l.

(DP-492) U.S. ARMY WHITE SANDS MISSILE RANGE, White Sands Missile Range, New Mexico 88002-5076, proposes to discharge 7,500 to 9,000 gallons per day of domestic sewage from the High Energy Laser Systems Test Facility - Technical Support Area into a septic tank-leach field located in Section 35, T19S, R6E, Otero County, New Mexico. The ground water below the site is at a depth of 90 to 130 feet and has a total dissolved solids concentration of approximately 6,700 mg/l.

Any interested person may obtain further information from the Ground Water Section, Ground Water/Hazardous Waste Bureau, EID, and may submit written comments to the Director of the EID at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of EID will allow thirty (30) days after the date of publication of this Notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why the hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

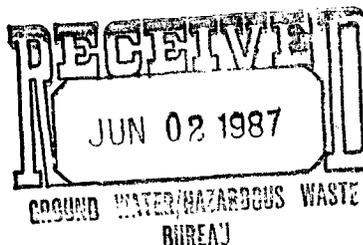
## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

May 28, 1987

State of New Mexico  
Health & Environment Dept.  
P.O. Box 968  
Santa Fe, NM 87504-0968



RE: Discharge Plan DP-323

ATT: Kevin Lambert, Hydrologist  
EID

Attached please find all necessary data needed to submit for application for renewal of approval of our discharge facility.

We have separated and submitted information according to the 5 section parts. You will find it well marked.

There were changes in our discharge facility in December of 1985 (see attached Map A - Facility Plot Plan) as indicated in Part I General Description and mentioned again in Part II Description of Facility (see Map D - Facility Storage).

On the Drilling and Completion Log attached in Part II, we have highlighted names of men present at times during drilling who were NMOCC employees.

On April 30, 1983 B & E, Inc. bought out Permian Brine Sales interest in these wells. Their name will still appear on various data dated prior to that date.

We feel confident we have supplied all the needed and necessary information. If anything else is needed or you have any questions please don't hesitate to contact us.

Thank you for your consideration in this matter.

Sincerely,

Phil Withrow  
Owner-Manager  
B & E, Inc.

PW/va1  
Attachments

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

### I. GENERAL DESCRIPTION

Eugenie #1	Discharge Well	Drilled 6-30-78
Eugenie #2	Injection Well	Drilled 11-30-79

<u>Main Office:</u>	B & E, Inc. P.O. Box 2292 700 N. Shipp Hobbs, NM 88240	<u>Field Office &amp; Yard:</u>	B & E, Inc. P.O. Box 756 South Y Carlsbad, NM 88220
---------------------	---	-------------------------------------	--

We produce brine water by virtue of injecting fresh water into Eugenie #2; down drilled casing hole to salt formation. Fresh water migrates 353 ft. across to Eugenie #1 and brine water is pumped out and store in 4-1000 bbl flake coated tanks manufactured by Permain Tank & Manufacturing, Inc. out of Odessa, TX. These tanks were purchased and set in December 1985. No rust or corrosion takes place in these tanks.

Eugenie #1 was drilled on 6-30-78; ran tubing and set, injected fresh water from City of Carlsbad thru meter and began to dissolve salt section. Pumped fresh thru it and stored brine in the above mentioned storage tanks. Eugenie #2 was drilled on 11-30-79; began injection thru salt formation and discharging brine water thru #1 into storage tanks.

SEE ATTACHED MAP A - Facility Plot Plan

SEE ATTACHED - Legals & Description of Operational History

SEE ATTACHED - USGS Topo Map

SUGGESTED OUTLINE FOR DISCHARGE PLAN SUBMITTAL:

In Situ Extraction Facilities

✓  
1. GENERAL DESCRIPTION

- A. Name of facility and name and address of responsible party
- B. Location: county, township, range and  $\frac{1}{4}$  Section or latitude/longitude coordinates (3-106.C.2)  
-indicate on USGS topo map,  $\frac{1}{2}$ ' or 15' quad
- C. Schematic or plot plan of facility  
-include short verbal description of process, including transportation elements (e.g., loading trucks), and  
-quantity, quality, and flow characteristics of the discharge  
(3-101.C.1)
- D. Operational history of injection and production at facility  
(5-203.C.4)  
-include dates of well construction and beginning of injection

Commencing at the Northwest corner of the SW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 17, Township 22 South, Range 27 East, N.M.P.M. Thence on an assumed bearing of due South a distance of 286.9 feet; Thence South 59 $^{\circ}$ 30' East a distance of 64.9 feet; Thence South 66 $^{\circ}$ 50' East a distance of 100 feet; Thence South 72 $^{\circ}$ 40' East a distance of 100 feet; Thence South 78 $^{\circ}$ 05' East a distance of 100 feet; Thence South 83 $^{\circ}$ 58' East a distance of 104.5 feet; Thence North 0 $^{\circ}$ 43' West a distance of 427 feet to the South right-of-way line of the connecting road between U. S. Highways 62 and 285; Thence Easterly along the said right-of-way line to its intersection with a line parallel to and 50 feet distant, the said intersecting point being marked with an iron rail set in concrete and being the point of beginning of the tract herein described; Thence Southeasterly along the said right-of-way line to a point that bears South 74 $^{\circ}$ 45' East a distance of 223.5 feet; Thence South 60 $^{\circ}$ 39' East along the said highway right-of-way a distance of 28.4 feet to the Northwest corner of the Mays Lumber Company Tract; Thence South 1 $^{\circ}$ 56' West along the West line of the said tract a distance of 350 feet; Thence at an angle to the left of 86 $^{\circ}$ 02' a distance of 155 feet to the Southeast corner of the said tract; Thence South along the boundary between the Benz-Fisher Tracts as shown in the agreement between the two parties a distance of 9.5 feet, more or less, to the North boundary line of the U.S.R.S. Main Canal; Thence Westerly along the said right-of-way a distance of 372.5 feet; the said point being marked with an iron rail set in concrete; Thence North 0 $^{\circ}$ 43' West a distance of 426.5 feet to the point of beginning.

## CARLSBAD BRINE STATION

Permian's Carlsbad Brine Station is located in the SW/4 - SW/4 Section 17, Township 22 South, Range 27 East, Eddy County, New Mexico. This location is at the intersection of US Highways 285 and 180 on the Southern outskirts of the city of Carlsbad. See drawing number 1 and map 2. The pumping rate is 68 GPM at 150 PSI Pressure.

Two brine wells were drilled at this site: Eugenie No. 1 and No. 2. The No. 1 well was drilled in 1978 to a total depth of 663'. A string of 9 5/8" O.D., 40#/ft. casing was set at 349' and 170 sacks of cement was circulated. A string of 7" O.D. 23#/ft. casing was set at 456' and 135 sacks of cement circulated. 587' of 2 7/8" tubing was hung in the well, bottomed in the salt section. A drillers log, exhibit 1, is attached.

After completion of this well, in August, 1978, the production of adequate supplies of brine could not be maintained due to the relatively thin section of salt being washed, i.e. 456' to 547'. The second well Eugenie No. 2 was drilled, in November, 1979, and fractured across to the No. 1 well. This well was drilled to a total depth of 610'. 5 1/2", 17#/ft. casing was set at 285' and 125 sacks of cement circulated. 2 1/2", 6.5#/ft. tubing was set at 583' and 100 sacks of cement circulated. The well was fractured across to No. 1 well through a salt and shale stringer 576' to 592'.

Exhibit 2, attached is the drillers log for the No. 2 well, Fresh Water for operations is obtained from the city of Carlsbad from a connection at the lease site. The fresh water is pumped down the tubing of the No. 2 well and brine circulated up the tubing of the No. 1 well to the 500 bbl. brine storage tanks. Water circulation at a rate of 70 GPM is maintained by a booster pump taking suction from the Carlsbad water system. Truck loading facilities have been provided adjacent to the No. 1 brine well -

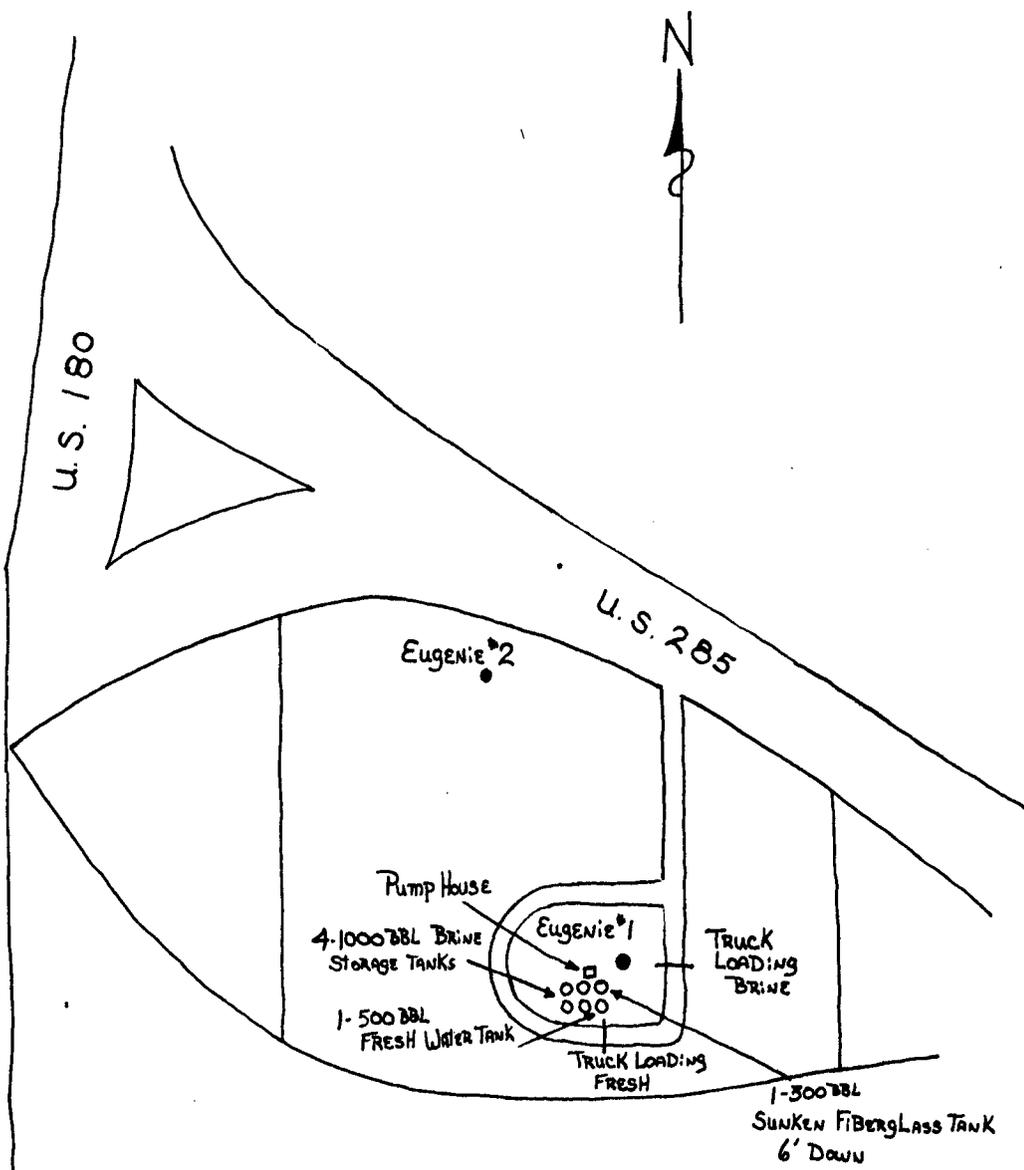
A search of the area surrounding the brine station did not reveal the presence of any fresh water wells.

The flood potential of this station appears remote. It is approximately 50' above the normal level of the Pecos River, 20' above the downtown area of Carlsbad and the highways provide excellent drainage to the west. See USGS Map 2, attached.

Sample connections are provided at the well heads of the brine wells.

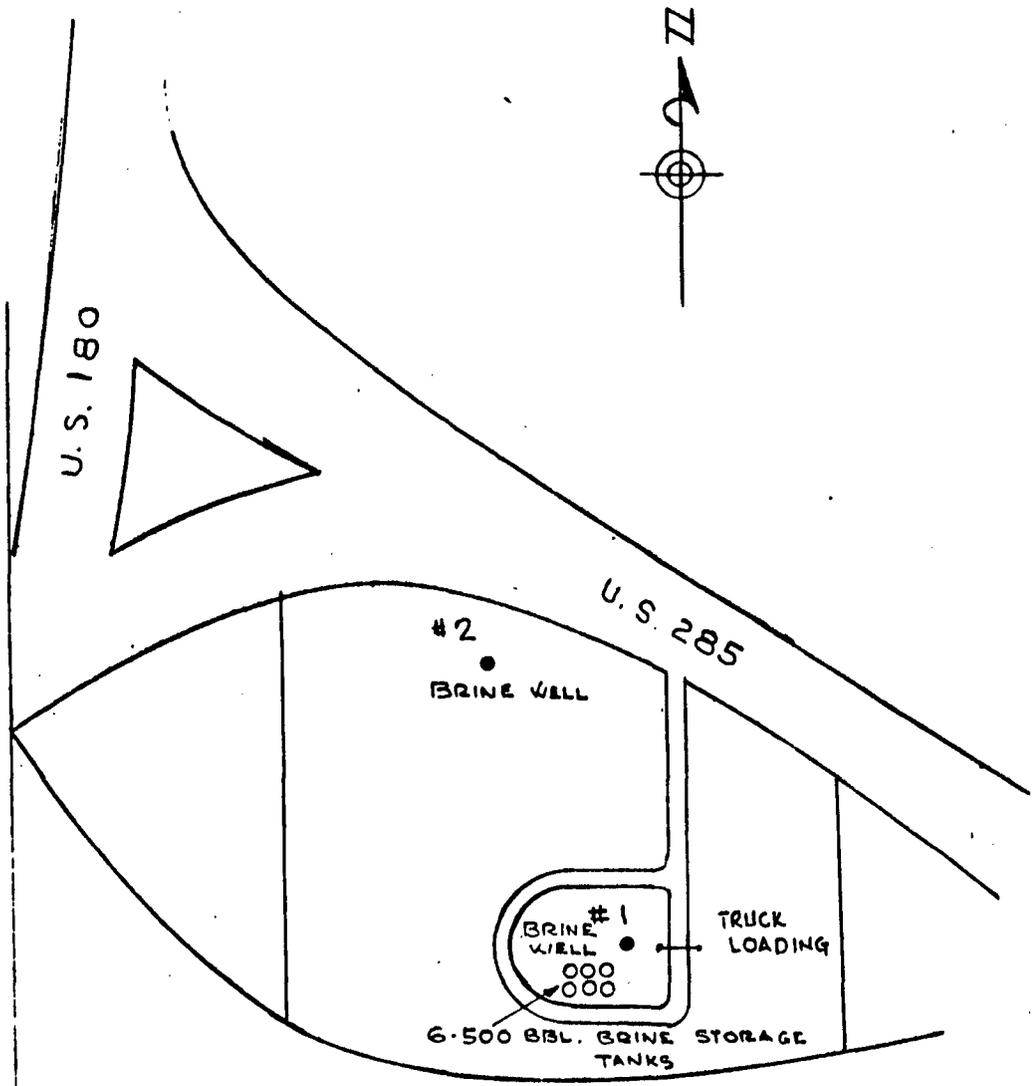
A drillers logs for both wells are attached, exhibits 1 & 2 which describes the lithological character of the underground formations.

Since there are no water wells in the vicinity of the brine station no facilities for monitoring are available.



Facility Plot Plan  
Map A

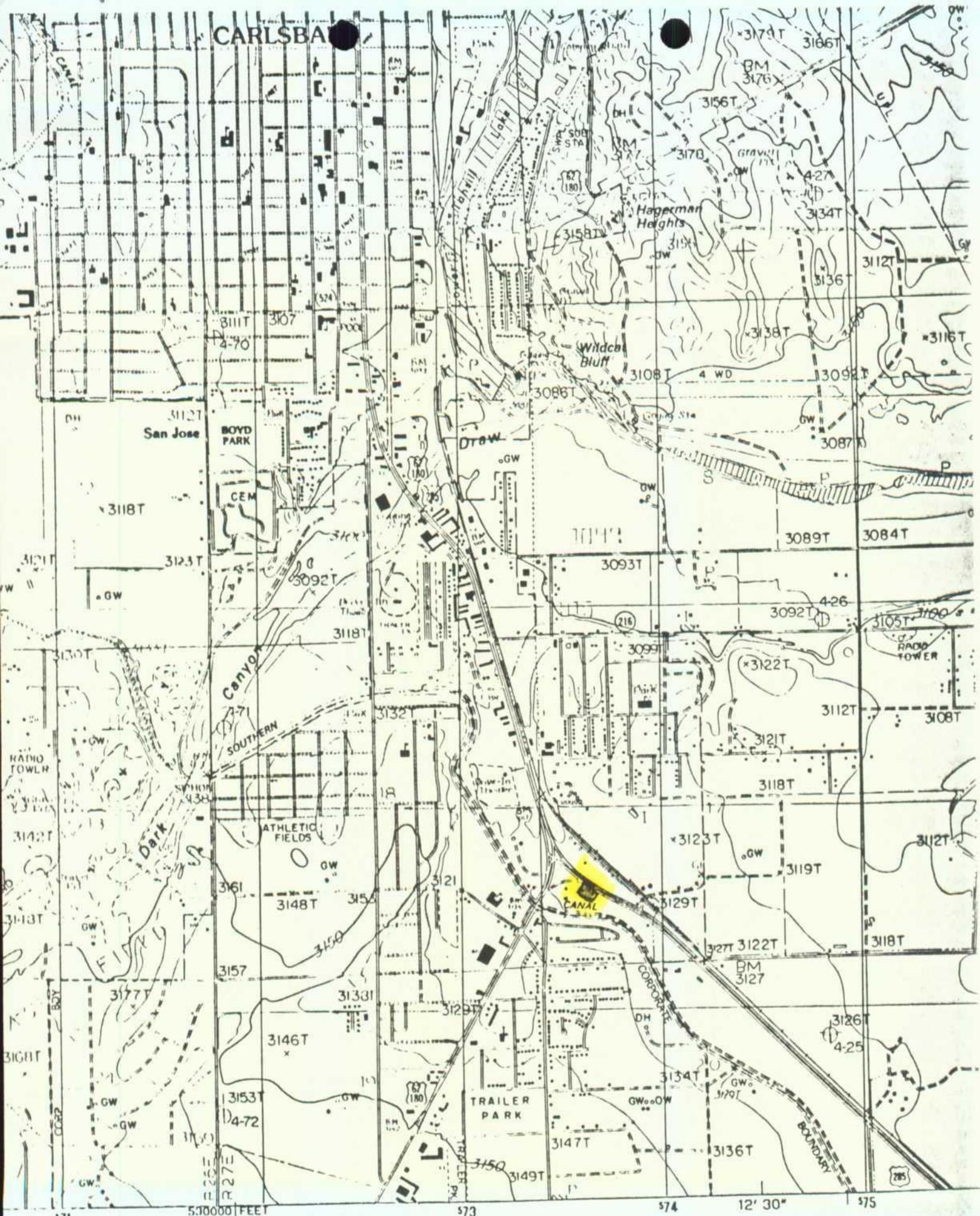
B+E BRINE SALES INC. HOBBS N. MEXICO P.O. Box 2292		
Eugenie #1 - Eugenie #2 BRINE STATION SW/4 - SW/4 SEC. 17 RGE. 27E TWP. 22S		
DATE 5-7-87	GENE PRUITT B+E INC	REVISED DRAWING * 1



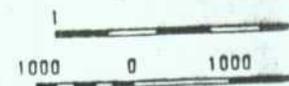
SCALE 1" = 200'

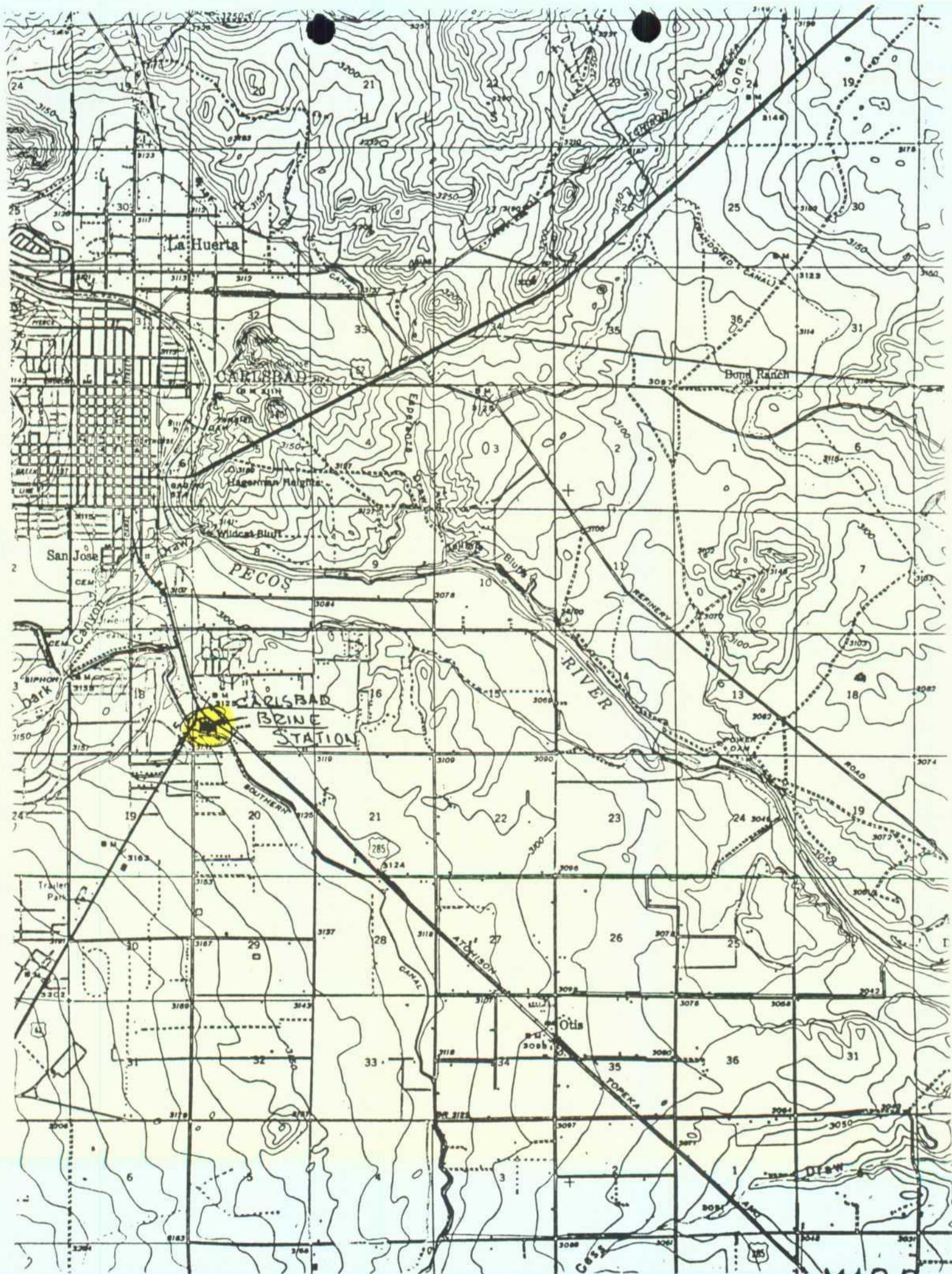
SW COR.  
SEC. 17

PERMIAN BRINE SALES, INC. OOESSA, TEXAS		
CARLSBAD BRINE STATION SW/4 - SW/4 SEC. 17 RGE. 27E TWP. 27S		
DATE: 10-19-82	R. C. MCCUTCHEN P.E. TEX. 9844	DRAWING NO. 1



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY  
 FROM AERIAL PHOTOGRAPHS TAKEN IN 1977  
 CHECKED IN 1978  
 MAP EDITED IN 1985  
 PROJECTION: TRANSVERSE MERCATOR  
 ZONE 11  
 1000-METER UNIVERSAL TRANSVERSE MERCATOR





Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

### II. DESCRIPTION OF FACILITY

#### A. Surface Facilities

1. See attached Map D - Facility Storage Dimensions.
2. Also see attached Map D. - 4-1000 bbl tanks are manifolded together with 6" PVC pipe. Flowline leaving Eugenie #2 (discharge well) to the storage tanks is 2½" PVC Pipe. Underground Flowline to the brine overhead loading rack is 4" PVC Pipe
3. Due to the continuing depressed drilling rig activity, we have gone weeks and sometimes months that we haven't produced any brine to sell. It is impossible due to the above stated facts to give a daily figure of discharge. Please refer to Part IV - (Procedures to Protect Ground Water Quality) No. 5.
4. 4-1000 bbls welded tanks; sealed flake line plastic coated interiors.

#### B. Underground Facilities

Please see all remaining attached data under Part II.

Map B  
Map C-1  
Map C-2  
Drilling & Completion Log  
Pressure Charts  
Pipe Casing Specs  
NMOCC Reports & Data  
ETC.

## II. DESCRIPTION OF FACILITIES

### A. Surface Facilities

1. Dimension of storage and/or disposal pond(s)/tank(s)  
-include side slope angle for ponds
2. Length and type of pipe(s) carrying fluids to from well to/from pond(s)/tank(s)
3. Average daily discharge to and, if applicable, withdrawal from pond/tank (3-106.C.1)
4. Type of pond liner, if any  
-include manufacturer's specs, technique used to seal seams

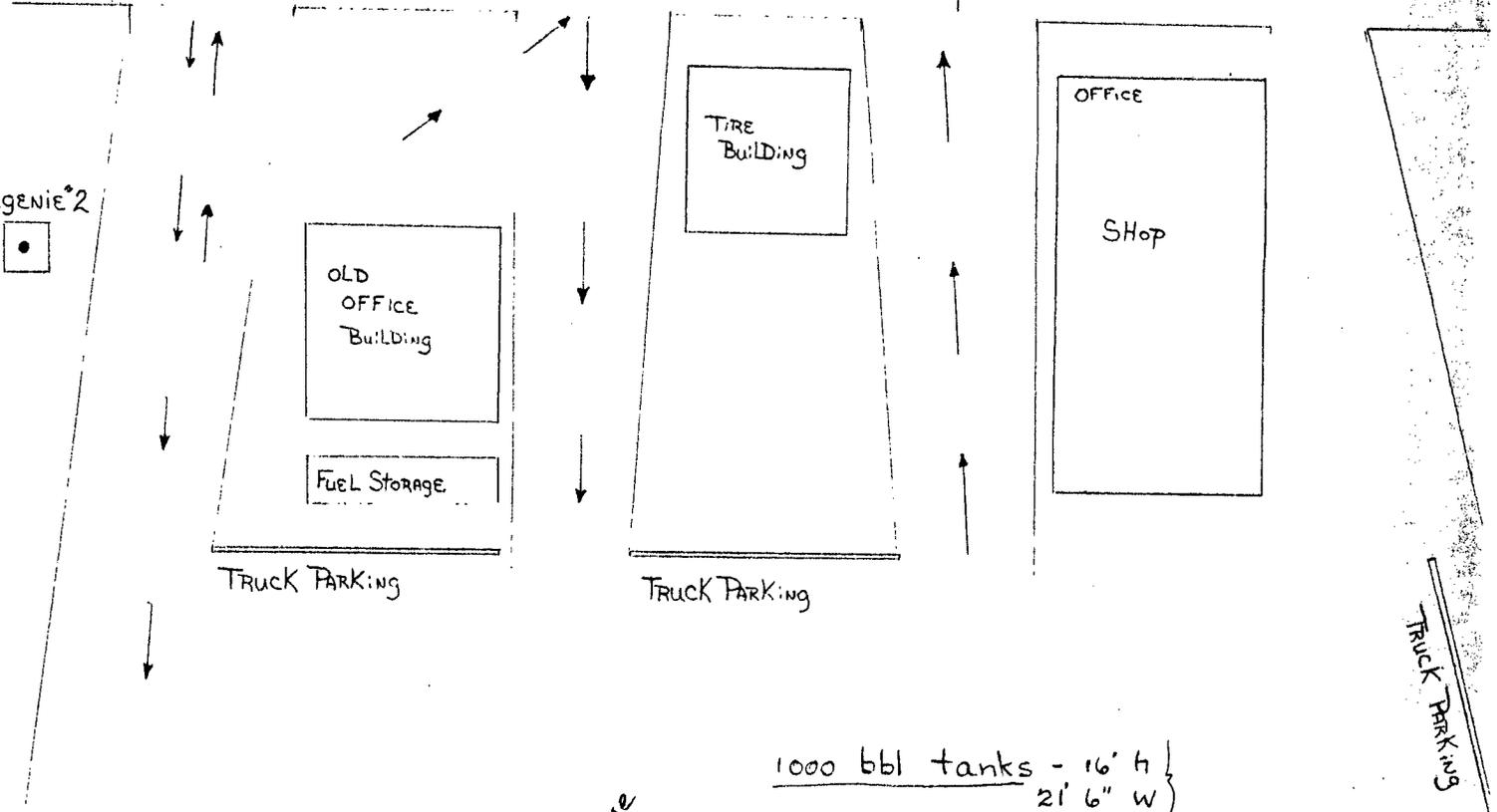
### B. Underground Facilities

1. Depth, diameter, production and protection casing and tubing specs of well(s)  
-include schematic drawings (5-102.B.1.d.8.; 5-210.B.13; 5-205.A.3.d.)
2. Construction procedures, including cementing and casing program, logging procedures, deviation checks and a drilling, testing and coring program (5-102.B.1.d.9.; 5-210.B.14; 5-204.B.2.b; 5-205.A.3.d,e). Include logs and results of tests for all new and worked-over wells (5-205.A.4).
3. Stimulation program (5-102.B.1.d.6.; 5-210.B.11). Note: 5-206 limitations.
4. Maximum and average injection pressures, injection volume, and other injection procedures (5-102.B.1.d.7.; 5-210.B.12; 5-203.B.1; 5-205.A.3.b,f).
5. Notification prior to drilling, casing etc. (5-205.A.5).
6. The proposed formation testing program to obtain an analysis or description, whichever the Director requires, of the chemical, physical and radiological characteristics of, and other information on, the receiving formation (5-102.B.1.d.5)

U.S. 285



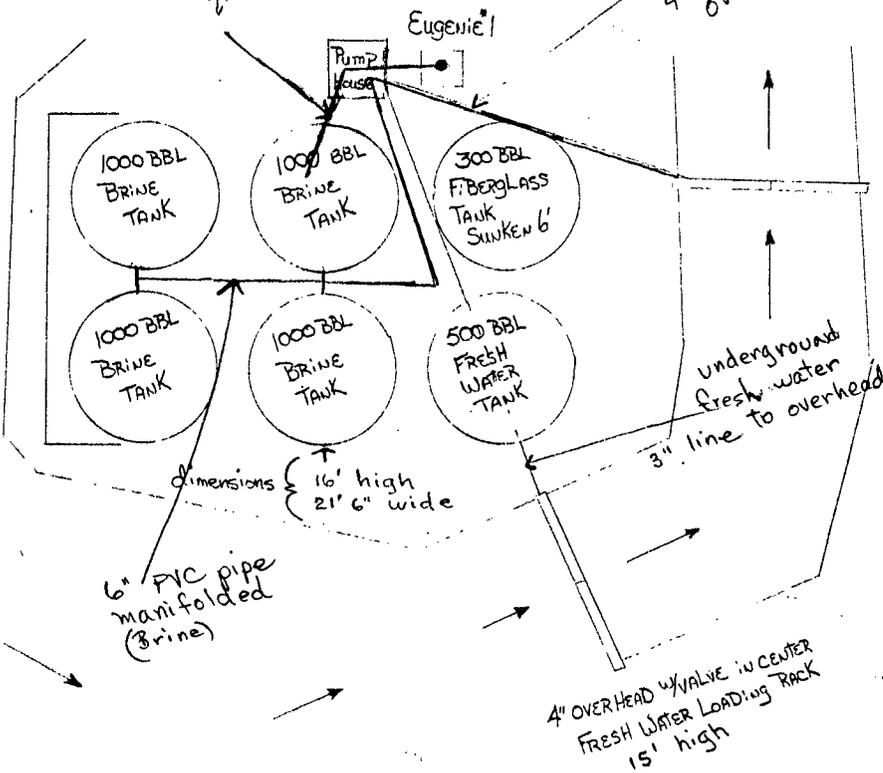
Eugenie 2



1000 bbl tanks - 16' H }  
21' 6" W }

2 1/2" PVC supply line to storage tanks

underground pipe 4" PVC to overhead loading



4" OVERHEAD w/VALVE IN CENTER BRINE WATER LOADING RACK 15' high

underground fresh water 3" line to overhead

4" OVERHEAD w/VALVE IN CENTER FRESH WATER LOADING RACK 15' high

# Facility Storage dimensions

## MAP D

OVERHEAD DRAWING

B&E INC.

SOUTH Y CARLSBAD N.M. 8582

DATE

May 7, 1987

Gene Pruitt

B&E INC.

4-1000 BBL BRINE STORAGE TANKS

EUGENIE #1

DISCHARGE BRINE TO STORAGE TANKS

GROUND SURFACE

8 7/8" CASING

220'

5 1/2" CASING

2 7/8" TUBING

456'

601'

663' TD

EUGENIE #2

FW Injection Down Hole

70 GPM

5 1/2" CASING

285'

2 7/8" TUBING

456'

601'

610' TD

Top of SALT

SALT FORMATION

576

fracture

592

Depth, Diameter  
Casing & Tubing  
Specs  
Map B

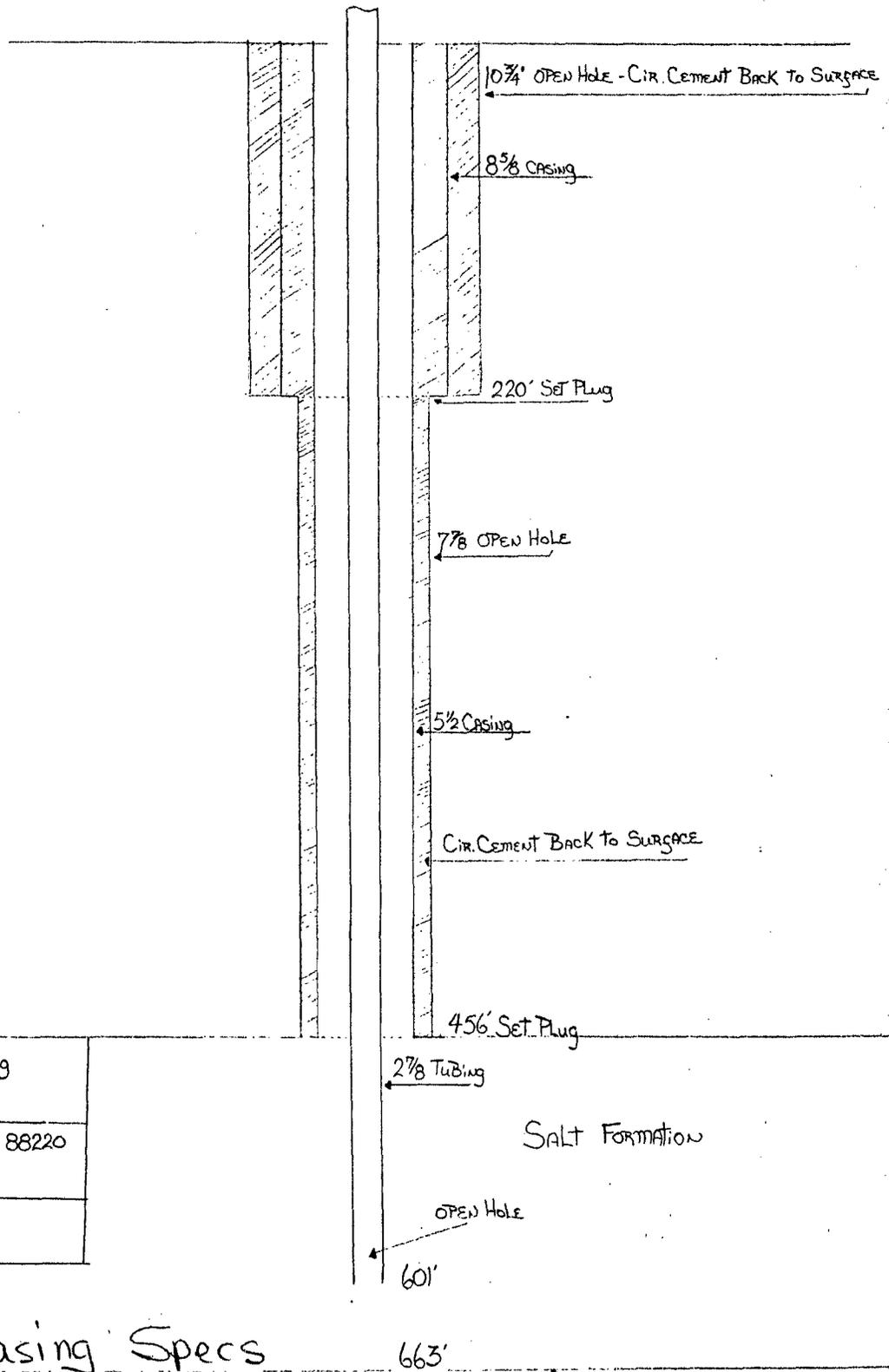
SUB-SURFACE SCHEMATIC DRAWING  
OF EUGENIE #1 & EUGENIE #2

B&E Inc. SOUTH Y CARLSBAD N.M. 88220

DATE  
May 7, 1987

GENE PRUITT  
B&E Inc.

EUGENIE\*1  
B/W Discharge



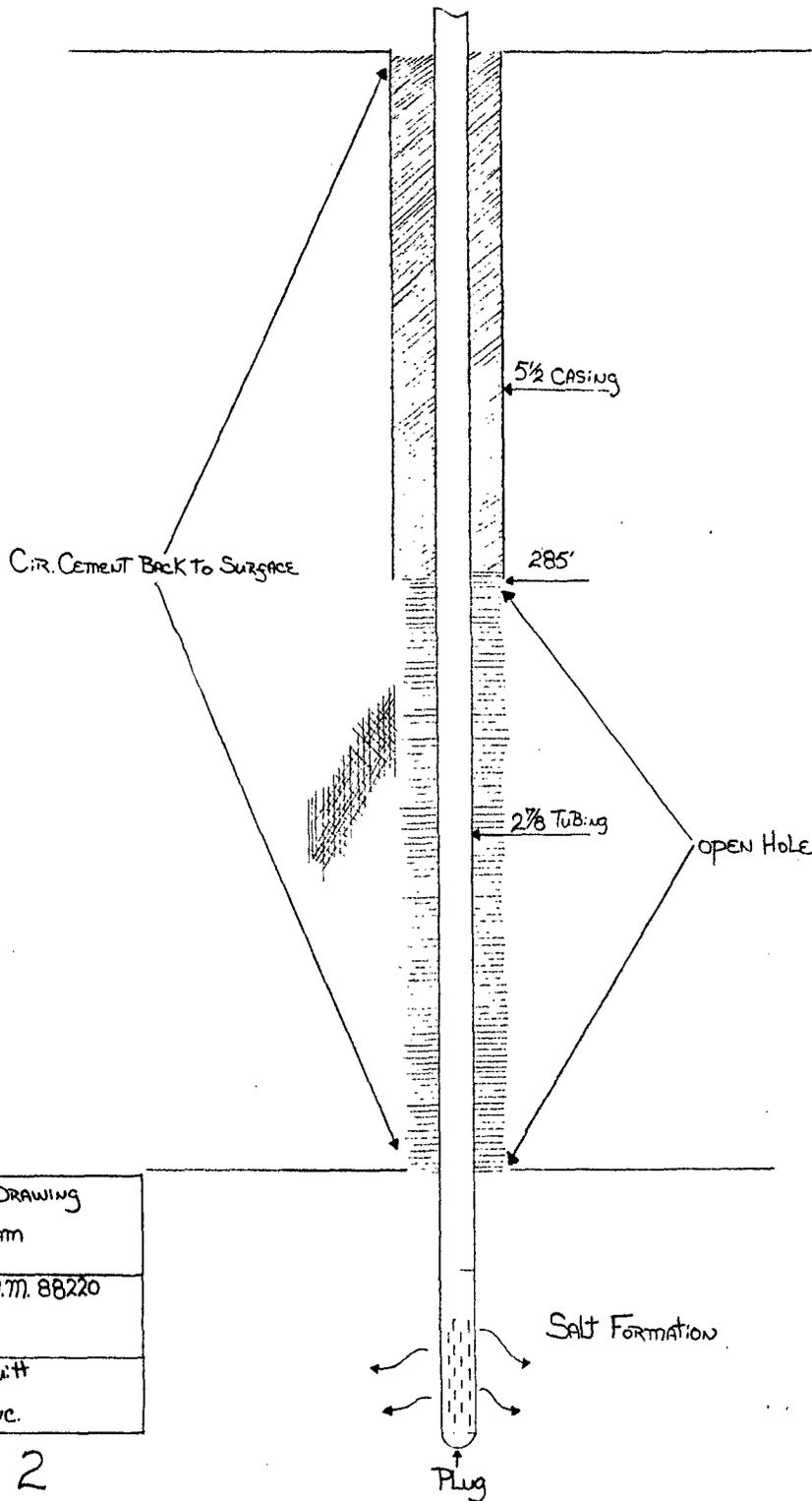
SUB-SURFACE SCHEMATIC DRAWING  
OF CEMENTING & CASING PROGRAM

B&E INC SOUTH Y CARLSBAD N.M. 88220  
EUGENIE\*1

DATE: MAY 7, 1987  
GENE PRUITT  
B&E INC.

Map C-1  
Cementing & Casing Specs

EUGENIE 2  
FW INJECTION  
DOWN HOLE

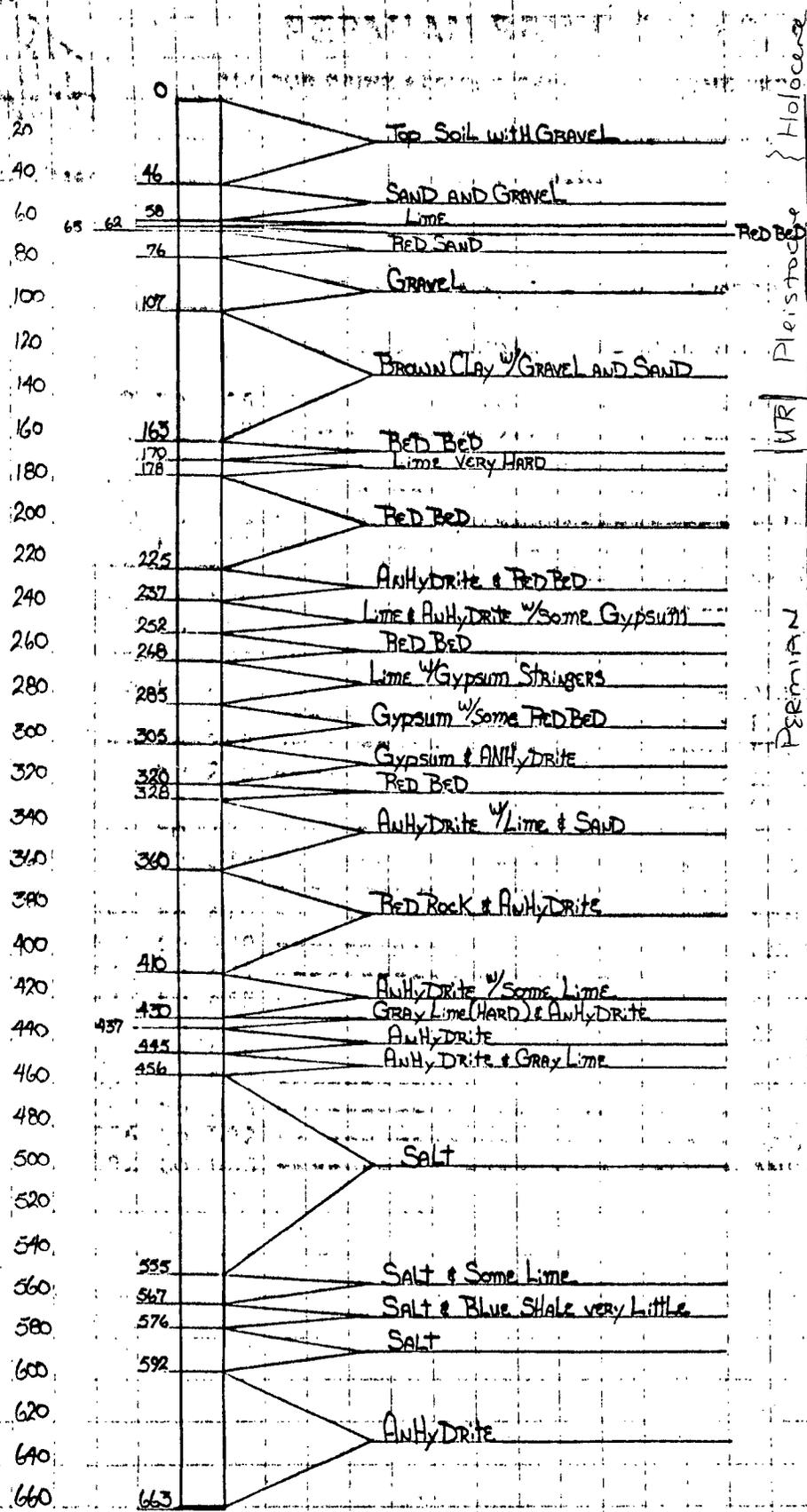


SUB-SURFACE SCHEMATIC DRAWING OF CEMENTING & CASING PROGRAM	
B&E INC. SOUTH Y CARLSBAD N.M. 88220 EUGENIE #2	
DATE May 7, 1987	GENE PRUITT B&E INC.

MAPC - 2

Cementing & Casing Specs

Eugenie 1 - discharge well  
 1/4" = 20 Feet



Aluvium

Gatina Fm

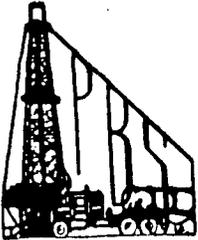
Santa Rosa SS?

Day Lake  
Red Beds

Rustler  
Erapst Clastics

Salado

Map E = #1  
 Testing & Coring Program



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0831

P. O. BOX 1591

JUNE 30, 1978

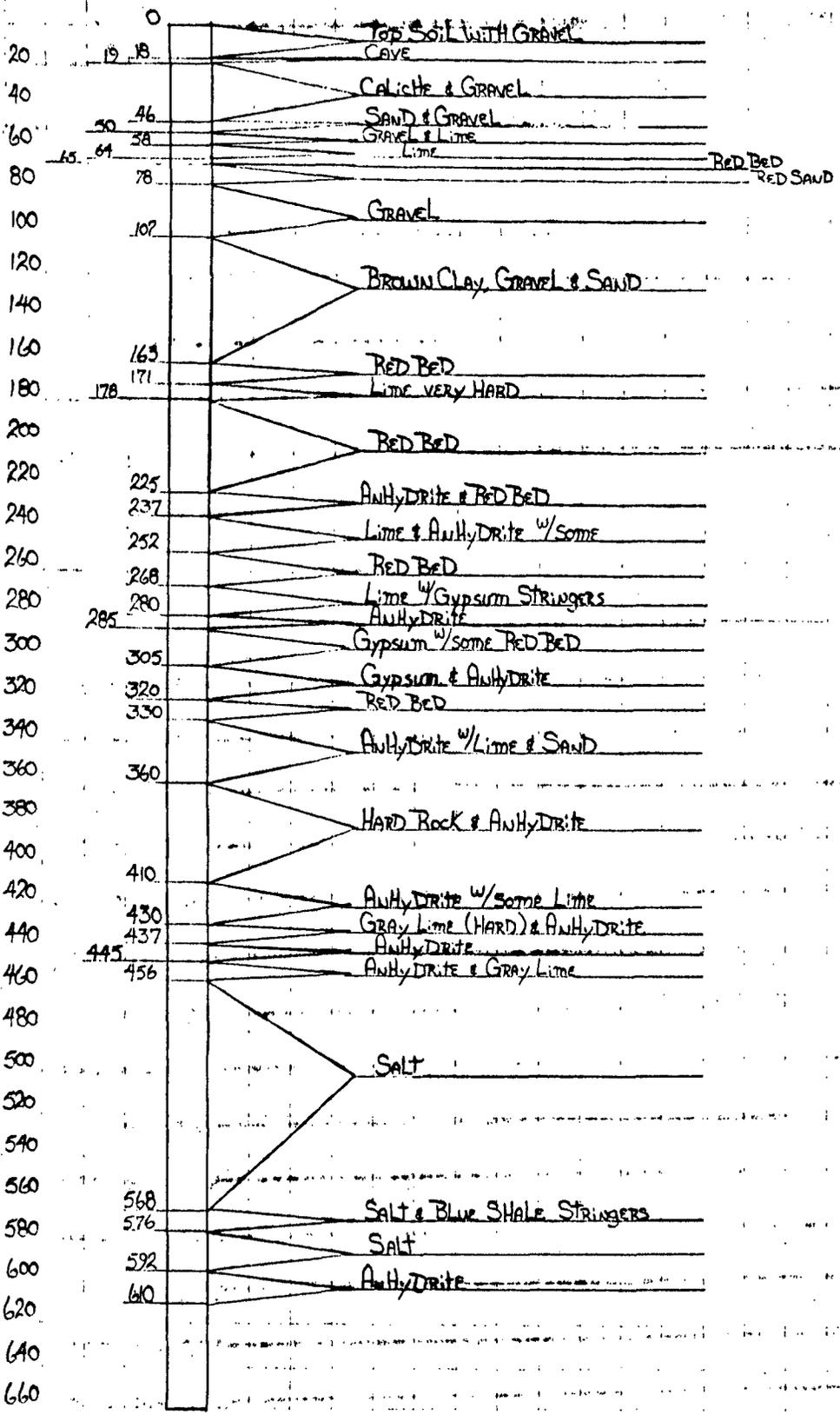
EXHIBIT No. 1

EUGENIE No. 1 - Sec 17-T22S-R27E

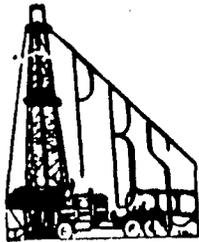
Eddy County, New Mexico

0 to 46	-----	TOP SOIL WITH GRAVEL
46 to 58	-----	SAND AND GRAVEL
58 to 62	-----	LIME
62 to 65	-----	RED BED
65 to 76	-----	PED SAND
76 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY W/GRAVEL AND SAND
163 to 170	-----	RED BED
170 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BED
225 to 237	-----	ANHYDRITE & RED BED
237 to 252	-----	LIME & ANHYDRITE W/SOME GYPSUM
252 to 268	-----	RED BED
268 to 285	-----	LIME W/GYPSUM STRINGERS
285 to 305	-----	GYPSUM W/SOME RED BED
305 to 320	-----	GYPSUM & ANHYDRITE
320 to 328	-----	PED BED
328 to 360	-----	ANHYDRITE W/LIME & SAND
360 to 410	-----	RED ROCK & ANHYDRITE
410 to 430	-----	ANHYDRITE W/SOME LIME
430 to 437	-----	GRAY LINE (HARD) & ANHYDRITE
437 to 445	-----	ANHYDRITE
445 to 456	-----	ANHYDRITE & GRAY LIME
456 to 555	-----	SALT
555 to 567	-----	SALT & SOME LIME
567 to 576	-----	SALT & <u>BLUE SHALE VERY LITTLE</u>
576 to 592	-----	SALT
592 to 663	-----	ANHYDRITE

EUGENIE #2 - injection well  
 1/4" = 20 Foot



Map E = #2  
 Testing & Coring Program



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79780

PHONE 332-0831

P. O. BOX 1591

November 30, 1979

EXHIBIT NO. 2

EUGENIE No.2 - Sec 17-T22S-R27E

PAGE 1

Carlsbad, New Mexico

0 to 18	-----	TOP SOIL WITH GRAVEL
18 to 19	-----	CAVE
19 to 46	-----	CALICHE & GRAVEL
46 to 50	-----	SAND & GRAVEL
50 to 58	-----	GRAVEL & LIME
58 to 64	-----	LIME
64 to 65	-----	RED BEDS
65 to 78	-----	RED SAND
78 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY, GRAVEL & SAND
163 to 171	-----	RED BEDS
171 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BEDS
225 to 237	-----	ANHYDRITE & RED BEDS
237 to 252	-----	LIME & ANHYDRITE W/ SOME
252 to 268	-----	RED BED
268 to 280	-----	LIME W/GYP. STRINGERS
280 to 285	-----	ANHYDRITE
285 to 305	-----	GYP. W/SOME RED BEDS
305 to 320	-----	GYP. & ANHYDRITE
320 to 330	-----	RED BEDS
330 to 360	-----	ANHYDRITE W/LIME & SAND

360 to 410-----HARD ROCK & ANHYDRITE  
410 to 430-----ANHYDRITE W/SOME LIME  
430 to 437-----GRAY LINE (HARD) & ANHYD  
437 to 445-----ANHYDRITE  
445 to 456-----ANHYDRITE & GRAY LIME  
456 to 568-----SALT  
568 to 576-----SALT & BLUE SHALE STRING  
576 to 592-----SALT  
592 to 610-----ANHYDRITE

January 15, 1980

*With  
File  
copy*

Mr. W.A. Gressett  
New Mexico Oil Conservation Commission  
P.O. Drawer DD  
Artesia, New Mexico 88210

Dear Mr. Gressett:

Re: Eugenie No. 2  
Sec. 17 T 22S-R27E

Attached are forms 103 and 105 for our drilling and completing the second brine well on our location at Carlsbad.

Form 103 is for the completion of the well. Form 105 has the cable tool drilling log attached.

If additional information is desired, please advise.

Very truly yours,

PERMIAN BRINE SALES, INC.

A.L. Hickerson  
President

ALH/sp  
Attachment

cc Phil Withrow

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LAND OFFICE	
OPERATOR	

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

Form C-105  
Revised 10-64

10. TYPE OF WELL  
 OIL WELL     GAS WELL     DRY     OTHER **Brine Water Well**

b. TYPE OF COMPLETION  
 NEW WELL     WORK OVER     DEEPEN     PLUG BACK     DIFF. REVR.     OTHER

11. Initial Type of Lease  
 State  Free

12. State Oil & Gas Lease No.

13. Unit Agreement Name

14. Term or Lease Name  
**Eugenie**

15. Well No.  
**2**

16. Field and Pool, or Wildcat

17. Name of Operator  
**Permian Brine Sales & Service, Inc.**

18. Address of Operator  
**Box 1591, 212 W. 5th St., Odessa, Texas 79760**

19. Location of Well

20. NEIT LETTER **M** LOCATED **1288** FEET FROM THE **South** LINE AND **497** FEET FROM

21. NE **West** LINE OF SEC. **17** TWP. **22S** RGE. **27E** NMPM

22. Date Spudded **Oct. 22, 1979** 23. Date T.D. Reached **11-19-79** 24. Date Compl. (Ready to Prod.) **11-22-79** 25. Elevation (DF, RKB, RT, GK, etc.) **GL 3126** 26. Elev. Casinghead **-**

27. Total Depth **618'** 28. Plug Back T.D. **583'** 29. If Multiple Compl., How Many **None** 30. Intervals Drilled By **Rotary Tools** 31. Cable Tools **X**

32. Producing Interval(s), of this completion - Top, Bottom, Name  
**Salt Top 456' Bottom 592**

33. Was Directional Survey Made **No**

34. Type Electric and Other Log run **None** 35. Was Well Cased **No**

36. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
<b>5 1/2"</b>	<b>17#</b>	<b>285'</b>	<b>8"</b>	<b>100 sx Circulated</b>	<b>None</b>
<b>2 1/2"</b>	<b>6.5#</b>	<b>583'</b>	<b>5"</b>	<b>100 sx Circulated</b>	<b>None</b>

37. LINER RECORD      38. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
	<b>None</b>					<b>None</b>	

39. Perforation Record (Interval, size and number)  
**None**

40. ACID, SHOT, FRACTURE, CEMENT SQUELGE, ETC.  
 DEPTH INTERVAL      AMOUNT AND KIND MATERIAL USED  
**None**

41. PRODUCTION

42. Date First Production **11-22-79** 43. Production Method (Flowing, gas lift, pumping - Size and type pump) **Water Pump** 44. Well Status (Prod. or Shut-in) **Brine Water**

Date of Test	Hours Tested	Choke Size	Prod'n. Per Test Period	Oil - BBL	Gas - MCF	Water - BBL	Grav - All Tests
Low Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - BBL	Gas - MCF	Water - BBL	Oil Gravity - API (Corr.)	

45. Disposition of Gas (Sold, used for fuel, vented, etc.)  
 Test Witnessed By

46. List of Attachments

47. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED **A.L. Hickerson** TITLE **President** DATE **11-30-79**

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LAND OFFICE	
OPERATOR	

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

5a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT - ..." FORM C-1011 FOR SUCH PROPOSALS.)

OIL WELL  GAS WELL  OTHER- **Brine Water Well**

7. Unit Agreement Name

Name of Operator

**Permian Brine Sales & Service, Inc.**

8. Farm or Lease Name

**Eugenie**

Address of Operator

**Box 1591, 212 W. 5th St., Odessa, Texas 79760**

9. Well No.

**2**

Location of Well

UNIT LETTER **M** **1288** FEET FROM THE **South** LINE AND **497** FEET FROM

10. Field and Pool, or Wildcat

THE **West** LINE, SECTION **17** TOWNSHIP **22S** RANGE **27E** NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)

**GL 3126**

12. County

**Eddy**

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK

PLUG AND ABANDON

TEMPORARILY ABANDON

CHANGE PLANS

PULL OR ALTER CASING

OTHER

SUBSEQUENT REPORT OF:

REMEDIAL WORK

ALTERING CASING

COMMENCE DRILLING OPNS.

PLUG AND ABANDONMENT

CASING TEST AND CEMENT JOB

OTHER

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1703.

*It is proposed to set the 5 1/2" casing and cement @ 285' instead of 350' as originally approved. All fresh water has been penetrated and the red beds are sloughing on the cable tools.*

COMPLETION

*Ran 285' of 17# 5 1/2" casing. B.T. cemented on 11/6/79 with 125 SK CLASS C CEMENT WITH 2% A-7 Calcium Chloride. Let set 36 hours. Drilled out plug with cable tools. NO WATER.*

*Ran 583' of 6.5# 2 1/8 tubing. B.T. cemented 11/20/79 with 100 SK OF CLASS C CEMENT WITH 2% A-7 Calcium chloride cement circulated. LET SET 24 HOURS.*

*Nov 21, 1979 FRACTURED ACROSS TO EUGENIE NO 1msalt shale STRINGER BETWEEN 576 & 591*

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

SIGNED A.L. Hickerson TITLE President DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

P.B.S. & S.  
BOX 1591  
ODESSA, TEXAS 79760

JUNE 30, 1978

SALT & 1

0 to 46 -----	TOP SOIL WITH GRAVEL
46 to 58 -----	SAND & GRAVEL
58 to 62 -----	LIME
62 to 65 -----	RED BED
65 to 76 -----	RED SAND
76 to 107 -----	GRAVEL
107 to 163 -----	BROWN CLAY W/GRAVEL & SAND
163 to 170 -----	RED BED
170 to 178 -----	LIME VERY HARD
178 to 225 -----	RED BED
225 to 237 -----	ANHYDRITE & RED BED
237 to 252 -----	LIME & ANHYDRITE W/SOME GYP.
252 to 268 -----	RED BED
268 to 285 -----	LIME W/GYP. STRINGERS
285 to 305 -----	GYP. W/SOME RED BED
305 to 320 -----	GYP. & ANHYDRITE
320 to 328 -----	RED BED
328 to 360 -----	ANHYDRITE W/LIME & SAND
360 to 410 -----	RED ROCK & ANHYDRITE
410 to 430 -----	ANHYDRITE W/SOME LIME
430 to 437 -----	GRAY LIME ( HARD ) & ANHYDRITE
437 to 445 -----	ANHYDRITE
445 to 456 -----	ANHYDRITE & GRAY LIME
456 to 555 -----	SALT
555 to 567 -----	SALT & SOME LIME
567 to 576 -----	SALT & <u>BLUE SHALE VERY LITTLE</u>
576 to 592 -----	SALT
592 to 663 -----	ANHYDRITE

ASING 349

1" - 456'

1" - 587

P.B.S. & S.

BOX 1591

ODESSA, TEXAS 79760

JUNE 30, 1978

SALT & 1

0 to 46	-----	TOP SOIL WITH GRAVEL
46 to 58	-----	SAND & GRAVEL
58 to 62	-----	LIME
62 to 65	-----	RED BED
65 to 76	-----	RED SAND
76 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY W/GRAVEL & SAND
163 to 170	-----	RED BED
170 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BED
225 to 237	-----	ANHYDRITE & RED BED
237 to 252	-----	LIME & ANHYDRITE W/SOME GYP.
252 to 268	-----	RED BED
268 to 285	-----	LIME W/GYP. STRINGERS
285 to 305	-----	GYP. W/SOME RED BED
305 to 320	-----	GYP. & ANHYDRITE
320 to 328	-----	RED BED



**BJ-HUGHES Inc.**  
A SUBSIDIARY OF HUGHES COMPANY  
P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**

**INVOICE** TERMS: NET 20TH PROX. STATEMENTS ON REQUEST ONLY

PAYABLE AT LONG BEACH, CALIFORNIA

DATE *11-19-79* NO. *30-2361*

DATE OF JOB *11/6/79* DISTRICT *Carlsbad NM* NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER *Permian Brine Sales* WELL NO. *EUGENIA #2* LEASE

ADDRESS *212 W. Fifth St.* COUNTY *EDDY* STATE *N.M.*

CITY *Odessa* STATE *Texas* FIELD

AUTHORIZED BY *48560* WELL OWNER

(OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC.  
212 WEST 5TH STREET  
ODESSA TX 79760

	DATE	TIME
TRUCK CALLED	<i>11/6</i>	<i>8:30 AM</i>
ARRIVED AT JOB	"	<i>10:30 AM</i>
START OPERATION	"	<i>11:05 AM</i>
FINISH OPERATION	"	<i>12:10 AM</i>
RELEASED	"	<i>12:30 AM</i>
MILES FROM STATION TO WELL		<i>1</i>
BULK TICKET NO.	<i>877-32287</i>	

Type Job: *CASING* Depth: *289* Ft. CEMENT DATA: Bulk  Sacks

Surface  Intermediate  Production  Remedial  Sacks Brand Type % Gal Admixes

Size Hole: *8 1/2* Depth: *289* Ft. *125* *C* *2 1/2 A-7*

Size & Wt. Casing: *5 1/2* NEW USED  Depth: *289* Ft.

Size & Wt. D. Pipe or Tubing Depth: Ft.

Top Plugs: *1* Type: *Rubber* Weight of Slurry: *14.8* LBS./GAL. LBS./CU. FT.

Bottom Plugs: Type: Volume of Slurry: *1.32*

Pump Tr. No. *1361* Fluid Pumped *H<sub>2</sub>O* Sacks Cement Treated With % of

STAGE NO.	TOTAL PREV. GALS.	MAX. DEPTH	FT.	MAX. PRESSURE	P.S.I.
		<i>289</i>			

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3-2051

NOV 9 1979

SIGNED:

*Hubert M. Lenzell*  
AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	Description	Quantity	Rate	Total
<i>201.05</i>	<i>Pump Charge 0-300'</i>			<i>325.00</i>
<i>261.00</i>	<i>Milage Charge 1 mi @ 1.50 per mi</i>	<i>1.50</i>	<i>1.50</i>	<i>1.50</i>
<i>223.05</i>	<i>1 ea 5 1/2 Top Rubber Plug</i>			<i>28.90</i>
	<i>Subtotal</i>			<i>355.40</i>
<i>0-999.30</i>	<i>3 3/4% New Mexico Gross Receipts Tax</i>			<i>13.33</i>
	<i>TOTAL</i>			<i>368.73</i>

SERVICE REPRESENTATIVE:

*Jim Calvert*

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:

*Hubert M. Lenzell*  
(WELL OWNER OPERATOR OR AGENT)

JOB TICKET NO. FORM NO. S-211

**S 77-58048**



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**BULK MATERIAL INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

ORIGINAL

DATE 11-19-79 NO. 30-83616

DATE OF JOB 11/6/79 DISTRICT Carlsbad, N.M. NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales WELL NO. EUGENIA #2 LEASE

ADDRESS 212 W. 5th St. COUNTY EDDY STATE N.M.

CITY Odessa STATE Texas FIELD

AUTHORIZED BY 48560 (OFFICE USE ONLY) WELL OWNER

PERMIAN BRINE SALES & SERVICE INC.  
 212 WEST 5TH STREET  
 ODESSA TX 79760

B. J. HUGHES  
 P. O. BOX 2250  
 Main Post Office  
 Dallas, Texas 75205

Truck & Trailer No.	No. Loads	Truck & Trailer No.	No. Loads	Other Equipment No.	MILES FROM STATION TO WELL:
<u>5339</u>	<u>1</u>			<u>1341</u>	<u>1</u>

SERVICE TICKET NO. 577-56058 ✓

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

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NOV 9 1979

SIGNED: [Signature]  
 AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	3-2051	BRAND AND TYPE	QUANTITIES				RATE	PRICE
			ORDERED	USED	RETURNED	CHARGED		
<u>815.00</u>		<u>Class C Cement</u>	<u>125</u>			<u>4.65</u>	<u>581.25</u>	
<u>840.00</u>		<u>Calcium Chloride</u>	<u>3 CWT</u>			<u>15.60</u>	<u>46.80</u>	
		Bentonite _____ % Gel. in. _____ Sacks Cement						
<u>810.00</u>		MIXING SERVICE <u>128 ft<sup>3</sup></u>				<u>.72</u>	<u>92.16</u>	
		RET'D MTL. CHARGE						
		WAITING TIME						
<u>806.03</u>		MILEAGE CHARGE <u>12,050 lbs.</u> <u>1 miles</u>				<u>.50</u>	<u>35.00</u>	
						<u>Deb Total.</u>	<u>755.21</u>	

999.30 33 1/4% New Mexico Gross Receipts tax 28.33

TOTAL 783.53

SERVICE REPRESENTATIVE: Permian  
 OB TICKET NO. B 77-32287  
 FORM NO. S-212

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
 (WELL OWNER OPERATOR OR AGENT)



BJ HUGHES INC.  
A SUBSIDIARY OF HUGHES TOOL COMPANY  
P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**ORIGINAL INVOICE**  
TERMS: NET 20TH P.  
STATEMENTS ON REQUEST ONLY  
DATE 11-30-79 NO. 30-86119

DATE OF JOB: 11/21/79 DISTRICT: Cubla, N.M. NEW WELL  OLD WELL  CUSTOMER'S ORDER NO. Eugenia #2

CUSTOMER: Permian Brine Sales & Service Inc WELL NO. #2

ADDRESS: P.O. Box 1591 COUNTY: Edley STATE: N.M.

CITY: Odessa STATE: Texas FIELD: \_\_\_\_\_

AUTHORIZED BY: H8560 79760 WELL OWNER: \_\_\_\_\_

PERMIAN BRINE SALES & SERVICE INC.  
BOX 1591  
ODESSA TX 79760

	DATE	AM	PM	TIME
TRUCK CALLED	11/21			8:30
ARRIVED AT JOB	"			9:00
START OPERATION	"			
FINISH OPERATION	"			
RELEASED	"			11:45
MILES FROM STATION TO WELL				1
BULK TICKET NO.				

Type Job: Pump Depth: \_\_\_\_\_ Ft. CEMENT DATA: Bulk  Sacks

Surface  Intermediate  Production  Remedial  Sacks \_\_\_\_\_ Br. MAIL  REMITTANCE TO: Admixes

Size Hole: \_\_\_\_\_ Depth: \_\_\_\_\_ Ft. B.J.-Hughes Inc.

Size & Wt. Casing: NEW USED 8 Depth: \_\_\_\_\_ Ft. P.O. Box 3634

Size & Wt. D. Pipe or Tubing Depth: \_\_\_\_\_ Ft. Main Post Office

Top Plugs: Type: \_\_\_\_\_ Weight of Slurry: Dallas, Texas 75285 LBS. / GAL: \_\_\_\_\_ LBS. / CU. YD: \_\_\_\_\_

Bottom Plugs: Type: \_\_\_\_\_ Volume of Slurry: \_\_\_\_\_

Pump Tr. No. 1361 Fluid Pumped 120 Sacks Cement Treated With \_\_\_\_\_ % of \_\_\_\_\_

STAGE NO.	TOTAL PREV. GAL.S.	MAX. DEPTH FT.	MAX. PRESSURE P.S.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

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SIGNED: X A.L. Dickerson  
AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	DESCRIPTION	AMOUNT
25701	Truck Chg.	300.00
261.00	Mileage Chg.	1.50
	1 mi @ 1.50 per mi.	
	Subtotal	301.50
999.30	33 3/4% NEW MEXICO GROSS RECEIPTS TAX	113.28
	TOTAL	312.78

SERVICE REPRESENTATIVE: Jim Calicut THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: A.L. Dickerson

BULK TICKET NO. S77-56080 (WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**  
**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 11-30-79 NO. 30-86117

DATE OF JOB 11-20-79 DISTRICT CARLSBAD NEW WELL  OLD WELL  CUSTOMER'S ORDER NO. \_\_\_\_\_  
 CUSTOMER Permian Brine Sales & Service Inc WELL NO. 2 LEASE Eugenit  
 ADDRESS 212 West 5th Street COUNTY EDDY STATE N.M.  
 CITY ODESSA STATE TX ZIP 79760 FIELD \_\_\_\_\_  
 AUTHORIZED BY \_\_\_\_\_ WELL OWNER \_\_\_\_\_

48560 (OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST 5TH STREET  
 ODESSA TX 79760

	DATE	AM	PM	TIME
TRUCK CALLED	11-20			10:30
ARRIVED AT JOB	11-20			11:30
START OPERATION	11-20			12:00
FINISH OPERATION	11-20			12:30
RELEASED	11-20			12:40
MILES FROM STATION TO WELL				1
BULK TICKET NO.	8-77-32103			

Type Job: Casing Depth: 600 Ft. CEMENT DATA: Bulk  Sacks   
 Surface  Intermediate  Production  Remedial  Sacks \_\_\_\_\_ Brand \_\_\_\_\_ Type \_\_\_\_\_ % Gel \_\_\_\_\_ Admixes \_\_\_\_\_  
 Size Hole: 5" Depth: 600 Ft. 100 \_\_\_\_\_ C \_\_\_\_\_ 29.1-7  
 Size & Wt. Casing: NEW USED 8 Depth: \_\_\_\_\_ Ft. \_\_\_\_\_  
 Size & Wt. D. Pipe or Tubing 2 3/4 Depth: 600 Ft. \_\_\_\_\_  
 Top Plugs: \_\_\_\_\_ Type: \_\_\_\_\_ Weight of Slurry: 14.8 LBS./GAL. \_\_\_\_\_ LBS./CU. FT. \_\_\_\_\_  
 Bottom Plugs: \_\_\_\_\_ Type: \_\_\_\_\_ Volume of Slurry: 1.32  
 Pump Tr. No. 1361 Fluid Pumped Brine-H<sub>2</sub>O Sacks Cement Treated With \_\_\_\_\_ % of \_\_\_\_\_

STAGE NO. TOTAL PREV. GALS. MAX. DEPTH 600 FT. MAX. PRESSURE \_\_\_\_\_ P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

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SIGNED: Jack Burrows AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	DESCRIPTION	AMOUNT
0201.10	Pump Charges 0-300'	325.00
2201.11	Pump Charges 300-600'	111.00
261.00	MILEAGE on Pump Unit	1.50
	<b>Sub TOTAL</b>	<b>437.50</b>
0-999.30	33 1/4% NEW MEXICO GROSS RECEIPTS TAX ON	16.41
	<b>TOTAL</b>	<b>453.91</b>

SERVICE REPRESENTATIVE: Nyckkenen  
 JOB TICKET NO. S77-56007  
 FORM NO. S 211

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Jack Burrows (WELL OWNER OPERATOR OR AGENT)



BJ HUGHES INC.  
A SUBSIDIARY OF HUGHES TOOL COMPANY  
P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**INVOICE** TERMS: NET 20TH PROX.  
STATEMENTS ON REQUEST ON  
PAYABLE LONG BEACH, CALIFORNIA

DATE 11-30-79 NO. 30-86112

DATE OF JOB 11-20-79 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO. \_\_\_\_\_

CUSTOMER Permian Brine Sales & SERVICE INC WELL NO. #2 LEASE Eugenia

ADDRESS 212 West 5th St. 5th Street COUNTY Eddy STATE NM

CITY Odessa STATE TX 79760 FIELD \_\_\_\_\_

AUTHORIZED BY \_\_\_\_\_ WELL OWNER \_\_\_\_\_

**48560** (OFFICE USE ONLY)

**PERMIAN BRINE SALES & SERVICE INC**  
212 WEST 5TH STREET  
ODESSA TX 79760

Truck & Trailer No.	No. Loads	Truck & Trailer No.	No. Loads	Other Equipment No.	MILES FROM STATION TO WELL:
5339				1361-6256	1

SERVICE TICKET NO. S-77-56007

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

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NOV 20 1979

SIGNED: [Signature]  
AGENT OF OWNER OR CONTRACTOR

	PRICE	QUANTITY	TYPE	QUANTITIES				RATE	PRICE
				ORDERED	USED	RETURNED	CHARGED		
MATERIALS	815.00	3 2051	Class "C" Cement	100			100	4.65	465.00
	840.00		Calcium Chloride	2 cwt.			2 cwt.	15.60	31.20
	806.03		Minimum Drayage chg.						35.00
SERVICES	810.00		On Cement & Additives (Calcium Chloride)				10 1/2 cu ft.	.72	71.88
			MIXING SERVICE						
			RET'D MTL. CHARGE						
			WAITING TIME						
		MILEAGE CHARGE					lbs. /mile		

Subtotal	606.08
1-999.30 3 3/4% NEW MEXICO GROSS RECEIPTS TAX	22.71
<b>TOTAL</b>	<b>628.79</b>

SERVICE REPRESENTATIVE: Kelly

OB TICKET NO. **B 77-32103**

FORM NO. S-212

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
(WELL OWNER OPERATOR OR AGENT)

Foreword

The Eugenie No. 1 brine well, completed in August of 1978, has been slow in developing enough cavern space to permit production of large quantities of 10 lb. brine. The well was drilled to bottom @ 592' with tubing hung @ 547', allows production rates of only about 500 to 600 barrels of brine per day when maintaining 10 lb. brine.

Drilling continues active in the area so it was decided to drill a second well and fracture across to No. 1 in order to increase the production rate, and to increase the effective life of the station.

Conclusions:

The No. 2 Eugenie was completed with 5 1/2" surface casing cemented at 285' and 2 7/8" tubing cemented at 583 feet. Open hole was left in bottom of salt section from 592' - 532'.

A fracture was successfully initiated between No. 2 and No. 1. Fresh water was pumped down No. 2 and brine produced out the tubing of No. 1. Brine saturation immediately increased from No. 1, indicating that the fracture was made into No. 1 at a low level in the cavern.

The fracture probably was made just below a layer of clay or shale, as a relatively large amount of fresh water was pumped from No. 2 to No. 1 before obtaining a "low pressure" connection.

DRILLING AND COMPLETION

Carlsbad Eugenie #2

- Oct. 19, 1979 - Bill Taylor moved rig in
- Oct. 22 - Started drilling w/ 6" bit, Reamed w/ 8" bit.  
At 18' - bit 6" cave, lost water & mud from  
18 1/2' to 50' - Caliche & Gravel
- Oct. 23 - Wayland Evans looking after well.  
41' - some water - (think) may be from irrigation  
canal  
90' - some water  
120' - drilling in Brown sand & red sticky clay
- Oct. 24 - P.B.S. moved casing & tubing to location  
- water standing in hole @ 52'  
- told Wayland to get 18" x 3/4" centralizers welded  
on 3 of the 5 1/2" JTS for bottom middle & top  
- for 2 1/2" - centralizers on 4 joints from bottom  
@ 450' - 330' @ top  
- centralizers 12" to 18" long & 1/2" thick
- Oct. 25 - to 154' yesterday  
- Taylor dumping mud back into hole because he  
was afraid hole would not stand up. Bailer  
is too light for heavy mud, so work goes slow.  
- to 182' - In red clay  
- tools hung in hole for 1 hour  
- casing collar on bottom of 5 1/2"  
- before we start to cement will pull joint of  
9 5/8 set at 20'
- Oct. 26 - 182' to 209' still using heavy mud
- Oct. 27 - 209' to 238'  
(233 1/2 - 235 1/2 anhydrite)
- Oct. 28 - Sunday - DOWN
- Oct. 29 - 238 to 249 in Brown clay. - 7" bailer won't  
go to bottom because mud is so heavy
- Nov. 1 - 8a.m. - Hole swelling & sluffing  
- getting plugs @ 85', 120', 190'  
- water & mud level continues to drop to 56' each  
morning  
- putting 1500# Gel per day in hole  
- infringement bad - getting maximum of 2' drilling  
per trip  
- tried FW Gel & lime mixture  
- carrying heavy clay all way along w/ Gel & lime  
- thinning with water, much less consistency now  
- bottom dumping w/ water in bailer  
- used water swap method - bailer for bailer  
- tried combination of 2 with adding water to top  
- gone from 7" baler to 6" to be sure not to be  
swabbing hole  
- often can't get to drilling zone with baler just  
often coming out of hole w/ tools  
- spent three days trying everything
- Nov. 2 - Phil Withrow 12 A.M. CALLED AND DISCUSSED PROBLEMS  
- Wayland - burned real bad IN ACCIDENT AT HOME  
- driller wanting to go to work by hour
- Nov. 5 - Phil & Bill Taylor decided to quit the hole  
@ 285'  
Bill Gressett, NMOCC, gave approval to SET & CEMENT  
5 1/2" casing at 285'
- Nov. 6 - welded shoe on 5 1/2"  
- running in 5 1/2 casing  
- cemented - circulated 30 + SXS-pulled out  
9 5/8" joint  
- filled hole back up w/ 3/4yd. red-mix cement

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- filled hole back up w/ 3/4yd. redi-mix cement

- Nov. 8 - Bill Taylor rigging down  
 - Clyde Tidwell & Son - Artesia on way to move their unit on hole  
 - drillers - Clyde & Dennis Tidwell  
 - Pushers - Jack Burroughs & Morris Lucas
- Nov. 12 - Monday - 445' in anhydrite
- Nov. 13 - Tuesday 456' - Top of salt to 490' in salt
- Nov. 14 - Shut down - gone deer hunting
- Nov. 15 - "\*\*\*\*\*Ditto\*\*\*\*\*"
- Nov. 16 - Friday - drilled from 490 to 535' in salt
- Nov. 17 - Sat. - Shut down
- Nov. 18 - Sun. - 535' - 555' Salt & anhydrite <sup>THIN STRINGER OF</sup> & clay
- Nov. 19 - Mon. - 555' - at 2 PM 587' - some blue clay at 583' bottom of salt - 592 then anhydrite
- Nov. 20 - Tuesday 8 AM - drlg. @ 610' in anhydrite. TD 618'
- 8:30 AM - cleaned hole with bailer  
 10:30 AM - started running tubing  
 12 NOON - tubing hung at 614'  
 12:30 - BJ on location  
 - 614' - of 2 7/8" 8 round thread tubing in hole w/ contrailizers & 2 baskets at 570' & 580'  
 - centralizers @ 10' - 280' - 320' - 395' - 425'  
 TD 618' in anhydrite  
 W.B. Weaver - NMOCC on location
- 1:15 PM - BJ cleaned hole with brine before cementing  
 1:30 - 1:37 - Cemented with 100 SX - ~~CIRCULATED~~ EXCESS  
 1:45 - displaced tubing plus 60 feet of annulus with water (4 1/2 bbls total - tubing 3 1/2 and annulus 1 bbl.  
 - Pulled up ~~one~~ joint of 2 7/8" to 583'  
 - hung on ~~slips~~ SLIPS  
 - wait on cement - 3 hours  
 - released rig after laying down joint  
 - waiting on cement  
 - tubing TD - 583'  
 - Baskets at 553 & 543  
 - circulated water behind cement <sup>UP TO</sup> 523' (30' above baskets - 60' above 583')

~~NOV 21~~

Nov. 21, 1979 - Well Fracture - Eugenie #2 to #1  
 - Called NMOCC - bled down #1 well  
 - Equipment - 500 bbl Frac tank  
 2" - makeup water line  
 tank truck to haul water  
 BJ pumper - for Frac

(All Times NM) - Pump down 2 7/8" tubing in #2 well  
 - Water volume in frac tank - 532 bbl.  
 8:20AM 2" - Meter reading - 330, 870 bbls.

8:50 <sup>AM</sup> - BJ Pump truck arrived. Jim Calicoat connected suction to ~~fracture tank~~ ~~operators~~ frac tank ~~and the discharge down tubing of #2~~  
 9:20 - pumped 1/2 bbl - pressure 750# let set  
 9:30 - another 1/2 bbl - pressure @ 1500# - broke thru  
 9:31 - 1/2 BPM - 750#  
 9:34 - 7 BPM - 900#  
 9:36 - 10.5 BPM - 1250#  
 9:40 - started flowing out casing of #1 well @ 35% (after only 60 bbls)  
 9:50 - switched No. 1 from pit to ~~tanks~~ TANKS  
 9:54 - 10.5 BPM - 1250# Flow started to tanks 95%  
 10:05 - slowed to 2 BPM - 500#  
 10:07 - Still @ 2 BPM - 500#  
 10.5 BPM - 800#  
 10:10 - "Ditto"  
 10:13 - NMOCC representatives arrived - Mike Williams  
 Larry Brooks  
 10:15 - Flow to #1 tanks 98%  
 10:36 - Slowed pumps to 2 BPM - 500#  
 10:39 - Slowed pumps to 1 BPM - 400#  
 10:40 - shut BJ down  
 - connected hose from our pump to well #2  
 10:46 - checked pressure in pumphouse on pump discharge -  
 over 200# - letting #1 well bleed down  
 11:25 <sup>PRESSURE</sup> - Reconnected BJ - still 400# on their Gauge.  
 11:30 - Released BJ

*# ROD HOUTCHENS  
 BJ OPERATE*

<u>Water Used</u>	=	<u>Barrels</u>
Frac Tank 532 start - 350 end	=	182
one truck load	=	140
Metered - 331227 end - 330,870	=	<u>457</u>
TOTAL		779 bbls.

#1 well bled down and stopped flowing to tanks  
 Bled #1 well casing to pit and hauled off water  
 Circulated No. 1 well down tubing to be sure tubing had not stopped up. Tubing was clear. Circulated No. 1 well normal - down casing and out tubing with well casing valve pinched on outlet to put 150-160# on cavern with #2 well opened back to frac tank with hose. No. 2 well pressure bled off to frac tank and then to pit. 100% brine then flow stopped completely, therefore no reverse flow pressure connection from No. 1 to No. 2 @ 150#.

- Shut down for Thanksgiving

Nov. 23 - Plan to connect #1 pump to No. 2 and see if we can get circulation. If not get pump truck & pump down #2 and across to No. 1 until low pressure still flowing brine connection established.

Nov. 24 - Got BJ Pump again  
 still no low pressure connection only one pump on unit

11:00 - 1 1/2 BPM 400 # Flow to #1  
 11:24 - 7 1/2 - BPM 400#  
 shut down pressure 300# switched pumps  
 2:00 - Tried 15 bbls with red dye  
 2:08 - Started again - pumped 1700 bbls. *No dye out No. 1.*  
 2:10 - 6 BPM - 650#  
 4:42 - shut down

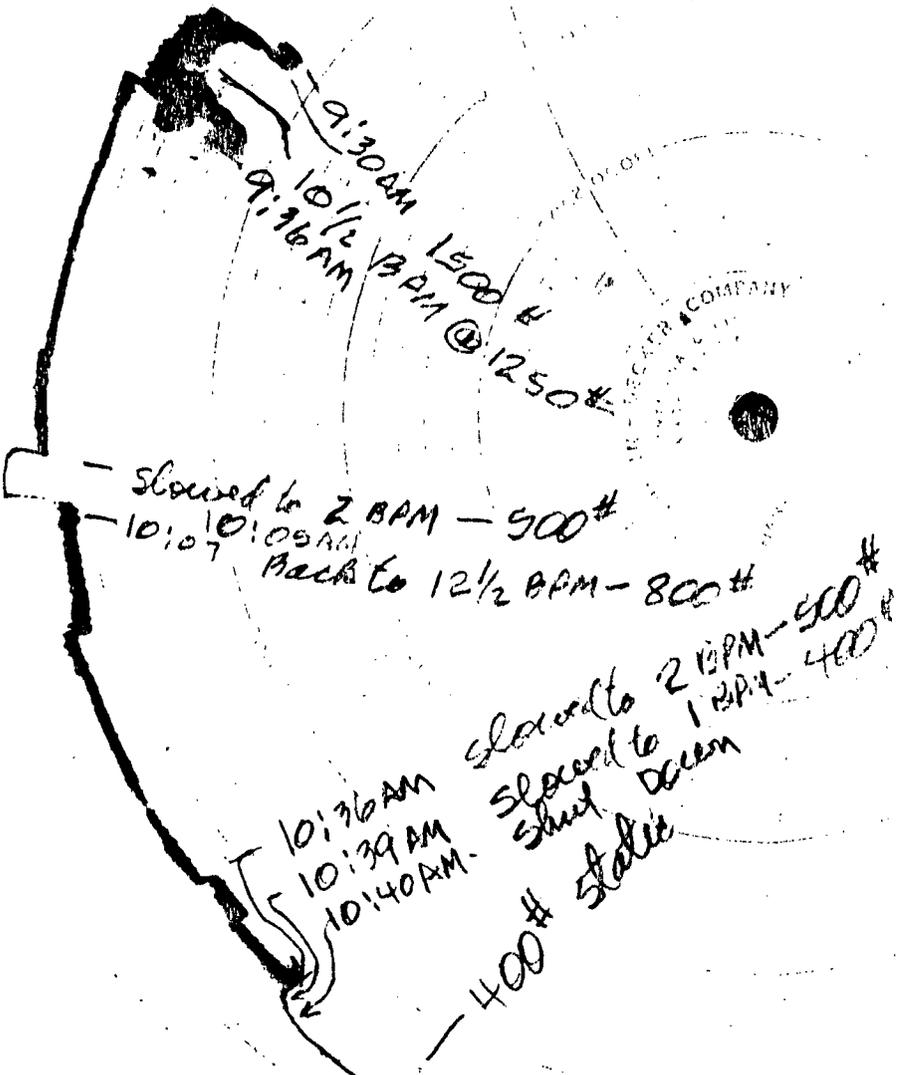
Nov. 25 - Rented a reverse pump from Davis Tool. Connected to Frac Tank by 1 PM static pressure still 275# started pumping 3 BPM @ 440# - return in 2 minutes at #1 - turned brine into tanks @ #1 after 1 hour

static 365# (265?) 97% Brine

- Nov. 25 Cont. - after 3 hours - press 460# static 375# (265?)  
Brine 97% shut down 4 PM
- Nov. 26 - pumped 6 AM to 6 PM 2000 bbls. Circulation to #1  
after 1-2 minutes press 450# Recovered 1000 bbls.  
(800 bbls of 95 + % - 200 of 85%) shut in  
390# static (290?) pumped again through night,  
Shut down 6 AM 11-27-79
- Nov. 27 - Bled 70 bbl. of 97% Brine to tanks in 1 hr.  
12 Noon 118# on No. 1 #2 - 240# (From 250#)  
This gauge found to be 100# too high  
Plan to let bleed down until Wed. Morning  
Hauled off 600 bbls (~~leaker~~) brine  
LIGHT
- Nov. 28 - Wed. Morning  
Flowing good brine  
21" in 1 hr. in 500 bbl. tank (58 gpm)  
20# on tubing flowing 60# shutdown
- Nov. 29 - Still flowing
- Nov. 30 - Bled pressure off No. 2 took BJ valve, etc., off.  
Connected our pump. Pressured No. 2 up to 160 lbs..  
No flow out No. 1 left city pressure on No. 2  
overnight.
- Dec. 1 - 7 AM - trickle of 100% brine into tanks 30# on  
#1 casing & 160# on No. 2
- Dec. 2 - Sun. - Trickle to #1 w/ City press on #2
- Dec. 3 - 1 bbl/hr. overnight  
Phil came to Odessa after reverse pump
- Dec. 4 - replaced 3 valves & 2 seats in pump  
ran 3 PM to 6 PM made 26" in 500 BBL TANK  
= 24 BPH - 17 GPM 100%  
260# pressure - 245# static indicates press.  
drop 15# @ 17 GPM
- Dec. 5 - still 250# static 245\* - pumped 450 bbls in 10 hrs.  
saturation dropped to 95% showed to 22 BPH overnight  
still 95%
- Dec. 6 - Still pumping 260# - static 245\*
- Dec. 7 - Ditto
- Dec. 8 - Ditto
- Dec. 9 - B & E returned diesel engine driven pump to Pyote  
and picked up triplex from PBS yard. Flowed no. 1  
well with only city pressure. Made 200 bbls. of 100%  
overnight.
- Dec. 14 - Triplex not yet connected will hook it up, ~~some~~  
~~at the well site~~ maybe tomorrow.  
Made 500 bbls in #1 overnight w/ city pressure - 100%  
Makes 10-15 BPH pumping @ 160# in #2 out #1  
with centrifugal pump
- Dec. 17 - Triplex connected. Pumped 1.5 BPM: for six hours  
@ 210# - 100% brine - when plastic line broke.

B. F. E

20



W. BECKER COMPANY

Palmer 135

06/11/90

20

INVOICE

WALTER D. BRININSTOOL

2502 SO. CANAL

CARLSBAD, N.M. 88220

Permian Brine Sales & Service, Inc.  
P.O. Box 1591  
Odessa, Texas 79760

June 28, 1978  
Invoice: 6-280

*Carlsbad*

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
30'	9 5/8" Casing	7.00	\$ 700.00
37'	7" Casing	3.00	1,611.00
151.7'	2 7/8" Tubing	.90	1,306.53
			<u>\$ 3,617.53</u>

*14,609*

**ILCO Supply Company, Inc.**

Order Date: ~~2/28/78~~  
6/28/78

NEW AND USED EQUIPMENT -- PIPE AND PIPE THREADING

P. O. BOX 647 TEL. 746-6682  
ARTESIA, NEW MEXICO -- 88210

STORE Artesia

INVOICE NO. 26806

DATE June 30, 1978

CUSTOMER'S ORDER NO.

LEASE

SHIP TO Permian Brine Sales & Service, Inc.  
Box 1591  
Odessa, TX 79760

DELIVERED TO Wayland M Evans

TERMS:

*Carlsbad*

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	7" Female HPC #4 CES Tubing Head	143.50	143.50
207.10 ft.	9-5/8 Casing	5.10	1,056.21
			1,199.71
		4% Tax	47.99
			<u>1,247.70</u>

Yard Phone 392-5888

INVOICE

# ABBOTT BROTHERS

WATER WELL CONTRACTORS

Box 637

HOBBS, NEW MEXICO

No 08965

*Carlsbad*

Date July 1, 1978  
 Lease Salt # 1  
 Ordered By Al Hickerson  
 Rig No. Jeter  
 State New Mexico

Fernian Brine Sales and Service  
P.O. Box 1591  
Odessa, Texas 79760

Terms Net: 8% Interest After 30 Days

To move in and out, \$200.00 each way.	\$ 400.00
189 1/2 hrs. @ 45.00 per hr.	8535.00
Southwest L.P. Gas tickets #4647, 4676, 4685 & 4717.	<u>270.71</u>
	9175.71
3 3/4 % Sales Tax	<u>344.09</u>
	9519.80

*11.6.78*



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**

**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78 NO. 30-20643

DATE OF JOB 6/28/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales & Service Inc. WELL NO. # 1 LEASE # Eugenie Carlsbad

ADDRESS 212 West Fifth St. COUNTY Eddy STATE NM

CITY Odessa STATE Texas FIELD

AUTHORIZED BY 79760 WELL OWNER Same

18560 (OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

	DATE	AM	PM	TIME
TRUCK CALLED	<u>6-28</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>1:45</u>
ARRIVED AT JOB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>2:00</u>
START OPERATION		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>4:28</u>
FINISH OPERATION		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>6:00</u>
RELEASED	<u>6-28</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>6:15</u>
MILES FROM STATION TO WELL				<u>1</u>
BULK TICKET NO.	<u>B-77-21732</u>			

Type Job: Prod Casing Depth: 453 Ft. CEMENT DATA: Bulk  Sacks  06017

Surface  Intermediate  Production  Remedial  Brand C Type C % Gel 3% A7 Admixes

Size Hole: 8" Depth: 663 Ft. 85

Size & Wt. Casing: 7" 23" NEW USED  Depth: 453 Ft. 135 SX

Size & Wt. D. Pipe or Tubing Depth: Ft.

Top Plugs: 1 Type: Rubber Weight of Slurry: 14.8 LBS./GAL. LBS./CU. FT.

Bottom Plugs: Type: Volume of Slurry: 1.32

Pump Tr. No. 1361 Fluid Pumped 18 GAL Sacks Cement Treated With \_\_\_\_\_ % of \_\_\_\_\_

STAGE NO. TOTAL PREV. GALS. JUL 05 1978 MAX. DEPTH 663 FT. MAX. PRESSURE 200 P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: [Signature]  
 AGENT OF OWNER OR CONTRACTOR

RICE REF. NO.	Description	Quantity	Price	Total
201.02	One Cement Pump Unit <u>663'</u>			<u>411.79</u>
261.00	Mileage on Pump Unit <u>@ 120</u>			<u>1 20</u>
298.00	One Guide Shoe Regular			<u>82 00</u>
298.00	One Float Shoe Regular			<u>169 00</u>
298.00	One Centralizer			<u>27 50</u>
273.07	One Top Rubber Plug			<u>33 35</u>
				<u>642 84</u>
				<u>25 71</u>
				<u>668 55</u>

SERVICE REPRESENTATIVE: Warren Allen THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
 JOB TICKET NO. S 77-29291 (WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**BULK MATERIAL INVOICE**  
 TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78 NO. 30-20644

DATE OF JOB 6-28-78 DISTRICT CHARLSBAD NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales & Service Inc WELL NO. A1 LEASE Eugenio CHARLSBAD

ADDRESS 212 WEST FIFTH ST COUNTY EDDY STATE N-MEX

CITY ODESSA STATE TEXAS FIELD

AUTHORIZED BY 79760 WELL OWNER SAME

18560 (OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

Truck & Trailer No.	No. Loads	Truck & Trailer No.	No. Loads	Other Equipment No.	MILES FROM STATION TO WELL:
5339	1			1361	1
JUL 05 1978					SERVICE TICKET NO. <u>5-77-29291</u>

**CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)**

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: [Signature]  
 AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	3-2051	BRAND AND TYPE	QUANTITIES			RATE	PRICE	
			ORDERED	USED	RETURNED		CHARGED	
0815.00		CLASS "C" CEMENT	135			135	4.10	553 50
0840.00		CALCIUM CHLORIDE	4 cwt			4 cwt	14.75	59 00
0890.00		BENTONITE	2.5x			2.5x	4.45	8 90
		Bentonite _____ % Gel. in. _____ Sacks Cement						
0810.00		MIXING SERVICE				143	.62	88 66
		RET'D MTL. CHARGE				20.1 FT		
		WAITING TIME						
0806.03		MILEAGE CHARGE	13090 lbs.			MIN chg	/ton /mile	27 00

SUB TOTAL							737 06	
2999.30 4% New Mexico Gross Receipts Tax							29 48	
							766 54	

SERVICE REPRESENTATIVE: Kelly THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
 SERVICE TICKET NO. **B 77 - 06017** (WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**BULK MATERIAL INVOICE**  
 TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

**ORIGINAL**

DATE 6-30-78 NO. 30-19536

WELL OF OB 6/20/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales & Service Inc. WELL NO. #1 LEASE Eugenie, Carlsbad S  
 ADDRESS 212 West Fifth St. COUNTY Eddy STATE NM  
 CITY Odessa STATE Texas FIELD

AUTHORIZED BY 8560 (OFFICE USE ONLY) WELL OWNER Same

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

MAIL REMITTANCE TO:  
 BJ Hughes Inc.  
 P.O. Box 3834  
 Main Post Office  
 Dallas, Texas 75285

Truck & Trailer No.	No. Loads	Truck & Trailer No.	No. Loads	Other Equipment No.	MILES FROM STATION TO WELL:
<u>3626 8607</u>	<u>1</u>			<u>1313</u>	<u>1</u>
<u>JUN 26 1978</u>					SERVICE TICKET NO. <u>5-77-29281</u>

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: X Pauline Williams  
 AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	BRAND AND TYPE	QUANTITIES				RATE	PRICE
		ORDERED	USED	RETURNED	CHARGED		
<u>815.00</u>	<u>Class "C" Cement</u>	<u>170</u>			<u>170</u>	<u>4.10</u>	<u>697 00</u>
<u>810.00</u>	<u>MIXING SERVICE</u>				<u>170</u>	<u>.62</u>	<u>105 40</u>
	<u>RET'D MTL. CHARGE</u>						
	<u>WAITING TIME</u>						
<u>806.03</u>	<u>MILEAGE CHARGE</u>	<u>lbs. 1</u>	<u>miles</u>	<u>Min. Charge</u>	<u>/ton /mile</u>		<u>27 00</u>
							<u>829 40</u>
							<del><u>924 80</u></del>
<u>-999.30 49% New Mexico Gross Receipts Tax</u>							<u>33 18</u>
							<u>862 58</u>

OFFICE REPRESENTATIVE: DAVIS THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Pauline Williams  
 TICKET NO. B 77 - 21797 (WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY.  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**  
**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78 NO. 30-19535

DATE OF JOB 6/20/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales & Service, Inc. WELL NO. #1 LEASE Eugenie Carlsbad

ADDRESS 212 West Fifth St. COUNTY Eddy PARISH STATE NM

CITY Odessa STATE Texas FIELD

AUTHORIZED BY 70720 WELL OWNER Same

8560  
 (OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

TRUCK CALLED	DATE <u>6-20</u>	AM <u>9:30</u>	PM
ARRIVED AT JOB		AM <u>10:00</u>	PM
START OPERATION		AM <u>11:00</u>	PM
FINISH OPERATION		AM <u>11:45</u>	PM
RELEASED	<u>6:20</u>	AM <u>12:00</u>	PM
MILES FROM STATION TO WELL	<u>1</u>		
BULK TICKET NO.	<u>877-217970</u>		

Type Job: Casing Depth: 317 Ft. CEMENT DATA: Bulk  Sacks

Surface  Intermediate  Production  Remedial  Sacks Brand Type % Gel Admixes

Well Hole: 12-1/2 Depth: 317 Ft. 170 C Neat

Size & Wt. Casing: 9-5/8 NEW USED  Depth: Ft.

Size & Wt. D. Pipe or Tubing Depth: Ft.

Plug Plugs: / Type: JUN 26 1978 Weight of Slurry: 14.8 LBS./GAL. LBS./CU. FT. LBS./GAL. LBS./CU. FT.

Bottom Plugs: / Type: Volume of Slurry: 1.32

Pump Tr. No. 1313 Fluid Pumped 120 22.5 Sacks Cement Treated With % of

AGE NO. TOTAL PREV. GALS. MAX. DEPTH 317 FT. MAX. PRESSURE 150 P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: Adrian L. ...  
 AGENT OF OWNER OR CONTRACTOR

CE REF. NO.	DESCRIPTION	AMOUNT
201.02	One Cement Pump Unit	297 61
261.00	Mileage on Pump Unit	1 20
298.00	One Guide Shoe Regular	143 00
298.00	One Stop Rih g	6 00
298.00	3 Centralizers @ 35.00 each	105 00
	<b>SUB TOTAL</b>	<b>552 81</b>
99930	4% New Mexico Sales Receipt Tax	22 11
		<b>574 92</b>

SERVICE REPRESENTATIVE: Warrn Allen THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Adrian L. ...  
 JOB TICKET NO. 677 00001 (WELL OWNER OPERATOR OR AGENT)

JOHNSON BUILDING SYSTEMS

RT. 4, BOX 740 381-4920

ODESSA, TEXAS 79763

*not posted*

TO Permian Basin Sales & Service SHIP TO Mr. Hickerson will pickup  
 ADDRESS Box 1591 ADDRESS \_\_\_\_\_  
 CITY Odessa, Texas 79760 CITY Carlsbad, New Mexico

REQ. NO. \_\_\_\_\_ FOR Carlsbad Station DATE REQUIRED \_\_\_\_\_ TERMS 30 HOW SHIP Their truck DATE 7-13-76

QUANTITY ORDERED	QUANTITY RECEIVED	PLEASE SUPPLY ITEMS LISTED BELOW	PRICE	UNIT
1				
2	one	Storage building		
3		Two doors in the 12' side		
4		brown metal with white trim		
5		One sky light no floor	885.	00
6			35.	40 Tax
7			920.	40
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

*Pd. CK. 08018*

**IMPORTANT** PLEASE SEND COPIES OF YOUR INVOICE WITH ORIGINAL BILL OF LADING

OUR ORDER NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.

PLEASE NOTIFY US IMMEDIATELY IF YOU ARE UNABLE TO SHIP COMPLETE ORDER BY DATE SPECIFIED.

*Wayne Whitaker* PURCHASING AGENT

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U.S.G.S.	
LAND OFFICE	
OPERATOR	

**RECEIVED**  
NEW MEXICO OIL CONSERVATION COMMISSION

MAY 28 1978

O. C. C.  
ARTEBIA, OFFICE

30-015-72574  
Form C-101  
Revised 1-4-65

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Brine Water Well SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name <b>Eugenia</b>	
2. Name of Operator <b>Permian Brine Sales &amp; Service, Inc.</b>		9. Well No. <b>1</b>	
3. Address of Operator <b>P. O. Box 1591, 212 West 5th St., Odessa, Texas 79760</b>		10. Field and Pool, or Wildcat <b>Wildcat</b>	
4. Location of Well UNIT LETTER <b>M</b> LOCATED <b>995</b> FEET FROM THE <b>South</b> LINE AND <b>641</b> FEET FROM THE <b>West</b> LINE OF SEC. <b>17</b> TWP. <b>22S</b> RGE. <b>27E</b> NMPM		12. County <b>Eddy</b>	
19. Proposed Depth <b>1,450</b>		19A. Formation <b>Salt</b>	
20. History or C.T. <b>C.T.</b>		21. Elevations (show whether DT, RT, etc.) <b>3,126' G.L.</b>	
21A. Kind & Status Plug. Bond <b>one well - \$5,000</b> <b>No. 610003738 8</b>		21B. Drilling Contractor <b>Not Selected Yet</b>	
22. Approx. Date Work will start <b>June 10, 1978</b>			

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12"	10-3/4"	54#	335'	100 sx.	Circulated
10"	8-5/8"	36#	550'	120 sx.	Circulated

We propose to drill a 12" cable tool hole through the fresh water, hang 10-3/4" casing at 335' and circulate cement. Then drill a 10" hole inside the 10-3/4" casing to the top of the salt at approximately 500', hang 8-5/8" casing and circulate cement. Then drill an 8" hole through the upper rock salt section and hang 2-7/8" tubing in open hole for circulation.

*City of Carlsbad notified*

APPROVAL VALID  
FOR 90 DAYS UNLESS  
DRILLING COMMENCED,  
EXPIRES 9-12-78

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed W. A. Grossett Title President Date 5-19-78

(This space for State Use)

APPROVED BY W. A. Grossett TITLE SUPERVISOR, DISTRICT II DATE JUN 12 1978

CONDITIONS OF APPROVAL, IF ANY:

1. Cement must be circulated to surface behind casing

all

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-85

All distances must be from the outer boundaries of the Section

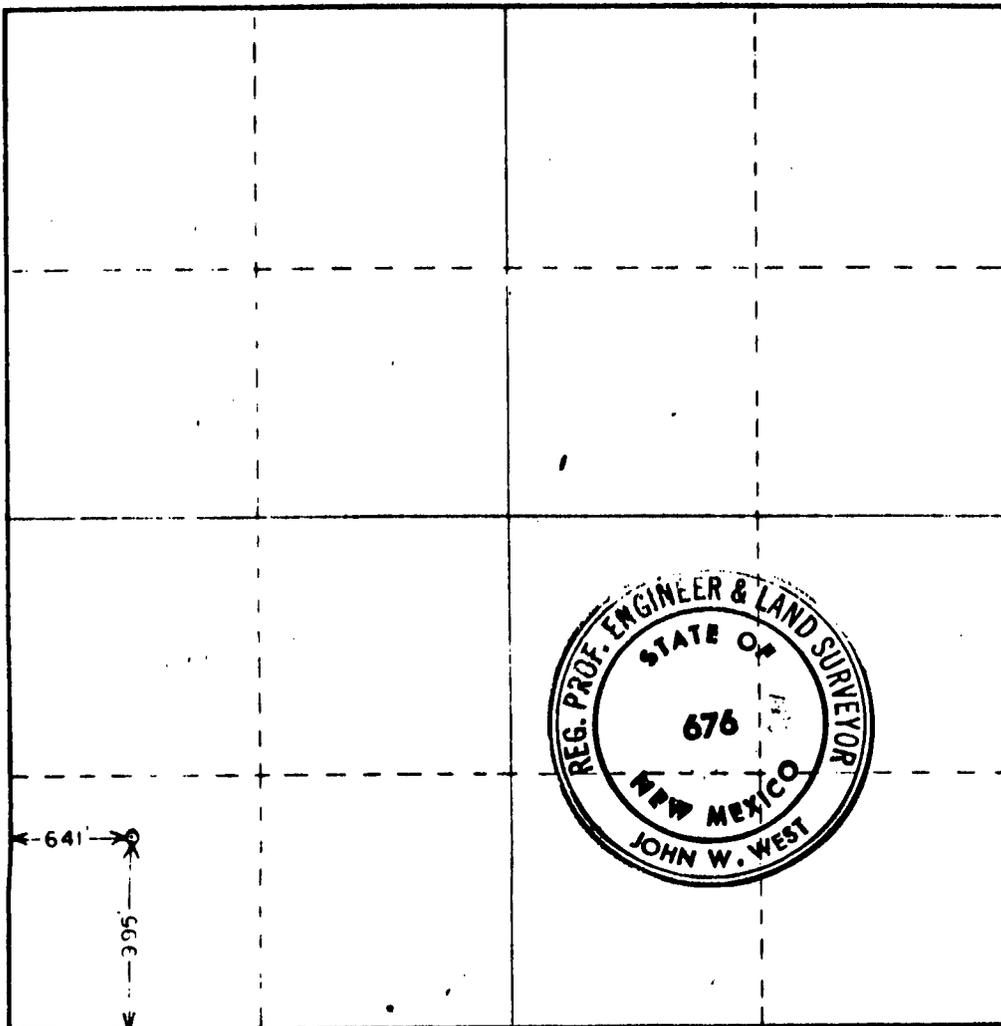
Operator <b>Permian Brine Sales &amp; Service, Inc.</b>		License <b>Salt Water Eugene</b>		Well No. <b>1</b>
Initial Letter <b>M</b>	Section <b>17</b>	Township <b>22 South</b>	Range <b>27 East</b>	County <b>Eddy</b>
Actual Location of Well: <b>995</b> feet from the <b>South</b> line and <b>641</b> feet from the <b>West</b> line				
Ground Level Elev <b>3126.4</b>	Producing Formation	Pool	Dedicated Acreage <b>A res</b>	

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.

*John W. West*  
Signature  
President

Company  
*Permian Brine Sales & Service*  
Date  
*5-26-78*

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.

May 15, 1978

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

*John W. West*  
Signature

Certificate No. **John W. West 676**  
**Ronald J. Eidson 3239**

File - NMOCC  
**RECEIVED**  
 Carlsbad well

Form C-103  
 Supersedes Old  
 C-102 and C-103  
 Effective 1-4-65

NEW MEXICO OIL CONSERVATION COMMISSION  
 JUL 20 1978

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FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	1/1

O. C. C.  
 ARTEBIA, OFFICE

5a. Indicate Type of Lease  
 State  Fee   
 5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO REFINISH OR PLUG BACK TO A DIFFERENT RESERVOIR.  
 (SEE APPLICATION FOR PERMIT - FORM C-101) FOR SUCH PROPOSALS.

1. OIL WELL  GAS WELL  OTHER: **Brine Water Well**

2. Name of Operator  
**Permian Brine Sales & Service, Inc.**

3. Address of Operator  
**P.O. Box 1591, 212 West 5th St., Odessa, Texas 79760**

4. Location of Well  
 UNIT LETTER **M** **995** FEET FROM THE **South** LINE AND **641** FEET FROM  
 THE **West** LINE, SECTION **17** TOWNSHIP **22 South** RANGE **27 East** N.M.P.M.

6. Elevation (Show whether DF, RT, GR, etc.)  
**3126 GL**

7. Unit Agreement Name

8. Farm or Lease Name  
**Eugenie**

9. Well No.  
**1**

10. Field and Foot, or Wildcat  
**Wildcat**

12. County  
**Eddy**

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK

TEMPORARILY ABANDON

FULL OR ALTER CASING

OTHER

PLUG AND ABANDON

CHANGE PLANS

SUBSEQUENT REPORT OF:

REMEDIAL WORK

COMMENCE DRILLING OPNS.

CASING TEST AND CEMENT JOBS

OTHER

ALTERING CASING

PLUG AND ABANDONMENT

11. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Used 9 5/8 - 40# - 349.4' Depth  
 Used 7" - 23# - 456' Depth

170 sacks cement circulated  
*waited on cement 48 hours*  
 135 sacks cement circulated,  
 with 4 sacks calcium chloride  
 and 2 sacks Bentonite.  
*waited on cement 18 hours*  
 A.H.

*6-29-78 drilled out plug and bailed to 658*  
*No water intrusions*

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

SIGNED *A. L. Dickerson* TITLE *President* DATE *7-19-78*

APPROVED BY *W. A. Gussert* TITLE *SUPERVISOR, DISTRICT II* DATE *JUL 26 1978*

CONDITIONS OF APPROVAL, IF ANY:  
*[Signature]*



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

JERRY APODACA  
 GOVERNOR

NICK FRANKLIN  
 SECRETARY

P.O. DRAWER DD  
 ARTESIA, NEW MEXICO 88211  
 (505) 746-4861

July 21, 1978

Permian Brine Sales & Service, Inc.  
 P.O. Box 1591  
 Odessa, Texas 79760

Re: Eugenie  
 #1-M-17-22-27  
 Eddy County, NM

Gentlemen:

We are returning the enclosed Forms C-103 on the subject well for additional information.

Please show the WOC time and pressure or bail test on each string of casing in accordance with Rule 107.

If you have any questions concerning this matter, please feel free to call upon me.

Sincerely yours,

*W. A. Gressett*

W. A. Gressett  
 Supervisor, District II

WAG:ro

Enclosure

7/24/78

*Mr. Gressett -*  
*I have added information desired*

*Thanks*

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-118  
Effective 1-4-85

All distances must be from the outer boundaries of the Section

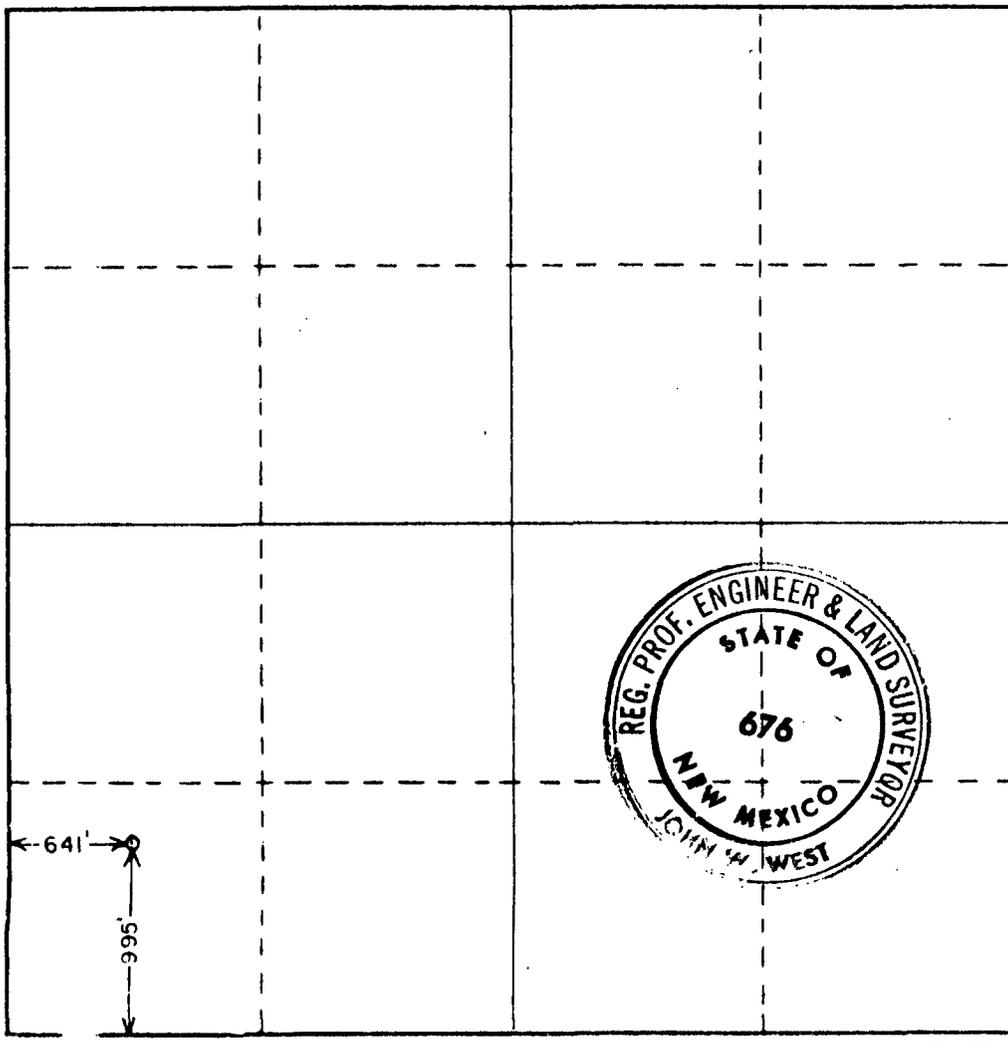
Operator <b>Permian Brine Sales &amp; Service, Inc.</b>		Lease <b>Salt Water</b>		Well No. <b>1</b>
Unit Letter <b>M</b>	Section <b>17</b>	Township <b>22Suth</b>	Range <b>27East</b>	County <b>Eddy</b>
Actual Footage Location of Well: <b>995</b> feet from the <b>South</b> line and <b>641</b> feet from the <b>West</b> line.				
Ground Level Elev. <b>3126.4</b>	Producing Formation	Pool	Dedicated Acreage:  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.

*John W. West*  
Name  
President  
Position  
Permian Brine Sales & Service, Inc.  
Company  
5-26-78  
Date

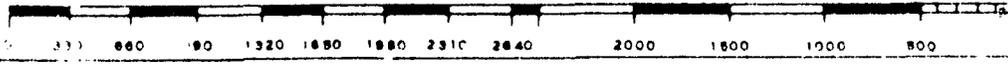
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

May 15, 1978

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

*John W. West*  
Certificate No. **John W. West 676**  
**Ronald J. Eidson 3239**



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LAND OFFICE	
OPERATOR	

Form C-101  
Revised 11-68

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

12. Indicate Type of Lease  
 State  Fee   
 13. Indicate Lease No.

17. TYPE OF WELL  
 OIL WELL  GAS WELL  GRY  OTHER  **Brine Water Well**  
 18. TYPE OF COMPLETION  
 REV. WFL.  WORK OVER  DEEPEN  PLUG BACK  DIFF. REPAIR  OTHER

14. Indicate Name of Well  
**Eugenie**  
 15. Field No. of Well  
**1**

2. Name of Operator  
**Permian Brine Sales & Service, Inc.**  
 3. Address of Operator  
**P. O. Box 1591, 212 West 5th St., Odessa, Texas 79760**

16. Field No. of Well  
**Wildcat**

4. Location of Well  
 UNIT LETTER **M** LOCATED **995** FEET FROM THE **South** LINE AND **641** FEET FROM  
 THE **West** LINE OF SEC. **17** TWP. **22S** RGE. **27E**

15. Date Spudded **6-14-78** 16. Date T.D. Reached **6-28-78** 17. Date Compl. (Ready to Prod.) **6-30-78** 18. Elevations (D.F., R.R., H.F., G.R., etc.) **3126 G.L.** 19. Elev. Casinghead **3129**

20. Total Depth **663** 21. Plug Base T.D. **587** 22. If Multiple Strings, How Many  
 23. Intervals Drilled By  
 Rotary Tools  
 Cable Tools **All**

24. Producing Interval(s), of this completion - Top, Bottom, Name  
**456 Top of Salt to 592 Bottom of Salt**  
 25. Was Directional Survey Made  
**No**

26. Type Electric and Other Logs Run  
**Cable Tool Drillers Log**  
 27. Was Well Cored  
**No**

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB. FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	40	349.4	12"	170 sx. - circulated	None
7"	23	456	9"	135 sx. - circulated	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-7/8	587	No

31. Perforation Record (Interval, size and number)  
**None**

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.  
 DEPTH INTERVAL  
 AMOUNT AND KIND MATERIAL USED  
**None**

33. PRODUCTION **DNA**

Date First Production  
 Production Method (Flowing, gas lift, pumping - Size and type pump)  
 Well Status (Prod. or Shut-in)

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)  
 Test Witnessed by

35. List of Attachments  
**Drillers Log**

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_





**BJ-HUGHES Inc.**  
A SUBSIDIARY OF HUGHES TOOL COMPANY  
P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**  
**INVOICE** TERMS: NET 20TH PROX. STATEMENTS ON REQUEST ON  
PAYABLE AT LONG BEACH, CALIFORNIA  
DATE 6-30-78 NO. 30-2064

DATE OF JOB <u>6/28/78</u>	DISTRICT <u>Carlsbad</u>	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	CUSTOMER'S ORDER NO.
CUSTOMER <u>Permian Brine Sales &amp; Service Inc.</u>	WELL NO. #1	LEASE <u>Eugenie Carlsbad</u>		
ADDRESS <u>212 West Fifth St.</u>	COUNTY <u>Eddy</u>	STATE <u>NM</u>		
CITY <u>Odessa</u> STATE <u>Texas</u>	FIELD	WELL OWNER <u>Same</u>		
AUTHORIZED BY <u>79760</u>	(OFFICE USE ONLY)			

**48560**

PERMIAN BRINE SALES & SERVICE INC  
212 WEST FIFTH STREET  
ODESSA TEXAS 79760

	DATE	TIME
TRUCK CALLED	<u>6:28</u>	<u>AM 1:4</u>
ARRIVED AT JOB		<u>AM 2:0</u>
START OPERATION		<u>AM 4:28</u>
FINISH OPERATION		<u>AM 6:00</u>
RELEASED	<u>6:28</u>	<u>AM 6:15</u>
MILES FROM STATION TO WELL		<u>1</u>
BULK TICKET NO.	<u>B-77-2173</u>	

Type Job: <u>Prod Casing</u>	Depth: <u>453</u> Ft.	CEMENT DATA: Bulk <input checked="" type="checkbox"/> Sacks <input type="checkbox"/>	<u>06017</u>
Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input checked="" type="checkbox"/> Remedial <input type="checkbox"/>	Size Hole: <u>8"</u>	Depth: <u>663</u> Ft.	Brand <u>C</u> Type <u></u> % Gel <u>3% A7</u>
Size & Wt. Casing: <u>7" 23"</u> NEW USED <input checked="" type="checkbox"/>	Depth: <u>453</u> Ft.	<u>135 SX</u>	
Size & Wt. D. Pipe or Tubing	Depth: <u></u> Ft.		
Top Plugs: <u>1</u> Type: <u>Rubber</u>	Weight of Slurry: <u>14.8</u>	LBS./GAL.	LBS./CU. FT.
Bottom Plugs:	Type: <u></u>	Volume of Slurry: <u>1.32</u>	
Pump Tr. No. <u>1361</u> Fluid Pumped <u>50 / 8 GAL</u>	Sacks Cement Treated With <u></u>	% of <u></u>	
STAGE NO.	TOTAL PREV. GALS. <u>JUL 05 1978</u>	MAX. DEPTH <u>663</u> FT.	MAX. PRESSURE <u>200</u> P.S.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall be to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: [Signature]  
AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	Description	Amount
0201.02	One Cement Pump Unit <u>663'</u>	<u>411.79</u>
0261.00	Mileage on Pump Unit <u>@ 1.20</u>	<u>1.20</u>
<del>298.00</del>	<del>One Guide Shoe Regular</del>	<del>82.00</del>
0298.00	One Float Shoe Regular	<u>169.00</u>
0298.00	One Centralizer	<u>27.50</u>
0273.07	One Top Rubber Plug	<u>33.35</u>
	<u>SUB TOTAL</u>	<u>642.84</u>
0999.30	<u>4% New Mexico Gross Receipts Tax</u>	<u>25.71</u>
		<u>668.55</u>

SERVICE REPRESENTATIVE: W. Allen  
JOB TICKET NO. **S 77-29291**

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
(WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**  
**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA  
 DATE 6-30-78 NO. 30-17535

DATE OF JOB 6/20/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.  
 CUSTOMER PERMIAN Brine Sales & Service, Inc. WELL NO. #1 LEASE Eugenie Carlsbad 58  
 ADDRESS 212 West Fifth St. COUNTY Eddy STATE NM  
 CITY Odessa STATE Texas FIELD  
 AUTHORIZED BY 8560 WELL OWNER Sams

(OFFICE USE ONLY)  
**PERMIAN BRINE SALES & SERVICE INC**  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

TRUCK CALLED	DATE <u>6-20</u>	AM <u>9:30</u>
ARRIVED AT JOB		PM <u>10:00</u>
START OPERATION		PM <u>11:00</u>
FINISH OPERATION		PM <u>11:45</u>
RELEASED	<u>6:20</u>	PM <u>12:00</u>
MILES FROM STATION TO WELL	<u>1</u>	
BULK TICKET NO.	<u>871-21797</u>	

Type Job: Casing Depth: 347 Ft. CEMENT DATA: Bulk  Sacks   
 Surface  Intermediate  Production  Remedial  Sacks Brand Type % Gal Adm  
 Size Hole: 12-1/2 Depth: 947 Ft. 170 C Neat  
 Size & Wt. Casing: 9-5/8 NEW USED  Depth: Ft.  
 Size & Wt. D. Pipe or Tubing Depth: Ft.  
 Top Plugs: / Type: JUN 26 1978 Weight of Slurry: 14.8 LBS./GAL. LBS./CU. FT.  
 Bottom Plugs: / Type: Volume of Slurry: 1.32  
 Pump Tr. No. 1313 Fluid Pumped 170 22.5 Sacks Cement Treated With % of

PAGE NO. TOTAL PREV. GALS. MAX. DEPTH 317 FT. MAX. PRESSURE 150 P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)  
 The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: Alie C. [Signature] AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	DESCRIPTION	PRICE
201.02	One Cement Pump Unit	201.02
261.00	Mileage on Pump Unit	1.20
298.00	One Guide Shoe Regular	143.00
298.00	One Stop Rth g	6.00
298.00	3 Centralizers @ 35.00 each	105.00
	<b>SUB TOTAL</b>	<b>552.81</b>
99930	4% New Mexico Sales Receipt Tax	22.11
		<b>574.92</b>

SERVICE REPRESENTATIVE: Warrn Allen THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Alie C. [Signature] (WELL OWNER OPERATOR OR AGENT)

# CARLSBAD BRINE STATION LAYOUT

SCALE - 1" = 40'

FORNEY

BURIED  
PIPE LINE

FRESH WATER

1.22 ACRE PROPERTY

TICKET LEAN-TO

BRINE  
WELL

PITS

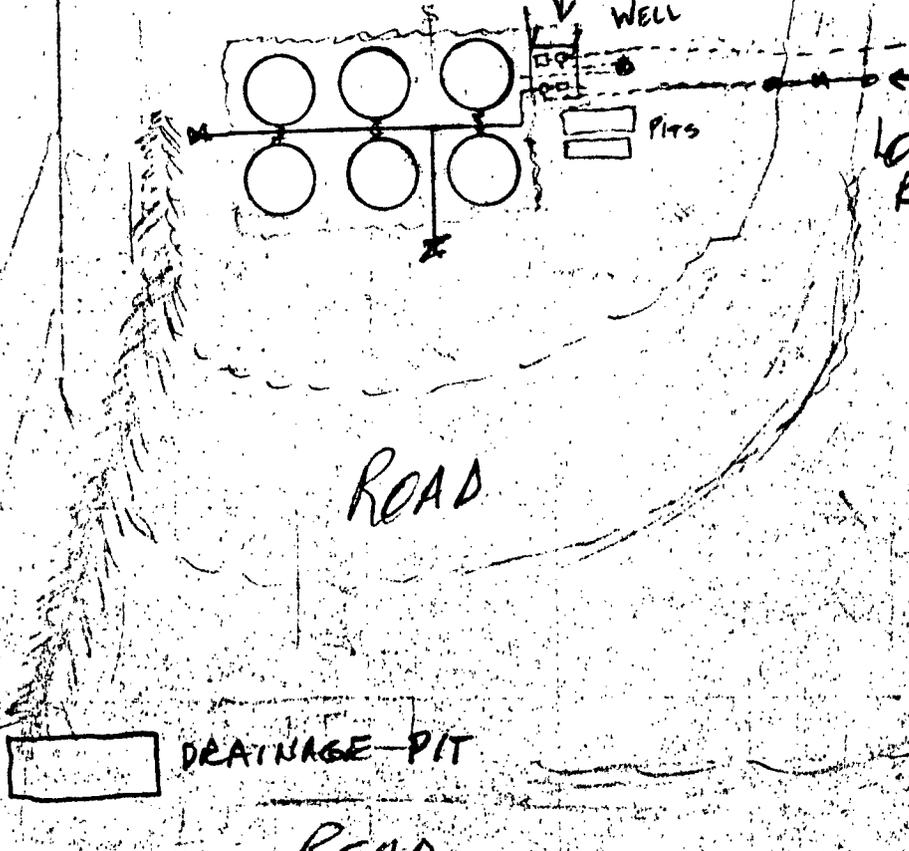
LOADING  
RACK

ROAD

DRAINAGE PIT

ROAD

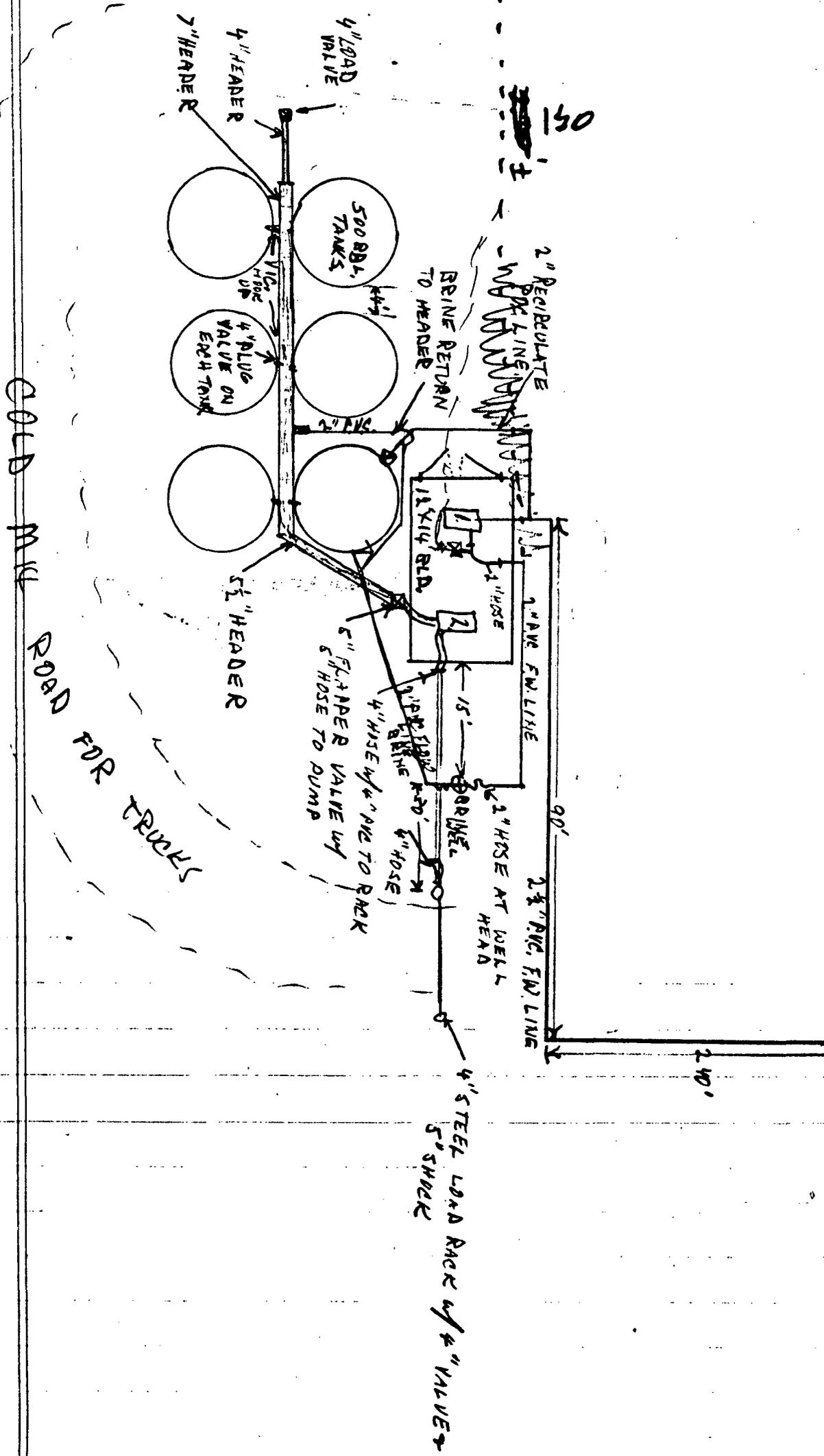
CANAL



CARLSBAD

CITY WATER TAP  
2" PLUG VALVE  
2" CHECK VALVE

300' ±



GOLD MINE

ROAD FOR TRUCKS

NOT TO SCALE

Carlsbad

▲ 958 - 310

1-8-79

3' SB to 466  
14" SB to 480'

▲ 456

TOP OF SALT

ROCK & FILL

543  
549 } DECP

555 } 2' LEDGE-LINE

572 } 9' LEDGE-SHALE

ROCK & FILL

587 - BIT

592 - BTM. SALT

SALT

LEDGE

SALT

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

### III. SITE CHARACTERISTICS

#### A. Soils

This section does not apply to this injection and discharge facility. There are no open pits or open ponds.

#### B. Geology

1. Stratigraphic Section (drilling logs) - See attached EXHIBIT #1 and EXHIBIT #2.
2. Geological Structures including Faults - There are no known faults. See attached Geological map.
3. Depth & Lithologic description of Rock - See attached Map E #1 and Map E #2 along with EXHIBITS #1 & #2.

#### C. Hydrology

1. Vertical & Lateral Limits of ground water - See attached Hydrological Map.
2. Injection wells - See attached Hydrological Map.
3. Flooding potential - The flood potential seems to be remote. We have normal rainfall and no recorded flooding. See description under Section I of the General Description.
4. Depth & Quality ground water affected if spill or leak occurred - the property in question has no fresh water wells for injection processes. Fresh water is supplied by the City of Carlsbad thru mainline and billed to us monthly.
5. Analysis of Water - Being a city water system it is unlikely we would experience a change in makeup of the water.
6. Chemical Analysis - See attached Unichem International Water Analysis report.

### III. SITE CHARACTERISTICS

- ✓ A. Soils (This section need only be submitted if unlined surface impoundments are proposed or in use. Additional ground water monitoring may be required for facilities using unlined surface impoundments. If impoundments do not adequately protect ground water, they will not be approved for use.)

1. Texture class
2. Soil Conservation Service (SCS) assessment of capability/limitations
3. Percolation test

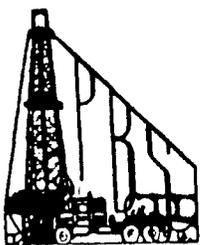
B. Geology (5-203.C.3)

- ✓ 1. Stratigraphic section (drilling log) of well(s) on the site, indicating depth, thickness and chemical characteristics of water-bearing strata 3-106.C.3,6; 5-205.A.3.j). Also give the lithology, stratigraphy, and fracture pressure of the receiving formation and confining zones (5-205.A.3.i).
2. Maps and cross-sections detailing the geology and geologic structures of the local area, including faults (known or suspected) (5-102.B.1.d.4.; 5-210.B.6 & 7). Are the faults known conduits or barriers to ground water flow?
3. Depth to and lithologic description of rock at base of alluvium below the discharge site, if such information is available (3-106.C.6)

Continued next  
page

C. Hydrology (5-203.C.3)

1. Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site, the position of such ground water within this area relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation (5-102.B.1.d.3.; 5-210.B.5).
2. A map showing the injection well(s) which are to be constructed and the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines, quarries, residences and roads, and any other pertinent surface features that are within a quarter-mile radius of the well or well field. (5-102.B.1.d.2.; 5-202.B.3; 5-210.B.2.)
3. Flooding potential of the site (3-106.C.4).
4. Depth to and quality of ground water most likely to be affected by spills/leaks (3-106.C.3). Analysis should include sodium ( $\text{Na}^+$ ), potassium ( $\text{K}^+$ ), calcium ( $\text{Ca}^{++}$ ), magnesium ( $\text{Mg}^{++}$ ), bicarbonate ( $\text{HCO}_3^-$ ), carbonate ( $\text{CO}_3^{=}$ ), chloride ( $\text{Cl}^-$ ), sulfate ( $\text{SO}_4^{=}$ ), and nitrate ( $\text{NO}_3^-$ ) TDS.
5. Analysis or description of water used for injection (if different from III.C.4, above) (3-106.C.1; 5-203.C.1). Include density, corrosiveness and temperature (5-205.A.3.g), as well as above constituents. Analyses to be submitted at least quarterly (5-207.C.1), unless the source is such that a change in makeup is very unlikely (e.g. a city water system).
6. Chemical analysis or description of discharge to the surface (if facility is presently in operation) (3-106.C.1). Analysis should include those constituents indicated in III.C.4. Once in operation, reports to be submitted quarterly (5-207.C.1).



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1891

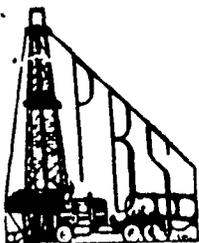
JUNE 30, 1978

EXHIBIT No. 1

EUGENIE No. 1 - Sec 17-T22S-R27E

Eddy County, New Mexico

0 to 46	-----	TOP SOIL WITH GRAVEL
46 to 58	-----	SAND AND GRAVEL
58 to 62	-----	LIME
62 to 65	-----	RED BED
65 to 76	-----	PED SAND
76 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY W/GRAVEL AND SAND
163 to 170	-----	RED BED
170 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BED
225 to 237	-----	ANHYDRITE & RED BED
237 to 252	-----	LIME & ANHYDRITE W/SOME GYPSUM
252 to 268	-----	RED BED
268 to 285	-----	LIME W/GYPSUM STRINGERS
285 to 305	-----	GYPSUM W/SOME RED BED
305 to 320	-----	GYPSUM & ANHYDRITE
320 to 328	-----	PED BED
328 to 360	-----	ANHYDRITE W/LIME & SAND
360 to 410	-----	RED ROCK & ANHYDRITE
410 to 430	-----	ANHYDRITE W/SOME LIME
430 to 437	-----	GRAY LIME (HARD) & ANHYDRITE
437 to 445	-----	ANHYDRITE
445 to 456	-----	ANHYDRITE & GRAY LIME
456 to 555	-----	SALT
555 to 567	-----	SALT & SOME LIME
567 to 576	-----	SALT & BLUE SHALE VERY LITTLE
576 to 592	-----	SALT
592 to 663	-----	ANHYDRITE



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0631

P. O. BOX 1591

November 30, 1979

EXHIBIT NO. 2

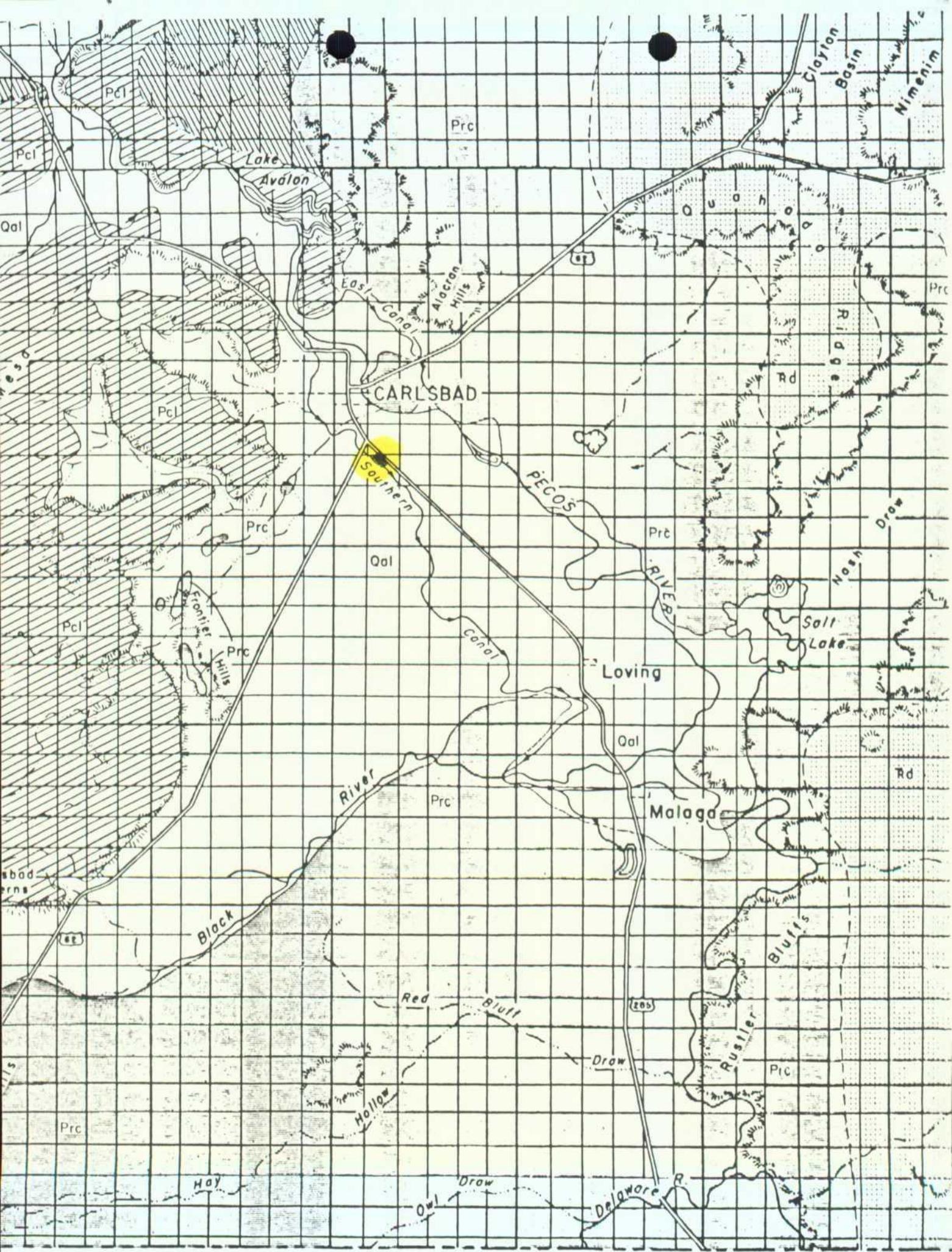
EUGENIE No.2 - Sec 17-T22S-R27E

PAGE 1

Carlsbad, New Mexico

0 to 18	-----	TOP SOIL WITH GRAVEL
18 to 19	-----	CAVE
19 to 46	-----	CALICHE & GRAVEL
46 to 50	-----	SAND & GRAVEL
50 to 58	-----	GRAVEL & LIME
58 to 64	-----	LIME
64 to 65	-----	RED BEDS
65 to 78	-----	RED SAND
78 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY, GRAVEL & SAND
163 to 171	-----	RED BEDS
171 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BEDS
225 to 237	-----	ANHYDRITE & RED BEDS
237 to 252	-----	LIME & ANHYDRITE W/ SOME
252 to 268	-----	RED BED
268 to 280	-----	LIME W/GYP. STRINGERS
280 to 285	-----	ANHYDRITE
285 to 305	-----	GYP. W/SOME RED BEDS
305 to 320	-----	GYP. & ANHYDRITE
320 to 330	-----	RED BEDS
330 to 360	-----	ANHYDRITE W/LIME & SAND

360 to 410-----HARD ROCK & ANHYDRITE  
410 to 430-----ANHYDRITE W/SOME LIME  
430 to 437-----GRAY LINE (HARD) & ANHYDR  
437 to 445-----ANHYDRITE  
445 to 456-----ANHYDRITE & GRAY LIME  
456 to 568-----SALT  
568 to 576-----SALT & BLUE SHALE STRINGE  
576 to 592-----SALT  
592 to 610-----ANHYDRITE

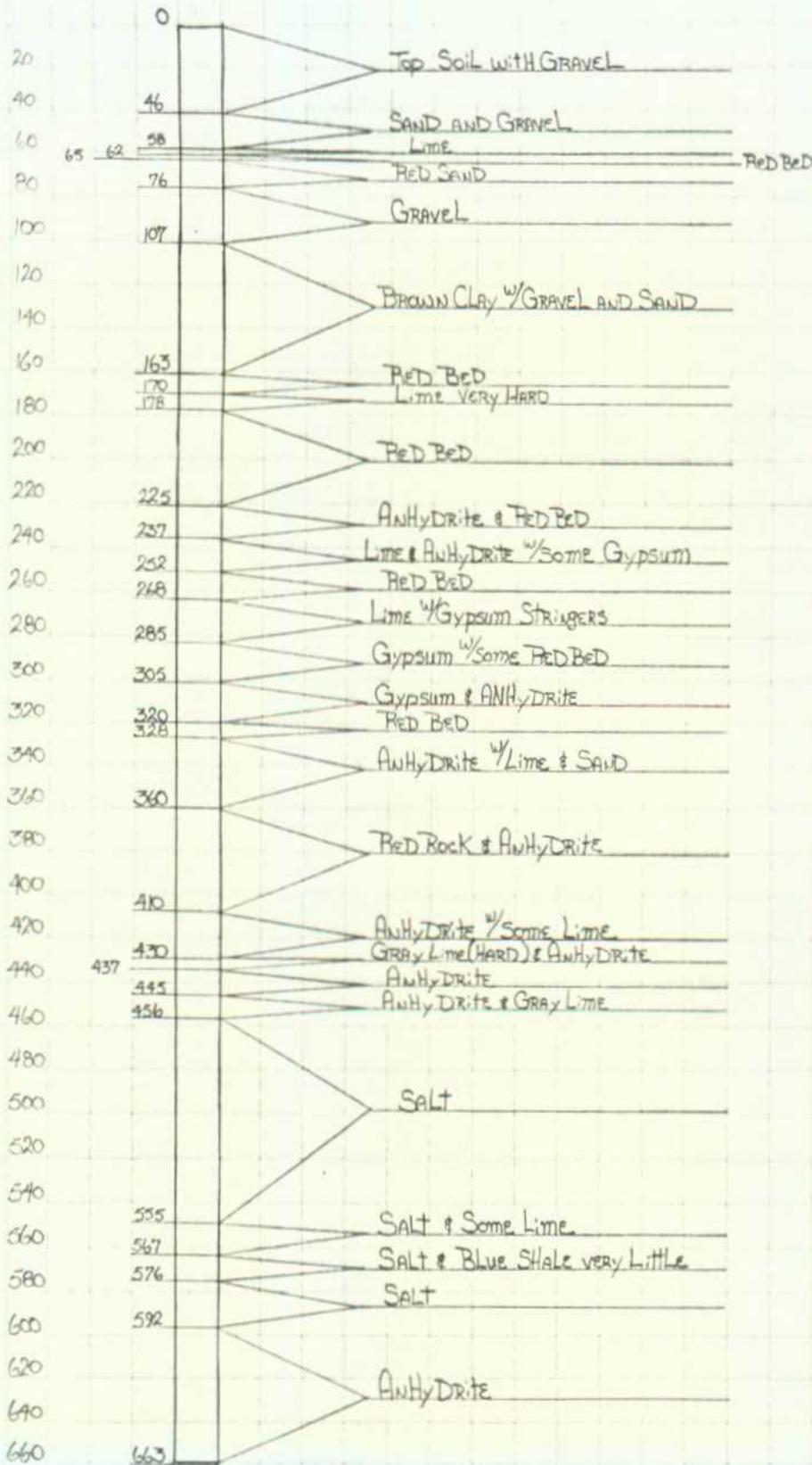


R. 25 E.      R. 26 E.      R. 27 E.      R. 28 E.      R. 29 E.

Geological Map

# Eugenie 1 - discharge well

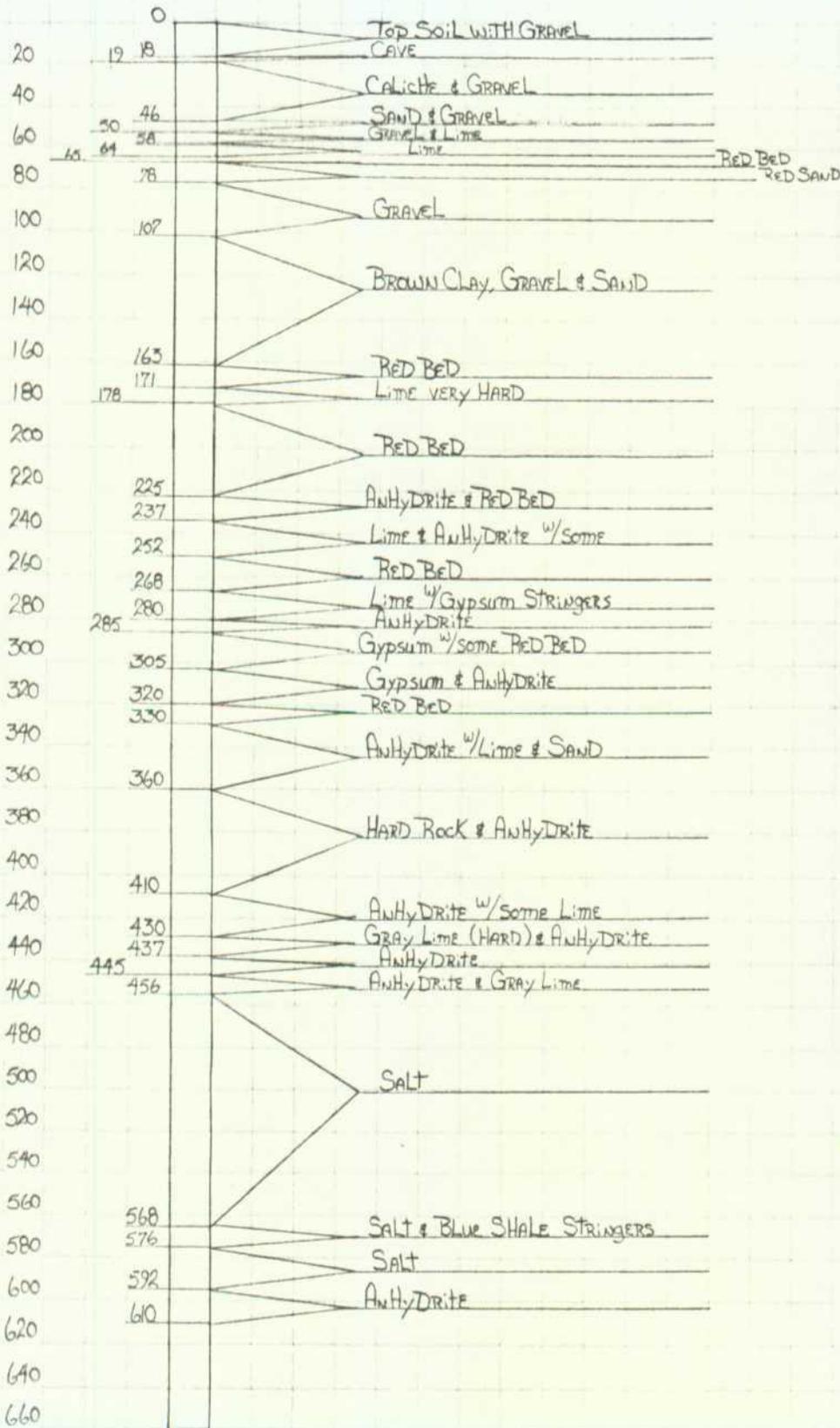
1/4" = 20 Foot



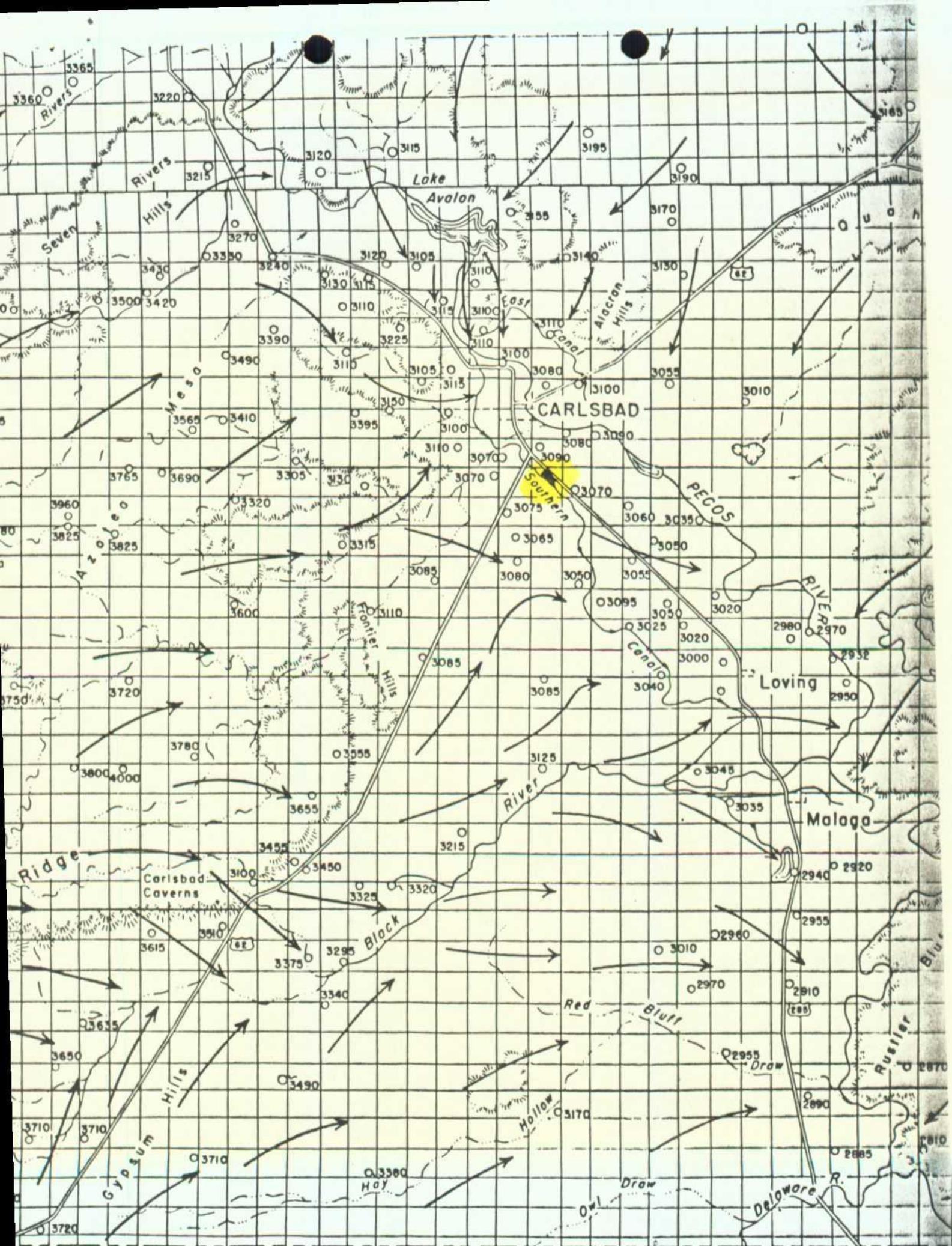
MAP E #1

Discharge Well

Eugenie 2 - injection well  
 1/4" = 20 Foot



MAP E #2  
 Injection Well



R. 24 E.      R. 25 E.      R. 26 E.      R. 27 E.      R. 28 E.



Home Office 707 N. Leach, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

Company B & E, Inc.

Field \_\_\_\_\_

Lease Brine Well #1

Sampling Date 2-12-80

Type of Sample \_\_\_\_\_

WATER ANALYSIS

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	92.00	1,840
Magnesium (Mg++)	6.00	72
Sodium (Na+) (CALCULATED)	5,306.19	121,989
Iron (Total)		0.30
Bicarbonate (HCO <sub>3</sub> -)	3.90	238
Carbonate (CO <sub>3</sub> -)	Not	Found
Hydroxide (OH-)	Not	Found
Sulphate (SO <sub>4</sub> -)	84.59	4,063
Chloride (Cl-)	5,315.70	188,500
<i>Chloride as NaCl 20 25.8</i>	<i>5,315.70</i>	<i>310,968</i>
Total Dissolved Solids		316,702
6.69 pH c 68 °F <i>10.0377 @ 68°F</i>		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as Ca CO <sub>3</sub>	98.00	4,900
Carbonate Hardness as CaCO <sub>3</sub> (temporary)	3.90	195
Non-Carbonate Hardness as CaCO <sub>3</sub> (permanent)	94.10	4,705
Alkalinity as CaCO <sub>3</sub>	3.90	195
Specific Gravity c 68° F	1.205	

\* mg/l = milligrams per Liter  
 \* me/l = milliequivalents per Liter

CaCO<sub>3</sub> S. I. positive @ 86°F (0.51)

CaSO<sub>4</sub> S. I. negative (0.81)

## Possible Combinations

	<u>ml/l</u>	<u>mg/l</u>	<u>ppm</u>	<u>%</u>
Calcium Bicarbonate $\text{Ca}(\text{HCO}_3)_2$	3.9	312	259	0.025%
Calcium Sulfate $\text{CaSO}_4$	78.59	5,344	4,435	0.4435%
Magnesium Sulfate $\text{MgSO}_4$	6.0	361	300	0.0300%
Calcium Chloride $\text{CaCl}_2$	9.51	528	438	0.0438%
Sodium Chloride $\text{NaCl}$	5,306.91	310,410	257,602	25.7602%

Weight/gal = 10.04 @ 68°F

If this sample were evaporated - the probable solids concentrations would be as follows: in order of their solubilities.

### 1 l of water evaporated

Iron Oxide $\text{Fe}_2\text{O}_3$	0.54 mg	— %
Calcium Carbonate $\text{CaCO}_3$	195.00 mg	0.06 %
Calcium Sulfate $\text{CaSO}_4$	5344 mg	1.69 %
Magnesium Sulfate $\text{MgSO}_4$	361 mg	0.11 %
Calcium Chloride $\text{CaCl}_2$	528 mg	0.17 %
Sodium Chloride $\text{NaCl}$	310,410 mg	97.97 %

### 100 bbls of water evaporated

Iron Oxide	0.019 #
Calcium Carbonate	6.825 #
Calcium Sulfate	187.040 #
Magnesium Sulfate	12.635 #
Calcium Chloride	18,480 #
Sodium Chloride	10,864.350 #
<u>Total solids</u>	<u>11,088.999 #</u>

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

### IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

#### A. During Operation

1. No known wells exist that have been plugged or abandoned within required radius.
2. No requirement to limit pressure.
3. Mechanical Integrity - 1500 lbs to 300 lbs. Down pressure due to brine section taking fresh water. Pumped from #2 to #1 with 55 lbs. pressure.
4. ✓ Measuring inflow - inflow is determined by city commercial fresh water meter. Outflow is determined by number of bbls shown on ✓ daily tickets hauled from storage tanks.
5. ✓ Volume injected to volume extracted - with 100 bbls of fresh water injected, we extract about 86-90 bbls of brine water. Loss of fresh water is due to displaced salt crystals. Approx. 8-12% loss.
6. ✓ Quality Sampling - quality of fresh - City of Carlsbad fresh water from city mainline. Quality of brine determined by using hydrometer.
7. ✓ Leak detection system - visually inspected each day. Underground ✓ fiberglass tank in the case of an overflow (precaution we have taken).
8. ✓ Detect deterioration ground water quality - We have no access to existing water wells. Fresh water wells still exist according to Hydrological Map in Section 8 and Section 16. See Hydrological Map.
9. ✓ Prevention of spills & leaks - physically monitored by driver while opening and closing valves when loading.
10. ✓ Contingency plans - In the event this could happen, the existing would be totally circulated with cement and plugged. We would refer you to our Cement & Casing Program on Eugenie #2.
11. ✓ We would definitely commit to notifying the EID within 48 hours if a leak or spill caused contamination.

#### B. Post Operational Commitment

*Equipment & Supplies*  
*Fresh Water*  
*Brine Supply Wells*  
*Salt Water Disposal*

## **B & E, INC.**

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

*Vacuum Trucks*  
*Winch Truck*  
*Kill Truck*  
*Frac Tanks*

### IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

continued

1. Plugging and abandonment - Please refer to the attached and approved Pluggine Bond dated 6-6-78 from the State of New Mexico, Energy and Minerals Dept. Oil Conservation Division.
2. Pond Closure - We do not have an open pit or open pond.

#### IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

##### A. During Operation

1. Identify those abandoned wells/shafts or other conduits in the area of review which penetrate the injection zone and which, through being improperly sealed, completed or abandoned, provide a pathway for migration of contaminants. Detail what corrective action (e.g. plugging open holes) will be taken to prevent any movement of contaminants into ground water of less than/equal to 10,000 mg/l TDS through such conduits due to the proposed injection activity (5-203.A, B.1). Include completion and plugging records of such wells/shafts (5-203.C.5.).
2. In the event that operations have begun before information comes to light regarding such a conduit that will require plugging, injection pressure will be required to be limited to avoid movement of contaminants through such a conduit into protected ground water (5-203.B.2).
3. Mechanical integrity testing, such as:
  - a. pressure test prior to start of operation (5-204.B.1.a).
  - b. monitoring of annulus pressure (5-204.B.1.b; 5-204.C.)
4. Means and locations for measuring inflow to and outflow from the pond/tank (locations may be indicated on the schematic required under I.C) (3-106.C.2, 5).
5. Compare volumes of fresh water injected to volume of fluid extracted to detect underground losses (3-107.A.1). May be done by recording injection pressure and either flow rate or volume every two weeks, or by metering and daily recording of fluid volumes (5-207.C.2).
6. Location and design of site(s) and method(s) for sampling for quality of fresh water and discharge fluids at facility (3-106.C.5).
7. Leak detection system under pond: drains, lysimeters, other? (3-107.A.1,3,9).
8. Monitoring to detect any deterioration of ground water quality in area; do you have access to water well(s) within \_\_\_\_\_ (distance) down-gradient from the facility, in order to detect variation in quality? If not, may need to put in observation wells (3-107.A.2,9; 5-205.C); and make periodic quality reports (5-207.C.2.b,c). Also, identify wells in the area for which the potential contamination from your brine operation is very low, which can serve to indicate "background" levels of water quality parameters in the area.
9. How will spillage/leakage be prevented during truck loading or at transfer points within the facility?

*Continued Next Page*

10. Contingency plans (3-107.A.10) in the event of:

- a. leak/spill from surface facilities;
- b. loss of mechanical integrity of injection/production well. How will ground water be protected from contamination or treated if contamination has occurred (1-203.A.2)?

11. If there is a leak, spill or other unanticipated discharge of a significant amount of water contaminants on the surface or underground at your facility, will you commit to notifying the EID Ground Water Section within 48 hours (1-203.A.1., 5-208.B.1)?

B. Post-operational commitments required prior to plan approval

1. Plugging and abandonment

- a. Plug and cap wells. Procedure must conform to that specified in 5-209, and be approved in advance.
- b. Demonstrate financial ability (5-210.B.17) to:
  - i. plug well and prepare for proper abandonment;
  - ii. restore protected ground water if contaminated by your brine extraction activities.
  - iii. undertake measures necessary to prevent contamination of groundwater having 10,000 mg/l or less TDS, after cessation of operations.

2. Pond closure

- a. Remove liner, if any, from pit (3-107.A)
- b. Remove salt crust from unlined pit and surrounding area (3-107.A.4, 11)
- c. Restore area to original contours or take other appropriate measures to prevent post-operational contamination.



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

June 6, 1978

JERRY APODACA  
GOVERNOR

NICK FRANKLIN  
SECRETARY

POST OFFICE BOX 8088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87505  
(505) 827-8434

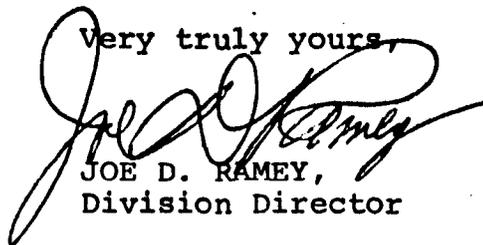
Mr. A. L. Hickerson  
Permian Brine Sales &  
Service, Inc.  
P. O. Box 1591  
Odessa, Texas 79760

Re: \$5,000 One-Well Plugging Bond  
Permian Brine Sales & Service,  
Inc., Principal  
United States Fire Insurance  
Company, Surety  
641' FWL and 995' FSL of  
Sec. 17, T-22-S, R-27-E,  
Eddy County, Depth: 5,000 ft.  
Bond No. 610 003738 8

Dear Mr. Hickerson:

The Oil Conservation Division hereby approves the  
above-captioned one-well plugging bond.

Very truly yours,



JOE D. RAMEY,  
Division Director

JDR/LT/dr

cc: Oil Conservation Division  
Artesia, New Mexico

United States Fire Insurance  
Company  
P. O. Box 2639  
Dallas, Texas 75221

Equipment & Supplies  
Fresh Water  
Brine Supply Wells  
Salt Water Disposal

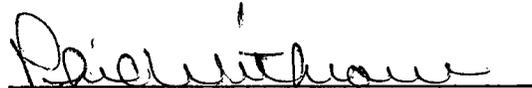
## B & E, INC.

South Y  
P. O. Box 756  
Carlsbad, N.M. 88220  
Phone (505) 885-6663

Vacuum Trucks  
Winch Truck  
Kill Truck  
Frac Tanks

### V. SIGN-OFF REQUIREMENT

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.



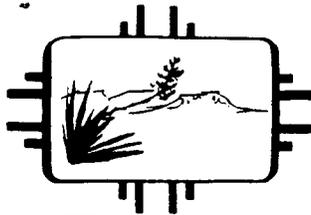
Phil Withrow  
Manager - Owner  
B & E, Inc.

---

V. SIGN-OFF REQUIREMENT

- Responsible official must certify as follows:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment (5-101.H.2).



NEW MEXICO  
HEALTH AND ENVIRONMENT  
DEPARTMENT

Post Office Box 968  
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS  
Governor

LARRY GORDON  
Secretary

CARLA L. MUTH  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 25, 1987

Mickey Monk  
B & E, Inc.  
P.O. Box 2292  
Hobbs, NM 88240

RE: Discharge Plan DP-323

Dear Mr. Monk:

In the summer of 1983, the Water Quality Control Commission (WQCC) transferred its delegation of authority from the Oil Conservation Division (OCD) to the Environmental Improvement Division (EID) to administer discharge plans for brine extraction facilities. On December 18, 1982, the discharge plan DP-323 for the B & E, Inc., Carlsbad brine station in Carlsbad located in Eddy County was approved by the Director of the OCD. This discharge plan was required and submitted pursuant to WQCC Regulations and it was approved for a period of up to five years. The approval will expire on December 18, 1987.

If you are still discharging at this facility and wish to continue discharging, please submit your application for renewal of plan approval, including a complete Part 5 discharge plan amendment/renewal, as quickly as possible. The necessary forms for making those submissions are enclosed. Submitting your application in a timely fashion will aid the EID in processing your discharge plan prior to the expiration date. Also, please indicate whether you have made or intend to make any changes in your discharge.

Section 5-101.G. of the WQCC regulations assures that those who are in compliance with their approved discharge plan on the date of its expiration, and who submit a complete application for a discharge plan renewal at least 180 days before the expiration date, which in this case would be June 15, 1987, will remain in compliance until the application for discharge plan renewal has been approved or disapproved. Applications for renewals submitted after June 15, 1987 may result in a discharge not in compliance, if EID is not provided sufficient time to process the application. Therefore, the EID recommends you submit an application for discharge plan renewal which include and adequately address all of the information necessary for evaluation of a new discharge plan well in advance of June 15, 1987.

Mickey Monk  
February 25, 1987  
Page 2

If you are no longer discharging and discharge plan renewal is not needed, please notify this office.

If you have any questions, please do not hesitate to contact me at the address listed on the letterhead or telephone number 827-2902.

Sincerely,



Kevin Lambert  
Hydrologist  
Ground Water Section/Underground  
Injection Control

KL:egr

Enclosures

cc: Garrison McCaslin, EID District IV Manager, Roswell

P 307 966 854

**RECEIPT FOR CERTIFIED MAIL**  
NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

* U.S.G.P.O. 1985-480-794	Sent to	Mickey Monk
	Street and No.	P.O. Box 2292
	P.O., State and ZIP Code	Hobbs, NM
	Postage	S
	Certified Fee	
	Special Delivery Fee	

BRINE STATION INSPECTION FORM

DATE 12/8 1986 EID INSPECTOR Lambert Koschal BAKER  
FACILITY B+E Carlsbad LOCATION Carlsbad T225 R27E  
FACILITY REP ON SITE Mickey Monk COUNTY Eddy Sec.17  
DP-323 LARRY Elmore

WELL OPERATION

WELL IS INJECTING: X THROUGH ANNULUS THROUGH TUBING  
SOURCE OF FRESH WATER City of Carlsbad  
TRACE INJECTION/PRODUCTION LINES

WELL HEAD PRESSURE PSIG PUMP PRESSURE 135 PSIG  
LEAKS AROUND WELL OR PUMP None

STORAGE AREA

FOR PONDS:  
GENERAL LINER APPEARANCE

AMOUNT OF FREEBOARD  
ANY SIGN OF OVERFLOW OR LEAKS  
LEAK DETECTION SYSTEM FLUIDS DRY

FOR TANKS:  
GENERAL APPEARANCE Total 4,000 bbls 4 tanks Silver tanks  
LABELED PLAINLY Black X YES NO New tanks and lines  
BERMED TO PREVENT RUNOFF YES X NO  
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH

NUMBER OF TANKS FOR BRINE 4 FRESH WATER 1

LOADING AREA

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE X YES NO  
ANY EVIDENCE OF RECENT SPILLAGE YES X NO  
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM YES NO  
ANY EVIDENCE OF OIL SPILLING/DUMPING YES X NO

No evidence of spills Drivers are required to stay with rig

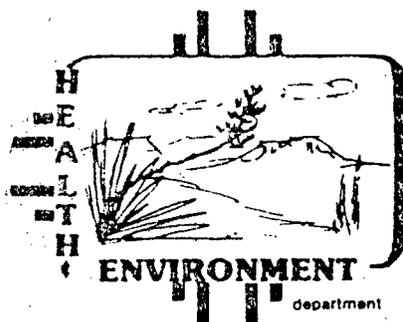
MONITORING WELLS

DEPTH FT STATIC WATER LEVEL FT BELOW CASING  
SAMPLED THIS VISIT YES NO TEMP Ec

COMMENTS B+E Carlsbad 5 to 6 yrs in operation

TONEY ANAYA  
GOVERNOR

DENISE O. FORT  
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968

(505) 984-0020

April 15, 1986

Roger E. Yarbro  
Marek & Yarbro, P.A.  
P.O. Drawer AA  
Carlsbad, New Mexico 88221-AA

RE: B & E Brine

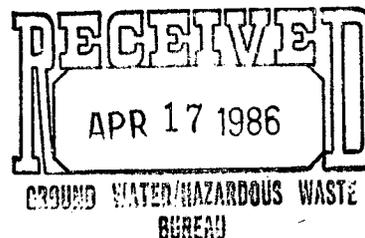
Dear Mr. Yarbro:

Thank you for your letter of April 11, 1986. I have reviewed the materials enclosed with that letter and have concluded that the two wells, Eugenie #1 and #2, are presently in compliance with WQCC regulations. Discharge plans for those wells were obtained from the Oil Conservation Division in 1982 pursuant to Part III of WQCC regulations. This occurred just prior to the adoption of Part V of WQCC regulations which now govern in-situ extraction and effluent disposal wells. The notifications of the transfer in ownership were submitted after the transfer in ownership had occurred. Those notifications of transfer in ownership therefore did not comply with the terms of § 3-III of WQCC regulations. However, since the Oil Conservation Division accepted those notifications, the transfers were effective, and those two wells therefore, are in compliance. However, please be advised that the current discharge plans expire in 1987, and a discharge plan application under part V of WQCC regulations must be submitted prior to the present plan's expiration. In closing, I would like to express my appreciation of B & E's voluntary compliance efforts.

Sincerely,

Duff Westbrook  
Division Attorney

cc: Paige Morgan



LAW OFFICES

MAREK & YARBRO, P.A.

110 WEST SHAW - P. O. DRAWER AA  
CARLSBAD, NEW MEXICO 88221-AA

TELEPHONE

THOMAS L. MAREK  
ROGER E. YARBRO  
M. JANE SHULER  
JOHN R. FUNK

11 April 1986

Duff Westbrook, Esq.  
Division Attorney  
Environmental Improve  
P.O. Box 968  
Santa Fe, New Mexico 87

Re: B & E, Inc., - Eug  
Salt Water Injecti

Dear Mr. Westbrook:

I would like to express my appreciation for the cooperation I have received from your office regarding the above referenced matter. As explained to you in our meeting of 10 April 1985, B & E, Inc., and this office are very interested in seeing that B & E, Inc., comes into compliance with any and all rules and regulations of the EID. Therefore, we will work with your office in any way possible to see that B & E, Inc., is in compliance with your rules and regulations.

It is my understanding, from the above referenced meeting, that you now believe that B & E, Inc., is acting in good faith and desires to cooperate with your office. Further, it is my understanding that there exists a good possibility that because of the OCC accepting the filing of the transfer of ownership that B & E, Inc., is in compliance and properly operating the old discharge plan. In that regard, enclosed please find the OCC filings and letters from the OCC to Permian Brine Sales, Inc., regarding the discharge plan. For your information, we have checked with the OCC office in Santa Fe and one of the files was checked out and the other file had very little in it. The information being supplied to you comes from the Artesia file.

It is my further understanding from our meeting, that if B & E, Inc., cannot operate under the current discharge plan, then the EID will work with B & E, Inc., and permit us to file a discharge plan so long as we proceed in good faith.

If I have misunderstood any of the above, please inform me so we can see we are complying with your regulations. Further, at your earliest possible convenience, please inform me as to whether or not we need to file a new discharge plan for the subject wells. I would also like to point out to you that we have filed a discharge plan for the Loco Hills operation, and even if we are permitted to continue operation of the subject wells under the old discharge plan, we realize that a new one must be filed by

Steve - Here's the stuff from B & E.  
Looks like OCC accepted the transfer  
& that the 2 wells are in compliance  
under ~~their~~ their Part III discharge  
plan. I'm going to write back to that  
effect if ~~they~~ no objections from  
you all. Call me if any comments  
Duff

Duff Westbrook, Esq.  
Environmental Improvement Division  
11 April 1986  
Page 2

December 1987. I would expect that once we have the experience of the Loco Hills operation under our belt, we will then be in a position to proceed with filing a new plan for the subject wells.

Again, thank you for your consideration, cooperation and assistance.

Sincerely,



Roger E. Yarbrow

tb

Enclosure

cc: Mickey Monk  
Phil Withrow



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION

*Carl...  
 Ferguson*

BRUCE KING  
 GOVERNOR

POST OFFICE BOX 2088  
 STATE LAND OFFICE BUILDING  
 SANTA FE, NEW MEXICO 87501  
 (505) 827-2434

December 18, 1982

*Carl...*

Permian Brine Sales, Inc.  
 P. O. Box 1591  
 Odessa, Texas 79760

Re: GWB-5 Discharge Plan

Gentlemen:

The discharge plan submitted for the brine production facility and two in site extraction wells located in Section 17, Township 22 South, Range 27 East, NMPM, Eddy County, New Mexico, is hereby approved.

The discharge plan was submitted pursuant to section 3-106 of the Water Quality Control Commission regulations. It is approved pursuant to Section 109. Please note subsections 3-109.E and 3-109.F which provide for possible future amendment of the plan. Please also be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

Yours very truly,

*Joe D. Ramey*  
 JOE D. RAMEY,  
 Director

JDR/jc

NOV 14 1984

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

O. C. D. ARTESIA, CHIEF

OPERATION PERMITS OFFICE

B & E, Inc.

Address P. O. Box 2292 Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box)

New Well, Recombination, Change in Ownership, Change in Transporter of: Oil, Casinghead Gas, Dry Gas, Condensate

Other (Please explain)

REC'D

NOV 14 1984

If change of ownership give name and address of previous owner Permian Brine Sales, Box 1519, Odessa, Texas 79760

II. DESCRIPTION OF WELL AND LEASE

Lease Name Eugenie, Well No. 1, Pool Name Wildcat, Location: Unit Letter M, 641 Feet from The W Line and 995 Feet from The S Line of Section 17 Township 22 S Range 27 E NMPM, Eddy County

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil or Condensate, Name of Authorized Transporter of Casinghead Gas or Dry Gas, If well produces oil or liquids, give location of tanks.

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X), Date Spudded, Date Compl. Ready to Prod., Total Depth, P.B.T.D., Elevations, Name of Producing Formation, Top Oil/Gas Pay, Tubing Depth, Perforations, Depth Casing Shoe, TUBING, CASING, AND CEMENTING RECORD

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks, Date of Test, Producing Method, Length of Test, Tubing Pressure, Casing Pressure, Choke Size, Actual Prod. During Test, Oil-Bbls., Water-Bbls., Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D, Length of Test, Bbls. Condensate/MMCF, Gravity of Condensate, Testing Method, Tubing Pressure (Shut-In), Casing Pressure (Shut-In), Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Jack R. Williams, Supervisor - Cortale, Date: 11/08/84

OIL CONSERVATION DIVISION

APPROVED NOV 16 1984, BY Original Signed By Leslie A. Clements, TITLE Supervisor District II

This form is to be filed in compliance with RULE 111. If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111. All sections of this form must be filled out completely for allowable on new and recompleted wells. Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition. Separate Forms C-104 must be filed for each pool in multiply recompleted wells.

OIL CONSERVATION DIVISION

RECEIVED BY SANTA FE, NEW MEXICO 87501

MAR 29 1985

REQUEST FOR ALLOWABLE AND AUTHORITY TO TRANSPORT OIL AND NATURAL GAS

OPERATOR	B & E, Inc.
PRODUCTION OFFICE	ARTESIA, OFFICE

1. Operator **B & E, Inc.**  
 Address **P. O. Box 2292 Hobbs, New Mexico 88240**

Reason(s) for filing (Check proper box)

New Well	<input type="checkbox"/>	Change in Transporter of:
Recompletion	<input type="checkbox"/>	Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>
Change in Ownership	<input checked="" type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>

If change of ownership give name and address of previous owner: **Permian Brine Sales, Box 1519, Odessa, Texas 79760**

II. DESCRIPTION OF WELL AND LEASE

Lease Name	<b>Eugenie</b>	Well No.	<b>2</b>	Well Name, including formation	<b>Wildcat - Brine Water Well</b>	Kind of Lease	State, Federal or Fee	Lease ID
Location	Unit Letter <b>M</b> <b>497'</b> Feet From The <b>W</b> Line and <b>1288'</b> Feet From The <b>S</b>							
Line of Section	<b>17</b>	Township	<b>22-S</b>	Range	<b>27-E</b>	NMPM	<b>Eddy</b>	County

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
If well produces oil or liquids, give location of tanks.	Unit, Sec., Twp., Rge. Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Reservoir	Other
Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.R.T.D.					
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Inj	Tubing Depth					
Perforations	Depth Casing Shoe							
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT					

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed 10% allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Inlet. Condensate/MCF	Gravity of Condensate
Testing Method (pump, back pr.)	Tubing Pressure (Start-End)	Casing Pressure (Start-End)	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

*Jack P. Williams*  
 Controller  
 March 25, 1985

OIL CONSERVATION DIVISION

APPROVED: **APR 2 1985**

BY: **Original Signed By**  
**Leslie A. Clements**  
 TITLE: **Supervisor District II**

This form is to be filed in compliance with N.M.S. 1982.  
 If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with N.M.S. 1982.  
 All sections of this form must be filled out completely for allowable on new and re-completed wells.  
 Fill out only Questions I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of ownership.  
 Separate Forms C-104 must be filed for each pool in multiply completed wells.

REC'D

APR 0 4 1985

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

*Fugate*

JOHN KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-2434

December 18, 1982

*Carleton*

Permian Brine Sales, Inc.  
P. O. Box 1591  
Odessa, Texas 79760

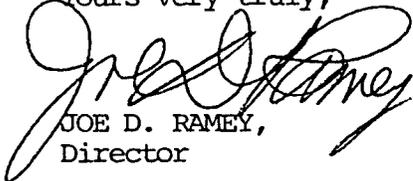
Re: GWB-5 Discharge Plan

Gentlemen:

The discharge plan submitted for the brine production facility and two in site extraction wells located in Section 17, Township 22 South, Range 27 East, NMPM, Eddy County, New Mexico, is hereby approved.

The discharge plan was submitted pursuant to section 3-106 of the Water Quality Control Commission regulations. It is approved pursuant to Section 109. Please note subsections 3-109.E and 3-109.F which provide for possible future amendment of the plan. Please also be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

Yours very truly,



JOE D. RAMEY,  
Director

JDR/jc

RECEIVED BY SANTA FE NEW MEXICO 87501

MAR 29 1985

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

O. C. D. ARTESIA, OFFICE

Operator: B & E, Inc.

Address: P. O. Box 2292 Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box)

New Well, Recombination, Change in Ownership, Change in Transporter of: Oil, Casinghead Gas, Dry Gas, Condensate

Other (Please explain)

If change of ownership give name and address of previous owner: Permian Brine Sales, Box 1519, Odessa, Texas 79760

REC'D

APR 4 1985

II. DESCRIPTION OF WELL AND LEASE

Lease Name: Eugenie, Well No.: 2, Well Name: Wildcat Brine Water Well, Kind of Lease: State, Federal or Fee: Fee, Location: M 497', W 1288', Line of Section: 17, Township: 22-S, Range: 27-E, NMPM, Eddy County

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil or Condensate, Name of Authorized Transporter of Casinghead Gas or Dry Gas, Address (Give address to which approved copy of this form is to be sent), If well produces oil or liquids, give location of tanks, Unit, Sec., Twp., Rge., Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X), Oil Well, Gas Well, New Well, Workover, Deepen, Plug Back, Date Spudded, Date Compl. Ready to Prod., Total Depth, P.B.T.D., Elevations (DF, RKB, RT, GR, etc.), Name of Producing Formation, Top Oil/Gas Try, Tubing Depth, Perforations, Depth Casing Shoe, TUBING, CASING, AND CEMENTING RECORD, HOLE SIZE, CASING & TUBING SIZE, DEPTH SET, SACKS CEMENT

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed the allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks, Date of Test, Producing Method (Flow, pump, gas lift, etc.), Length of Test, Tubing Pressure, Casing Pressure, Choke Size, Actual Prod. During Test, Oil-Bbls., Water-Bbls., Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D, Length of Test, Title, Condensate/MCF, Gravity of Condensate, Testing Method (spot, back pr.), Tubing Pressure (shut-in), Casing Pressure (shut-in), Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Jack P. Williams, Controller, m. j. 25, 1985

OIL CONSERVATION DIVISION

APR 2 1985

APPROVED: APR 2 1985

BY: Original Signed By

Leslie A. Clements

TITLE: Supervisor District II

This form is to be filled in compliance with O.C.D. 1984. If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with rule 8.111. All sections of this form must be filled out completely for allowables on new and re-completed wells. Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such changes of conditions. Separate Forms C-104 must be filed for each pool in multiple completed wells.

NOV 14 1984

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

O. C. D. ARTESIA OFFICE

OPERATION	<input type="checkbox"/>
PRODUCTION OFFICE	<input checked="" type="checkbox"/>

**I.**

Name: B & E, Inc.

Address: P. O. Box 2292 Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box):

New Well	<input type="checkbox"/>	Change in Transporter of:	
Recompletion	<input type="checkbox"/>	Oil	<input type="checkbox"/>
Change in Ownership	<input checked="" type="checkbox"/>	Casinghead Gas	<input type="checkbox"/>
		Dry Gas	<input type="checkbox"/>
		Condensate	<input type="checkbox"/>

Other (Please explain):

REC'D

NOV 19 1984

If change of ownership give name and address of previous owner: Permian Brine Sales, Box 1519, Odessa, Texas 79760

**II. DESCRIPTION OF WELL AND LEASE**

Lease Name <u>Eugenie</u>	Well No. <u>1</u>	Pool Name, including Formation <u>Wildcat</u>	Kind of Lease State, Federal or Fee <u>Fee</u>	Lease No.
Location				
Unit Letter <u>M</u>	<u>641</u>	Feet from the <u>W</u> Line and	<u>995</u>	Feet from the <u>S</u>
Line of Section <u>17</u>	Township <u>22 S</u>	Range <u>27 E</u>	NMPN, <u>Eddy</u>	County

**III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS**

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number:

**IV. COMPLETION DATA**

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res't.	Diff. Res't.
Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.					
Elevations (DF, RKB, RT, CR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth					
Perforations	Depth Casing Shoe							
<b>TUBING, CASING, AND CEMENTING RECORD</b>								
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT					

**V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL**

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

**GAS WELL**

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MCF	Gravity of Condensate
Testing Method (prior, back pr.)	Tubing Pressure (Shot-In)	Casing Pressure (Shot-In)	Choke Size

**VI. CERTIFICATE OF COMPLIANCE**

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Jack R. Williams  
(Signature)  
Supervisor - Cortaleu  
(Title)  
11/08/84  
(Date)

**OIL CONSERVATION DIVISION**

APPROVED NOV 16 1984, 19

BY: Original Signed By  
Leslie A. Clements

TITLE: Supervisor District II

This form is to be filed in compliance with N.M.S. 7-1-101. If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

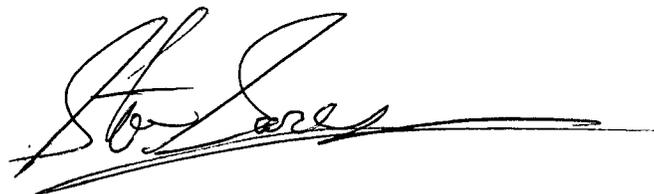
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition. Separate Forms C-104 must be filed for each pool in multiply recompleted wells.

4/11/86

YESTERDAY DUFF, AND I MET WITH MICKY MONK, & ROGER  
YARBRO FROM B&E ABOUT WHATS GOING ON WITH THE  
TRANSFER OF OWNERSHIP.

BOTTOM LINE IS THAT IF OGD TRANSFERED OWNERSHIP TO  
B&E WE'LL TAKE THAT AS TRANSFERING DP TOO AND THEY  
HAVE UNTIL DEC '87 TO RENEW & COME UNDER PART 5.

APPARENTLY THERE HAS BEEN A WHEZE LOT OF CONFUSION ON  
WHETHER THE PART 3 (OGD) DP TRANSFERED, BUT RIGHT NOW  
ITS NOT WORTH MESSING WITH.

A handwritten signature in black ink, appearing to read "Bob Lane", with a long horizontal line underneath it.

TONEY ANAYA  
GOVERNOR

DENISE D. FORT  
DIRECTOR

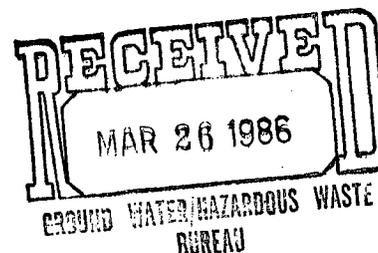


STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968  
827-2990

March 25, 1986



Roger E. Yarbro, Attorney  
P.O. Drawer AA  
Carlsbad, New Mexico 88221

RE: B & E; Compliance with WQCC Regulations

Dear Mr Yarbro:

This letter is in response to our recent telephone conversation regarding B & E well service. After talking with technical staff, I have obtained the following information with respect to the division of responsibilities for the administration of underground injection well regulations among the Environmental Improvement Division ("EID") and the Oil Conservation Division ("OCD").

Prior to the Water Quality Control Commission's ("WQCC") adoption of Part V of its regulations, discharge plans for underground injection and effluent disposal wells were processed under Part III of Water Quality Control Commission regulations. At that time, the OCD had jurisdiction over underground injection wells such as those owned by your client B & E. However, when Part V of the WQCC's regulations was adopted in September, 1982, the EID was given the authority to administer those regulations, and has retained such authority since that time.

Apparently, Permian Brine Sales, Inc. obtained a Part III discharge plan for the Carlsbad brine station from the OCD just prior to the adoption of Part V of WQCC regulations. Subsequently, your client bought two brine wells from Permian, one of which was the Carlsbad brine station referred to above. However, under WQCC regulations a discharge plan obtained by one person for a particular facility does not operate as an approved discharge plan for the same facility when that facility is sold or otherwise transferred to a new and different owner. In order for a new owner (i.e., B & E) to operate a facility pursuant to a discharge plan obtained by a previous owner, the requirements governing the transfer of discharge plans set forth in § 3-III of WQCC regulations must be complied with.

Roger E. Yarbo  
March 25, 1986  
Page 2

Unfortunately for your client, those requirements were not satisfied with respect to the Carlsbad brine station discharge plan. Consequently, your client must now submit an application for a discharge plan for the Carlsbad brine station pursuant to Part V of WQCC regulations. The submission of a similar discharge plan application is required of B & E for its Artesia (Loco Hills) brine station pursuant to an Assurance of Discontinuance entered into by B & E and the EID. Thus, B & E is not in compliance by virtue of previous discharge plan approvals given to its predecessor, Permian Brine Sales, Inc.

I hope this clears up any confusion which may exist. I have enclosed a copy of WQCC regulations for your convenience, and if you have any questions, please feel free to call me at (505) 827-2984.

Sincerely,



Duff Westbrook  
Division Attorney

---

cc: Paige Morgan

2/27/86: I spoke with Phil Withrow and Mickey Monk. Withrow repeated that he thought Permian Brine's Part 3 permit should be transferred to him because he had been half-owner of the Carlsbad station all along. I referred him to Duff Westbrook to answer that question. I said that if Duff determined that the Part 3 permit did transfer, he still needed to do a modification to describe the changes he had made in the surface facilities and he would also need to do a Part 5 permit for the facility for when the Part 3 permit expired in December 1987. If the Part 3 permit did not transfer, then they needed to do a Part 5 permit within 60 days of February 14th, as stated in my letter. I said they could reference all the parts of Permian's old permit that were still applicable, and that if they did a good-faith job of preparing a Part 5 DP for the Carlsbad facility/ that we could negotiate on filling in any blanks that were left. He said they would contact Duff, and if necessary they would prepare a DP by the deadline and bring it in to Santa Fe to discuss what more might be needed.

~~In response to the question in my 2/14 letter about any other facilities they might have, he said he was half-owner of the Quality Brine station and full-owner of the Loco Hills and Carlsbad stations formerly owned by Permian Brine, and that he also had a produced water disposal facility on Hwy. 128. I said the latter was regulated by OCD.~~

D  
PAGE,

3/24

Duff is going to write B & E & tell them they need to transfer DP from Permian & submit modification for any changes. OK?



PAGE

PHIL WITHROW CALLED 7/24/86 ET ~ 11<sup>30</sup>

HE AND MICKEY MONK WERE ON THE PHONE. HE WANTED TO KNOW WHAT HE HAD TO DO TO GET INTO COMPLIANCE WITH REGS. HE BOUGHT OUT PERMIAN'S SHARE OF CARLSBAD BRINE STATION WHEN OCD STILL RAN THE CLASS 3 PROGRAM. HE SAID HE THOUGHT HE HAD PERMIAN'S OCD PERMIT & THAT IT TRANSFERRED & HE WOULDN'T NEED TO MODIFY UNTIL RENEWAL.

I COULDN'T MAKE MUCH SENSE OUT OF FILES WHILE ON THE PHONE SO I TOLD HIM YOU WOULD CALL HIM BACK ON THURSDAY



293-0762

TONEY ANAYA  
GOVERNOR

DENISE D. FORT  
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968  
(505) 984-0020

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 14, 1986

Phil Withrow  
B&E, Inc.  
PO Box 2292  
Hobbs, NM 88240

Re: B&E's Carlsbad Brine Station: compliance status.

Dear Mr. Withrow:

In connection with the above topic, it may prove useful to run through a certain chronology of events.

January 6, 1984: You accompanied the principals of Quality Brine, Inc., Stan and Danny Watson, to a meeting with EID staff members David Boyer and myself. At that meeting, the New Mexico Water Quality Control Commission (WQCC) regulations as they pertain to brine extraction wells were thoroughly explained to the Watsons and you.

August 21, 1985: EID staff members Steven Sares and I encountered the B&E Loco Hills Brine Station while driving from Loco Hills to Carlsbad on County Road 217. We had not previously been aware of the existence of this facility. I wrote you on September 18th to advise you again of your obligations under the WQCC regulations, among them the requirement to have an approved discharge plan in place for any in situ extraction well prior to start-up of operations. At that time, I proposed that you could enter into an Assurance of Discontinuance, in order legally to remain in operation while preparing a discharge plan. You wound up going that route.

November 12, 1985: Steven Sares and I went to make an inspection of what we believed to be a Permian Corporation brine station in Carlsbad, and found that ownership had been transferred to B&E some two years previously, with no notice provided to the EID.

I conferred with a member of your staff, Mickey Monk, and he sent some documents to me which he thought would be adequate to transfer Permian's approved discharge plan to B&E. I enclose a copy of a memo from our legal counsel, in which he found that the submitted documentation did not meet the terms of Section 5-101.I of the WQCC regulations. As a result, B&E is operating the Carlsbad facility without an approved discharge plan and therefore is in violation of the WQCC regulations and the New Mexico Water Quality Act.

The EID will not support a second B&E petition for an Assurance of Discontinuance before the Water Quality Control Commission. It is our belief that you have been

P 612 426 698

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

B&E, Inc. (See Reverse)

U.S.G.P.O. 1983-403-517	Sent to	Phil Withrow
	Street and No.	P.O. Box 2292
	P.O., State and ZIP Code	Hobbs, N.M.
	Postage	88240

fully aware of your obligations under the Commission regulations for at least two years, and have chosen willfully to ignore them. The Assurance of Discontinuance should be used to allow the continuation of an illegal discharge when there are mitigating circumstances surrounding the discharge. There appear to be none in the case of B&E Carlsbad. Under an Assurance of Discontinuance, the Commission agrees not to take legal action against a party for continuing to discharge without an approved discharge plan during the pendency of the Assurance, except in extraordinary circumstances. I see no reason for the Commission to enter into such an agreement in the case of B&E Carlsbad.

Be aware that you are in violation of the WQCC regulations and Water Quality Act by discharging without an approved discharge plan at B&E Carlsbad. To avoid legal penalties, respond to this letter as follows:

1) Within ten days of receipt of this letter, notify this office of any and all B&E facilities which may require a discharge plan. Note that any truck-washing facility and any other operation involving the disposal of waste fluids, as well as any brine extraction well and associated surface facilities, must be reported. If you fail to report any existing facility or any facility which you construct or for which you assume ownership in the future, EID will take legal action against B&E for such failure to report pursuant to Section 1-201 of the WQCC regulations. A Notice of Intent form is enclosed, for use in reporting.

2) Within sixty days of receipt of this letter, submit to this office a discharge plan containing those elements required under Part 5 of the WQCC regulations. I have enclosed for your convenience a set of guidelines for preparation of a Part 5 discharge plan, and a copy of the Part 3 discharge plan submitted by Permian Corporation for this facility. Failure to respond within the specified time period will be reason for EID to take legal action against B&E for operating a brine station without an approved discharge plan.

If you have any questions, please contact me at 827-2901, or at the above address.

Sincerely,



Paige Grant Morgan  
Water Resource Specialist  
Ground Water Section

PGM:pgm

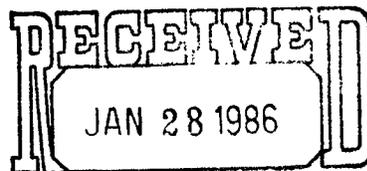
cc: Garrison McCaslin, EID District IV Manager  
Duff Westbrook, EID Legal Bureau

PAIGE -

I think the most appropriate course of action would be to write them and tell them 1.) they must promptly comply w/ the reqs. w/ respect to this well; 2.) if they have any other facilities, they must tell us about them within 10 days, ~~and~~ and bring those facilities into compliance within 30? days; and 3.) if there are any other facilities which they don't tell us about (and we learn of them later) or if they fail to come into compliance w/ respect to any facility, ~~that~~ then legal action will ensue because the Assurances don't seem to have the necessary effect. See what Ernie thinks... I have a hard time tracking him down

Duff

Ernie - I'm willing to go w/ Duff's recommendation especially as Ron points out, given the wide load of the Carter assigned to me. Duff



GROUND WATER/HAZARDOUS WASTE  
BUREAU

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Don: your reaction?

Page

2/6/86

1/28

Page,

Sony I held this <sup>my</sup> error. I agree w Duff (unless I'm totally misunderstanding the whole import) on course of action. Also, since we're beholden at this time to the legal Bureau (because of time crunch) we don't have much of a choice. However, you're on top of this & I'll back you up if you want to take immediate and/or other, more <sup>prudent</sup> action

7 thanks  
Don

Page,

2/7

I did discuss with Duff. I agree with him.

The zinger is to tell Bt E that they must inform <sup>us</sup> ~~us~~ now (within 30 days) of all <sup>other</sup> facilities requiring discharge plans. 

TONEY ANAYA  
GOVERNOR

DENISE D. FORT  
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968  
(505) 984-0020

January 3, 1986

Mickey Monk  
B&E, Inc.  
PO Box 2292  
Hobbs, NM 88240

Re: Discharge plan for B&E Loco Hills brine station

Dear Mr. Monk:

This is to correct the error in my December 11th letter to you which you pointed out in a phone call to me on December 13th. On reviewing the file on B&E State 24-1 Brine Station, I realized that you had submitted copies of two bonds which you hold with two different state agencies. I informed you in my December 11th letter that the bond you hold with the State Land Commission will not serve the purpose of the financial assurance required of injection well facilities. However, as you pointed out to me by telephone, you also hold a bond with the Oil Conservation Division which is specifically intended to cover plugging of the brine well. If you can demonstrate that the amount of this bond is adequate to cover the cost of plugging by an outside contractor, then the bond will be accepted by this agency as meeting the terms of Section 5-210.3.17 of the Water Quality Control Commission (WQCC) regulations.

Sorry for the confusion.

I will be in touch with you by separate letter regarding B&E's Carlsbad brine station. Briefly, the materials describing the transfer of ownership are deemed by our legal counsel not to meet the terms of Section 5-101.I. of the WQCC regulations, which governs transfer of a discharge plan upon the change in ownership of a facility.

Sincerely,

Paige Grant Morgan  
Water Resource Specialist  
Ground Water Section

PGM:pgm

cc: John Guinn, EID District IV Manager.

TONEY ANAYA  
GOVERNOR

DENISE D. FORT  
DIRECTOR



**STATE OF NEW MEXICO**

**ENVIRONMENTAL IMPROVEMENT DIVISION**

P.O. Box 968, Santa Fe, New Mexico 87504-0968  
(505) 984-0020

MEMORANDUM

Date: January 2, 1986

To: Duff Westbrook, Legal Bureau

From: Paige Morgan, Ground Water Section *PAW*

I talked with Ernie Rebeck about the B&E Carlsbad brine station ownership transfer situation. He agreed that it seemed an appropriate case in which to seek a moderate penalty. The following are some facts which have bearing in the case:

- (1) All in situ extraction wells are required under Section 5-101.B.3 to have a discharge plan after December 20, 1982 in order to operate. This is true whether or not there is ground water to protect at a given location and no matter when they went into operation.
- (2) B&E was well-informed about the WQCC regulations pertaining to brine wells, since
  - (a) B&E Company president Phil Withrow accompanied Quality Brine partners Stan and Danny Watson on their first visit to EID in January 1984, during which time Dave Boyer (former EID UIC Director) and I explained explicitly what was required of brine stations under the WQCC regulations;
  - (b) The relationship between the Watsons and Withrow obviously continues to be close: Stan Watson represented B&E before the Commission when B&E submitted an Assurance of Discontinuance to cover the period during which a discharge plan would be prepared for the B&E Loco Hills brine station. Watson has also submitted some discharge plan materials for that facility on B&E's behalf; and
  - (c) We had contacted B&E about the necessity of having a discharge plan for the Loco Hills brine station before we learned that they also owned a brine station in Carlsbad.

In short, Phil Withrow of B&E knew of the WQCC requirements of brine wells and chose to ignore them until EID called him on the carpet for each of his facilities. (As an aside, once his responsibilities are pointed out for each facility, his company is quite cooperative in coming in line with the regulations.)

(3) EID has negotiated seven Assurances of Discontinuance with brine extraction facilities over the past two years. They have been effective in bringing each facility into compliance but appear not to have served as an adequate incentive to other noncompliant facilities to clean up their act. It seems appropriate to

begin to seek penalties for noncompliance after two years of playing Mr. Nice Guy, to raise EID's profile in the brine well industry and encourage self-reporting and regulatory compliance.

I don't know how to go about this. Shall I write them a letter requiring a discharge plan and tell them we're going to sue for penalties for their being without a discharge plan, therefore out of compliance, for two and a half years? Do you have to run this whole idea through Denise before I make contact with them again? I already wrote them that we did not deem the previous owner's discharge plan transferred to them, and said a letter discussing the matter would follow.

Thanks for your help.

cc: Ron Conrad, Program Manager, Ground Water Section  
Ernest Rebuck, Bureau Chief, GW/HWB

TONY ANAYA  
GOVERNOR

DENISE D. FORT  
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968  
(505) 827-2990

MEMORANDUM:

TO: Paige Morgan Grant  
FROM: Duff Westbrook *DW*  
RE: Transfers of brine well discharge plan under §5-101.I  
DATE: December 30, 1985

There are two conditions precedent to the transfer of an in situ extraction or effluent disposal well discharge plan under §5-101.I of WQCC regulations. The first condition is that the director of the EID must receive written notice of any such transfer at least 30 days prior to any such transfer. §5-101.I.2.a. To be effective, written notice under §5-101.I.2.a must include: 1). the signatures of the present and succeeding discharger; 2). an acknowledgement by the succeeding discharger that it will be responsible for compliance with the discharge plan upon its taking possession of the in situ extraction or effluent disposal well; 3). a specific date for the transfer of "discharge plan" responsibility, coverage and liability; and 4). all information on the succeeding discharger's financial responsibility which is required by §5-210.B.17. Subsection 5-210 B.17 requires the submission of a surety bond or other adequate assurances of the succeeding discharger's ability to "undertake measures necessary to prevent contamination of ground water...after the cessation of operations...."

The second condition precedent to the transfer of an effluent disposal on in situ extraction well discharge plan under §5-101.I is that the director must fail to raise any objections prior to the proposed transfer date. §5-101.I.2.b. The documents provided by the ground water bureau, which are attached to this memo are inadequate to accomplish a transfer of an in situ extraction well discharge plan under §5-101.I

First, only one of the three documents provided to the EID can be considered in making the determination of whether the requirements of §5-101.I.2 have been satisfied. The documents marked exhibit A and B are draft copies which have not been signed by either party. These documents are therefore deficient in that they fail to satisfy the requirements of a written notice set forth in §5-101.I.3.a. Moreover, these documents fail to state a specific date for the transfer of the discharge plan, and thus do not satisfy the requirements of §5-101.I.3.b. The only documents provided to the EID which can be considered in determining whether the transfer is legally sufficient is the one marked Exhibit C. This document is in final form, has been signed by both the existing and succeeding dischargers, and contains a specific date (April 30, 1983) of when the transfer is to occur.

However, Exhibit C does not contain any language which acknowledges that the succeeding discharger will be responsible for compliance with the discharge plan. The statement that "B & E hereby covenants that it shall assume all obligations of PBS concerning the operation of the salt mining station..." is not specific enough to satisfy the requirements of §5-101.I.3.a. Any such language should track the language of the regulations. In addition, Exhibit C does not include any information on the succeeding discharger's financial responsibility. The requirements of 5-101.I.3c are therefore not satisfied, and the written notice is therefore inadequate.

Lastly, the Director of the EID did not receive written notice of the transfer 30 days prior to the actual transfer. The documents indicate that they were received by the EID on December 12, 1985. The documents further indicate that the transfer occurred on July 7, 1983. Thus, the EID received written notice of the transfer almost two and one-half years after the transfer had occurred. Exhibit C therefore does not satisfy the requirement of §5-101.I.2a.

The fact that this is a "good operation" is not relevant to the issue of whether §5101.I has been satisfactorily complied with, since the language of that section is not discretionary in nature. There is little the EID can do at this point since the transfer has already occurred. Perhaps requiring B & E to go through the steps of obtaining a new, rather than transferred discharge plan, is one way of dealing with this problem.

DW/rb

Exhibit A

Carlisle Permian

**DRAFT COPY**

FOR DISCUSSION PURPOSES ONLY  
McCORMICK & FORBES

SUPPLEMENTAL AGREEMENT

THIS SUPPLEMENTAL AGREEMENT made this \_\_\_\_ day of May 1978, between B & E, INC., a New Mexico Corporation, "B & E", and PERMIAN BRINE SALES AND SERVICE, INC., a Texas Corporation, "Permian".

WHEREAS, the parties have entered into that certain Brine Process Agreement dated the \_\_\_\_ day of May 1978; and

WHEREAS, the parties desire to supplement and change the Agreement as set forth below.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

1. ASSIGNMENT OF OPERATING RIGHTS: Permian assigns all of its operating rights to B & E and B & E accepts the operator's responsibilities set forth below, except Permian shall continue to be the responsible party for complying with requirements imposed by the State of New Mexico and its agencies having jurisdiction over the process.

2. OPERATOR'S RESPONSIBILITIES: B & E shall be responsible for the day to day operation of the process. B & E shall pay and discharge all costs and expenses in connection with the operation of the process from the process' income.

B & E shall establish an independent set of books for the process. The operation expenses and profit shall be determined by generally accepted accounting principles. Said books shall be available to Permian for its inspection and an audit by an accountant of its choosing at its expense.

3. DIVISION OF INCOME AND PROFITS: B & E shall receive 10 percent of the process' gross revenues as consideration for its operation of the process. The 10 percent received by B & E shall be charged to operating expenses and the net income after deducting the 10 percent and other operating expenses shall be divided between the parties as follows:

<u>NAME OF PARTY</u>	<u>PERCENTAGE</u>
B & E, INC.	70%
Permian	30%

Income distribution shall be made monthly by B & E.

4. DELINQUENT ACCOUNTS: Any accounts which are delinquent for a two

1 year period will be charged off as an operating expense.

2 5. PURCHASES OF BRINE WATER BY B & E, INC.: It is contemplated that  
3 B & E will purchase a substantial portion of the brine produced by the process.  
4 B & E shall pay the price normally paid in the area for the brine purchased  
5 by it.

6 6. WARRANTY OF MINERAL TITLE: The parties herein acknowledge that  
7 B & E does not warrant to Permian title to the brine to be sold. The parties  
8 agree that in the event it becomes necessary for payment of royalties on the  
9 brine to be sold, any back royalty payments will be split between the parties  
10 based on their division of the net profits and any expenses incurred in the  
11 negotiation or litigation concerning said royalty payments or title will be  
12 borne by the parties in the same percentage as the division of net profits.

13 7. TERMINATION: This Agreement shall remain in full force and effect  
14 so long as commercial quantities of brine are produced or until terminated  
15 as provided for herein. In the event a party wishes to abandon the operation  
16 he shall give the other party 15 days' written notice of his intention to  
17 abandon and the parties will jointly agree upon the salvage value of the  
18 equipment located upon the premises and the party wishing to continue the  
19 operation shall pay to the abandoning party a percentage of the salvage value  
20 equal to the abandoning party's percentage ownership in the operation as  
21 determined in paragraph 3 above. Such abandonment shall constitute the  
22 termination of this Agreement.

23 8. AMENDMENT: This Agreement expresses the full Agreement of the  
24 parties and shall not be amended, except by written agreement executed with  
25 the same formalities of this Agreement and shall be binding upon the heirs,  
26 Personal Representatives and assigns of the parties.

27 B & E, INCORPORATED

28 ATTEST:

29 By \_\_\_\_\_  
30 Secretary

By \_\_\_\_\_  
Phil Withrow, President

31 PERMIAN BRINE SALES AND SERVICE

32 ATTEST:

By \_\_\_\_\_

By \_\_\_\_\_  
A. L. Hickerson, President

Exhibit B

Carl Reed Lee File **DRAFT COPY**

FOR DISCUSSION PURPOSES ONLY  
McCORMICK & FORBES

AGREEMENT

1  
2 THIS AGREEMENT made this \_\_\_\_\_ day of May 1978, between B & E, INC.,  
3 a New Mexico Corporation, "B & E", and PERMIAN BRINE SALES AND SERVICE, INC.,  
4 a Texas Corporation, "Permian".

5 WHEREAS, B & E is the owner of the following described land in Eddy  
6 County, New Mexico:

7  
8 Commencing at the NW corner of the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Sec-  
9 tion 17, Township 22 South, Range 27 East, N.M.P.M.,  
10 thence on an assumed bearing of due South a distance  
11 of 286.9 ft.; thence South 59 degrees 30 minutes East  
12 a distance of 64.9 ft.; thence South 66 degrees 50  
13 minutes East a distance of 100 ft.; thence South 78  
14 degrees 05 minutes East a distance of 100.0 ft.;  
15 thence South 83 degrees 58 minutes East a distance  
16 of 104.5 ft.; thence North 0 degrees 43 minutes West  
17 a distance of 427 ft. to the South right of way line  
18 of the road connecting U. S. Highway 285 and 180;  
19 thence Easterly along the said right of way line to  
20 its intersection with a line parallel to and 50 ft.  
21 distant to the point of beginning of the tract herein  
22 described - the said point being marked with an iron  
23 rail set in concrete; thence Easterly along the said  
24 right of way line to a point that bears South 74 degrees  
25 45 minutes East a distance of 223.5 ft.; thence South  
26 60 degrees 39 minutes East along the said right of way  
27 line a distance of 28.4 ft. to the NW corner of the  
28 Mays Lumber Company Tract; thence South 1 degree 56  
29 minutes West along the West boundary of the said  
30 tract a distance of 350 ft.; thence at an angle to  
31 the left of 86 degrees 02 minutes a distance of 155  
32 ft. to the SE corner of the said Lumber Company Tract;  
thence South along the Easterly line of the said tract  
a distance of 9.5 ft, more or less, to the North right  
of way line of the U.S.R.S. Main Canal; thence West-  
erly along the said canal right of way a distance of  
372.5 ft. to the point of beginning, the said point  
being marked by an iron rail set in concrete, all  
being in Eddy County, New Mexico.

25 WHEREAS, the parties desire to establish a process to produce brine  
26 water on the above described property.

27 NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

28 1. Permian agrees to install a brine process on the above described  
29 premises, including the drilling of a brine well, construction of storage  
30 tanks, pump, and truck loading facilities.

31 2. Permian agrees to install the process in a workmanlike manner,  
32 in accordance with the best proved methods and use its best efforts in good

1 faith to minimize the cost of construction.

2 3. The actual cost of construction shall be borne by the parties in  
3 the following percentages:

4	<u>NAME OF PARTY</u>	<u>PERCENTAGE</u>
5	B & E, Inc.	80%
6	Permian	20%

7 after payment of the aforesaid percentage, B & E shall own \_\_\_\_\_ percentage  
8 of the process except for fixtures attached to the land which cannot be  
9 removed without damage to the surface, which B & E shall own in fee simple,  
10 Permian shall own the balance of the process.

11 4. Permian shall be the operator of the process and shall have exclusive  
12 charge, control and supervision of the operation. Permian, as operator,  
13 shall be subject to all the valid rules and regulations of any authority  
14 having jurisdiction of the premises, including agencies of the State of New  
15 Mexico. Permian shall be responsible to obtain and file all bonds and assur-  
16 ances with the State of New Mexico and its agencies during the construction of  
17 the process and during its operation.

18 B & E, INCORPORATED  
19 ATTEST:  
20 By \_\_\_\_\_ By \_\_\_\_\_  
21 Secretary Phil Withrow, President

22 PERMIAN BRINE SALES AND SERVICE, INC.  
23 ATTEST:  
24 By \_\_\_\_\_ By \_\_\_\_\_  
25 Corporate Secretary A. L. Hickerson, President

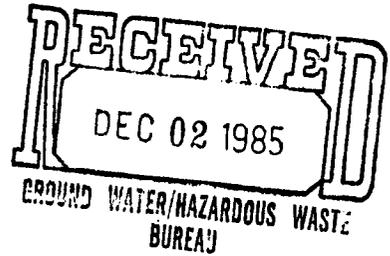
26  
27  
28  
29  
30  
31  
32

Exhibit C

Bill -  
Sale of Carlsbad  
70%  
70%

AGREEMENT, ASSIGNMENT AND BILL OF SALE

STATE OF NEW MEXICO     X  
COUNTY OF LEA           X



WHEREAS, by Letter Agreement accepted in May, 1978, PERMIAN BRINE SALES & SERVICE, INC. ("PBS") and B&E, INC. (B&E) entered into an agreement and supplemental agreement (copies attached) for the joint operation of that certain brine water station located in the SW/4 SW/4, Section 17, T-22-S, R-27-E, Eddy County, New Mexico (the "Station").

WHEREAS, PERMIAN BRINE SALES, INC., successor to PERMIAN BRINE SALES & SERVICE, INC. desires to sell and B&E desires to buy all of the right, title and interest of PBS in and to the Station;

NOW, THEREFORE, in consideration of the premises and the covenants herein contained, the parties hereto agree as follows:

1. The May 1978, Letter and Supplemental Agreement is hereby terminated effective April 30, 1983, at 11:59 p.m.;
2. In consideration of \$10.00 and other good and valuable considerations, in hand paid by B&E to PBS, the receipt and sufficiency of which is hereby acknowledged, PBS hereby conveys, sells, transfers and assigns all of its right, title and interest in and to the following:
  - a. That certain Salt Mining Operation located on the B&E yard in Carlsbad, New Mexico, in the SW/4 SW/4, Section 17, T-22-S, R-27-E, Eddy County, New Mexico;
  - b. The two brine well holes at the Station, including the casing and tubing therein;

- c. The six 500 barrel tanks at the Station, including all pipe, valves, fittings, pumps, and pump house associated therewith;
  - d. All other personal property used in connection with the joint operations by the parties hereto at the Station.
3. PBS hereby covenants that it will take all necessary steps to secure the written approval of the State of New Mexico for transfer of all well records, etc to B&E. PBS hereby covenants that it will execute all necessary documents to effect such approval.
4. B&E hereby covenants that it shall assume all obligations of PBS concerning the operation of the salt mining station and hereby agrees to hold PBS harmless from any and all claims arising before and after April 30, 1983, in connection with the ownership and operation of the Station.

IN WITNESS WHEREOF, the parties hereto have executed this instrument effective April 30, 1983.

B & E, INC.

BY: *Phil Withrow*

PHIL WITHROW, PRESIDENT

PERMIAN BRINE SALES, INC.

BY: *A.L. Hickerson*

A.L. HICKERSON, PRESIDENT

THE STATE OF

COUNTY OF

BEFORE ME, the undersigned authority, on this day, personally appeared Phil Withrow, known to me to be the person whose name is subscribed to the foregoing instrument as President of B&E, Inc., a corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 7 day of July, 1983.

John Hummel  
Notary Public in and for  
Dea County.

Notary Commission expires on  
June 20 1987.

THE STATE OF TEXAS\

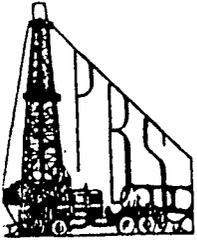
COUNTY OF ECTOR \

BEFORE ME, the undersigned authority, on this day personally appeared A.L. Hickerson, known to me to be the person whose name is subscribed to the foregoing instrument as President of Permian Brine Sales, Inc., a corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the \_\_\_\_\_ day of June 30, 1983.

John Hummel  
Notary Public in and for  
Dea County.

Notary Commission expires on  
June 20 1987.



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

## SUPPLEMENT TO ASSIGNMENT & BILL OF SALE EUGENIE - CARLSBAD STATION

PERMIAN BRINE SALES, INC. further covenants that it does not have any liens, liabilities or commitments against the brine wells or the facilities connected thereto. PERMIAN BRINE SALES, INC. has not entered into any agreements obligating the brine station or B & E, INC.

IN WITNESS WHEREOF, we have executed this Supplement, effective April 30, 1983.

PERMIAN BRINE SALES, INC.

BY:

A.L. Hickerson  
A.L. HICKERSON, PRESIDENT

STATE OF TEXAS X

COUNTY OF ECTOR X

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared A.L.HICKERSON, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said PERMIAN BRINE SALES, INC., a corporation, and that he executed the same as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 6<sup>th</sup> day of July, A.D., 1983.

Gene Ann Huff  
NOTARY PUBLIC IN AND FOR ECTOR  
COUNTY, TEXAS

REQUEST FOR LEGAL SERVICES

Ernie Rebeck

Chief 6w/4w Bureau

Request made by: Ron Conrad  
(Name)

F. H. ... section  
(Title)

Date of Request: 12/2/85

Person Attorney should contact: Judy Morgan Telephone No. 2901

Priority: Emergency (explain)  
 Normal but ASAP, please  
 Low

Nature of Request:

- Referral of matter to legal bureau for enforcement
- Assign attorney to advise in licensing matter
- Assign attorney to represent Division in a matter before the EIB, WQCC, or OHSRC
- Legal opinion: with reference to Sec. 5-101.I of the WQCC reg.
- Review enforcement letter for legal adequacy
- Review submittal to federal or state government agency for legal adequacy is the lan-  
graze in
- Review draft contract or agreement for legal adequacy paragraph 4, page 2
- Obtain inspection order in District Court of the attached document
- Status report dated April 30, 1983
- Other (please specify) sufficient to effect transfer of a brine  
well DP? The brine well changed ownership some time,

Please fill in as applicable: however it is a good operation and we are not particularly  
concerned that they didn't give us 30 days prior  
notification.

Name of case \_\_\_\_\_

Attorney assigned to case \_\_\_\_\_

To Be Completed by Chief Attorney

This matter has been referred to \_\_\_\_\_ on \_\_\_\_\_

with the following instructions \_\_\_\_\_

Internal # \_\_\_\_\_

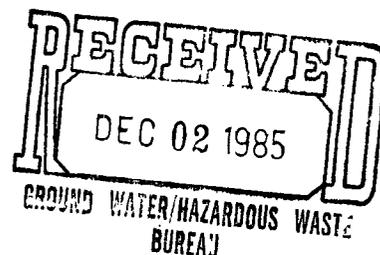
Chief Attorney

Date Completed \_\_\_\_\_

AGREEMENT, ASSIGNMENT AND BILL OF SALE

*Bill -  
Sale of Carlsbad  
70%*

STATE OF NEW MEXICO       X  
COUNTY OF LEA            X



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WHEREAS, PERMIAN BRINE SALES, INC., successor to PERMIAN BRINE SALES & SERVICE, INC. desires to sell and B&E desires to buy all of the right, title and interest of PBS in and to the Station;

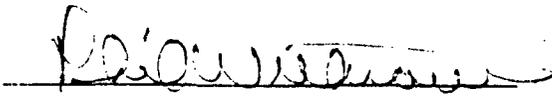
NOW, THEREFORE, in consideration of the premises and the covenants herein contained, the parties hereto agree as follows:

1. The May 1978, Letter and Supplemental Agreement is hereby terminated effective April 30, 1983, at 11:59 p.m.;
2. In consideration of \$10.00 and other good and valuable considerations, in hand paid by B&E to PBS, the receipt and sufficiency of which is hereby acknowledged, PBS hereby conveys, sells, transfers and assigns all of its right, title and interest in and to the following:
  - a. That certain Salt Mining Operation located on the B&E yard in Carlsbad, New Mexico, in the SW/4 SW/4, Section 17, T-22-S, R-27-E, Eddy County, New Mexico;
  - b. The two brine well holes at the Station, including the casing and tubing therein;

- c. The six 500 barrel tanks at the Station,  
including all pipe, valves, fittings, pumps,  
and pump house associated therewith;
- d. All other personal property used in connection  
with the joint operations by the parties hereto  
at the Station.
3. PBS hereby covenants that it will take all necessary  
steps to secure the written approval of the State  
of New Mexico for transfer of all well records, etc  
to B&E. PBS hereby covenants that it will execute  
all necessary documents to effect such approval.
4. B&E hereby covenants that it shall assume all  
obligations of PBS concerning the operation of the  
salt mining station and hereby agrees to hold PBS  
harmless from any and all claims arising before and  
after April 30, 1983, in connection with the ownership  
and operation of the Station.

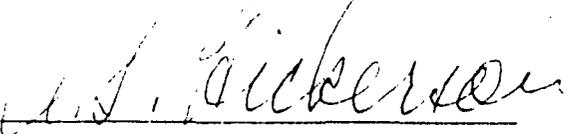
IN WITNESS WHEREOF, the parties hereto have executed  
this instrument effective April 30, 1983.

B & E, INC.

BY: 

PHIL WITHROW, PRESIDENT

PERMIAN BRINE SALES, INC.

BY: 

A.L. HICKERSON, PRESIDENT

THE STATE OF  
COUNTY OF

BEFORE ME, the undersigned authority, on this day, personally appeared Phil Withrow, known to me to be the person whose name is subscribed to the foregoing instrument as President of B&E, Inc., a corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 7  
day of July, 1983.

John Grenlow  
Notary Public in and for  
Blair County.  
Notary Commission expires on  
June 20 1987.

THE STATE OF TEXAS X  
COUNTY OF ECTOR X

BEFORE ME, the undersigned authority, on this day personally appeared A.L. Hickerson, known to me to be the person whose name is subscribed to the foregoing instrument as President of Permian Brine Sales, Inc., a corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the \_\_\_\_\_  
day of June 30, 1983.

John Grenlow  
Notary Public in and for  
Blair County.  
Notary Commission expires on  
June 20 1987.

*Carl Albert Loan File* DRAFT COPY

FOR DISCUSSION PURPOSES ONLY  
McCORMICK & FORBES

AGREEMENT

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4 a Texas Corporation, "Permian".

5 WHEREAS, B & E is the owner of the following described land in Eddy  
6 County, New Mexico:

7  
8 Commencing at the NW corner of the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Sec-  
9 tion 17, Township 22 South, Range 27 East, N.M.P.M.,  
10 thence on an assumed bearing of due South a distance  
11 of 286.9 ft.; thence South 59 degrees 30 minutes East  
12 a distance of 64.9 ft.; thence South 66 degrees 50  
13 minutes East a distance of 100 ft.; thence South 78  
14 degrees 05 minutes East a distance of 100.0 ft.;  
15 thence South 83 degrees 58 minutes East a distance  
16 of 104.5 ft.; thence North 0 degrees 43 minutes West  
17 a distance of 427 ft. to the South right of way line  
18 of the road connecting U. S. Highway 285 and 180;  
19 thence Easterly along the said right of way line to  
20 its intersection with a line parallel to and 50 ft.  
21 distant to the point of beginning of the tract herein  
22 described - the said point being marked with an iron  
23 rail set in concrete; thence Easterly along the said  
24 right of way line to a point that bears South 74 degrees  
25 45 minutes East a distance of 223.5 ft.; thence South  
26 60 degrees 39 minutes East along the said right of way  
27 line a distance of 28.4 ft. to the NW corner of the  
28 Mays Lumber Company Tract; thence South 1 degree 56  
29 minutes West along the West boundary of the said  
30 tract a distance of 350 ft.; thence at an angle to  
31 the left of 86 degrees 02 minutes a distance of 155  
32 ft. to the SE corner of the said Lumber Company Tract;  
thence South along the Easterly line of the said tract  
a distance of 9.5 ft, more or less, to the North right  
of way line of the U.S.R.S. Main Canal; thence West-  
erly along the said canal right of way a distance of  
372.5 ft. to the point of beginning, the said point  
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being in Eddy County, New Mexico.

25 WHEREAS, the parties desire to establish a process to produce brine  
26 water on the above described property.

27 NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

28 1. Permian agrees to install a brine process on the above described  
29 premises, including the drilling of a brine well, construction of storage  
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32 in accordance with the best proved methods and use its best efforts in good

1 faith to minimize the cost of construction.

2 3. The actual cost of construction shall be borne by the parties in  
3 the following percentages:

4	<u>NAME OF PARTY</u>	<u>PERCENTAGE</u>
5	B & E, Inc.	80%
6	Permian	20%

7 after payment of the aforesaid percentage, B & E shall own \_\_\_\_\_ percentage  
8 of the process except for fixtures attached to the land which cannot be  
9 removed without damage to the surface, which B & E shall own in fee simple,  
10 Permian shall own the balance of the process.

11 4. Permian shall be the operator of the process and shall have exclusive  
12 charge, control and supervision of the operation. Permian, as operator,  
13 shall be subject to all the valid rules and regulations of any authority  
14 having jurisdiction of the premises, including agencies of the State of New  
15 Mexico. Permian shall be responsible to obtain and file all bonds and assur-  
16 ances with the State of New Mexico and its agencies during the construction of  
17 the process and during its operation.

18 ATTEST: B & E, INCORPORATED

19  
20 By \_\_\_\_\_  
21 Secretary

By \_\_\_\_\_  
Phil Withrow, President

22 ATTEST: PERMIAN BRINE SALES AND SERVICE, INC.

23  
24 By \_\_\_\_\_  
Corporate Secretary

By \_\_\_\_\_  
A. L. Hickerson, President

*Carl... ..*

**DRAFT COPY**

FOR DISCUSSION PURPOSES ONLY  
McCORMICK & FORBES

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B & E shall establish an independent set of books for the process. The operation expenses and profit shall be determined by generally accepted accounting principles. Said books shall be available to Permian for its inspection and an audit by an accountant of its choosing at its expense.

3. DIVISION OF INCOME AND PROFITS: B & E shall receive 10 percent of the process' gross revenues as consideration for its operation of the process. The 10 percent received by B & E shall be charged to operating expenses and the net income after deducting the 10 percent and other operating expenses shall be divided between the parties as follows:

<u>NAME OF PARTY</u>	<u>PERCENTAGE</u>
B & E, INC.	70%
Permian	30%

Income distribution shall be made monthly by B & E.

4. DELINQUENT ACCOUNTS: Any accounts which are delinquent for a two

1 year period will be charged off as an operating expense.

2 5. PURCHASES OF BRINE WATER BY B & E, INC.: It is contemplated that  
3 B & E will purchase a substantial portion of the brine produced by the process.  
4 B & E shall pay the price normally paid in the area for the brine purchased  
5 by it.

6 6. WARRANTY OF MINERAL TITLE: The parties herein acknowledge that  
7 B & E does not warrant to Permian title to the brine to be sold. The parties  
8 agree that in the event it becomes necessary for payment of royalties on the  
9 brine to be sold, any back royalty payments will be split between the parties  
10 based on their division of the net profits and any expenses incurred in the  
11 negotiation or litigation concerning said royalty payments or title will be  
12 borne by the parties in the same percentage as the division of net profits.

13 7. TERMINATION: This Agreement shall remain in full force and effect  
14 so long as commercial quantities of brine are produced or until terminated  
15 as provided for herein. In the event a party wishes to abandon the operation  
16 he shall give the other party 15 days' written notice of his intention to  
17 abandon and the parties will jointly agree upon the salvage value of the  
18 equipment located upon the premises and the party wishing to continue the  
19 operation shall pay to the abandoning party a percentage of the salvage value  
20 equal to the abandoning party's percentage ownership in the operation as  
21 determined in paragraph 3 above. Such abandonment shall constitute the  
22 termination of this Agreement.

23 8. AMENDMENT: This Agreement expresses the full Agreement of the  
24 parties and shall not be amended, except by written agreement executed with  
25 the same formalities of this Agreement and shall be binding upon the heirs,  
26 Personal Representatives and assigns of the parties.

27 B & E, INCORPORATED

28 ATTEST:

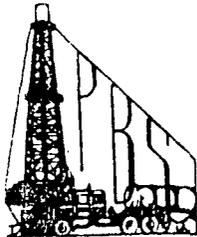
29 By \_\_\_\_\_  
30 Secretary

By \_\_\_\_\_  
Phil Withrow, President

31 PERMIAN BRINE SALES AND SERVICE

32 ATTEST:

By \_\_\_\_\_  
A. L. Hickerson, President



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1581

## SUPPLEMENT TO ASSIGNMENT & BILL OF SALE EUGENIE - CARLSEAD STATION

PERMIAN BRINE SALES, INC. further covenants that it does not have any liens, liabilities or commitments against the brine wells or the facilities connected thereto. PERMIAN BRINE SALES, INC. has not entered into any agreements obligating the brine station or B & E, INC.

IN WITNESS WHEREOF, we have executed this Supplement, effective April 30, 1983.

PERMIAN BRINE SALES, INC.

BY:

A.L. Hickerson  
A.L. HICKERSON, PRESIDENT

STATE OF TEXAS X

COUNTY OF ECTOR X

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared A.L.HICKERSON, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said PERMIAN BRINE SALES, INC., a corporation, and that he executed the same as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 6<sup>th</sup> day of July, A.D., 1983.

Gene Ann Huff  
NOTARY PUBLIC IN AND FOR ECTOR COUNTY, TEXAS



NOTICE OF PUBLICATION  
STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
SANTA FE, NEW MEXICO

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plan has been submitted for approval to the Director of the Oil Conservation Division, P. O. Box 2088, State Land Office Building, Santa Fe, New Mexico 87501, telephone (505) 827-3260.

PERMIAN BRINE SALES, INC., P. O. Box 1591, Odessa, Texas 79760, telephone (915) 332-0531, Al Hickerson requests approval of their discharge plan for their brine in situ extraction wells and facilities located in: Section 16, Township 25 South, Range 37 East, Lea County; Section 17, Township 22 South, Range 27 East, Eddy County; and Section 24, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico. Permian Brines Sales, Inc. injects water down their injection well to an underlying salt formation thereby dissolving the salt, forming a brine water solution with a total dissolved solids content of approximately 300,000 mg/L. Permian Brine Sales, Inc. extracts and sells the brine water solution to various companies for use in oil and gas production.

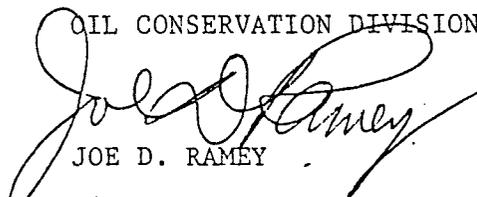
Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN Under the Seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 12th day of November, 1982.

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION



JOE D. RAMEY  
Director

S E A L



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-2434

December 18, 1982

Permian Brine Sales, Inc.  
P. O. Box 1591  
Odessa, Texas 79760

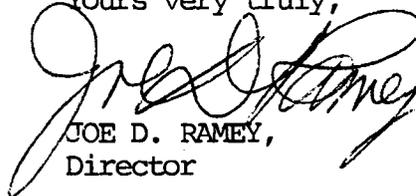
Re: GWB-5 Discharge Plan

Gentlemen:

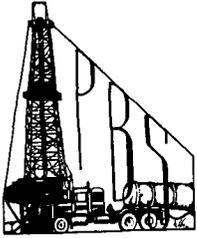
The discharge plan submitted for the brine production facility and two in site extraction wells located in Section 17, Township 22 South, Range 27 East, NMPM, Eddy County, New Mexico, is hereby approved.

The discharge plan was submitted pursuant to section 3-106 of the Water Quality Control Commission regulations. It is approved pursuant to Section 109. Please note subsections 3-109.E and 3-109.F which provide for possible future amendment of the plan. Please also be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

Yours very truly,

  
JOE D. RAMEY,  
Director

JDR/jc



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

November 8, 1982

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey  
Division Director

Dear Sir:

Pursuant to your letter of September 9, 1982, and to subsequent telephone conversations with Mr. Oscar Simpson, attached hereto is a filing of a discharge plan for an in situ extraction well for brine. This filing is for the well located in:

Section 17, Township 22 South,  
Range 27 East in Eddy County.

If additional information is required, please call me.

Very truly yours,

PERMIAN BRINE SALES, INC.

A.L. Hickerson  
President

ALH/rdt  
Attachment

CC/Phil Withrow  
B. & E. INC.

## CARLSBAD BRINE STATION

Permian's Carlsbad Brine Station is located in the SW/4 - SW/4 Section 17, Township 22 South, Range 27 East, Eddy County, New Mexico. This location is at the intersection of US Highways 285 and 180 on the Southern outskirts of the city of Carlsbad. See drawing number 1 and map 2. The pumping rate is 68 GPM at 150 PSI Pressure.

Two brine wells were drilled at this site: Eugenie No. 1 and No. 2. The No. 1 well was drilled in 1978 to a total depth of 663'. A string of 9 5/8" O.D., 40#/ft. casing was set at 349' and 170 sacks of cement was circulated. A string of 7" O.D. 23#/ft. casing was set at 456' and 135 sacks of cement circulated. 587' of 2 7/8" tubing was hung in the well, bottomed in the salt section. A drillers log, exhibit 1, is attached.

After completion of this well, in August, 1978, the production of adequate supplies of brine could not be maintained due to the relatively thin section of salt being washed, i.e. 456' to 547'. The second well Eugenie No. 2 was drilled, in November, 1979, and fractured across to the No. 1 well. This well was drilled to a total depth of 610'. 5 1/2", 17#/ft. casing was set at 285' and 125 sacks of cement circulated. 2 1/2", 6.5#/ft. tubing was set at 583' and 100 sacks of cement circulated. The well was fractured across to No. 1 well through a salt and shale stringer 576' to 592'.

Exhibit 2, attached is the drillers log for the No. 2 well, Fresh Water for operations is obtained from the city of Carlsbad from a connection at the lease site. The fresh water is pumped down the tubing of the No. 2 well and brine circulated up the tubing of the No. 1 well to the 500 bbl. brine storage tanks. Water circulation at a rate of 70 GPM is maintained by a booster pump taking suction from the Carlsbad water system. Truck loading facilities have been provided adjacent to the No. 1 brine well -

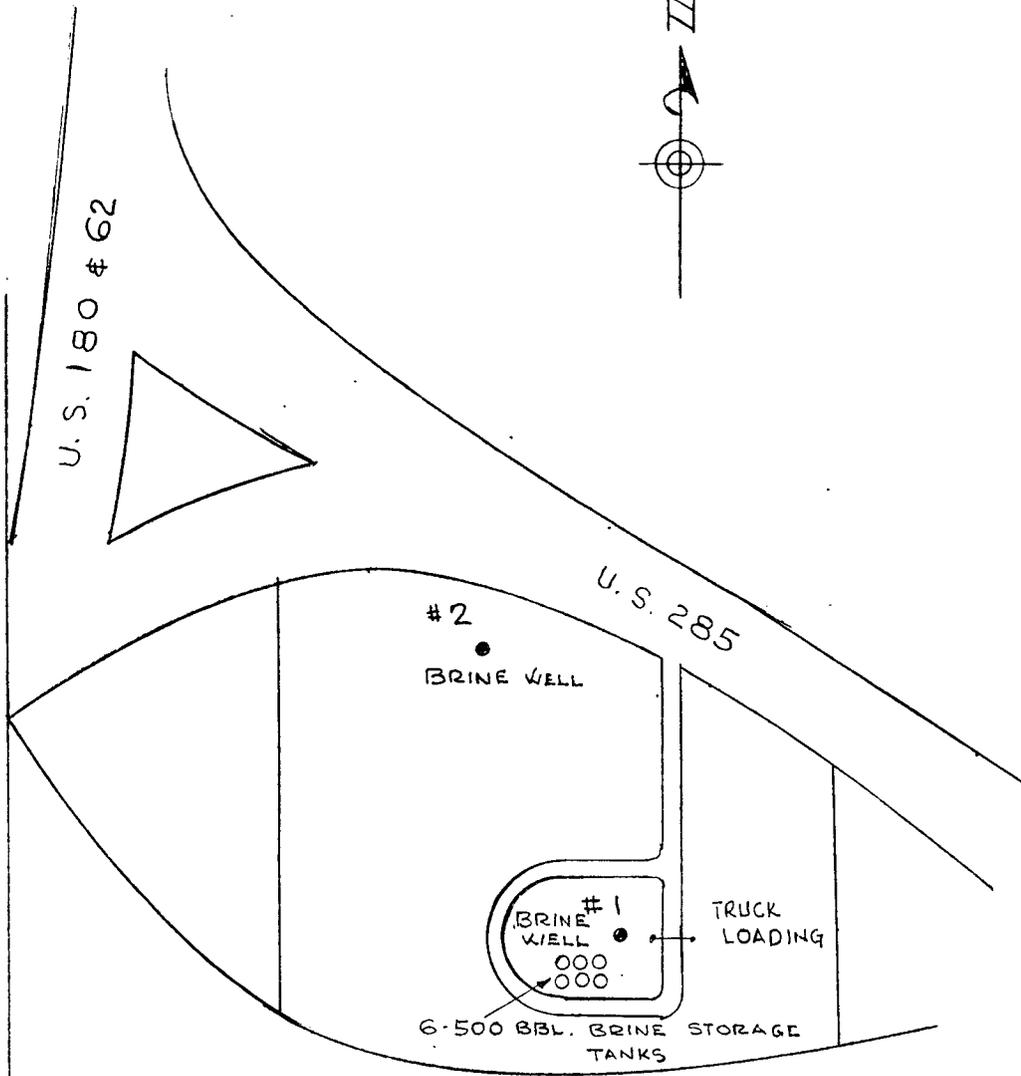
A search of the area surrounding the brine station did not reveal the presence of any fresh water wells.

The flood potential of this station appears remote. It is approximately 50' above the normal level of the Pecos River, 20' above the downtown area of Carlsbad and the highways provide excellent drainage to the west. See USGS Map 2, attached.

Sample connections are provided at the well heads of the brine wells.

A drillers logs for both wells are attached, exhibits 1 & 2 which describes the lithological character of the underground formations.

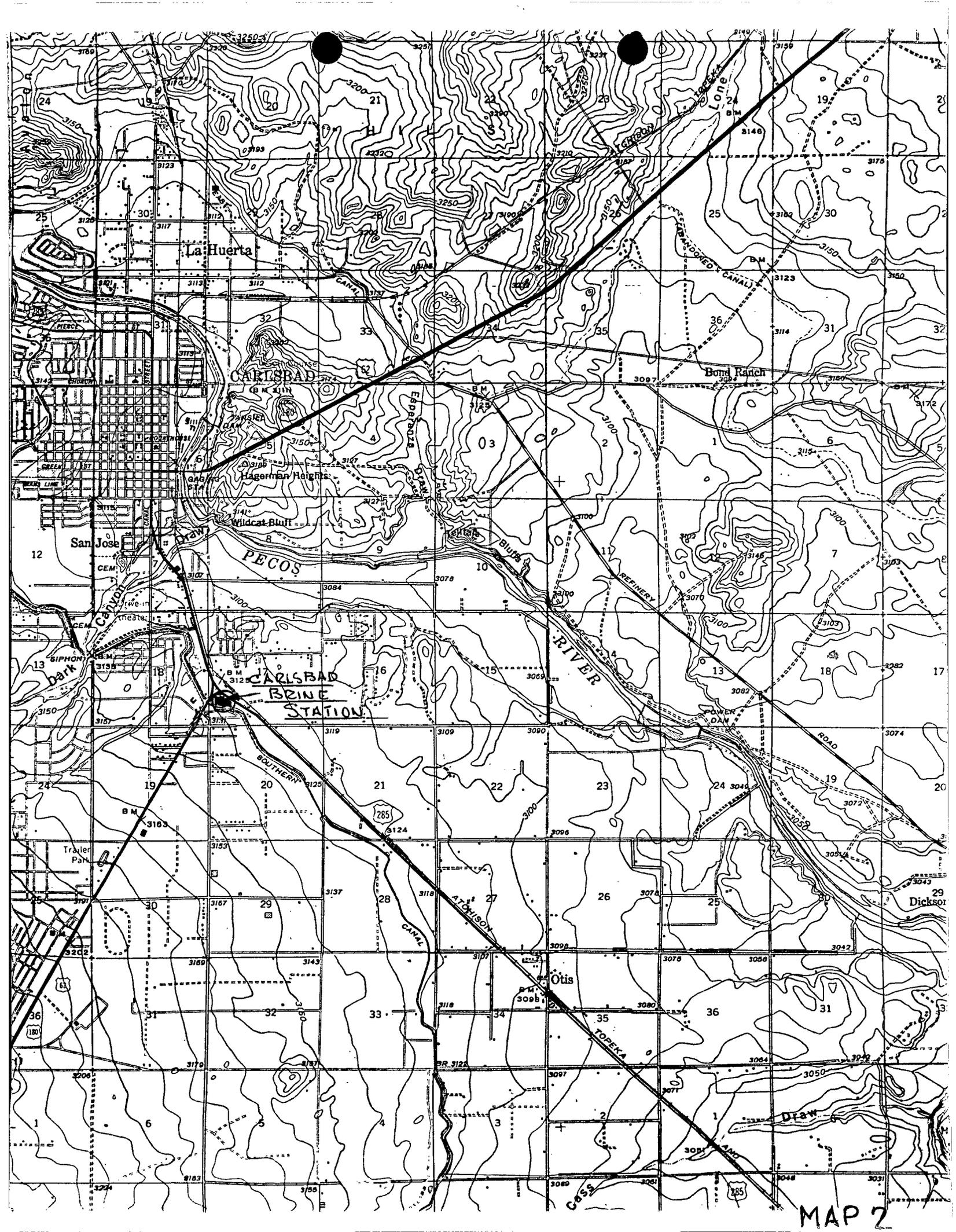
Since there are no water wells in the vicinity of the brine station no facilities for monitoring are available.

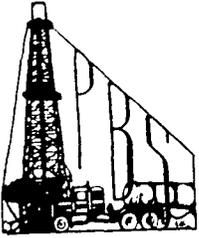


SCALE 1" = 200'

SW COR.  
SEC. 17

PERMIAN BRINE SALES, INC. OOESSA, TEXAS		
CARLSBAD BRINE STATION SW/4 - SW/4 SEC. 17 RGE. 27E TWP. 27S		
DATE: 10-19-82	R. C. McCUTCHAN P.E. TEX. 9844	DRAWING NO. 1





# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

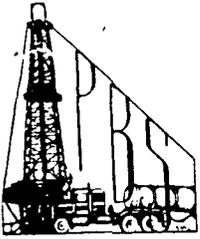
JUNE 30, 1978

EXHIBIT No. 1

EUGENIE No. 1 - Sec 17-T22S-R27E

Eddy County, New Mexico

0 to 46	-----	TOP SOIL WITH GRAVEL
46 to 58	-----	SAND AND GRAVEL
58 to 62	-----	LIME
62 to 65	-----	RED BED
65 to 76	-----	RED SAND
76 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY W/GRAVEL AND SAND
163 to 170	-----	RED BED
170 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BED
225 to 237	-----	ANHYDRITE & RED BED
237 to 252	-----	LIME & ANHYDRITE W/SOME GYPSUM
252 to 268	-----	RED BED
268 to 285	-----	LIME W/GYPSUM STRINGERS
285 to 305	-----	GYPSUM W/SOME RED BED
305 to 320	-----	GYPSUM & ANHYDRITE
320 to 328	-----	RED BED
328 to 360	-----	ANHYDRITE W/LIME & SAND
360 to 410	-----	RED ROCK & ANHYDRITE
410 to 430	-----	ANHYDRITE W/SOME LIME
430 to 437	-----	GRAY LIME (HARD) & ANHYDRITE
437 to 445	-----	ANHYDRITE
445 to 456	-----	ANHYDRITE & GRAY LIME
456 to 555	-----	SALT
555 to 567	-----	SALT & SOME LIME
567 to 576	-----	SALT & <u>BLUE SHALE VERY LITTLE</u>
576 to 592	-----	SALT
592 to 663	-----	ANHYDRITE



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

P. O. BOX 1591

ODESSA, TEXAS

79760

PHONE 332-0531

November 30, 1979

EXHIBIT NO. 2

EUGENIE No.2 - Sec 17-T22S-R27E

PAGE 1

Carlsbad, New Mexico

0 to 18	-----	TOP SOIL WITH GRAVEL
18 to 19	-----	CAVE
19 to 46	-----	CALICHE & GRAVEL
46 to 50	-----	SAND & GRAVEL - SOME WATER
50 to 58	-----	GRAVEL & LIME
58 to 64	-----	LIME
64 to 65	-----	RED BEDS
65 to 78	-----	RED SAND
78 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY, GRAVEL & SAND
163 to 171	-----	RED BEDS
171 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BEDS
225 to 237	-----	ANHYDRITE & RED BEDS
237 to 252	-----	LIME & ANHYDRITE W/ SOME GYP
252 to 268	-----	RED BED
268 to 280	-----	LIME W/GYP. STRINGERS
280 to 285	-----	ANHYDRITE
285 to 305	-----	GYP. W/SOME RED BEDS
305 to 320	-----	GYP. & ANHYDRITE
320 to 330	-----	RED BEDS
330 to 360	-----	ANHYDRITE W/LIME & SAND

360 to 410-----HARD ROCK & ANHYDRITE  
410 to 430-----ANHYDRITE W/SOME LIME  
430 to 437-----GRAY LINE (HARD) & ANHYDRITE  
437 to 445-----ANHYDRITE  
445 to 456-----ANHYDRITE & GRAY LIME  
456 to 568-----SALT  
568 to 576-----SALT & BLUE SHALE STRINGER  
576 to 592-----SALT  
592 to 610-----ANHYDRITE

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Form O-105  
Revised 1-1-80

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

JAN 10 1980

O. C. D.  
ARTESIA, OFFICE

Oil Well Type of Lease  
State  Fee

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JAN 17 1980

1a. TYPE OF WELL *Bm 1*

OIL WELL  GAS WELL  DRY  OTHER Brine Water Well

b. TYPE OF COMPLETION  
NEW WELL  WSP-OVER  DEEPEN  PLUG BACK  REPAIR  OTHER

O. C. D.  
ARTESIA, OFFICE  
Eugenie

2. Name of Operator  
Permian Brine Sales & Service, Inc.

3. Address of Operator  
Box 1591, 212 W. 5th St., Odessa, Texas 79760

2

4. Location of well  
UNIT LETTER M LOCATED 1288 FEET FROM THE South LINE AND 497 FEET FROM

*Eddy*

THE West LINE OF SEC 17 TWP. 22S RGE 27E NEBM

15. Date Spudded Oct. 22, 1979 16. Date T.D. Reached 11-19-79 17. Date Ready to Prod. 11-22-79 18. Test Interval (Oil, RKB, RL, GR, etc.) GL 3126

20. Total Depth 618' 21. Plug back T.D. 583' 22. Multiple Completions  23. Intervalle Entered By  24. Hot Dry Hole  25. Casing Tests

24. Producing intervals, of this completion - Top, Bottom, Zone  
Salt Top 456' Bottom 592

25. Was Directional  No

26. Type Electric and Other Logs Run  
None

27. Was Well Cased  No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./ FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
5 1/2"	17#	285'	8"	125 sx Circulated	None
2 1/2"	6.5#	583'	5"	100 sx Circulated	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
	None	

31. Perforation: Interval, size and number  
None

32. ACID, SHOT, FRACTURE, CEMENT SQUELZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	None

33. PRODUCTION

Date First Production 11-22-79 Production Method Water Pump Well Status Brine Water

Date of Test	Hours Tested	Choke Size	Prod'n. Per Cent Per Cent	Oil - PRL	Gas - MCF	Water - PBL	Gas - P Ratio
Flow Tubing Press.	Casing Pressure	Calculated 14-Hour Rate	Oil - PRL	Gas - MCF	Water - PBL	Gas - P Ratio	Gravity - API (Cont.)

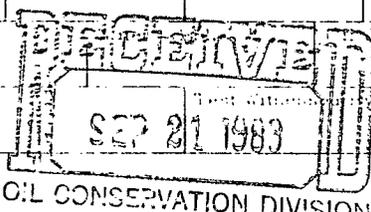
34. Disposition of Gas (Sold, used for fuel, vented, etc.)

35. List of Attachments

I, Thereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A.L. Hickerson TITLE President DATE 11-30-79

*Posted ID 2 1-18-80 Brine Water*



RECEIVED

JAN 17 1980

# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

O. C. D.  
ARTESIA, OFFICE

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

November 30, 1979

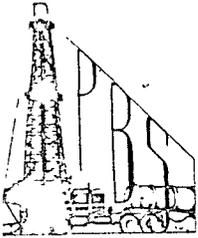
EUGENIE No.2 - Sec 17-T22S-R27E

Carlsbad, New Mexico

0 to 18	-----	TOP SOIL WITH GRAVEL
18 to 19	-----	CAVE
19 to 46	-----	CALICHE & GRAVEL
46 to 50	-----	SAND & GRAVEL - SOME WATER
50 to 58	-----	GRAVEL & LIME
58 to 64	-----	LIME
64 to 65	-----	RED BEDS
65 to 78	-----	RED SAND
78 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY, GRAVEL & SAND
163 to 171	-----	RED BEDS
171 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BEDS
225 to 237	-----	ANHYDRITE & RED BEDS
237 to 252	-----	LIME & ANHYDRITE W/ SOME GY
252 to 268	-----	RED BED
268 to 280	-----	LIME W/GYP & STRINGERS
280 to 285	-----	ANHYDRITE
285 to 305	-----	GYP. W/SOME RED BEDS
305 to 320	-----	GYP. & ANHYDRITE
320 to 330	-----	RED BEDS
330 to 330	-----	ANHYDRITE W/LIME & SAND

RECEIVED  
 SEP 21 1983  
 OIL CONSERVATION DIVISION  
 SANTA FE

360 to 410-----HARD ROCK & ANHYDRITE  
410 to 430-----ANHYDRITE W/SOME LIME  
430 to 437-----GRAY LINE (HARD) & ANHYDRITE  
437 to 445-----ANHYDRITE  
445 to 456-----ANHYDRITE & GRAY LIME  
456 to 568-----SALT  
568 to 576-----SALT & BLUE SHALE STRINGER  
576 to 592-----SALT  
592 to 610-----ANHYDRITE



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

P. O. BOX 1591

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JAN 10 1980

O. C. D.  
ARTESIA, OFFICE

PHONE 332-0531

January 9, 1980

Mr. W.A. Gressett  
New Mexico Oil Conservation Commission  
P.O. Drawer DD  
Artesia, New Mexico 88210

Dear Mr. Gressett:

Re: Eugenie No 2  
Sec 17 T 22S-R27E

Attached are forms 103 and 105 for our drilling and completing the second brine well on our location at Carlsbad.

I prepared these forms on November 30, 1979 and they inadvertently were put into our file without typing, thus causing this delay in reporting.

If additional information is desired, please call me.

Very truly yours,

PERMIAN BRINE SALES, INC.

A.L. Hickerson  
President

ALH/sp  
Attachment

cc Phil Withrow

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NEW MEXICO OIL CONSERVATION COMMISSION

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Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

JAN 17 1980

O C D

5a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS STESIA OFFICE  
DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT - " (FORM C-101) FOR SUCH PROPOSALS.

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <u>Brine Water Well</u>	7. Unit Agreement Name
2. Name of Operator <u>Permian Brine Sales &amp; Service, Inc.</u>	8. Farm or Lease Name <u>Eugenie</u>
3. Address of Operator <u>Box 1591, 212 W. 5th St., Odessa, Texas 79760</u>	9. Well No. <u>2</u>
4. Location of Well UNIT LETTER <u>M</u> <u>1288</u> FEET FROM THE <u>South</u> LINE AND <u>497</u> FEET FROM THE <u>West</u> LINE, SECTION <u>17</u> TOWNSHIP <u>22S</u> RANGE <u>27E</u> NMPM.	10. Field and Pool, or Wildcat
15. Elevation (Show whether DF, RT, GR, etc.) <u>GL 3126</u>	12. County <u>Eddy</u>

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Completion

Ran 285' of 17# 5½" casing. B.J. Cemented on 11/6/79 with 125 sx Class C cement with 2% A-7 Calcium Chloride. Cement circulated. Let set 36 hours. Drilled out plug with cable tools. No water.

Ran 583' of 6.5# 2 7/8 tubing. B.J. Cemented 11/20/79 with 100 sx of Class C cement with 2% A-7 Calcium Chloride cement circulated. Let set 24 hours.

November 21, 1979 fractured across to Eugenie No. 1 in salt & shale stringer between 576' and 592'.

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

SIGNED A.L. Hickerson TITLE President DATE \_\_\_\_\_

APPROVED BY W.A. Gressett TITLE SUPERVISOR, DISTRICT II DATE JAN 18 1980

CONDITIONS OF APPROVAL, IF ANY:

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OPERATOR	1	

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

JAN 10 1980

O. C. D.  
ARTESIA OFFICE

5a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" FORM C-1011 FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Brine Water Well	7. Unit Agreement Name
2. Name of Operator Permian Brine Sales & Service, Inc.	8. Farm or Lease Name Eugenie
3. Address of Operator Box 1591, 212 W. 5th St., Odessa, Texas 79760	9. Well No. 2
4. Location of Well UNIT LETTER M 1288 FEET FROM THE South LINE AND 497 FEET FROM THE West LINE, SECTION 17 TOWNSHIP 22S RANGE 27E NMPM.	10. Field and Pool, or Wildcat
15. Elevation (Show whether DF, RT, GR, etc.) GL 3126	12. County Eddy

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data  
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

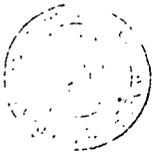
It is proposed to set the 5½" casing and cement @ 285' instead of 350' as originally approved. All fresh water has been penetrated and the red beds are sloughing on the cable tools.

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

SIGNED A.L. Hickerson TITLE President DATE

APPROVED BY W.A. Gussert TITLE SUPERVISOR, DISTRICT II DATE JAN 18 1980

CONDITIONS OF APPROVAL, IF ANY:



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

BRUCE KING  
GOVERNOR

LARRY KEHOE  
SECRETARY

January 11, 1980

P.O. DRAWER DD  
ARTESIA, NEW MEXICO 88210  
(505) 746-4861  
748-2183

Permian Brine Sales  
and Service, Inc.  
P. O. Box 1591  
Odessa, Texas 79760

Re: Eugenie  
#2-M-17-22-27  
Eddy County, NM

Gentlemen:

We are returning the enclosed Form C-104 on the subject well for additional information.

Please complete by filling in the formation record from surface to total depth. Further, please submit Form C-103, reporting the details on setting and cementing both strings of casing.

If you have any questions concerning this matter, please feel free to call upon me.

Sincerely,

W. A. Gressett  
Supervisor, District II

WAG:ar  
Encls.

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Form O-105  
Revised 10-68

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NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG  
JAN 10 1980

10. Indicate Type of Lease  
a. Title  Fee

O. C. D.

ARTESIA, OFFICE

1a. TYPE OF WELL  
OIL WELL  GAS WELL  DRY  OTHER Brine Water Well

b. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DELPEN  PLUG BACK  LIFE WELL  OTHER

2. Name of Operator  
Permian Brine Sales & Service, Inc.

3. Address of Operator  
Box 1591, 212 W. 5th St., Odessa, Texas 79760

4. Location of Well  
UNIT LETTER M LOCATED 1288 FEET FROM THE South LINE AND 497 FEET FROM THE West LINE OF SEC. 17 TWP. 22S RGE. 27E NMPM

15. Date Spudded Oct. 22, 1979 16. Date T.D. Reached 11-19-79 17. Date Compl. (Ready to Prod.) 11-22-79 18. Location (D.F., RKB, RT, GR, etc.) GL 3126 19. Elev. Casingshead -

20. Total Depth 618' 21. Plug Back T.D. 583' 22. If Multiple Compl., How Many None 23. Interval in Drilled by None 24. Interval in Drilled by None 25. Curle Leads X

24. Producing Intervals, of this completion - Top, Bottom, None  
Salt Top 456' Bottom 592

26. Type Electric and Other Log Run None 27. Was Well Cased No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
5 1/2"	17#	285'	8"	100 sx Circulated	None
2 1/2"	6.5#	583'	5"	100 sx Circulated	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
	None			

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
	None	

31. Perforations, see 12 (Interval, size and number)  
None

32. ACID, SHOT, FRACTURE, CEMENT SQUELZE, ETC.  
DEPTH INTERVAL None AMOUNT AND KIND MATERIAL USED None

33. PRODUCTION

Date First Production 11-22-79 Production Method (Flowing, gas lift, pumping - Size and type pump) Water Pump Well Status (Prod. or Shut-in) Brine Water

Date of Test	Hours Tested	Check Valve	Prod'n. For Test Performed	Oil - BBL	Gas - MCF	Water - Gall.	GR - 100 bbls
Flow Timing Press.	Casing Pressure	Flow Line 4-1/2" or larger	Flow Line	Gas - MCF	Water - BBL	Oil Gravity - API (Cont.)	

34. Log (Mud, Solids, used for fuel, vented, etc.)  
None

35. List of API Reports  
None

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A.L. Hickerson TITLE President DATE 11-30-79

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <i>Permian Brine Sales &amp; Service</i>		Lease <i>Eugenie</i>			Well # <i>2</i>	
Location of Well	Unit <i>1285 S 497 W</i>	Section <i>17</i>	Township <i>22</i>	Range <i>27</i>	County <i>Eddy</i>	
Drilling Contractor			Type of Equipment <i>Cable tools to start approx. 10-16-79</i>			
* <i>Witness</i> APPROVED CASING PROGRAM						
Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement	
* <i>8"</i>	<i>5 1/2"</i>	<i>17</i>		<i>350</i>	<i>circ.</i>	
* <i>4 3/4"</i>	<i>2 7/8"</i>	<i>6.4</i>		<i>580</i>	<i>"</i>	
Casing Data:						
Surface _____ joints of _____ inch _____ # Grade _____ (Approved) (Rejected)						
Inspected by _____ date _____						
Cementing Program						
Size of hole <i>8"</i> Size of Casing <i>5 1/2</i> Sacks cement required _____						
Type of Shoe used <i>guide</i> Float collar used _____ Btm 3 jts welded _____						
TD of hole <i>289</i> Set <i>289</i> Feet of <i>5 1/2</i> inch <i>125</i> # Grade <i>J-55</i>						
New-used csg. @ <i>289</i> with <i>125</i> sacks neat cement around shoe						
+ _____ sax _____ additives <i>270 cc</i>						
Plug down @ <i>12:05</i> ( <del>AM</del> ) (PM) Date <i>11-6-79</i>						
Cement circulated <i>yes</i> No. of Sacks <i>25 sack</i>						
Cemented by _____ Witnessed by <i>Grossert</i>						

Permian Brine Sales  
Eugenie #2

M-17-22-27

11-20-79

Ran 2 7/8 to 590 and cemented with 100 SX Class C 2% CC  
Circulated 20 SX. Centerlizer @ 10 ft - 280 ft - 320 ft  
395 ft & 445 ft Basket located @ 570 ft & 580 ft  
TD @ 616 Plug down @ 1:30 pm BJ Cemented  
2 7/8 Tubing used Best Treated to 6000 PSI

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NEW MEXICO OIL CONSERVATION COMMISSION RECEIVED

30-015-23031  
Form C-101  
Revised 1-1-65

SEP 5 1979

O. C. C.  
ARTESIA, OFFICE

5A. Indicate Type of Lease  
STATE  FEDERAL   
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			7. Unit Agreement Name
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Brine Water Well SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. Farm or Lease Name Eugenie
1. Name of Operator Permian Brine Sales & Service, Inc. ✓			9. Well No. 2
3. Address of Operator Box 1591, 212 W. 5th St., Odessa, Texas 79760			10. Field and Pool, if Wildcat Wildcat
4. Location of Well UNIT LETTER M LOCATED 1288 FEET FROM THE South LINE 497 FEET FROM THE West LINE OF SEC. 17 TWP. 22S RGE. 27E NMPM			11. County Eddy
19. Proposed Depth 600'		19A. Formation Salt	20. History of C.T. C.T.
21. Elevation (Show whether DT, RT, etc.) 3126 G.L.	21A. Kind & Status Plug Bond one well \$5,000 applied for	21B. Drilling Contractor Not selected yet	22. Approx. Date Work will start Oct. 1, 1979

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
8"	5 1/2"	17#	350'	75 Sx.	Circulated
4 3/4"	2 7/8"	6.4#	580'	50 Sx.	Circulated

We propose to drill an 8" cable tool hole through the fresh water to 350', hang 5 1/2" casing, and circulate cement. Then drill a 4 3/4" hole inside the 5 1/2" casing to the bottom of the rock salt at approximately 600', hang 2 7/8" tubing to 580' and circulate cement. We then will fracture the rock salt section between 580-600 with fresh water across to the Eugenie #1 well, 327' away. Fresh water will then be circulated down the 2 7/8 in well No. 2, through the salt section to well No. 1 and out the tubing to storage for sale.

*City of Carlsbad notified*

APPROVAL VALID FOR 90 DAYS UNLESS DRILLING COMMENCED,

EXPIRES 1-15-80

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed W. A. Gresset Title President Date 9-5-79

(This space for State Use)

APPROVED BY W. A. Gresset TITLE SUPERVISOR, DISTRICT II DATE OCT 15 1979

CONDITIONS OF APPROVAL, IF ANY:

Cement must be circulated to surface behind 5 1/2" & 2 7/8" casing

Notify N.M.O.C.C. in sufficient time to witness cementing the 5 1/2" & 2 7/8" casing

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-132  
Superseded C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Permian Brine Sales & Service, Inc.		Lease		Salt Water		Section	
Letter	Section	Township	Range	City		2	
M	17	22 South	27 East	Eddy			
1288	South		497	West			
3126.4	Salt						

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
- 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?

**RECEIVED**

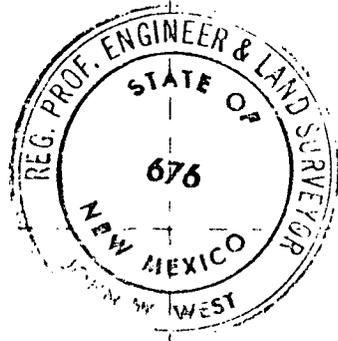
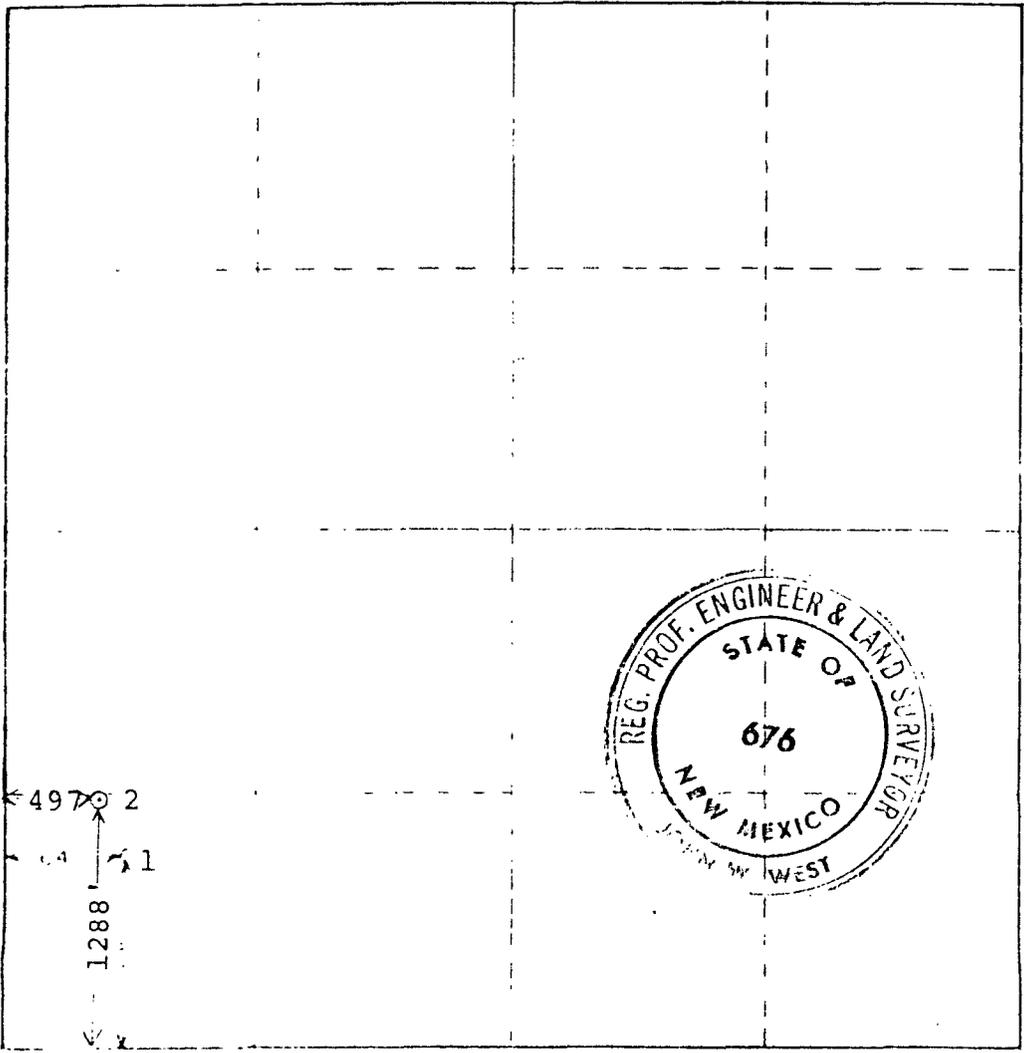
SEP 5 1979

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) \_\_\_\_\_

**D. C. G. ARTESIA, OFFICE**

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

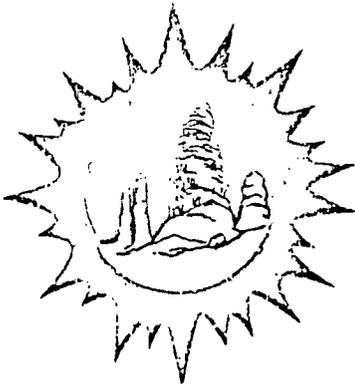
*R. L. Hedrickson*  
Name of \_\_\_\_\_  
President of \_\_\_\_\_

Permian Brine Sales & Service, Inc.  
Date 8-28-79

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

Aug. 15, 1979

Registered Professional Engineer & Land Surveyor  
No. 676  
*John W. West*  
Certificate No. John W. West 676



# city of carlsbad



PHONE 887-1191 • BOX 1569 • CARLSBAD, NEW MEXICO 88220  
Mayor — Walter Gerrells      City Administrator — Claude Tabor

October 12, 1979

Mr. Roger E. Yarbrow  
Attorney at Law  
McCormick and Forbes  
P. O. Box 1718  
Carlsbad, New Mexico 88220

Re: Brine Well

Dear Ernie:

This is to advise you that the brine well B & E, Inc., is proposing to drill within the City limits in an area that is zoned to allow brine water sales.

Mr. Tom Wetterhus, inspector for the City, should be contacted prior to commencing drilling.

Please let me know if you need additional information.

Yours very truly,

Claude F. Tabor  
City Administrator

CFT:vg

cc: B & E, Inc.



# city of carlsbad

PHONE 887-1191 • BOX 1569 • CARLSBAD, NEW MEXICO 88220  
Mayor — Walter Gerrells      City Administrator — Claude Tabor

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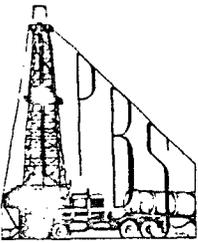
Yours very truly,

Claude F. Tabor  
City Administrator

CFT:vg

cc: B & E, Inc.

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OCT 15 1979  
CITY OF CARLSBAD



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

September 4, 1979

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SEP 5 1979

**D. C. C.**  
ARTESIA, OFFICE

Mr. W.A. Gressett  
New Mexico Oil Conservation Commission  
P.O. Drawer DD  
Artesia, New Mexico 88210

Re: Eugenie No. 2  
Sec. 17-T 22S-R27E

# 1  
9955 641 W  
# 2  
12885 - 497 W

Dear Mr. Gressett:

Attached are forms C-101 and C-102 for our drilling a second brine well on our location at Carlsbad.

Also attached for your information are three articles describing the hydraulic fracturing of rock salt.

This procedure will allow us to make saturated brine at a faster rate to supply our customers.

If additional information is desired, please call me.

Your favorable consideration will be appreciated.

Very truly yours,

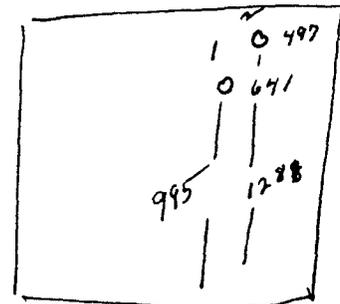
PERMIAN BRINE SALES, INC.

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SEP 17 1979  
EID: WATER  
POLLUTION CONTROL

A.L. Hickerson  
President

ALH/sp  
Attachment

cc Phil Withrow



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Form C-105  
Revised 10-74

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

O. C. C.  
ARTESIA, OFFICE

6a. Indicate Type of Lease  
State  Fee

6. State Oil & Gas Lease No.

*Bus. of Mines* 1

1a. TYPE OF WELL  
OIL WELL  GAS WELL  DRY  OTHER Brine Water Well

b. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. RESVR.  OTHER

7. Unit Agreement Name

8. Farm or Lease Name  
Eugenie

2. Name of Operator  
Permian Brine Sales & Service, Inc.

9. Well No.  
1

3. Address of Operator  
P.O. Box 1591, 212 West 5th St., Odessa, Texas 79760

10. Field and Pool, or Block  
Wildcat

4. Location of Well  
UNIT LETTER M LOCATED 995 FEET FROM THE South LINE AND 641 FEET FROM

11. County

THE West LINE OF SEC. 17 TWP. 225 RGE. 27E NMPM

15. Date Spudded 6-14-78 16. Date T.D. Reached 6-28-78 17. Date Compl. (Ready to Prod.) 6-30-78 18. Elevations (D.F., RKB, RT, GR, etc.) 3126 G.L. 19. Elev. Casinghead 3129

20. Total Depth 663 21. Plug back T.D. 587 22. If Multiple Compl., How Many  
23. Intervals Drilled By  
Rotary Tools  
Cable Tools  
All

24. Producing Interval(s), of this completion - Top, Bottom, Name  
456 Top of Salt to 592 Bottom of Salt

25. Was Directional Survey Made  
No

26. Type Electric and Other Logs Run  
Cable Tool Drillers Log

27. Was Well Cored  
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB. FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	40	349.4	12"	170 sx. - circulated	None
7"	23	456	9"	135 sx. - circulated	None

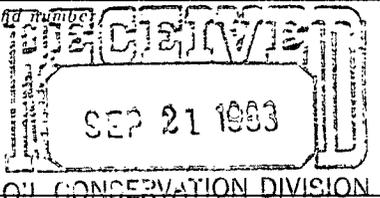
29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8	587'	No

31. Perforation Record (Interval, size and number)  
None



32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	<u>None</u>

33. SANTA FE PRODUCTION DNA

Date First Production Production Method (Flowing, gas lift, pumping - Size and type pump) Well Status (Prod. or Shut-in)

Date of Test Hours Tested Choke Size Prod'n. Per Test Period Oil - BBL Gas - MCF Water - BBL Gas - Oil Ratio

Flow Tubing Press. Casing Pressure Calculated 24-Hour Rate Oil - BBL Gas - MCF Water - BBL Oil Gravity (Sp. Gr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.) Test Witnessed By

35. List of Attachments  
Drillers Log

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED [Signature] TITLE President DATE 7/14/78

*Post 2- Brine 14-12*  
*W 78*  
*7-21*

**INSTRUCTIONS**

This form is to be filed with the appropriate District Office of the Commission not later than 30 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured by this. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1165.

**INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE**

**Southeastern New Mexico**

**Northwestern New Mexico**

- |                          |                        |                             |                        |
|--------------------------|------------------------|-----------------------------|------------------------|
| T. Anhy _____            | T. Canyon _____        | T. Ojo Alamo _____          | T. Penn. "B" _____     |
| T. Salt <u>456</u>       | T. Strawn _____        | T. Kirtland-Fruitland _____ | T. Penn. "C" _____     |
| B. Salt <u>592</u>       | T. Atoka _____         | T. Pictured Cliffs _____    | T. Penn. "D" _____     |
| T. Yates _____           | T. Miss _____          | T. Cliff House _____        | T. Leadville _____     |
| T. 7 Rivers _____        | T. Devonian _____      | T. Menefee _____            | T. Madison _____       |
| T. Queen _____           | T. Silurian _____      | T. Point Lookout _____      | T. Elbert _____        |
| T. Grayburg _____        | T. Montoya _____       | T. Mancos _____             | T. McCracken _____     |
| T. San Andres _____      | T. Simpson _____       | T. Gallup _____             | T. Ignacio Qtzte _____ |
| T. Glorieta _____        | T. McKee _____         | Base Greenhorn _____        | T. Granite _____       |
| T. Paddock _____         | T. Ellenburger _____   | T. Dakota _____             | T. _____               |
| T. Blinbry _____         | T. Gr. Wash _____      | T. Morrison _____           | T. _____               |
| T. Tubb _____            | T. Granite _____       | T. Todilto _____            | T. _____               |
| T. Drinkard _____        | T. Delaware Sand _____ | T. Entrada _____            | T. _____               |
| T. Abo _____             | T. Bone Springs _____  | T. Wingate _____            | T. _____               |
| T. Wolfcamp _____        | T. _____               | T. Chinle _____             | T. _____               |
| T. Penn. _____           | T. _____               | T. Permian _____            | T. _____               |
| T. Cisco (Bough C) _____ | T. _____               | T. Penn. "A" _____          | T. _____               |

**OIL OR GAS SANDS OR ZONES**

- No. 1, from.....to..... No. 4, from.....to.....
- No. 2, from.....to..... No. 5, from.....to.....
- No. 3, from.....to..... No. 6, from.....to.....

**IMPORTANT WATER SANDS**

Include data on rate of water inflow and elevation to which water rose in hole.

- No. 1, from.....to.....feet. ....
- No. 2, from.....to.....feet. ....
- No. 3, from.....to.....feet. ....
- No. 4, from.....to.....feet. ....

**FORMATION RECORD (Attach additional sheets if necessary)**

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

**RECEIVED**  
 SEP 21 1983  
 CONSERVATION DIVISION  
 SANTA FE

P.B.S. & S.  
BOX 1591  
ODESSA, TEXAS 79760

JUNE 30, 1978

SALT & 1

0 to 46 -----	TOP SOIL WITH GRAVEL
46 to 58 -----	SAND & GRAVEL
58 to 62 -----	LIME
62 to 65 -----	RED BED
65 to 76 -----	RED SAND
76 to 107 -----	GRAVEL
107 to 163 -----	BROWN CLAY W/GRAVEL & SAND
163 to 170 -----	RED BED
170 to 178 -----	LIME VERY HARD
178 to 225 -----	RED BED
225 to 237 -----	ANHYDRITE & RED BED
237 to 252 -----	LIME & ANHYDRITE W/SOME GYP.
252 to 268 -----	RED BED
268 to 285 -----	LIME W/GYP. STRINGERS
285 to 305 -----	GYP. W/SOME RED BED
305 to 320 -----	GYP. & ANHYDRITE
320 to 328 -----	RED BED
328 to 360 -----	ANHYDRITE W/LIME & SAND
360 to 410 -----	RED ROCK & ANHYDRITE
410 to 430 -----	ANHYDRITE W/SOME LIME
430 to 437 -----	GRAY LIME ( HARD ) & ANHYDRITE
437 to 445 -----	ANHYDRITE
445 to 456 -----	ANHYDRITE & GRAY LIME
456 to 555 -----	SALT
555 to 567 -----	SALT & SOME LIME
567 to 576 -----	SALT & <u>BLUE SHALE VERY LITTLE</u>
576 to 592 -----	SALT
592 to 663 -----	ANHYDRITE

BYRON JACKSON INC.

CEMENTING AFFIDAVIT

I, Warren Allen, being of lawful age and having full knowledge of the facts herein below set out do state: I am employed by Byron Jackson Inc. On 6-20, 1978, BYRON JACKSON INC. performed the cementing operation herein described for PERMIAN BASIN SALES & SERVICE CO on their Well No. #1 on the EUGENIE CARLISLE STATION lease located in Eddy County, State of NEW MEX.

CASING CEMENTING: Name or type of string was SURFACE. Information provided by the Customer Company states that the casing was 9 5/8 in. O.D. set in 12 1/2 inch hole, and that the casing depth set was 347 feet. For this job the following materials were used:

170 SACKS CLASS C

An estimated 20 sacks of excess cement was circulated out of the well.

CEMENT PLUG: Information provided by the Customer Company states that the hole size was \_\_\_\_\_ inches, and total depth was \_\_\_\_\_ feet. For this job the following materials were used to place plugs as indicated:

Plug from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. with \_\_\_\_\_ sacks of \_\_\_\_\_

SIGNED: BYRON JACKSON INC.

BY- Warren Allen

DATE: 6-20-78

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NEW MEXICO OIL CONSERVATION COMMISSION

JUL 20 1978

O. C. C.  
ARTESIA, OFFICE

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

10. Indicate Type of Lease  
State  Fee   
11. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO RE-ENTER OR TO GO BACK TO A DIFFERENT RESERVOIR.  
APPLICATION FOR PERMIT - FORM C-101 FOR SUCH PROPOSALS

1. Indicate Type of Well: OIL WELL  GAS WELL  OTHER - Brine Water Well

2. Name of Operator: Permian Brine Sales & Service, Inc.

3. Address of Operator: P.O. Box 1591, 212 West 5th St., Odessa, Texas 79760

4. Location of Well:  
UNIT LETTER M 995 FEET FROM THE South LINE AND 641 FEET FROM  
THE West LINE, SECTION 17 TOWNSHIP 22 South RANGE 27 East NMPM

7. Unit Agreement Name  
8. Name of Lease Inmate: Eugenie  
9. Well No.: 1  
10. Field and Pool, or Wildcat: Wildcat  
11. County: Eddy

15. Elevation (Show whether DF, RT, GR, etc.)  
3126 GL

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK  PLUG AND ABANDON   
TEMPORARILY ABANDON  CHANGE PLANS   
RE-ENTER OR ALTER CASING  OTHER

SUBSEQUENT REPORT OF:

REMEDIAL WORK  ALTERING CASING   
COMMENCE DRILLING OPNS.  PLUG AND ABANDONMENT   
COMPLETED AND ABANDONMENT JOB  OTHER

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work, SEE RULE 1103.

Used 9 5/8 - 40# - 349.4' Depth  
Used 7" - 23# - 456' Depth

170 sacks cement circulated  
*waited on cement 48 hours*  
135 sacks cement circulated, *Alt.*  
with 4 sacks calcium chloride  
and 2 sacks Bentonite.  
*waited on cement 18 hours*  
*Alt.*

6-29-78 Drilled out plug & bailed to 658 ft.  
No water intrusion

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

SIGNED: W. A. Gressett TITLE: President DATE: 7-19-78

APPROVED BY: W. A. Gressett TITLE: SUPERVISOR, DISTRICT II DATE: JUL 26 1978

CONDITIONS OF APPROVAL, IF ANY:



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**  
**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78 NO. 30-19535

DATE OF JOB 6/20/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Permian Brine Sales & Service, Inc. WELL NO. #1 LEASE Eugenie Carlsbad St

ADDRESS 212 West Fifth St. COUNTY Eddy STATE NM

CITY Odessa STATE Texas FIELD

AUTHORIZED BY [Signature] WELL OWNER Same

18560 (OFFICE USE ONLY)

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

	DATE	AM	PM	TIME
TRUCK CALLED	<u>6-20</u>			<u>9:30</u>
ARRIVED AT JOB				<u>10:00</u>
START OPERATION				<u>11:00</u>
FINISH OPERATION				<u>11:45</u>
RELEASED	<u>6-20</u>			<u>12:00</u>
MILES FROM STATION TO WELL				<u>1</u>
BULK TICKET NO.	<u>877-21797</u>			

Type Job: Casing Depth: 347 Ft. CEMENT DATA: Bulk  Socks

Surface  Intermediate  Production  Remedial  Socks Brand Type % Gel Admixes

Size Hole: 12-1/2 Depth: 347 Ft. 170 C Neat

Size & Wt. Casing: 9-5/8 NEW USED  Depth: Ft.

Size & Wt. D. Pipe or Tubing Depth: Ft.

Top Plugs: / Type: JUN 26 1978 Weight of Slurry: 14.8 LBS./GAL. LBS./CU. FT.

Bottom Plugs: / Type: Volume of Slurry: 1.32

Pump Tr. No. 1313 Fluid Pumped 120 22.5 Sacks Cement Treated With % of

STAGE NO. TOTAL PREV. GALS. MAX. DEPTH 317 FT. MAX. PRESSURE 150 P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

3-2051 SIGNED: [Signature] AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	Description	Quantity	Unit Price	Total
	One Cement Pump Unit			<u>297 67</u>
	Mileage on Pump Unit			<u>1 20</u>
	One Guide Shoe Regular			<u>143 00</u>
	One Stop Ring			<u>6 00</u>
	3 Centralizers @ 35.00 each			<u>105 00</u>
	SUB TOTAL			<u>552 81</u>
<u>0-99930</u>	<u>4% New Mexico Sales Receipt Tax</u>			<u>22 11</u>
				<u>574 92</u>

SERVICE REPRESENTATIVE: Warrn Allen THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]

JOB TICKET NO. S 77. 20201 (WELL OWNER OPERATOR OR AGENT)



**BJ-HUGHES Inc.**  
 A SUBSIDIARY OF HUGHES TOOL COMPANY  
 P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

**SERVICE OPERATIONS**

**INVOICE** TERMS: NET 20TH PROX.  
 STATEMENTS ON REQUEST ONLY  
 PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78 NO. 30-20643

DATE OF JOB 6/28/78 DISTRICT Carlsbad NEW WELL  OLD WELL  CUSTOMER'S ORDER NO.

CUSTOMER Permian Brine Sales & Service Inc. WELL NO. #1 LEAS Eugenie Carlsbad St.

ADDRESS 212 West Fifth St. COUNTY Eddy STATE NM

CITY Odessa STATE Texas FIELD

AUTHORIZED BY 79760 WELL OWNER Same

48560

PERMIAN BRINE SALES & SERVICE INC  
 212 WEST FIFTH STREET  
 ODESSA TEXAS 79760

	DATE	AM	PM	TIME
TRUCK CALLED	6-28			1:45
ARRIVED AT JOB				2:00
START OPERATION				4:28
FINISH OPERATION				6:00
RELEASED	6-28			6:15
MILES FROM STATION TO WELL	1			
BULK TICKET NO.	B-77-21739			

Type Job: Prod Casing Depth: 453 Ft. CEMENT DATA: Bulk  Socks  06017

Surface  Intermediate  Production  Remedial

Size Hole: 8" Depth: 663 Ft. 135 SX Brand C Type  % Gel  Admixes 3% AT

Size & Wt. Casing: 7" 23" NEW USED  Depth: 453 Ft. 135 SX

Size & Wt. D. Pipe or Tubing Depth:  Ft.

Top Plugs: 1 Type: Rubber Weight of Slurry: 14.8 LBS./GAL. LBS./CU. FT.

Bottom Plugs:  Type:  Volume of Slurry: 1.32 LBS./GAL. LBS./CU. FT.

Pump Tr. No. 1361 Fluid Pumped 120 / 18 GAL Sacks Cement Treated With  % of

STAGE NO. JUL 05 1978 TOTAL PREV. GALS.  MAX. DEPTH 663 FT. MAX. PRESSURE 200 P.S.I.

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no additional terms and conditions shall apply to this order without the consent of an authorized representative of BJ-HUGHES Inc.

SIGNED: [Signature] AGENT OF OWNER OR CONTRACTOR

PRICE REF. NO.	Description	Quantity	Unit Price	Total
0201.02	One Cement Pump Unit <u>663'</u>		<u>411.79</u>	<u>411.79</u>
0261.00	Mileage on Pump Unit @ <u>120</u>			<u>120</u>
<del>298.00</del>	<del>One Guide Shoe Regular</del>			<del>82.00</del>
0298.00	One Float Shoe Regular			<u>169.00</u>
0298.00	One Centralizer			<u>27.50</u>
0273.07	One Top Rubber Plug			<u>33.35</u>
				<u>642.84</u>
				<u>25.71</u>
				<u>668.55</u>

SERVICE REPRESENTATIVE: Warren Allen  
 JOB TICKET NO. S 77- 29291

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]  
 (WELL OWNER OPERATOR OR AGENT)

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <u>PRYMIAN Brine Sales &amp; Service</u>		Lease <u>Eugenie</u>			Well # <u>1</u>
Location of Well	Unit <u>M</u> <u>995 S</u> <u>641-W</u>	Section <u>17</u>	Township <u>22</u>	Range <u>27</u>	County <u>Eddy</u>
Drilling Contractor	Type of Equipment <u>Cable Tools</u>				

APPROVED CASING PROGRAM

Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
<u>12 3/4</u>	<u>10 3/4</u>	<u>54</u>	<del>335</del>	<u>335</u>	<u>Circulate</u>
* <u>8</u>	<u>7</u>	<u>32</u>		<u>453</u>	<u>Circulate</u>

Casing Data:

Production Surface joints of \_\_\_\_\_ inch # Grade \_\_\_\_\_  
(Approved) (Rejected)

Inspected by \_\_\_\_\_ date \_\_\_\_\_

Cementing Program

Size of hole 8" Size of Casing 7" Sacks cement required 135

Type of Shoe used Texas Float collar used NO Btm 3 jts welded Yes

TD of hole 592 Set 453 Feet of 7 Inch 32 # Grade K-55

~~Used~~ used csg. @ 453 with 135 sacks neat cement around shoe  
+ \_\_\_\_\_ sax \_\_\_\_\_ additives 3% Calcium Chloride

Plug down @ 6:10 (AM) (PM) Date 6-28-78

Cement circulated Yes No. of Sacks 20

Cemented by Byron Jackson Witnessed by B.W. Weaver

Temp. Survey ran @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_ top cement @ \_\_\_\_\_

Casing test @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_

Method Used \_\_\_\_\_ Witnessed by \_\_\_\_\_

Checked for shut off @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_

Method used \_\_\_\_\_ Witnessed by \_\_\_\_\_

Remarks: \_\_\_\_\_

BYRON JACKSON INC.

CEMENTING AFFIDAVIT

I, Warren Allen, being of lawful age and having full knowledge of the facts herein below set out do state: I am employed by Byron Jackson Inc. On 6-20, 1978, BYRON JACKSON INC. performed the cementing operation herein described for PERMIAN BRINE SALES & SERVICE CO on their Well No. #1 on the EUGENIE CARLSBAD STATION lease located in Eddy County, State of NEW MEX.

17-22-27

CASING CEMENTING: Name or type of string was SURFACE. Information provided by the Customer Company states that the casing was 9 5/8 in. O.D. set in 12 1/2 inch hole, and that the casing depth set was 317 feet. For this job the following materials were used:

170 SACKS CLASS C

RECEIVED

JUN 23 1978

O. C. C.  
ARTERIA OFFICE

An estimated 20 sacks of excess cement was circulated out of the well.

CEMENT PLUG: Information provided by the Customer Company states that the hole size was \_\_\_\_\_ inches, and total depth was \_\_\_\_\_ feet. For this job the following materials were used to place plugs as indicated:

Plug from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. with \_\_\_\_\_ sacks of \_\_\_\_\_

SIGNED: BYRON JACKSON INC.

BY- Warren Allen

DATE: 6-20-78

## FIELD REPORT FOR CEMENTING OF WELLS

Operator <i>Fernandez Brine Sales Service Inc</i>		Lease <i>Eugenie</i>			Well # <i>1</i>
Location of Well	Unit <i>995 S 641 W</i>	Section <i>17</i>	Township <i>22</i>	Range <i>27</i>	County <i>Eddy</i>
Drilling Contractor			Type of Equipment <i>Cable tool to start 6-12-78</i>		

\* *Witness*

## APPROVED CASING PROGRAM

Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
* <i>12 3/4"</i>	<i>10 3/4"</i>	<i>54</i>		<i>335</i>	<i>circ.</i>
*	<i>8 5/8"</i>	<i>36</i>		<i>350</i>	<i>"</i>

## Casing Data:

Surface *12* joints of *3 1/2* inch *12* # Grade

(Approved) (Rejected)

Inspected by *M. S.* date *6/12/78*

## Cementing Program

Size of hole *12 3/4* Size of Casing *9 5/8* Sacks cement required *170*Type of Shoe used *none* Float collar used *10c* Btm 3 jts welded *120*TD of hole *322* Set *322* Feet of *9 5/8* Inch *12* # GradeNew-used csg. @ *322* with *170* sacks neat cement around shoe+ *1* sax *170* additivesPlug down @ *12:00* (AM) (PM) Date *6/20/78*Cement circulated *yes* No. of Sacks *20*Cemented by *RJ* Witnessed by *R. J. ...*

Temp. Survey ran @ (AM) (PM) Date top cement @

Casing test @ (AM) (PM) Date

Method Used Witnessed by

Checked for shut off @ (AM) (PM) Date

Method used Witnessed by

Remarks:

*3/25/78*

NO. OF COPIES RECEIVED	5
DISTRIBUTION	8
SANTA FE	1
FILE	1
U.S.G.S.	2
LAND OFFICE	
OPERATOR	1

**RECEIVED**  
NEW MEXICO OIL CONSERVATION COMMISSION

30-015-22574  
Form C-101  
Revised 1-1-65

MAY 26 1978

**O. C. C.**  
ARTEZIA, OFFICE

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> <b>Brine Water Well</b> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name <b>Eugenie</b>	
2. Name of Operator <b>Permian Brine Sales &amp; Service, Inc.</b>		9. Well No. <b>1</b>	
3. Address of Operator <b>P. O. Box 1591, 212 West 5th St., Odessa, Texas 79760</b>		10. Field and Pool, or Wildcat <b>Wildcat</b>	
4. Location of Well UNIT LETTER <b>M</b> LOCATED <b>995</b> FEET FROM THE <b>South</b> LINE AND <b>641</b> FEET FROM THE <b>West</b> LINE OF SEC. <b>17</b> TWP. <b>22S</b> RGE. <b>27E</b> NMPM		12. County <b>Eddy</b>	
19. Proposed Depth <b>1,450</b>		19A. Formation <b>Salt</b>	20. Rotary or C.T. <b>C.T.</b>
21. Elevations (Show whether DF, RT, etc.) <b>3,126' G.L.</b>	21A. Kind & Status Plug. Bond <b>one well - \$5,000</b> <b>No. 610003738 8</b>	21B. Drilling Contractor <b>Not Selected Yet</b>	22. Approx. Date Work will start <b>June 10, 1978</b>

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12"	10-3/4"	54#	335'	100 sx.	Circulated
10"	8-5/8"	36#	550'	120 sx.	Circulated

We propose to drill a 12" cable tool hole through the fresh water, hang 10-3/4" casing at 335' and circulate cement. Then drill a 10" hole inside the 10-3/4" casing to the top of the salt at approximately 500', hang 8-5/8" casing and circulate cement. Then drill an 8" hole through the upper rock salt section and hang 2-7/8" tubing in open hole for circulation.

*City of Carlsbad notified*

APPROVAL VALID  
FOR 90 DAYS UNLESS  
DRILLING COMMENCED,  
EXPIRES 9-12-78

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed [Signature] Title **President** Date **5-19-78**

(This space for State Use)

APPROVED BY [Signature] TITLE **SUPERVISOR, DISTRICT II** DATE **JUN 12 1978**

CONDITIONS OF APPROVAL, IF ANY:

*Hole must be at least 2" larger than the surface casing*  
Cement must be circulated to all casing.

Notify N.M.O.C.C. in sufficient time to witness cementing the all casing

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form 1  
Supplement No. 1  
11/1/77

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

Permian Brine Sales & Service, Inc.

~~Salt Water~~ *Eugenie*

1

M 17 22 South 27 East Eddy

995 South 641 West

3126.4

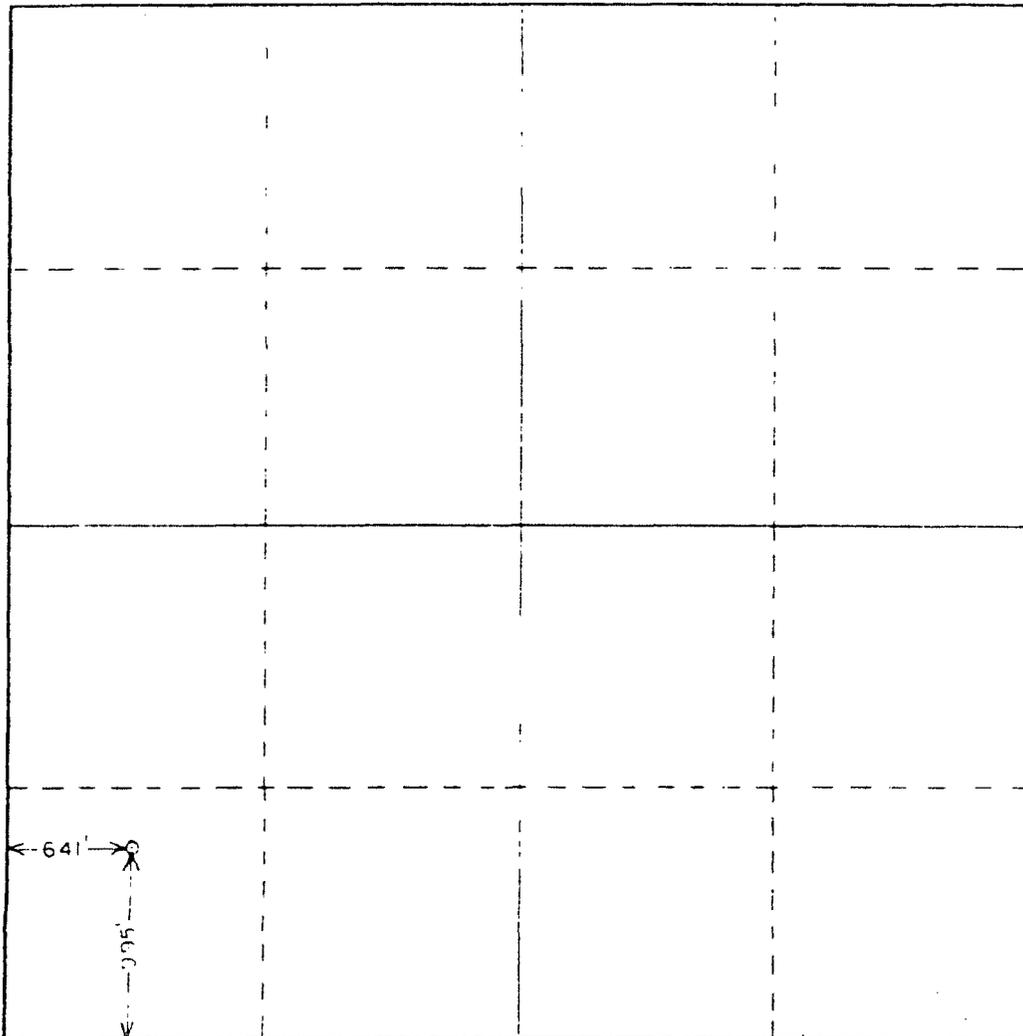
Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

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

*Ronald J. Edson*

President

Permian Brine Sales & Service, Inc.

5/30/78

5/30/78

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.

May 15, 1978

Registered Professional Engineer and Land Surveyor

*John W. West*

Certificate No. John W. West 676

Ronald J. Edson 3239





# CITY OF CARLSBAD

PHONE 887-1191 • BOX 1569 • CARLSBAD, NEW MEXICO 88220  
Mayor — Walter Gerrells      City Administrator — Claude Tabor

June 9, 1978

RECEIVED

JUN 14 1978

O. C. C.  
ARTESIA, OFFICE

Mr. Roger E. Yarbro  
Attorney at Law  
McCormick and Forbes  
P. O. Box 1718  
Carlsbad, New Mexico 88220

Re: Brine Well

Dear Ernie:

The State Engineer controls the drilling of water wells in this area; however, City ordinances relating to zoning should be adhered to. I have checked with Mr. Powers, City Building Official, and he has assured me that the brine well location is in the proper zoning.

Please have the drilling contractor contact Mr. Powers prior to drilling. If you need additional information, please let me know.

Yours truly,

Claude F. Tabor  
City Administrator

CFT/jw

7 June 1978

Mr. Claude Tabor  
City Administrator  
City of Carlsbad  
P. O. Box 1569  
Carlsbad, New Mexico 88220

Re: Brine Well

Dear Claude:

I discussed the possibility of B & E, Inc., a New Mexico Corporation located in Carlsbad and Hobbs, establishing a brine well at the South "Y" in the Carlsbad city limits with George Watkins. The brine well will be just like a water well in all respects. The well will not change the type of activity at B & E's location.

I have been unable to find a city ordinance which requires us to secure a drilling permit from the city. Please advise me what type of authority we need to proceed.

We would like to proceed as soon as possible so an early reply will be appreciated.

Sincerely,

Roger E. Yarbro

REY:bw

cc: George Watkins, Esquire

INVENTORY OF SOLUTION MINING WELLS OIL CONSERVATION DIVISION, 1981

\* = please attach pertinent documents

I. OPERATOR / LOCATION INFORMATION

Operator PERMIAN BRINE SALES & SERV. INC

Address P.O. BOX 1591, 212 W. 5<sup>th</sup> St. Odessa Tx. 79760

Phone 1-915-332-0531

Mr. Hickerson

Well unit # 2 Lse. Eugenie Location U.M. 1288 FSL/ 497FWL

T. 22S R. 27E Sec. 17 NW 1/4 SW 1/4 SW 1/4

County Eddy

Purpose of well (brine supply, LPG storage, potash dissolution) \_\_\_\_\_

BRINE SUPPLY

332

II. DRILLING / SITING INFORMATION

Contractor (CONTACT OPR.) \_\_\_\_\_ 11/2/81

Date drilling started 10-22-79 Date drilling completed 11-19-79

Drilling method CABLE TOOL

Elevation of ground surface 3126 How measured \_\_\_\_\_

Date measured 8-15-79 Order of survey \_\_\_\_\_

Name of surveyor JOHN W. WEST

Total depth of hole 618' PETD 583'

Attach schematic of well ,include open hole interval, perforations, etc. \*

Type of drilling fluid \_\_\_\_\_

Type of drilling mud if used (brand if known) \_\_\_\_\_

List any additives to the drilling mud, or any other chemicals put down well:

Describe casing tests performed TBG. TESTED TO 6000 psi, csg. tested to 1000 psi

as per Mr Hickerson

Other tests \_\_\_\_\_

\* = please attach pertinent documents

II. DRILLING / SITING (continued)

Casing, tubing, and cementing record (please attach copy)\*

Note: if a copy is not available detail casing record on back of this sheet using the following format. Include brand or type of cement if known.

From	To	Size of Hole	Size of Casing	Weight per Foot	Sacks of Cement	Estimated Top of cmt.
------	----	--------------	----------------	-----------------	-----------------	-----------------------

Was mudcake on bore wall removed before cementing production casing? \_\_\_\_\_

Was salt saturated cementing material used opposite salt formation? NO

Is site within 1/2 mile of another well? If so, use note to explain. NO

WELLS W/IN 1/2 MILE INDUSTRIAL PRDPRTY.

Site preparation (concrete pad, graded dirt, pit, etc) GRADED DIRT &

CALICHE NO PIT

Type of surface seal or well-head (locking security cap, welded, etc.) \_\_\_\_\_

WELL HEAD - SEE ATTACHED SKETCH

Comments (include problems encountered while drilling, loss of circulation, deviation of hole from vertical, centralizers used, tools lost or stuck, fracturing techniques used, etc.) SLOUGHING AT 285'.

BASKETS ON 27/8" @ 570' & 580' Cement @ 10', 280', 320', 395', 445'

\_\_\_\_\_ (use back of sheet if more space is required)

NO. 7 (OLD) RECEIVED	
D. T. DIVISION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

**RECEIVED**  
 NEW MEXICO OIL CONSERVATION COMMISSION  
**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**  
**JAN 10 1980**  
**O. C. D.**  
 ARTESIA, OFFICE

Form O-105  
 Revised 3-78

6. Indicate Type of Lease  
 State  Fee

5. State Oil & Gas Lease No.

7. Unit Agreement No.

8. Form of Lease Name  
**Eugenie**

9. Well No.  
**2**

10. Field and Pool, or wildcard

11. County

1a. TYPE OF WELL  
 OIL WELL  GAS WELL  DRY  OTHER Brine Water Well

b. TYPE OF COMPLETION  
 NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. REVR.  OTHER

2. Name of Operator  
**Permian Brine Sales & Service, Inc.**

3. Address of Operator  
**Box 1591, 212 W. 5th St., Odessa, Texas 79760**

4. Location of Well  
 UNIT LETTER M LOCATED 1288 FEET FROM THE South LINE AND 497 FEET FROM

THE West LINE OF SEC. 17 TWP. 22S RGE. 27E N.M.P.M.

15. Date Spudded Oct. 22, 1979 16. Date T.D. Reached 11-19-79 17. Date Compl. (Ready to Prod.) 11-22-79 18. Interventions (DF, RKB, RT, GR, etc.) GL 3126 19. Elev. Contingency -

20. Total Depth 618' 21. Plug Back T.D. 583' 22. If Multiple Compl., How Many → 23. Interventions Drilled By → Rotary Tools → Cable Tools X

24. Producing Interval(s), of this completion - Top, Bottom, Name  
**Salt Top 456' Bottom 592**

25. Was Directional Survey Made No

26. Type Electric and Other Logs Run None 27. Was Well Cored No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
5 1/2"	17#	285'	8"	100 sx Circulated	None
2 1/2"	6.5#	583'	5"	100 sx Circulated	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
	None			

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
	None	

31. Perforation Record (Interval, size and number)  
None

32. ACID, SHOT, FRACTURE, CEMENT SQUELZE, ETC.  
 DEPTH INTERVAL None AMOUNT AND KIND MATERIAL USED None

33. PRODUCTION

Date First Production 11-22-79 Production Method (Flowing, gas lift, pumping - Size and type pump) Water Pump Well Status (Prod. or Shut-in) Brine Water

Date of Test	Hours Tested	Choke Size	Prod'n. Per Test Period	Oil - BBL	Gas - MCF	Water - BBL	Gas - Oil Ratio

Flow Tubing Press. → Casing Pressure → Calculated 14-Hour Rate → Oil Gravity - API (Corr.) →

34. Description of Gas (Sold, used for fuel, vented, etc.) → Test Witnessed By →

35. List of Addendums

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A.L. Hickerson TITLE President DATE 11-30-79  
**A.L. Hickerson**

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FILE	1 ✓
U.S.G.S.	2
LAND OFFICE	
OPERATOR	1

NEW MEXICO OIL CONSERVATION COMMISSION RECEIVED

30-015-25031  
Form C-101  
Revised 1-1-65

SEP 5 1979

O. C. C.  
ARTESIA, OFFICE

5A. Indicate Type of Lease  
STATE  FEDERAL   
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Brine Water Well SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name Eugenie	
2. Name of Operator Permian Brine Sales & Service, Inc. ✓		9. Well No. 2	
3. Address of Operator Box 1591, 212 W. 5th St., Odessa, Texas 79760		10. Field and Pool, or Wildcat Wildcat	
4. Location of Well UNIT LETTER M LOCATED 1288 FEET FROM THE South LINE AND 497 FEET FROM THE West LINE OF SEC. 17 TWP. 22S RGE. 27E NMPM		12. County Eddy	
19. Proposed Depth 600'		19A. Formation Salt	20. Nature of C.T. C.T.
21. Elevations (Show whether DF, RT, etc.) 3126 G.L.	21A. Kind & Status Plug Bond one well \$5,000 applied for	21B. Drilling Contractor Not selected yet	22. Approx. Date Work will start Oct. 1, 1979

# 610 057402 2  
PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
8"	5 1/2"	17#	350'	75 Sx.	Circulated
4 3/4"	2 7/8"	6.4#	580'	50 Sx.	Circulated

We propose to drill an 8" cable tool hole through the fresh water to 350', hang 5 1/2" casing, and circulate cement. Then drill a 4 3/4" hole inside the 5 1/2" casing to the bottom of the rock salt at approximately 600', hang 2 7/8" tubing to 580' and circulate cement. We then will fracture the rock salt section between 580-600 with fresh water across to the Eugenie #1 well, 327' away. Fresh water will then be circulated down the 2 7/8 in well No. 2, through the salt section to well No. 1 and out the tubing to storage for sale.

*City of Carlsbad notified*

APPROVAL VALID FOR 90 DAYS UNLESS DRILLING COMMENCED,  
EXPIRES 1-15-80

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
Signed W. A. Gresset Title President Date 9-4-79

(This space for State Use)  
APPROVED BY W. A. Gresset TITLE SUPERVISOR, DISTRICT II DATE OCT 15 1979

CONDITIONS OF APPROVAL, IF ANY:  
Cement must be circulated to surface behind 5 1/2" & 2 7/8" casing  
Notify N.M.O.C.C. in sufficient time to witness cementing the 5 1/2" & 2 7/8" casing

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <i>Permian Brine Sales &amp; Service</i>		Lease <i>Eugenie</i>			Well # <i>2</i>
Location of Well	Unit <i>1286 S 497 W</i>	Section <i>17</i>	Township <i>22</i>	Range <i>22</i>	County <i>Eddy</i>
Drilling Contractor	Type of Equipment <i>Cable tools to start approx. 10-16-79</i>				

APPROVED CASING PROGRAM

Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
<i>8"</i>	<i>5 1/2"</i>	<i>17</i>		<i>350</i>	<i>circ.</i>
<i>4 3/4"</i>	<i>2 7/8"</i>	<i>6.4</i>		<i>580</i>	<i>"</i>

Casing Data:

Surface \_\_\_\_\_ joints of \_\_\_\_\_ inch \_\_\_\_\_ # Grade \_\_\_\_\_  
(Approved) (Rejected)

Inspected by \_\_\_\_\_ date \_\_\_\_\_

Cementing Program

Size of hole *8"* Size of Casing *5 1/2* Sacks cement required \_\_\_\_\_

Type of Shoe used *guide* Float collar used \_\_\_\_\_ Btm 3 jts welded \_\_\_\_\_

TD of hole *289* Set *289* Feet of *5 1/2* inch *125* # Grade *J-55*

New-used csg. @ *289* with *125* sacks neat cement around shoe

+ \_\_\_\_\_ sax \_\_\_\_\_ additives *270 cc*

Plug down @ *12:05* (AM) (PM) Date *11-6-79*

Cement circulated *yes* No. of Sacks *25 sax*

Cemented by \_\_\_\_\_ Witnessed by *Grossett*

Permian Brine Sales

#

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Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

JAN 10 1980

O. C. D.  
ARTESIA OFFICE

3a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.  
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <u>Brine Water Well</u>	7. Unit Agreement Name
2. Name of Operator <u>Permian Brine Sales &amp; Service, Inc.</u>	8. Farm or Lease Name <u>Eugenie</u>
3. Address of Operator <u>Box 1591, 212 W. 5th St., Odessa, Texas 79760</u>	9. Well No. <u>2</u>
4. Location of Well UNIT LETTER <u>M</u> <u>1288</u> FEET FROM THE <u>South</u> LINE AND <u>497</u> FEET FROM THE <u>West</u> LINE, SECTION <u>17</u> TOWNSHIP <u>22S</u> RANGE <u>27E</u> N.M.P.M.	10. Field and Pool, or Wildcat
15. Elevation (Show whether DF, RT, GR, etc.) <u>GL 3126</u>	12. County <u>Eddy</u>

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data  
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

It is proposed to set the 5½" casing and cement @ 285' instead of 350' as originally approved. All fresh water has been penetrated and the red beds are sloughing on the cable tools.

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

SIGNED A. L. Hickerson TITLE President DATE \_\_\_\_\_

APPROVED BY W. A. Gussert TITLE SUPERVISOR, DISTRICT II DATE JAN 18 1980

CONDITIONS OF APPROVAL, IF ANY:

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NEW MEXICO OIL CONSERVATION COMMISSION RECEIVED

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

JAN 17 1980

O C D

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <u>Brine Water Well</u>		5a. Indicate Type of Lease State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
2. Name of Operator <u>Permian Brine Sales &amp; Service, Inc.</u>		5. State Oil & Gas Lease No.
3. Address of Operator <u>Box 1591, 212 W. 5th St., Odessa, Texas 79760</u>		7. Unit Agreement Name
4. Location of Well UNIT LETTER <u>M</u> <u>1288</u> FEET FROM THE <u>South</u> LINE AND <u>497</u> FEET FROM THE <u>West</u> LINE, SECTION <u>17</u> TOWNSHIP <u>22S</u> RANGE <u>27E</u> N.M.P.M.		8. Farm or Lease Name <u>Eugenie</u>
15. Elevation (Show whether DF, RT, GR, etc.) <u>GL 3126</u>		9. Well No. <u>2</u>
		10. Field and Pool, or Wildcat
		12. County <u>Eddy</u>

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Completion

Ran 285' of 17# 5½" casing. B.J. Cemented on 11/6/79 with 125 sx Class C cement with 2% A-7 Calcium Chloride. Cement circulated. Let set 36 hours. Drilled out plug with cable tools. No water.

Ran 583' of 6.5# 2 7/8 tubing. B.J. Cemented 11/20/79 with 100 sx of Class C cement with 2% A-7 Calcium Chloride cement circulated. Let set 24 hours.

November 21, 1979 fractured across to Eugenie No. 1 in salt & shale stringer between 576' and 592'.

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

SIGNED A.L. Hickerson TITLE President DATE \_\_\_\_\_

APPROVED BY W.A. Gressett TITLE SUPERVISOR, DISTRICT II DATE JAN 18 1980

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

JAN 10 1980

O. C. D.  
ARTESIA, OFFICE

1. Indicate Type of Lease  
State

2. Name of Leaseholder  
**RECEIVED**  
JAN 17 1980  
**O. C. D.**  
ARTESIA, OFFICE  
**Eugenie**

3. Well No. **2**

1. TYPE OF WELL *Bm 1*

2. TYPE OF COMPLETION  
OIL WELL  GAS WELL  DRY  OTHER **Brine Water Well**

NEW WELL  WORK OVER  DEEPEN  PLUG BACK  REFR.  OTHER

3. Name of Operator  
**Permian Brine Sales & Service, Inc.**

4. Address of Operator  
**Box 1591, 212 W. 5th St., Odessa, Texas 79760**

5. Location of Well  
UNIT LETTER **M** LOCATED **1288** FEET FROM THE **South** LINE AND **497** FEET FROM

6. West LINE OF SEC. **17** TWP. **22S** RGE. **27E** N.M.P.M. **Eddy**

7. Date Spudded **Oct. 22, 1979** 18. Date T.D. Reached **11-19-79** 19. Date Compl. (Ready to Prod.) **11-22-79** 20. Elevation (D.F., RKB, RT, GR, etc.) **GL 3126** 21. Elev. Casinghead **-**

22. Total Depth **618'** 23. Plug Back T.D. **583'** 24. If Multiple Complet., How Many **→** 25. Intervals Drilled By **Rotary Tools** 26. Cable Tools **X**

27. Producing Interval(s), of this completion - Top, Bottom, Name  
**Salt Top 456' Bottom 592**

28. Was Directional Survey Made **No**

29. Type Electric and Other Logs Run **None** 30. Was Well Cased **No**

31. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
5 1/2"	17#	285'	8"	125 sx Circulated	None
2 1/2"	6.5#	583'	5"	100 sx Circulated	None

32. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
		None		

33. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
	None	

34. Perforation Record (Interval, size and number)

None

35. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	None

36. PRODUCTION

Date First Production **11-22-79** Production Method (Flowing, gas lift, pumping - Size and type pump) **Water Pump** Well Status (Prod. or Shut-in) **Brine Water**

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Performed	Oil - BBL	Gas - MCF	Water - BBL	Grav - lb./gallon

Flow Tubing Press.	Casing Pressure	Calculated 14-Hour Rate	Oil - BBL	Gas - MCF	Water - BBL	Oil Gravity - API (Cont.)

37. Disposition of Gas (Sold, used for fuel, vented, etc.)  
Test Witnessed By

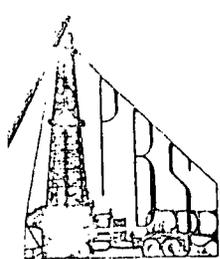
38. List of Amendments

39. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED *A. L. Hickerson* TITLE **President** DATE **11-30-79**

*Posted ID 2 1-18-80 Brine Water*

T.	Anhy	<u>225'</u>
T.	Salt	<u>456'</u>
B.	Salt	<u>592'</u>



# PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

JAN 17 1980

O. C. D.  
ARTESIA, OFFICE

ODESSA, TEXAS

79760

PHONE 332-0531

P. O. BOX 1591

November 30, 1979

EUGENIE No.2 - Sec 17-T22S-R27E

Carlsbad, New Mexico

0 to 18	-----	TOP SOIL WITH GRAVEL
18 to 19	-----	CAVE
19 to 46	-----	CALICHE & GRAVEL
46 to 50	-----	SAND & GRAVEL - SOME WATER
50 to 58	-----	GRAVEL & LIME
58 to 64	-----	LIME
64 to 65	-----	RED BEDS
65 to 78	-----	RED SAND
78 to 107	-----	GRAVEL
107 to 163	-----	BROWN CLAY, GRAVEL & SAND
163 to 171	-----	RED BEDS
171 to 178	-----	LIME VERY HARD
178 to 225	-----	RED BEDS
225 to 237	-----	ANHYDRITE & RED BEDS
237 to 252	-----	LIME & ANHYDRITE W/ SOME GYP
252 to 268	-----	RED BED
268 to 280	-----	LIME W/GYP. STRINGERS
280 to 285	-----	ANHYDRITE
285 to 305	-----	GYP. W/SOME RED BEDS
305 to 320	-----	GYP. & ANHYDRITE
320 to 330	-----	RED BEDS
330 to 360	-----	ANHYDRITE W/LIME & SAND

360 to 410-----HARD ROCK & ANHYDRITE  
410 to 430-----ANHYDRITE W/SOME LIME  
430 to 437-----GRAY LINE (HARD) & ANHYDRITE  
437 to 445-----ANHYDRITE  
445 to 456-----ANHYDRITE & GRAY LIME  
456 to 568-----SALT  
568 to 576-----SALT & BLUE SHALE STRINGER  
576 to 592-----SALT  
592 to 610-----ANHYDRITE

\* = please attach pertinent documents

III. FORMATION INFORMATION

Formation Record			
From	To	Thickness	Formation (name, description)

SEE ATTACHED LOG.

Logs (specify type) DRILLERS FM. LOG.

Identify where logs are on file NMOC D FILES.

\* = please attach pertinent documents

IV. AQUIFER INFORMATION

Aquifers encountered during drilling

From	To	Aquifer Description	Amount of Water entering hole	Quality of Water
------	----	---------------------	-------------------------------	------------------

NONE RE: AS/MR HICKINSON.

Note: if water quality analyses are available please attach.\*

Source of aquifer description \_\_\_\_\_

Depth at which water was first encountered \_\_\_\_\_

Depth to which water rose \_\_\_\_\_

Source of water level data \_\_\_\_\_

Comments (include information regarding determination of piezometric level and method of sealing off water zone) \_\_\_\_\_

CEMENT CIRCULATED ON SURFACE (sq. ft + b.g.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\* = please attach pertinent documents

V. PRODUCTION / BRINE STORAGE INFORMATION

Method of production (describe fully) WATER PUMP. <sup>used as a stand by.</sup> PUMP FW  
DOWN TBG IN EUGENIE #2 # PRODUCE BRINE THRU  
TBG IN #2, ACROSS A FRACTURE. CSG<sup>th</sup> annulus shut  
off in #1 well. FW PUMPED DOWN @ 100-150 PSI.

Was well used previously for some purpose other than brine supply, potash dissolution, or LPG storage. If so use note to explain. NO

Use of brine DRILLING, PROD.

Source of injection water (be specific) CITY OF CARLSBAD WATER  
LINE

Attach detailed production history (include dates of production, amount of water injected, injection rates, amount of brine produced, production rates, method of gaging injection/production rates )\*

Note: If the cavity was used for LPG storage include volumes of product injected and withdrawn as well as a summary of the maximum and minimum pressures during injection, storage and withdrawal.

Chemical analyses of injection water (attach)\* CITY OF CARLSBAD DRNG. H<sub>2</sub>O LINE

Note : Chemical analyses should include sampling point and method, pH, temperature, method of analysis, name and location of laboratory, etc.

Chemical analyses of water produced (attach)\*

\* = please attach pertinent documents

V. PRODUCTION / BRINE STORAGE (continued)

Brine storage facilities (describe) 6/500 bbl tanks

Current condition/status of brine storage pit NO PIT FOR STORAGE  
UNLINED OVERFLOW PIT.

Is brine storage pit currently being monitored for leakage? N/A

Specify company or agency which is monitoring leakage N/A

If pit leakage has been monitored in past use note to explain. N/A

Comments on production history (note if production rates or brine  
concentrations have changed through time) STABLE AS PER MR HICKERSON  
SEE ATTACH.

\* = please attach pertinent documents

VI. ABANDONMENT / PLUGGING RECORD

Date well abandoned/plugged \_\_\_\_\_

Reason for well abandonment or plugging NO INTENTIONS TO P&A.

Method of Plugging (describe fully, include amounts of cement, est. top, plug type, depth, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VII. Further comments (subsidence noted, subsidence monitoring, leakage noted, natural subsidence features noted nearby, LPG storage data, etc.)

NO SUBSIDENCE NOTED. NOT EQUIPPED FOR MONITORING SUBS. NO LEAKAGE NOTED fm. tanks.

Recorded by Larry Brooks

Date 10/26/81

Permian Brine Sales

Eugenie #2

M-17-22-27

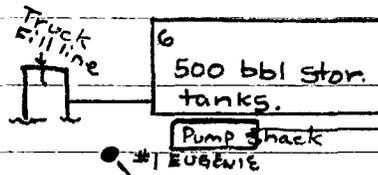
11-20-79

Ran 2 7/8 #540 and cemented with 100 SX class C 2%CC  
Circulated 20 SX. Centerlizer @ 10ft - 280ft - 320ft  
395ft + 445ft Basket located @ 570ft + 580ft

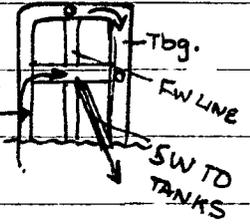
TD @ 616 Plug down @ 1:30 pm BJ Cemented  
2 7/8 Tubing used But Tested to 6000 PSI

Eugenie #1 & 2

SUR. EQUIP.



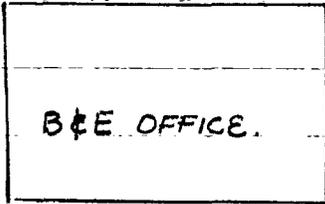
Line schem. inside pump shack.



SW UP THRU Tbg.

327'

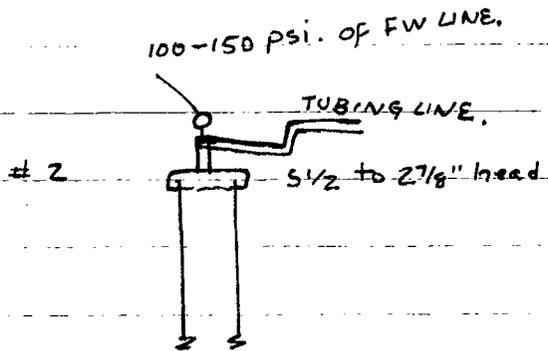
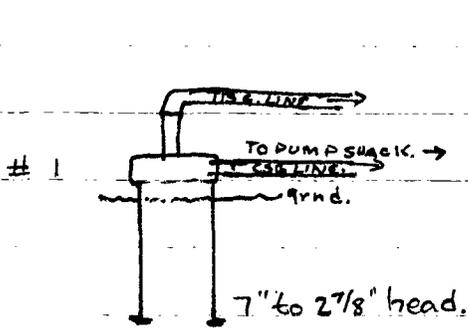
- 1.) FW METERED - CITY OF CARCSBAD H<sub>2</sub>O Line.
- 2.) Pump H<sub>2</sub>O down tbg in #2, circ out tbg in #1 csg. annulus on both wells shut off.



FW DOWN #2 Eugenie

LDVING/DTIS HG WY

Eugenie # 2 # 1 WELL HEADS



Permian Brine Sales Inc.

M-17-22-27 Eugenie #1.

PBS&S Inc.

M-17-22-27

Eugenie #2

GL 3126.4

GL 3126

← TO SALES

H<sub>2</sub>O pump

TD SOIL/GRAVEL 0-18  
 CALICHE/GRAVEL 18-46  
 SAND/GRAVEL H<sub>2</sub>O, 41-46  
 L.S.  
 RED BEDS 64-78  
 GRAVEL 78-107  
 Gravel, clay, sand  
 red beds  
 107-171  
 L.S. 171-178  
 RED BEDS 178-225  
 ANHY. GYP. RD. BEDS 225-52'  
 RED BED 252-68  
 LG. GYP. ANHY. RED BED  
 STRINGERS. 268-320'  
 RED BEDS 320-330'  
 ANHY. w/ ls. stringers.  
 330-456

327'

5 1/2" @ 289'  
CMT. CIRC.

9 5/8" @ 349.4  
CMT. CIRC.

7" @ 456  
CMT. CIRC.

TR 456  
136'

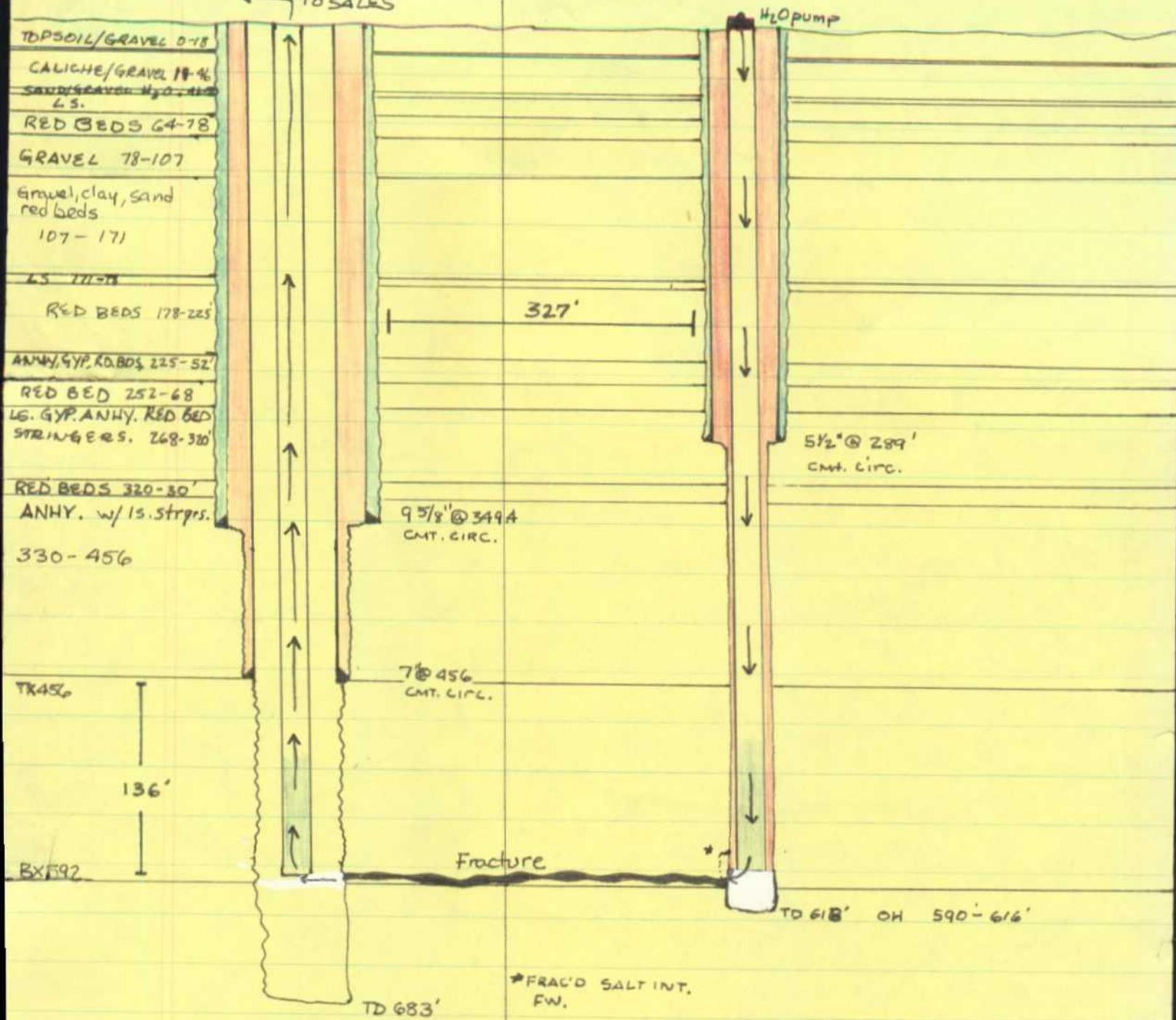
Fracture

TD 618' OH 590'-616'

BX 592

TD 683'

\*FRAC'D SALT INT.  
FW.



INVENTORY OF SOLUTION MINING WELLS OIL CONSERVATION DIVISION, 1981

\* = please attach pertinent documents

I. OPERATOR / LOCATION INFORMATION

Operator Permian Brine Sales Inc.

Address P.O. BOX 1591, 212 W. 5th St., Odessa Tx. 79760

Phone 1-915-322-0531

Well unit # 1, Lse. Eugenie Location UT. M. 995 FSL & 641 FWL.

T. 225 R. 27E Sec. 17 NW 1/4 SW 1/4 SW 1/4

County Eddy

Purpose of well (brine supply, LPG storage, potash dissolution) \_\_\_\_\_

BRINE SUPPLY

332

II. DRILLING / SITING INFORMATION

Contractor \_\_\_\_\_ PHIL WITHEROW - <sup>OWNER</sup> ~~OWNER~~

Date drilling started 6-14-78 Date drilling completed 6-28-78

Drilling method CABLE TOOL

Elevation of ground surface 3126.4 How measured \_\_\_\_\_

Date measured 5-15-78 Order of survey \_\_\_\_\_

Name of surveyor JOHN W. WEST.

Total depth of hole 663' PB TD 587'

Attach schematic of well ,include open hole interval, perforations, etc. \*

Type of drilling fluid X / A

Type of drilling mud if used (brand if known) \_\_\_\_\_

List any additives to the drilling mud, or any other chemicals put down well:

\_\_\_\_\_  
\_\_\_\_\_

Describe casing tests performed cs.g. tstd. to 1000 psi as per Hickerson

\_\_\_\_\_  
\_\_\_\_\_

Other tests \_\_\_\_\_

\_\_\_\_\_

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OPERATOR	1

**RECEIVED**  
 NEW MEXICO OIL CONSERVATION COMMISSION  
 5-21-78 2:45 PM  
 MAY 26 1978  
 O. C. C.  
 ARTESIA, OFFICE

30-015-2-25, 4  
 Form C-101  
 Revised 1-1-65

5A. Indicate Type of Lease  
 STATE  FEE   
 5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <b>Brine Water Well</b> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name <b>Eugenie</b>	
2. Name of Operator <b>Permian Brine Sales &amp; Service, Inc.</b>		9. Well No. <b>1</b>	
3. Address of Operator <b>P. O. Box 1591, 212 West 5th St., Odessa, Texas 79760</b>		10. Field and Pool, or Wildcat <b>Wildcat</b>	
4. Location of Well UNIT LETTER <b>M</b> LOCATED <b>995</b> FEET FROM THE <b>South</b> LINE AND <b>641</b> FEET FROM THE <b>West</b> LINE OF SEC. <b>17</b> TWP. <b>22S</b> RGE. <b>27E</b> NMPM		12. County <b>Eddy</b>	
19. Proposed Depth <b>1,450</b>		19A. Formation <b>Salt</b>	20. Rotary or C.T. <b>C.T.</b>
21. Elevations (Show whether DF, RT, etc.) <b>3,126' G.L.</b>	21A. Kind & Status Plug. Bond <b>one well - \$5,000 No. 610003738 8</b>	21B. Drilling Contractor <b>Not Selected Yet</b>	22. Approx. Date Work will start <b>June 10, 1978</b>

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12"	10-3/4"	54#	335'	100 sx.	Circulated
10"	8-5/8"	36#	550'	120 sx.	Circulated

We propose to drill a 12" cable tool hole through the fresh water, hang 10-3/4" casing at 335' and circulate cement. Then drill a 10" hole inside the 10-3/4" casing to the top of the salt at approximately 500', hang 8-5/8" casing and circulate cement. Then drill an 8" hole through the upper rock salt section and hang 2-7/8" tubing in open hole for circulation.

*City of Carlstadt notified*

APPROVAL VALID  
 FOR 90 DAYS UNLESS  
 DRILLING COMMENCED,  
 EXPIRES 9-12-78

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
 Signed W. J. Hinkerson Title President Date 5-19-78

(This space for State Use)

APPROVED BY W. A. Gussert TITLE SUPERVISOR, DISTRICT II DATE JUN 12 1978

CONDITIONS OF APPROVAL, IF ANY:  
*Hole must be at least 2" larger than the surface casing*  
 Cement must be circulated to the all casing.

Notify N.M.O.C.C. in sufficient time to witness cementing the all casing

\* = please attach pertinent documents

II. DRILLING / SITING (continued)

Casing, tubing, and cementing record (please attach copy)\*

Note: if a copy is not available detail casing record on back of this sheet using the following format. Include brand or type of cement if known.

From	To	Size of Hole	Size of Casing	Weight per Foot	Sacks of Cement	Estimated Top of cmt.
------	----	--------------	----------------	-----------------	-----------------	-----------------------

Was mudcake on bore wall removed before cementing production casing? N/A

Was salt saturated cementing material used opposite salt formation? NO

Is site within 1/2 mile of another well? If so, use note to explain. \_\_\_\_\_

INDUSTRIAL PROP. ONLY WELL LOC. W/in 1/2 mi. is Eugenie #2.

Site preparation (concrete pad, graded dirt, pit, etc) \_\_\_\_\_

Graded dirt & caliche

Type of surface seal or well-head (locking security cap, welded, etc.) \_\_\_\_\_

Well head see sketch.

Comments (include problems encountered while drilling, loss of circulation, deviation of hole from vertical, centralizers used, tools lost or stuck, fracturing techniques used, etc.) water @ 60'.

\_\_\_\_\_ (use back of sheet if more space is required)

NO. OF COPIES RECEIVED	3
DISTRIBUTION	
CANTAFE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
OPERATOR	1

RECEIVED

NEW MEXICO OIL CONSERVATION COMMISSION

JUL 20 1978

O. C. C.  
ARTEZIA, OFFICE

Form C-103  
Supersedes Old  
C-102 and C-103  
Effective 1-1-65

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.
7. Unit Agreement Name
8. Farm or Lease Name
Eugenie
9. Well No.
1
10. Field and Pool, or Wildcat
Wildcat
11. County
Eddy

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO CEMENT OR PLUG BACK TO A DIFFERENT RESERVOIR.  
FOR APPLICATION FOR PERMIT - SEE FORM C-101 FOR SUCH PROPOSALS.

DIL WELLS <input type="checkbox"/>	GAS WELL <input type="checkbox"/>	OTHER: Brine Water Well
Name of Operator	Permian Brine Sales & Service, Inc. ✓	
Address of Operator	P.O. Box 1591, 212 West 5th St., Odessa, Texas 79760	
Location of Well	UNIT LETTER M 995 FEET FROM THE South LINE AND 641 FEET FROM THE West LINE, SECTION 17 TOWNSHIP 22 South RANGE 27 East N.M.P.M.	

15. Elevation (Show whether DF, RT, GR, etc.)  
3126 GL

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK   
TEMPORARILY ABANDON   
PULL OR ALTER CASING   
OTHER

PLUG AND ABANDON   
CHANGE PLANS

REMEDIAL WORK   
COMMENCE DRILLING OPNS.   
CROSSLINK-TEST-AND-CEMENT JOB   
OTHER

ALTERING CASING   
PLUG AND ABANDONMENT

Propose Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Used 9 5/8 - 40# - 349.4' Depth

Used 7" - 23# - 456' Depth

170 sacks cement circulated  
*waited on cement 48 hours*  
135 sacks cement circulated, *Alt.*  
with 4 sacks calcium chloride  
and 2 sacks Bentonite.  
*waited on cement 18 hours*  
*Alt.*

6-29-78 Drilled out plug & bailed to 658 ft.  
No water intrusion

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

SIGNED: A. L. Anderson TITLE: President DATE: 7-19-78

APPROVED BY: W. A. Gussert TITLE: SUPERVISOR, DISTRICT II DATE: JUL 26 1978

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <i>James Brine Lubliner Inc</i>		Lease <i>Eugenie</i>			Well # <i>1</i>
Location of Well	Unit <sup>M</sup> <i>995 S 641 W</i>	Section <i>17</i>	Township <i>22</i>	Range <i>27</i>	County <i>Eddy</i>
Drilling Contractor	Type of Equipment <i>Cable tools to start 6-12-78</i>				

APPROVED CASING PROGRAM

Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
<i>12 3/4"</i>	<i>10 3/4"</i>	<i>54</i>		<i>335</i>	<i>lic.</i>
	<i>8 5/8"</i>	<i>36</i>		<i>350</i>	<i>"</i>

Casing Data:

Surface *12* joints of *9 5/8* inch *42* # Grade \_\_\_\_\_  
(Approved) (Rejected)

Inspected by *M. S.* date *6/19/78*

Cementing Program

Size of hole *12 3/4* Size of Casing *9 5/8* Sacks cement required *190*

Type of Shoe used *guide* Float collar used *No* Btm 3 jts welded *yes*

TD of hole *322* Set *322* Feet of *9 5/8* Inch *42* # Grade \_\_\_\_\_

New-used csg. @ *322* with *190* sacks neat cement around shoe  
+ \_\_\_\_\_ sax \_\_\_\_\_ additives \_\_\_\_\_

Plug down @ *12:00* (AM) (PM) Date *6/20/78*

Cement circulated *yes* No. of Sacks *20*

Cemented by *B. J.* Witnessed by *Mike Stuppfield*

Temp. Survey ran @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_ top cement @ \_\_\_\_\_

Casing test @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_

Method Used \_\_\_\_\_ Witnessed by \_\_\_\_\_

Checked for shut off @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_

Method used \_\_\_\_\_ Witnessed by \_\_\_\_\_

Remarks: \_\_\_\_\_

NEW MEXICO OIL CONSERVATION COMMISSION  
DRAWER DD  
ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator <u>PYMIAN Brine Sales &amp; Service</u>		Lease <u>Eugenie</u>			Well # <u>1</u>
Location of Well	Unit <u>M</u> <u>945 S</u> <u>641-W</u>	Section <u>17</u>	Township <u>22</u>	Range <u>27</u>	County <u>Eddy</u>
Drilling Contractor	Type of Equipment <u>Cable Tools</u>				

APPROVED CASING PROGRAM

Size of Hole	Size of Casing	Weight Per Foot	New or Used	Depth	Sacks Cement
<u>12 3/4</u>	<u>10 3/4</u>	<u>54</u>	<del>335</del>	<u>335</u>	<u>Circulate</u>
* <u>8</u>	<u>7</u>	<u>32</u>		<u>453</u>	<u>Circulate</u>

Casing Data:  
~~Surface~~ Production \_\_\_\_\_ joints of \_\_\_\_\_ inch # Grade \_\_\_\_\_  
 (Approved) (Rejected) \_\_\_\_\_

Inspected by \_\_\_\_\_ date \_\_\_\_\_

Cementing Program  
 Size of hole 8" Size of Casing 7" Sacks cement required 135  
 Type of Shoe used Texas Float collar used NO Btm 3 jts welded Yes  
 TD of hole 592 Set 453 Feet of 7 Inch 32 # Grade K-55  
~~Used~~ used csg. @ 453 with 135 sacks neat cement around shoe  
 + \_\_\_\_\_ sax \_\_\_\_\_ additives 3% Calcium Chloride  
 Plug down @ 6:10 (AM) (PM) Date 6-28-78  
 Cement circulated Yes No. of Sacks 20  
 Cemented by Byron Jackson Witnessed by B.W. Weaver  
 Temp. Survey ran @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_ top cement @ \_\_\_\_\_  
 Casing test @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_  
 Method Used \_\_\_\_\_ Witnessed by \_\_\_\_\_  
 Checked for shut off @ \_\_\_\_\_ (AM) (PM) Date \_\_\_\_\_  
 Method used \_\_\_\_\_ Witnessed by \_\_\_\_\_

Remarks: \_\_\_\_\_

\* = please attach pertinent documents

III. FORMATION INFORMATION

			Formation Record
From	To	Thickness	Formation (name, description)

SEE ATTACHED FM. REP.

Logs (specify type) DRILLERS LOG

\_\_\_\_\_

Identify where logs are on file OCD FILES.

\_\_\_\_\_

# RECEIVED

## NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

**O. C. C.**  
ARTESIA, OFFICE

DISTRIBUTION	5
SANTA FE	1
FILE	1
U.S.G.S.	2
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

10. TYPE OF WELL  
*Br. of Mine* 1

OIL WELL  GAS WELL  DRY  OTHER Brine Water Well

11. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. RESYR.  OTHER

7. Unit Agreement Name

8. Form or Lease Name

Eugenie

2. Name of Operator  
Permian Brine Sales & Service, Inc.

9. Well No.

1

3. Address of Operator  
P.O. Box 1591, 212 West 5th St., Odessa, Texas 79760

10. Field and Pool, or Wildcat

Wildcat

4. Location of Well  
UNIT LETTER M LOCATED 995 FEET FROM THE South LINE AND 641 FEET FROM

11. County

THE West LINE OF SEC. 17 TWP. 22S RGE. 27E NMPM

15. Date Spudded 6-14-78 16. Date T.D. Reached 6-28-78 17. Date Compl. (Ready to Prod.) 6-30-78 18. Elevations (DF, RHH, RT, GR, etc.) 3126 G.L. 19. Elev. Casinghead 3129

20. Total Depth 663 21. Plug Back T.D. 587 22. If Multiple Compl., How Many  
23. Intervals Drilled By: Rotary Tools \_\_\_\_\_ Cable Tools All

24. Producing Interval(s), of this completion - Top, Bottom, Name  
456 Top of Salt to 592 Bottom of Salt 25. Was Directional Survey Made No

26. Type Electric and Other Logs Run  
Cable Tool Drillers Log 27. Was Well Cored No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	40	349.4	12"	170 sx. - circulated	None
7"	23	456	9"	135 sx. - circulated	None

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8	587"	No

31. Perforation Record (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
None	None

33. PRODUCTION DNA

Date First Production \_\_\_\_\_ Production Method (Flowing, gas lift, pumping - Size and type pump) \_\_\_\_\_ Well Status (Prod. or Shut-in) \_\_\_\_\_

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity	API (Sp. Gr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.) \_\_\_\_\_ Test Witnessed By \_\_\_\_\_

35. List of Attachments  
Drillers Log

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED [Signature] TITLE President DATE 7/14/78

*Posttest Brine*  
*7-21-78*



P.B.S. & S.

JUNE 30, 1978

BOX 1591

ODESSA, TEXAS 79760

SALT & 1

0 to 46 -----	TOP SOIL WITH GRAVEL
46 to 58 -----	SAND & GRAVEL
58 to 62 -----	LIME
62 to 65 -----	RED BED
65 to 76 -----	RED SAND
76 to 107 -----	GRAVEL
107 to 163 -----	BROWN CLAY W/GRAVEL & SAND
163 to 170 -----	RED BED
170 to 178 -----	LIME VERY HARD
178 to 225 -----	RED BED
225 to 237 -----	ANHYDRITE & RED BED
237 to 252 -----	LIME & ANHYDRITE W/SOME GYP.
252 to 268 -----	RED BED
268 to 285 -----	LIME W/GYP. STRINGERS
285 to 305 -----	GYP. W/SOME RED BED
305 to 320 -----	GYP. & ANHYDRITE
320 to 328 -----	RED BED
328 to 360 -----	ANHYDRITE W/LIME & SAND
360 to 410 -----	RED TOCK & ANHYDRITE
410 to 430 -----	ANHYDRITE W/SOME LIME
430 to 437 -----	GRAY LINE ( HARD ) & ANHYDRITE
437 to 445 -----	ANHYDRITE
445 to 456 -----	ANHYDRITE & GRAY LIME
456 to 555 -----	SALT
555 to 567 -----	SALT & SOME LIME
567 to 576 -----	SALT & <u>BLUE SHALE VERY LITTLE</u>
576 to 592 -----	SALT
592 to 663 -----	ANHYDRITE

\* = please attach pertinent documents

IV. AQUIFER INFORMATION

Aquifers encountered during drilling

From	To	Aquifer Description	Amount of Water entering hole	Quality of Water
------	----	---------------------	-------------------------------	------------------

60-		?	?	FW, as per <del>well log</del> Field Trip
-----	--	---	---	---

operator states no FW encountered except @ 60'

Note: if water quality analyses are available please attach.\*

Source of aquifer description N/A

Depth at which water was first encountered 60'

Depth to which water rose N/A

Source of water level data M12

Comments (include information regarding determination of piezometric level and method of sealing off water zone)

CMT. CIRC. ON SUR. & INT. CSQ.

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\* = please attach pertinent documents

V. PRODUCTION / BRINE STORAGE INFORMATION

Method of production (describe fully) inj fresh H<sub>2</sub>O down tbg in #2 well, produce salt water from #1. Csg. line. Csg. annulus shut off. in #1. Common fracture allows the flow from #2 to 1. Water travels down tbg @ 100-150 psi.

Was well used previously for some purpose other than brine supply, potash dissolution, or LPG storage. If so use note to explain. NO

Use of brine DRILLING/PROD.

Source of injection water (be specific) CITY OF CARLSBAD WATER SUPPLY.

Attach detailed production history (include dates of production, amount of water injected, injection rates, amount of brine produced, production rates, method of gaging injection/production rates )\*

Note: If the cavity was used for LPG storage include volumes of product injected and withdrawn as well as a summary of the maximum and minimum pressures during injection, storage and withdrawal.

Chemical analyses of injection water (attach)\* CITY OF CARLSBAD DRINKG. H<sub>2</sub>O.

Note : Chemical analyses should include sampling point and method, pH, temperature, method of analysis, name and location of laboratory, etc.

Chemical analyses of water produced (attach)\*

\* = please attach pertinent documents

V. PRODUCTION / BRINE STORAGE (continued)

Brine storage facilities (describe) 6/500 bbl. storage tanks  
\_\_\_\_\_  
\_\_\_\_\_

Current condition/status of brine storage pit NO PIT, except overflow  
pit by Tanks  
\_\_\_\_\_

Is brine storage pit currently being monitored for leakage? NO PIT. N/A  
Specify company or agency which is monitoring leakage - N/A  
\_\_\_\_\_

If pit leakage has been monitored in past use note to explain. - N/A  
\_\_\_\_\_  
\_\_\_\_\_

Comments on production history (note if production rates or brine  
concentrations have changed through time) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* = please attach pertinent documents

VI. ABANDONMENT / PLUGGING RECORD

Date well abandoned/plugged \_\_\_\_\_

Reason for well abandonment or plugging NO INTENTIONS TO P&A

Method of Plugging (describe fully, include amounts of cement, est. top, plug type, depth, etc.) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VII. Further comments (subsidence noted, subsidence monitoring, leakage noted, natural subsidence features noted nearby, LPG storage data, etc.)

NO SUBSIDENCE NOTED. NOT MONITORED FOR SUBSIDENCE. NO LEAKAGE FM. TANKS.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Recorded by Larry Brooks

Date 10/26/81







UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : B AND E INC.  
 DATE : 5-20-82  
 FIELD, LEASE & WELL : XXXXXXXXXX EUGENIE #1  
 SAMPLING POINT: BRINE WELL  
 DATE SAMPLED : 5-19-82

SPECIFIC GRAVITY = 1.208  
 TOTAL DISSOLVED SOLIDS = 307897  
 PH = 6.58

		ME/L	MG/L
<b>CATIONS</b>			
CALCIUM	(CA)+2	78.6	1576.
MAGNESIUM	(MG)+2	12.3	149.
SODIUM	(NA), CALC.	5167.	118810.
<b>ANIONS</b>			
BICARBONATE	(HCO3)-1	2.5	152.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	67.6	3250
CHLORIDES	(CL)-1	5188.	183958.
<b>DISSOLVED GASES</b>			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		.7
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

CARBONATE INDEX  
 CALCIUM CARBONATE SCALING

30C  
 86F  
 -1.0  
 UNLIKELY

SULFATE INDEX  
 CALCIUM SULFATE SCALING

-.30  
 UNLIKELY

RECEIVED

MAY 25 1982

Q. C. D.

ARTESIA, OFFICE