BW - 6

GENERAL CORRESPONDENCE

YEAR(S):

1988 -> 1978

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

CHOUSE WATER/NATA 2005 WASTE

June 10, 1988

Enviornmental 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 comformance 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,

Phil Withrow Owner/Manager B & E, Inc.

PW/val

Attachments

XC: file

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: State 24 #1 - Loco Hills Brine Station

Sec. 24 T 18S R 28E Eddy County, New Mexico

ATT: Kevin Lambert

CROUND WATER/HAZARDOUS WASTE

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,

Valerie Lemon Sec/Clerk

B & E, Inc.

Attachment

XC: file

Unichem International

707, North Leech

P.O.Box 1499

- MeW/MeXico 88240 😘 🕮 静線

Company: B&E, Inc. Date : 03-01-1988

Location: State 24 - Well #1 (on 02-29-1988)

Specific Gravity:

Total Dissolved Solids:

:Hq

IONIC STRENGTH:

Sample 1

1.242 338820

7. 29 5.90**7**

CATIONS:	M.B. No.	9 0953		· · · me	e/liter	mg/liter #
Calcium	(Cm ⁺²)	***			52.0	1040 🌏
Magnesium	(Mg+2)				45.2	549
Sodium	(Na+1)			!	5680	131000
Iron (total)	(Fe ⁺²)			•	0.015	0,420
Barium	(Ba+2)	71. The state of t	Dati is	Brazilia	0.003	0.240

ANIONS: Bicarbonate

(HCO1-1) (CO_3^{-2}) Carbonate (OH-1) Hydroxide (SO4-2) Sulfate Chloride $(C1^{-1})$

O 0

6450

134 5640 200000

SCALING INDEX (positive value indicates scale)

Calcium Calcium Carbonate

Sulfate

86°F 30°C

The state of the state of

2.8

-3.0

CHARLEST TO HELD TO THE COLOR

	IRS 1
ł	7711

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

Sample #8

ate received	(C
2	
Lab No.	

interfest	Date repor									
	Reviewed &	·							REMARKS:	LABORATORY
			\\\ 0.00\	01075 Silver			-			
			•]	•		-	(as SO ₄)		(as Mn)
	pCI/I	11501 Radium-228	<0.005	O1145		00070		00945		01056
(Silvex)		7.00	_	Mercury	•	Color		(as CO ₃)		(as Fe)
39740	pCi/I	09501	₹0,0005	ж 07180	mg/1	00080		00445		1045
<u>!</u>			-			Coor	-	(as HCO ₃)	3	(as Mg)
39730	pCI/I	03501	0.0	X 01049		01330		00440		00925
		Gross Alp	•		•			(as CaCO ₃)	-	(as Ca)
39400 Toxanhana	RADIOLOGICAL PCI/I	RADIOLO	<0.005	x 01030		00400		00430		00915
Methoxychlor			-•			Micromhos 25°C	•	(as N)		(as CaCO ₃)
38270			100,00	X 01025		00095		00620 Nitrate		00900
			-		•	Agents (as Las)	-	(as F)	-	(as X)
39732			,a	x 01005		38260 Foaming		00950	·	00935
			•	Arsenic		Filterable Residue		Chloride (as CI)	•	(as Na)
39390			0,005	x 01000	Vēw	70300		00940		00930
ORGANIC		PARAMETER	mg/I	HEAVY METALS		PHYSICAL	mg/l	ANIONS	mg/l	SNG
		- Other (apace)//	(
LAT.		Well-Depth			SOURCE	De l' Non-community	R)		EM (Chèck one)	PRIVATE
carisbad, New Mexico	Cart					Carlsbad	City of Ca		l	Max Cordova
1569	Address P. O.							Ow		Collected By
atter	Don	a l :	Added	Nitric Acid Ad	z !	k Watering	o. 2 Stock		9:30	10-7-85
TREATED WATER	LITRE	Eddy		Double Fagle Collector's remarks	Collecto		20608		Collection Time	Carlsbad
	Check one:	County		Location	City or	pły System Code No.	Water Supply		tem Name	Nater Supply System Name
☐ Radiological	Organic	λΑLΥ	of CHEMICAL AN	UP TYPE of	метея сво]	INTERIM PRIMARY PARAMETER GROUP ()	INTERI	Check individual items for analysis [Mark appropriate box(es)]	Check individus	CHEMICAL ANALYSES:
		11. 11.		Pen /	or PRINT with Ball Point Pen	TYPE	on of sample(CONSULT SLD Lab Annex L for proper presentation of sample(s).	Lab Annex L fo	CONSULT SL
1808 SLD user code No.	5 HM-1808	Date received		ES	SAMP	-		IVISION	SCIENTIFIC LABORATORY DIVISION	
		odillate 10		ANALYSES	and PHYSICAL /	CHEMICAL and PH	CHEN	HEALTH and ENVIRONMENT DEPARTMENT	EAI TH and ENVIRO	T



CHEMICAL IVOISAND P DNIAI VOEC

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G. F					
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7 \$40 4 80 4 80 6 80 6 80 6 80 6 80 6 80 6 80 6 80 6				(as SO ₄)	(as Mn)
11501 PC(/) 11501	01145 <0.005	 	00070	00945	01056
(Silvex)		•	000	3 (as. CO ₃)	(as Fe)
PCI/A	<u> </u>	, mg/1 X	00080	00445	01045
(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)				◆ 25 (as HCO ₃)	(6w
03501 (Dpc// 39730	01049 < 0.01		01330	00440 em 87	00925
1		•	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(as CaCO ₃)	(as Ca)
RADIOLOGICAL PCI/I 39400	01030 <0,05	X.	00400 9H	00430 Alkalinity	00915
Methoxychior C + 5		C	Micromhos 25°C	(as N)	(as CaCO ₃)
38270	01025 <0,001		Conductance	00620	00900 Tot.Hardness
			.Agents (as Las)	(as F)	(as X)
39732	Barlum <0	X	38260 Foaming	Fluoride	00935 Potassium
		1.70.00	Filterable Residue	(as Ci)	(as Na)
39390 (1977)	ا 000 الار		70300	100940 AND	00930
PARAMETER ORGANIC mg/l	HEAVY mg/I P	7	PHYSICAL	mg/I-ANIONS mg/I	CATIONS
and the same are been been been and the same of the				され でいいと本語ないないまっとう	
LONG	□Pool	□ Orain	Non-community	PUBLIC: Di Community	PRIVATE
Denin TV	Diake.	SOURCE:		one) =	TYPE of SYSTEM (Check one) 30 135 135
Elarisbas New Newtons 220	(a)	Cons	of Carleyad	Owner	Collected By
		Collector/stremarks	ren Halam	Collection Time 20% Collection Point	12-175-86 Service
Check one: The RAW WATER		We city or Location	1000	The second secon	stem N
WITASIS	TYPE of CHEMICAL ANALYSIS Complete Sacondary	RAMETER GROUP	TERIM PRIMARY PA	k appropriate box[es]]	ALYSES:
10.00 Sept. 10.00	OR PRINT WITH BALL POINT PEN.	3471	DEFINITIONS ON REVERSE.	FOR PROPER PRESERVATION OF SAMPLES. CONSULT D	FOR PROPER PRESERV
Date received Lab No. SLD user code No.	ANALYSES	SAMPL	CHEMICAL and PHY for WATER	HEAT THE ENVIRONMENT DEPARTMENT CONTINUES OF THE STATE OF	HEATH OF SCIENTIAL LABORA
1	in solden som garten i state som en				

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

SAMPLE SENT BY CITY OF Carisba	<u>d</u> /	WYTARIS NO.	
FROM Water Well Field		SAMPLE RECEIVED	1/28/88
ADDRESS	(SAMPLE REPORTED	1/29/88
WATER SOURCE Composite		ere anguaganistanan angulapanistan atau mak	
PHYSICAL CHARACTER		ECEIVED	
Color Odor			
CHEMICAL CH	ARACTERISTIC		المنظورة الدولية والمواجع في المنظورة المنظورة المنظورة المنظورة المنظورة المنظورة المنظورة المنظورة المنظورة والمنظورة المنظورة ا
	PARTS per MILLION	PPM as CaCo3	As CaCog GRAINS per Gallon
Alkalinity-M:		220	
Alkalinity-P:		0	material formation and a second se
Calcium-Ca:	72	180	10.5
Magnesium-MG:	39	156	9.1
Sodium-Na:			
Sulphates-So4:	78		
Chlorides-Cl:	28		
Sp. Cond.:	430		
Iron-Fe:			
Free Chlorine:			
l'luoride:	0.47		
PH: As received:	7.77		
Aquapoise (PHs) at 70°F:			
TOTAL HARDNESS: (As CaCo3):		336	19.6
TOTAL DISSOLVED SOILDS (As CaCo3):			

Jose A. Renteria

CONDITIONS OF APPROVAL, IF ANY

	•	
". C COPIES RECEIVED 5		Form C=103
TRIBUTION	·	Supersedes Old C-102 and C-103
r FE NEW	MEXICO OIL CONSERVATION COMMISSION	C-102 and C-103 Effective 1-1-65
FILE		· ·
U.S.G.S.	RECEIVE	Da. Indicate Type of Lease
LAND OFFICE		State Fee -
OPERATOR 3	DC0 07 1074	5. State Oil & Gas Lease No.
	DEC 2 3 1974	
SUNDRY NOTICES AN	D REPORTS ON WELLS	
USE "APPLICATION FOR PLAMIT -"	(FORM C-101) FOR SUCH PROPOSALS.)	
OIL GAS X OTHER	ARTESIA, OFFICE	7. Unit Agreement Name
2. Name of Operator		8, Farm or Leane Name
Cities Service Oil Cor	mpany	Tracy B Com.
3. Address of Operator		g, Wali No.
Box 1919 - Midland, Te	exas 79701	1
4. Location of Well		10/Floid and Pool, or Wildeat
UNIT LETTER I 2045 PEET PE	South 1.79	Undesignated Morrow
THE PER PER PER PER PER PER PER PER PER PE	OM THE FEET FROM	MIMIMINI
THE Fast LINE, SECTION 18	TOWNSHIP 22S RANGE 27E NMPM	
()	vation (Show whether DF, RT, GR, etc.)	12. County
	3108' GR	Eddy
Check Appropriate B	ox To Indicate Nature of Notice, Report or Ot	her Data
NOTICE OF INTENTION TO	•	T REPORT OF:
PERFORM REMEDIAL WORK	LUG AND ABANDON REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON	COMMENCE DRILLING OPNS.	PLUG AND ABANDONMENT
PULL OR ALTER CASING C	MANGE PLANS CASING TEST AND CEMENT JQB X	
	OTHER	·
OTHER	————U	;
17, Describe Proposed or Completed Operations (Clearly	state all pertinent details, and give pertinent dates, including	e estimated date of starting any propo
work) SEE RULE 1103.		
T.D. 1843' Lime. Preparing to d	rill ahead. Drilled to a T. D. of 1	843. Ran 3 jts. (143)
10-3/4" 01) 40.5# K55 casing, 2 j	ts. (51.58') 10-3/4" OD 40.5# H40 ca	sing, 11 jts. (407.53')
10-3/μ" OU μομοπ casing & 30 jt	в. (1157.06') 10-3/4" од 32.75# нцо	casing - a total or
	.89' & cemented with 400 sacks Halli	
	440 sacks Class C with 2% CaCl. Plu top of cement at 550'. Cemented wit	
	ks. Job complete 12:00 P.M., 12/18/	
Tested 10-3/4" casing to 500# fo		THE HOO EN HOUSE
100000 10-3/4 00020.6 00 300// 10	a dial of halideon - one	
Job witnessed by Gerald Lynch. C	ity of Carlsbad Oil & Gas inspector,	and Leland Mermis and
Leon Bergstrom of the NMOCC.	- V 0120000 020 0 000 000 000 000 000 000 0	1
	•	
	•	
•		
	•	
18, I hereby certify that the information above is true and	complete to the best of my knowledge and belief.	
BIGNED LUIDE	Region Operation Manager	r DATE 12/20/74
	<i>(</i>	
APPROVED BY WELL STORY	TITLE OH AND DAS IMPRESTOR	PATE DEC 23 1974
- · ·	VIL AND UNG INC. EC.	₩ ₩ ° °

NEW MEXICO OIL CONSERVATION COMMISSION DRAWER DD ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

atier L	mie ai	96.	Lease	scy B	Con	7	Well #	/	;
ocation of Woll	2045 5 T	Section /8		Townsh	1 p	Range 27	County		
Drilling Contractor Type of Equipment Retay to start 12-15-74									
,		APPROV	ED CASI	NG PRO	GRAM				
ize of Ho	le Size	of Casing	Weigh Foo		New	or Used	Dopth	Sacks	Cemen
20		<u> </u>	65				350	350	cire.
14	1/4" 10	4"	40.	5			1850	1500	1,
	2 7	78°,	26 - 29				8850	950	
Casing Data: 19,91" \$600-1170 200 Casing Data: 36375 32# H-40 5760 11 575 40# H-40 5760 2 375 405 H-40 5760 2 375 405 H-40 5760 2 375 405 H-50 5760 YES NEW API (Approved) (Rejected)									
YES NEW API (Approved) (Rejected)									
Inspected by Lord Bengition date 12-16-74									
Cementing Program									
Size of hole 143/4" Size of Casing 103/4 Sacks coment required									
Type of Shoe used <u>Guide</u> Float collar used <u>YES</u> Btm 3 jts THEFAOLOK									
TD of hole 1843 KBSet 1823 4. Feet of 1034 Inch _ # Grade AS ABOVE									
New-used csg. @ /8236, L with 420 sacks neat cement around shoe 4/2% cacta									
+ 400 SEX HOWCOLITE BUDILIVES 4/5 GILSONITE + 14 FLOCELE + 270 CACLE.									
Plug down @ 10:30 (AM) Date 12-18-74									
Cement circulated No No. of Sacks									
Comented by Howco Witnessed by Jeon Bengstrom									
Temp. Survey ran @ 500 (PM) Date 12-18-74 top cement @ 550									
Casing test @ (AN) (PM) Date									
Method Used Witnessed by Checked for shut off (AM) (PM) Date									
			•	, -		1 1			
Method us	e a	BASKETS @		Witne	esseu	1 1) <u>y</u>			
							22'6/	1 5T 6	TAGE
JUKTACE /	INCTOCETE	10 342	SE1 17	*/.	2.00	STACE,	ec want		20 3 A
CLASS C 1/4 E 2 PG CC) + (150 SX CLASS C W/27. C.C. W/1" & CIRC CAT TO SURFACE)									
The control of the co									

RAN I" DOWN ANNULUS BETWEEN 16"CSG & 10 34CSG TO 541' CMT W/4205X
CLASS C CMT W/290 CACLE. HAD GOOD RETURNS THROUGHOUT, & CIRC EST.
I BBL CMT TO SURFACE

. · · · ·			•
. C COPIEB RECEIVED	4		Form C-101
TRIBUTION	1		Supersedes Old
VI V FE	1	NEW MEXICO OIL CONSERVATION COMMISSION	_C-102 and C-103 Effective 1-1-65
FILE	1		
U.S.G.S.		RECEIVED	5a. Indicate Type of Lease
LAND OFFICE	L		State Fee X
OPERATOR	12	DEC 1 8 1974	5, State Oil 6 Gas Lease No.
		D(C 1 0 13/4	
	SU	NDRY NOTICES AND REPORTS ON WELLS	
1, OIL	, x	OTHER-	7, Unit Agreement Name
2. Name of Operator		_	8, Farm or Lease Name
Cities Service	011	Company /	Tracy B Com.
3. Address of Operator			g. Well No.
Box 1919 - Midl	and	Texas 79701	1
4. Location of Well	·	2045 PEET FROM THE South LINE AND 479 PEET FROM	Ig. Field and Pool, or Wildcat Undesignated Morrow
THE East	LINE,	ECTION 18 TOWNSHIP 22S RANGE 27E HMPM.	
mmmmm	777		
		15, Elevation (Show whether DF, RT, GR, etc.) 3108 ° GR	12. County Eddy
NOT		ck Appropriate Box To Indicate Nature of Notice, Report or Ot subsequent	her Data TREPORT OF:
PERFORM REMEDIAL WORK		PLUE AND ABANDON REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON		COMMENCE DRILLING OPHS.	PLUS AND ASANDONMENT
PULL OR ALTER CABINS	_]	CHANGE PLANS CASING TEST AND CEMENT JOB	
		OTHER	
OTHER		 U	
17. Describe Proposed or C work) SEE RULE 1703	omple	od Operations (Clearly state all pertinent details, and give pertinent dates, including	estimated date of starting any proposed
drilled to a T. 342' w/300 sack 12-12-74. Ceme the cement @ 15 Flocele/sack an	D.] s C] nt c O'.	Prep to drill ahead. This well was spudded @ 3 42'. Ran 16 Jts. (322.20') 16" OD 65# K-55 casing ass C w/1/4# Flocele/sack and 2% CaCl. cement. Plid not circulate to the surface. WOC 6 Hrs. Ran Ran 1" tubing in the annulus and cemented w/150 s CaCl. cement. Cement circulated to the surface. Tested 16" casing to 1000# for 30 minutes with n	set and cemented @ ug down @ 5:05 AM on Temp. Survey. Top of acks of Class C w///L#
NMOCC and The C	ity	of Carlsbad was notified but did not witness cemen	ting job.
		•	,
		•	

Region Operation Manager

OIL AND GAS INSPECTOR

December 16, 1974

DEC 1 9 1974

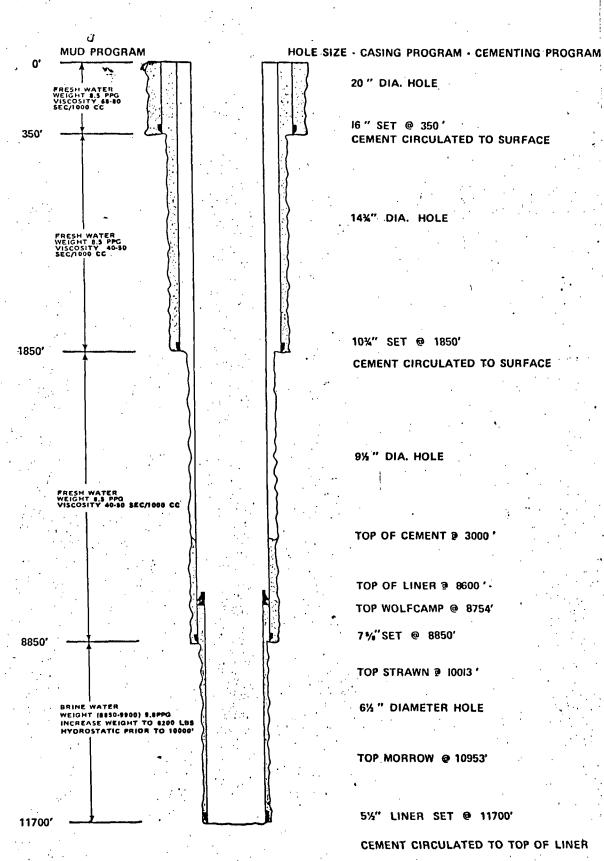
18, I hereby certify that the information above is true and complete to the best of my knowledge and belief.

ORIGINAL SIGNED BY E. Y. WILDER

CONDITIONS OF APPROVAL, IF ANY:

CSOC TRACY B NO. I EDDY COUNTY, NEW MEXICO

CASING SCHEMATIC



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 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

__day of_

1988 by Phil Withrow.

My commission expires:

Notary Public

State of New Mexico

Rigged-up Bolo Pol Surreip boggers hunk ; mad pole trick @ 9 dm to run tracor survey on the Engenie # 2 woll be tied bit Tunkings down Line of Lood ito hale i a shoped Durgged logging dead to loo from surfaces. and slatted longing honged even look de boldtom
of casing indicite was a 580 to hong slaved
Wal Z lax to 5# see was interest and R. A. maturel
word and into spoot bose simplication
Pragal Longing 00 of free to 2000.

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brine red Treal purphind only es dropped RA

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log = @ 100 from 5 man & contined @ 000'

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hosp showed carries man with the fearant door.

Figsel all equation.

VI Budunie Pel Cosultal







Nº 26926

P. O. Box 2988, Midland, Texas 79702 DATE 2-13-88 CUSTOMER BFF INC ____ CUSTOMER NO. _ P.O. BOX 2292 Hobbs ADDRESS LEASE _ All invoices are Payable in Midland, Midland County, Texas WELL NO. TERMS: NET 30 DAYS All services are supplied subject to our General Terms and Conditions as stated COUNTY ____ 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. STATION HObbs/(1) TRUCK 7-9// NUMBER UNIT **TOTAL** 0F 0F UNIT UNITS **MEASURE PRICE DESCRIPTION** CODE DATE en Pa 2-13 Service Charge 001 SEt UD DNE Instrument Protection Charge Pressure Control Equipment 200.00 005 2-13 LUBRICATOR NSI 20000 0-500 Materials Charge 2-13 BRADENINFAD TRACER ODER. CHARGE 450,00 450,00 101 MIN 2-13 Bradenhead 458' 18 101 TRACFR Eld TOTAL CHICAR PARTY 700 00 2-13 009 T-131 PRICEIO mat. 5 mc 50.00 700,00 Perforations: TYPE OF JOB: () PRODUCTION LOGGING) PIPE RECOVERY: SUB TOTAL () RECOMPLETION: PLUG AND ABANDONMENT: (INJECTION PROFILE: () O/H LOGGING: OCCUPATIONAL TAX M. Combs BPS Engineer _____ STATE SALES TAX m. Blythe. C. Tic **TOTAL** ' Authorized Agent

BCII PETROLEUM SURVEYS

Nº 26927

P. O. Box 2988, Midland, Texas 79702

DATE 2-13-88

CUSTOMER	<u>B</u>	& E	INC				CUSTOMER N	0		
ADDRESS	P.O.	Box.	2292	Hobbs	N.ME	y. 88240	LEASE			
All invoices are	e Payable in N	Midland, Mic	dland County, Texa	as		845-10	WELL NO	# 7		
TERMS: NET 3 All services ar	re supplied st Price Schedu	ibject to our	General Terms a	nd Conditions as s	stated ***		COUNTY	Eddy	•	
Concerning irr	etrievable loss	s of sealed :	sources, both Bell	Petroleum Surveys and 36.501, and N	s and	and the same of		N. ME		N. Contraction of the contractio
CFR Parts 30	and 70.		10, 00ction3 00.4 t	ang 30.301, and 141	10 100	· 함 [파일] ()	STATE !	10, 1, 16/		
Subject to con	rection of cler	ical errors.			* .	TRUCK *	T-911		STATION	Hobb=(6)
				······································	· ·		NUMBER	UNIT		
	· · · · · ·				<u>, , , , , , , , , , , , , , , , , , , </u>		OF UNITS	OF MEASURE	UNIT PRICE	TOTAL
CODE	DATE	Camilaa	Chassa	DESCRIPTIO				<u> </u>] [4.0.40
001	2-13	Service	ent Protection (tup ·		ONE	SETUP	600.00	600.00
005	2-/3		e Control Equip		ubeicate	20	0-500	CT.	200.02	200.00
200	<i>L-1</i> 0		ls Charge	a r	<u>POPIUMIR</u>	OIC	0-300		200.	200.
101	2-13		ENHEAD	TRACER	ODFR	CHARGE	min	F.4.	450,00	450,00
101	2-13	BRAd	FN hEAD	TRACER	Ocoth	Charge	583	f.t.		94.94
	·			17 ± ±.			Est l'Eld	TOTAL	<u> </u>	1344 94
		0.10	.1 ~	<u> </u>	2)	·	BK		- 00	700,00
009	2-13	RA	mat sm	ic I-1	3) 🥕	ile	5me	RIA.	5000 otal	7.00.00
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Perforation	L	<u> </u>			قر)·		 	-	
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1				<u> </u>	44	Francisco P.	j	 		
			···	····	S. 100				†	
	TYPE OF J	0Β: τ)	PRODUCTION	LOGGING () PIPE REC	; overy:	SUB TOT	ΔΙ		
	WELL COM		() RECOM		*	ÄBANDONME	NT:			<u> </u>
(INJECTION	PROFILE:	() O/H L	OGGING: ()	CASED HÖL	E LOGGING	OCCUPA:	TIONAL TAX		
BPS Eng	jineer	m	1. Combs		·		STATE S	ALES TAX		
Ţ			Blythe, (;	11	TOTAL	•		
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Authoriz	ed Agent	KO,	w.	Hous	مريد	<u> </u>				

Phil Mechanic Comment of Comments of the Comment of

BRINE WELL PRESSURE TEST

- 1. Attach pressure recorder to well head assembly.
- 2. Attach separate pressure guage 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 inital 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.

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

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."

Owner/Manager

SUBSCRIBED AND SWORN TO before me this,

1988 by Phil Withrow.

My commission expires:

Notary Public

State of New Mexico

day of

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 ½ 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.

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

Comparsion 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.

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 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."

Phil Withrow Dwner/Manager

SUBSCRIBED AND SWORN TO before me this

day of

of June

1988 by Phil Withrow.

My commission expires:

Notary Public

State of New Mexico

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

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."

Owner/Manager

SUBSCRIBED AND SWORN TO before me this 1988 by Phil Withrow.

day of

My commission expires:

Notary Public

State of New Mexicó

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 unanticipated 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 1988 by Phil Withrow.

day of

My commission expires:

Notary Public

State of New Mexico

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 #l would be to rig up pulling machine on well #l, 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 #l.

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 completely procedure.



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

JERRY APODACA GOVERNOR

NICK FRANKLIN SECRETARY June 6, 1978

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

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 3:15 Am B&E, Due / Phil Withow 885-6663 Val DPSubmitted In next week or two, weed to get Phil to sign as few things, hard time getting him to sit still I told her we have developed bond form and will be sending them w/ our questions & comments associated w/ thennext submittal Want to let you know that special bonding requienests are going to be Will be looking for your 5 th the

5-31-88

2980227 Well Plugging rene (B & E, Inc. and Watson Treating on this) 2980227 renews 02/22 annually premium \$ 50.00 24 4477509 Well Plugging renews 0,7/27 annually premium \$ 50.00 renews 09/01 annually Well Plugging pr|emium \$ 50.00 4477516 renews 06/26 annually Mining Permit premium \$ 30.00 4719382 Well Plugging renews 03/28 annually premium \$ 50.00 4719384 Right of Way/Water Lease renews 06/10 annually premium \$ 50.00 July

Revised 6-17-77

STATE OF NEW MEXICO

ONE-WELL PLUGGING BOND

FOR CHAVES, EDDY, LEA, MCKINERY, RIO APPIDA, ROOSEVELT, *
SANDOVAL, AND SAN JUAN COUNTIES ONLY

HOND NO. 4477 513 We the of Surety Company)
AMOUNT OF COND \$5,000.00
COUNTY Lea
minimum bond is \$5,000.00* , the minimum bond is \$7,500.00* e minimum bond is \$10,000.00
500.00 finnd may be permitted to 10 stilled as much third under a \$5.000.00 fund may 60 permitted to go to 10,500 feet.
nos 2088, Santa l'e 87501
. (An individual) (a partnership)
, with its principal office in the city of , and authorized to do husiness
ance Company
of Washington .
num of Five Thousand & No/100
ter enter into oil and gas leases, or embon dioxide and
ter enter into oil and pas Jeases, or carbon dioxide red States of America to private individuals, and

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berland	6-17-77

STATE OF NEW MEXICO

FOR CHAVES, LDDY, LEA, ECKIMELY, RIO	
SATIIXIVAL. AND SAN JUAN COUR	APRIDA, ROOSEVELT, TILS ONLY
	4719382
•	BOND NO. The the of Sweets Company)
	APOUNT OF COND \$5,000.00
	: COUNTY . Eddy
FOR Walls less than 5,000 feet deep, the mean for walls 5,000 feet to 10,000 feet deep, for walls more than 10,000 feet deep, the last certain conditions, a well bring drilled under a 33,000,00 or 31,500, 3 well bring drilled under a 33,000,00 feet deeper than the moreal mealment dryin, i.e., a well bring drilled under a 17,500,00 took may be personally feet, and a well being drilled under a 17,500,00 took may be personally took and a well being drilled under a 17,500,00 took may be personally took and a well being drilled under a 17,500,00 took may be personally took and a well being drilled under a 17,500,00 took may be personally to the personal took and a well being drilled under a 17,500,00 took and a well being drilled under a 17,500,	the Militaum bond is \$7,500.00° minimum bond is \$10,000.00
File with Oil Conservation Commission, P. O. Bux	2088, Santa Pe 8750
NOW ALL MEN BY THESE PRESENTS:	* **
B&E, Inc.	p)
That	(All individual) (a partnership)
Hobbs State of New Mexico	and authorized to do husiness
the State of New Mexico), as PRINCIPAL, and Safeco Insura	ince Company
orporation areanized and existing under the laws of the State of	Washington
rporation integrized and existing under the laws of the State of authorized to do business in the State of New Mexico, as SUREL exico, for the use and benefit of the Oil Conservation Commission of exico Statutes Annotated, 1953 Compilation, as amended, in the sum illust lawful money of the United States, for the payment of which,	Washington Y, are held turnly bound unto the State of New New Mexico pursuant to Section 63.3-11. New of Five Thousand dollars and no/10 well and truly to be made, said PRINCIPAL and
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reporation areanized and existing under the laws of the State of authorized to do business in the State of New Mexico, as SUREL exico, for the use and benefit of the Oil Conservation Commission of exico Statutes Annotated, 1953 Compilation, as amended, in the sum illars lawful money of the United States, for the payment of which, IRETY hereby bind themselves, their successors and assigns, jointly and The conditions of this obligation are such that: WHERFAS, The above principal has heretofore or may bereafter (O2) gas bases, or helium gas leases with the State of New Mexico; and WHERFAS, The above principal has heretofore or may bereafter (O2) gas leases, or helium gas leases on lands patented by the United	Washington Y, are held turnly bound unto the State of New New Mexico pursuant to Section 63-3-11. New of Five Thousand dollars and no/10 well and truly to be made, said PRINCHAL and severally, family by these presents. enter into oil and gas leases, or carbon dioxide
orporation are mired and existing under the laws of the State of authorized to do business in the State of New Mexico, as SURE lexico, for the use and benefit of the Oil Conservation Commission of exico Statutes Annotated, 1953 Compilation, as amended, in the sum ollars lawful money of the United States, for the payment of which, JRETY hereby bind themselves, their successors and assigns, jointly and The conditions of this obligation are such that: WHEREAS, The above principal has heretofore or may be easter CO2) gas bases, or beliam gas leases with the State of New Mexico; and	Washington Y, are held turnly bound unto the State of New New Mexico pursuant to Section 63,3-11. New of Five Thousand dollars and no/10 well and truly to be made, said PRINCIPAL and severally, family by these presents. enter into oil and gas leases, or carbon dioxide enter into oil and gas leases, or carbon dioxide States of America to private individuals, and the care of proceeding patterns and positive oil and proceeding only around, own or operate such well, or such well carbon dioxide (CO ₂) leases, or belian gas leases, individuals, and on land otherwise aemed by private from the West Line and 1288. From

when abandoned in accordance with the roles, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to contine the sil, gas, and water in the strata in which they are found, and to prevent them from escaping into other strong

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 torce and effect,

2980227 Well Plugging renews 02/22 annually premium \$ 50.00

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

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

Lugania 447516 Mining Permit renews 06/26 annually premium \$ 30.00

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

Lugania 4719384 Right of Way/Water Lease renews 06/10 annually premium \$ 50.00

STATE OF NEW MEXICO

ONE-WELL PLUGGING BOND

FOR ALL COUNTIES EXCEPT:
CHAVES, EDDY, LEA, MCKINLEY, HIO ARRIBA, ROOSEVELT,
SANDOVAL, AND SAN JUAN

		BOND NO.	4477509	
			(hir Use (\$5um) Company) OF BOND \$5,000.00	
		COUNTY .		_
NOTE	For wells less than 5,000 feet deep, the immonant Nord is \$7,500,000. For wells 5,000 to 10,000 feet deep, the minimum bond is \$10,000 feet. Les wells more than 10,000 feet deep, the minimum bond is \$12,500,000. The wells more than 10,000 feet deep, the minimum bond is \$12,500,000.	or Schilfer dagor	th , a the mornist rossimum depth,	
	re a wall being dolla Franker a \$1,50 ct was Sort to redo personated to go to 5,000 feet, and a wall being drilled under a 5 feet of Soc Pole 1947	i jujup vo upt je oraj o	otas (e periodical so go to \$1),540	
	File with Oil Conservation Commission, P. O. Box 2088, Sam	u Fe 87501		
KNOW	WALL MEN BY THESE PRESENTS:			
	That B & E., Incorporated			
	on about organized in the State of New Mox Loo			
1101	Obbs State of New Mexico Sole of New Mexico Sole of New Mexico Linguistics Company		, and authorized to do bus	iness
in the Sc	Scite of New Mexico), as PRINCHAL, and	/		, =
Mexico, Mexico: (Kalars	inthorized to do business in the State of New Mexico, as SURETY, are his of the use and benefit of the Oil Conservation Commission of New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of $\underline{Five\ Thousa}$ is lawful money of the United States, for the payment of which, well and TY hereby bind themselves, their successors and assigns, jointly and severally, firmly by	exico pursu and Dolla truly to be	uant to Section 65-3-11, ars and no/100 e made, said PRINCIPAL	New
ï	The conditions of this obligation are such that:			
	WHEREAS. The above principal has heretofore or may hereafter enter into oil and ga mygos leases with the State of New Mexico; and	is leases, or o	carbon dioxide (CO2) gas lease	es, or
helimo	WHEREAS, The above principal has heretofore or may hereafter enter into oil and gram gas leases on lands patented by the United States of America to private individual iduals; and		· · · · ·	
may con or gas, statted and or individu the E	WHEREAS, The above principal, individually, or in association with one commence the drifting of one well not to exceed a depth of 5,200 is, or carbon dioxide (CO ₂) gas or belium gas, or does own or may acquire all by others on land embraced in said State of and gas leases, or carbon does find patented by the United States of America to private individuals, induals, the identification and location of said well being 1987, 9 feet from the East Line Section 24 , Township 18 (North) (South), 1 Eddy Gonny, New Mexico.	own or uposide (CO) and on lane South	leet, to prospect for and produ perate such well, or such color leases, or helium gas lead to therwise owned by particles and 1930.4 f.	eceoil well eases, rivate eet fro
plag sa	NOW, THEREFORE, If the above houncen principal and surety or either of them or to said well when dry or when abandoned in accordance with the rules, regulations, and ord ico in such way as to confine the oil, gas, and water in the strata in which they are found at	ers of the Oil	Conservation Commission of	(New
	THEN, THEREFORE, This obligation shall be null and void; otherwise and in defaul	t of complete	compliance with any and all	of said

obligations, the same shall remain in full force and effect.



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

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart 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

- 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

Vim A Lambert

KL:JP:egr

BRINE STATION INSPECTION FORM

DATE 1/30 1987 EID INSPECTOR Lambert/Parka FACILITY B+E CARISDAY LOCATION CARISDAY FACILITY REP ON SITE VAL & Gene COUNTY Edy
WELL OPERATION 2 well system
WELL IS INJECTING: THROUGH ANNULUS THROUGH TUBING SOURCE OF FRESH WATER City Carbad TRACE INJECTION/PRODUCTION LINES Buried lines Above grade Jooksgood Working WELL HEAD PRESSURE PSIG PUMP PRESSURE 300 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:
NUMBER OF TANKS FOR BRINE 4 FRESH WATER black
LOADING AREA
PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE ANY EVIDENCE OF RECENT SPILLAGE DOES FACILITY HAVE A SPILL COLLECTION SYSTEM ANY EVIDENCE OF OIL SPILLING/DUMPING YES NO NO
MONITORING WELLS
DEPTHFT STATIC WATER LEVELFT BELOW CASING SAMPLED THIS VISITYESNO TEMPEC
COMMENTS Evidence of oil spilling dumping near fresh water tank Also recent spillage of brane Neld to do botter job of Keeping Surface spills under control Informed dispatcher of oil spillage. He stated they would clean up oil ASAP



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

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart 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 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. Flease provide this office with a copy of the results of a pressure test, using the attached "Brine Well Pressure Test" procedure (5-204.B.l.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.l.). 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 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

Street and Na Box 75%

P.O. Street and ZP Code
Postage

Certified Fee

Special Polityper, For



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 1501

Mr. Michael J. Burkhart, 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. Burkhart:

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



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, Lemo / for

Ernest C. Rebuck

Program Manager

Ground Water Section

ECR/mp

Enclosure

903-E31 .O.9.D.2.U



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

547

RECEIPT

GARREY CARRUTHERS
Governor

LARRY GORDON Secretary

CARLA L. MUTH Deputy Secretary

Mexido

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

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

6/for

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. Rebuck

Program Manager

Ground Water Section

ECR/mp

Enclosure



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

- 1 for

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. Rebuck Program Manager

Ground Water Section

ECR/mp

Enclosure

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, SE¼ of NW¼, 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 SW¼ of SW¼ 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 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 ma/1.

(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

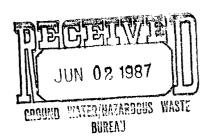
May 28, 1987

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 Decription 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/val 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

Main Office:

B & E, Inc.

Field Office & Yard:

B & E, Inc. P.O. Box 756

P.O. Box 2292 700 N. Shipp

Hobbs, NM 88240

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

. GENERAL DESCRIPTION

- A. Name of facility and name and address of responsible party
- B. Location: county, township, range and 12/2 Section or latitude/longitude coordinates (3-106.C.2)
 -indicate on USGS topo map, 72' 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)
- 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 SW4SW4 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 59030' East a distance of 64.9 feet; Thence South 66050' East a distance of 100 feet; Thence South 72040' East a distance of 100 feet; Thence South 78005' East a distance of 100 feet; Thence South 83058' East a distance of 104.5 feet; Thence North 0043' West a distance of 427 feet to the South right-ofway 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 74045' East a distance of 223.5 feet; Thence South 60°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 1⁰56' West along the West line of the said tract a distance of 350 feet; Thence at an angle to the left of 86⁰02' 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 0043' 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 a 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 -

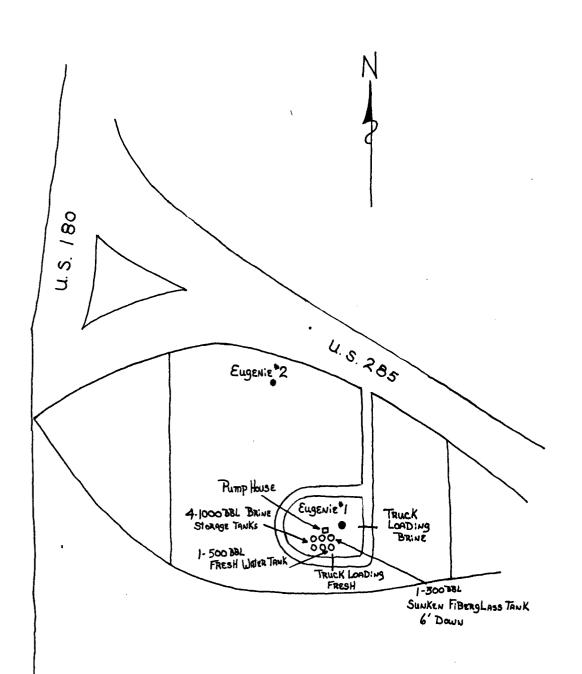
A search of the area surrounding the brine station did not reveal the presence of any fresh water wells.

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 Carlshad and the highways provide excellent drainage to the west. See USCS Map 2, attached.

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

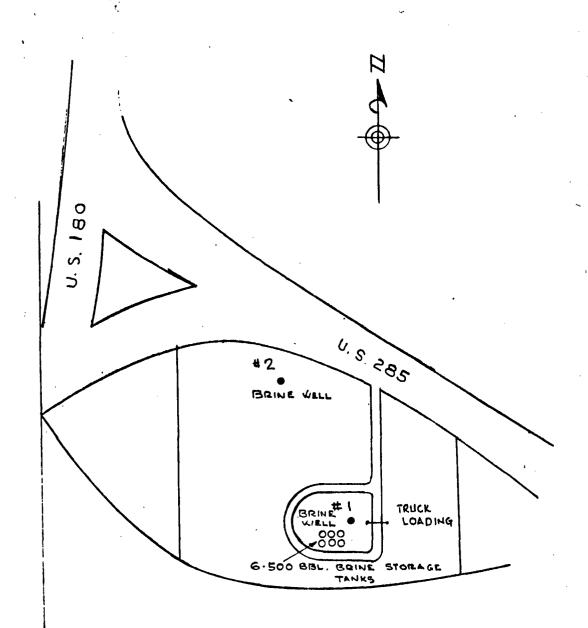
A drillers logs for both wells are attached, exhibits 1 & 2 which describes the lithological character of the underground formations.

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 T	BRINE SALES	INC. Box 2292
Eugenie*	1 - Eugenie*2 Brine Station 4 Sec. 17	{
AGE.	27E TWP 225	
DATE 5-7-87	GENE PRUITT B&E INC	ReviseD DRAWING



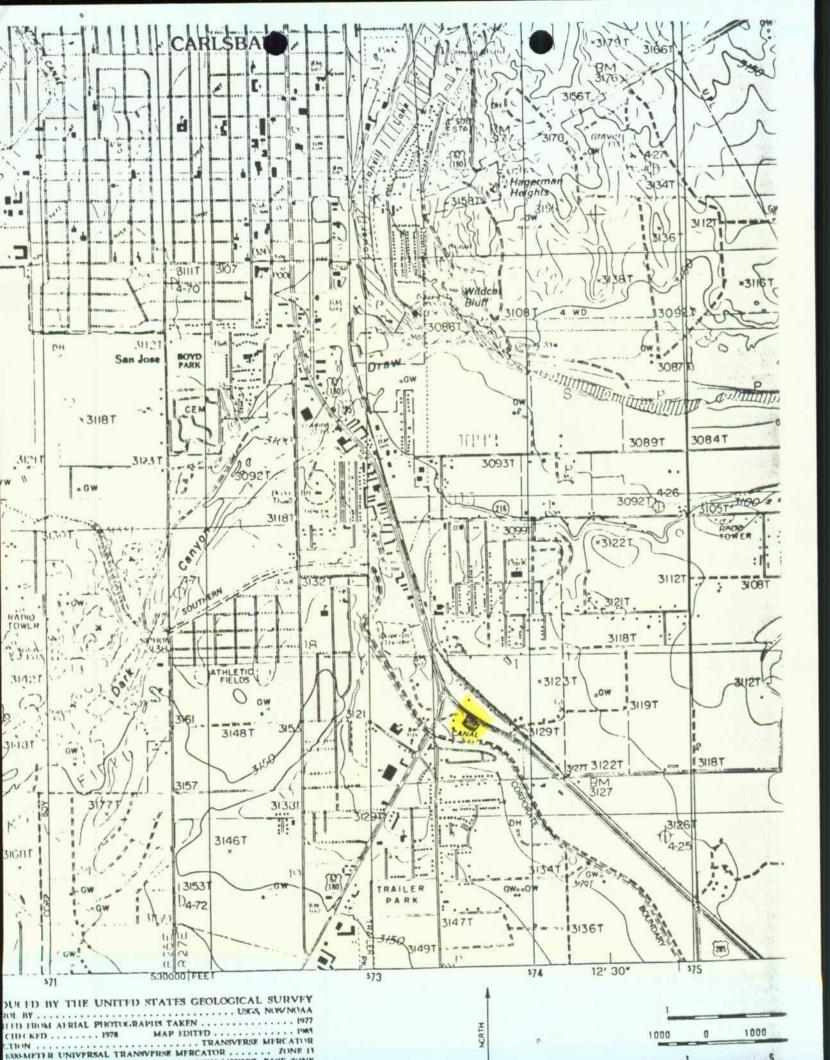
SCALE 1" - 200'

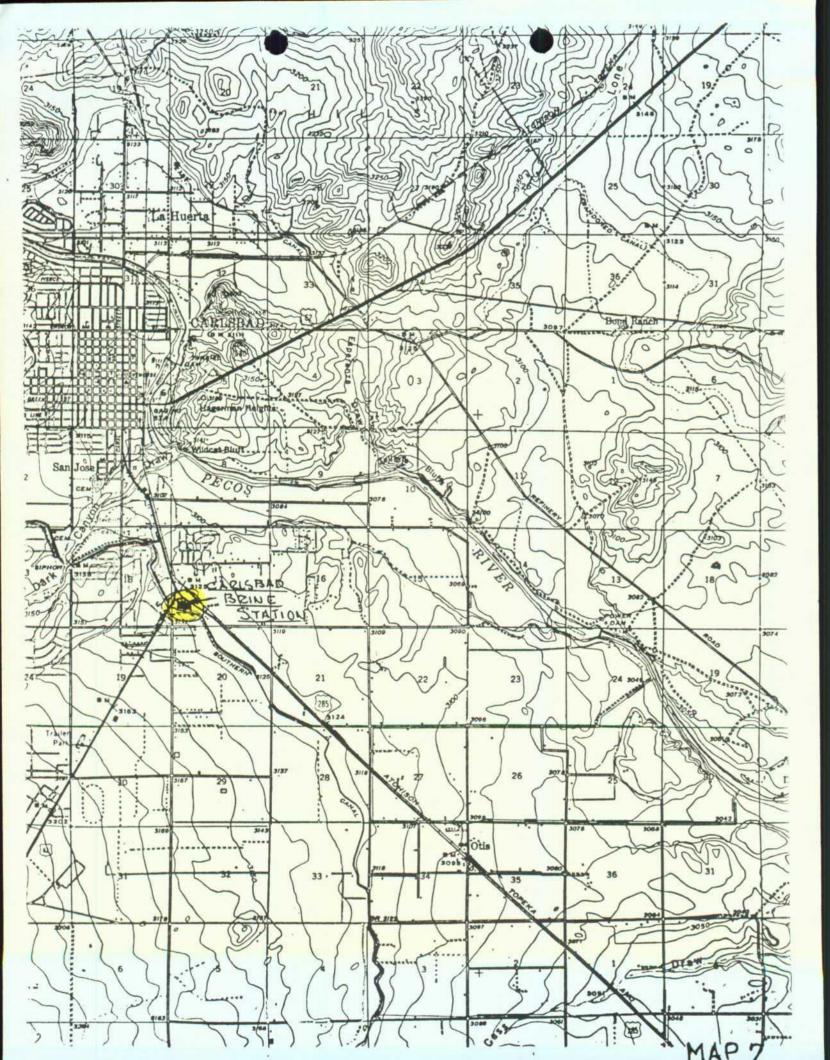
PERMIAN BRINE SALES, INC.
ODESSA, TEXAS
CARLSBAD BRINE STATION
SW/4 SW/4 SEC. 17

SW/4 SW/4 SEC. 17 PGE. 27 E TWP. 275

DATE: 10: 19:82 PE TEX. 9844

SW COR.





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.

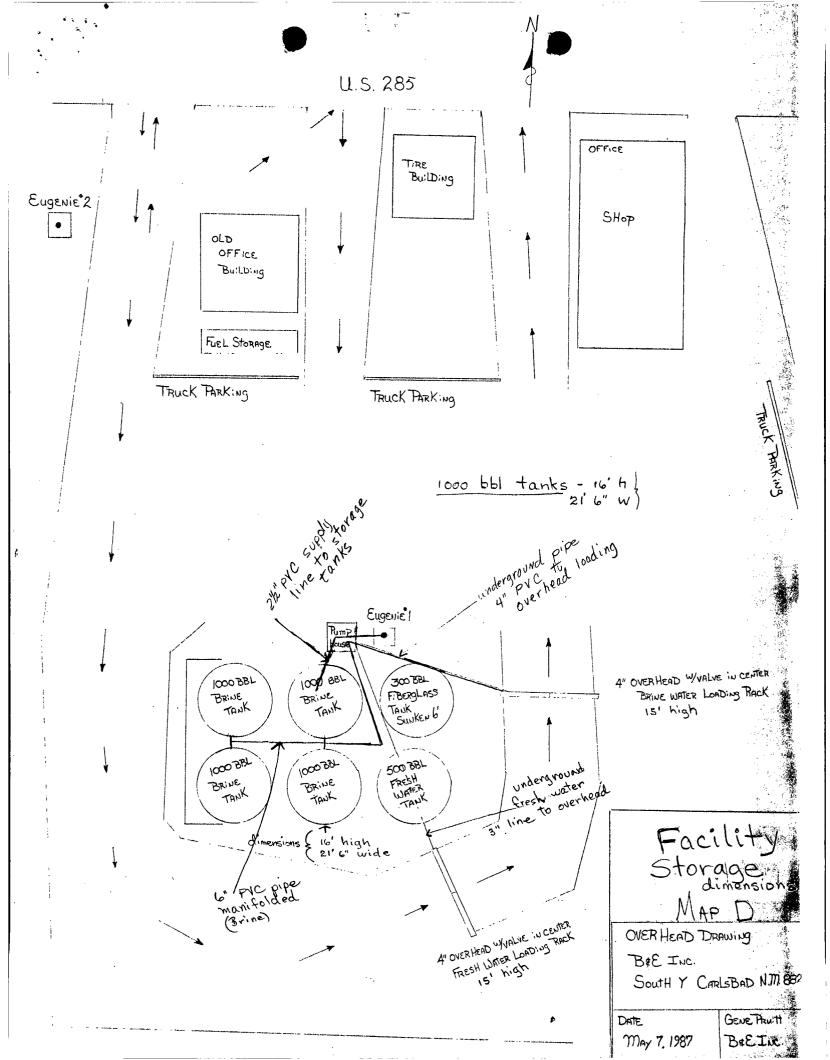
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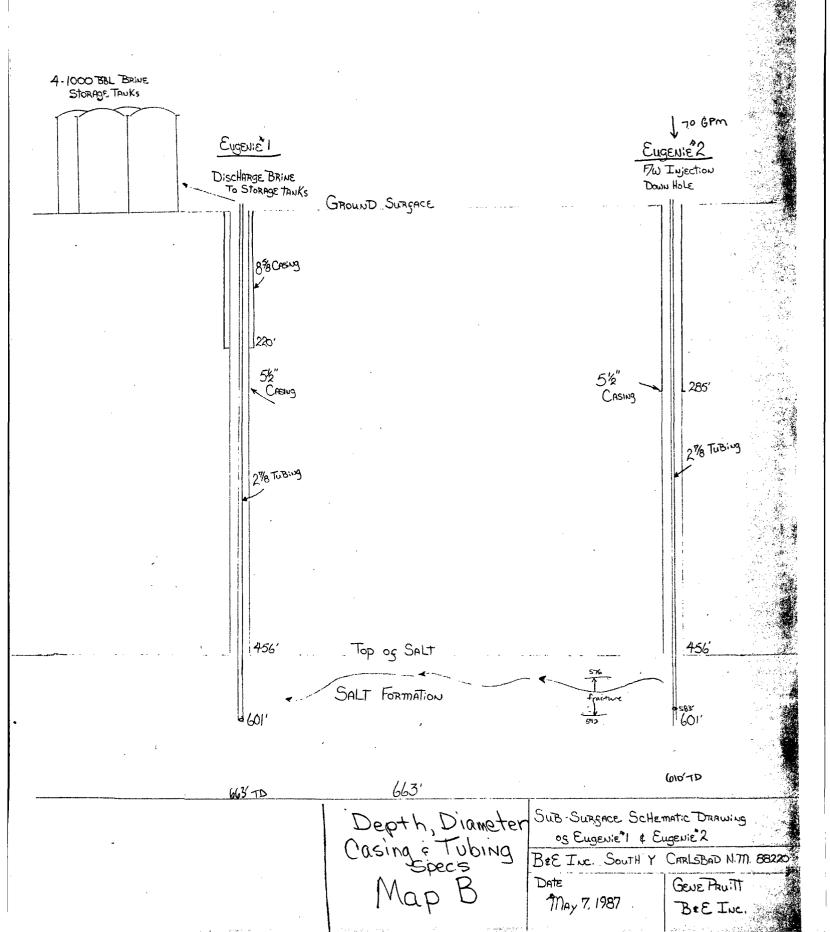
A. Surface Facilities

- Dimension of storage and/or disposal pond(s)/tank(s)
 -include side slope angle for ponds
- 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

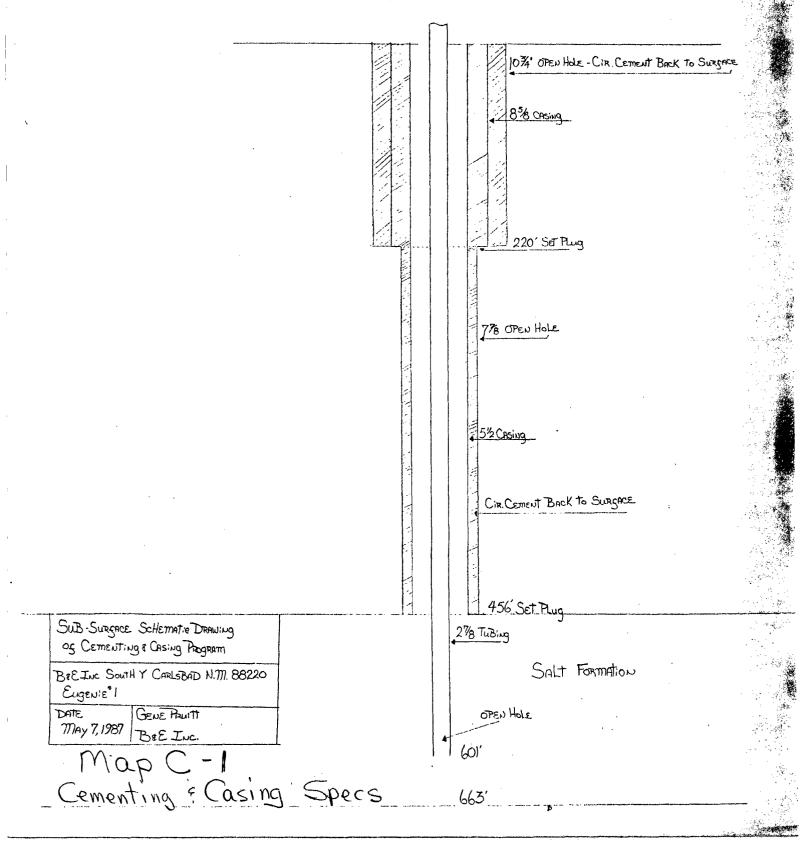
B. Underground Facilities

- 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
- 4. Maximum and average injection pressures, injection volume, and other injection procedures (5-102.8.1.d.7.; 5-210.8.12; 5-203.8.1; 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)

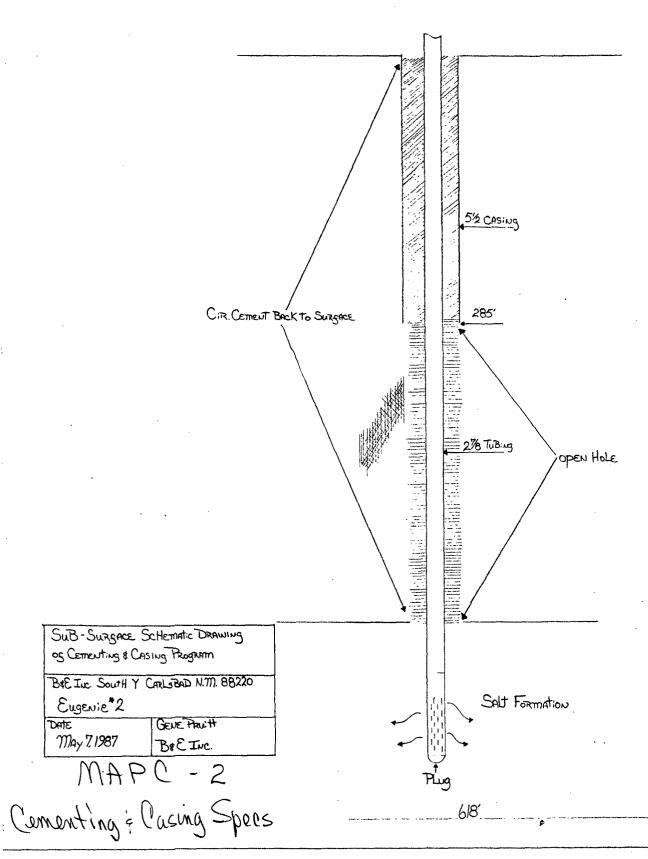




Eugenie" | B/w DiscHarge







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P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXA

PHONE 332-0831

JUNE 30, 1978

EXIBIT No. 1

EUGENIE No. 1 - Sec 17-T22S-R27E

Eddy County, New Mexico

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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 GYPSU
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
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576	to	592		SALT
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		•		No. 4 (1) (2007)

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Testing & Corno



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0631

November 30, 1979

EXHIBIT NO. 2

EUGENIE No.2 - Sec 17-T22S-R27E

PAGE

Carlsbad, New Mexico

Callabady New Mexaco	San William
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	
64 to 65	RED BEDS
65 to 78	RED SAND
78 to 107	GRAVEL
107 to 163	BROWN CLAY, GRAVEL & SANI
163 to 171	1
171 to 178	LIME VERY HARD
178 to 225	RED BEDS
225 to 237	•
237 to 252	and the second s
252 to 268	
268. to 280	
280 to 285	
285 to 305	GYP. W/SOME RED BEDS
305 to 320	GYP. & ANHYDRITE
320 to 330	
330 to 360	ANHYDRITE W/LIME & SAND
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PAGE Z

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

January 15, 1980 New Mexico Oil Conservation Commission P.O. Drawer DD Artesia, New Mexico 88210 Dear Mr. Gressett: Re: Eugenie No. 2 Bec. 17 T 225-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 co Phil Withrow

NO. OF COPIES HEEFTV								n C+105 ised 1668
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And See the control of the cape of the cape of the cape tools. COMPLETION Ray 285' OF 17 5/2" CASING. B. J. Commented on 11/6/7" Ray 285' OF 17 5/2" CASING. B. J. Commented on 11/6/7" Ray 285' OF 17 5/2" CASING. B. J. Commented on 11/6/7" Ray 285' OF 17 5/2" CASING. B. J. Commented on 11/6/7" Ray 129 5x CLA>> C CEMENT WITH 2 % A-7 Calcium Chlorido. MENT CIRCUMSTED. HOURS. Drilled out pluc with CABIE TOOLS. No WATER: Ray 583' Of 6.5 21/8 TUBING. B. J. Commented 11/22 Ray 583' Of 6.5 21/8 TUBING. B. J. Commented 11/22 WITH 100 5x OF CLASS C CEMENT WITH 2 & A-7 Calciumd Comment Circumsted. Let set 24 Hours. Comment Circumsted. Let set 24 Hours. 1 hereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 25	,				•
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COMPLETION Ram 285 OF 17# 5/12 CASING. B.J. Commented on 11/6/7 PAINTH 129 SX CLASS C CEMENT NITH 276 A-7 Calcium Chlorido. NEXT ENTRUCATED. HOURS. Drilled out pluc with CABLE TOOLS. NO WATER. RAN 583' OF 6.5# 21/8 TUBING. B.J. Commented 11/2E NITH 100 SX OF CLASS C CEMENT NITH 28 A-7 Calciumd Comment Circulated. Let set 24 HOURS. NOV 21, 1979 FRACTURED ACROSS TO EUGENIE NO MISMITS SHAP. Thereby certify that the information above 10 true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 & STRINGER 576 & STR	/A/n/ste/a/1 /	off 300'/as originally	approved. All	fresh water	
COMPLETION Ram 285 OF 17# 5/12 CASING. B.J. Commented on 11/6/7 PAINTH 129 SX CLASS C CEMENT NITH 276 A-7 Calcium Chlorido. NEXT ENTRUCATED. HOURS. Drilled out pluc with CABLE TOOLS. NO WATER. RAN 583' OF 6.5# 21/8 TUBING. B.J. Commented 11/2E NITH 100 SX OF CLASS C CEMENT NITH 28 A-7 Calciumd Comment Circulated. Let set 24 HOURS. NOV 21, 1979 FRACTURED ACROSS TO EUGENIE NO MISMITS SHAP. Thereby certify that the information above 10 true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 & STRINGER 576 & STR	had belen	penetrated and the cr	ed beds are sld	ughing on	
MANT CIRCULATER. HOWAY. Drilled out plus with CABLE TABLE. NO WATER. RAN 583' Of 6.5 278 TUBING. B. T. Centuled 11/2E RAN 583' Of 6.5 278 TUBING. B. T. Centuled 11/2E WITH 100 5X OF CLASS C CEMENT WITH 28 A-7 Calciumd Coment circulated. Let set 24 Howes. NOV 21, 1979 FRACTURED ACROSS TO EUGENIE NO MISALTESHAM Thereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 & STRINGER BETWEE					
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RAN 583' Of 6.5 21/8 TUBING. B. T. CENEUTED II 1220 RAN 583' Of 6.5 21/8 TUBING. B. T. CENEUTED II 1220 WITH 100 5X OF CLASS C CEMENT WITH 28 A-7 CALCIUMD COMENT CIRCURated - LET SET 24 HOULES. NOV 21 1979 FRACTURED ACLOSS TO EUGENIE NO IMPRINTESHAN Thereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 57L' 45	121TH 129 SX C	LASS & CEMENT NI			MAIE
RAN 583' Of 6.5 21/8 TUBING. B. T. CENEUTED ITELLISMENT WITH 28 A-7 CALCIUMA WITH 100 5X OF CLASS C CEMENT WITH 28 A-7 CALCIUMA COMENT CIRCURATED. LET SET 24 HOURS. NOV 21, 1979 FRACTURED ACLOSS TO EUGENIE NO IMPROVED STRINGER BETWEEN 57L' & STR	MART CIRECUSTAN	· Hours, Drill	ed and pe	LUG WITH	CABLE
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WITH 100 5% OF CLASS C CEMENT WITH LONG LOSS COMENS WITH LOSS COMENS COMENS CICCURATED. LET SET 24 HOURS. NOV 21 1979 FRACTURED ACLOSS TO EUGENIE NO IMPANTESHAP. Thereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 57L 4:	TABLE NO	11SATER 1			A. A. 11/20
WITH 100 5% OF CLASS C CEMENT WITH LOUIS. COMEN CICCURATED - LET SET 24 HOURS. NOV 21 1979 FRACTURED ACLOSS TO EUGENIE NO IMSANTS SHA Thereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 4:	TECCS (NO)	# 7	1/0 TUBING	B. T. Cource	red !!!
WITH 100 5% OF CLASS C CEMENT WITH LOUIS. COMEN CICCURATED - LET SET 24 HOURS. NOV 21 1979 FRACTURED ACLOSS TO EUGENIE NO IMSANTS SHA Thereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN 576 4:	PA 50	23 04 65 4	18 INDING		n Mai
NOV-21 1979 FRACTURED ACLOSS TO EUGENIE NO IMSALTESHAD I hereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN STILLES	NAM JE		MENT WINTH	22 A-7 C	accuma
NOV-21 1979 FRACTURED ACLOSS TO EUGENIE NO IMSALTESHAD I hereby certify that the information above is true and complete to the best of my knowledge and belief. STRINGER BETWEEN STILLES	WITH 100 5X	OF CLASS C CK	MENT ANGLE		
NOV 21 1979 FRACTURED ACLOSS TO EUGENIE NO IMPALTED HAT	concre eller	latted. LET SET	24 HOURS.		
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TITLE	Nev 21	1919 PRACTURED	MURETY IP	CHURCH IE NO	CALL CALMENT
A.L. Hickerson President	, I hereby certify that the information	a above is true and complete to the best of	n my knowledge and belief.	STEINGER BETU	- 546 N 576 E
A. L. Hickerson President					10
A.L. HICKORSON President	.NED	TITLE		DATE	
	A.L. HICKERSON	21	esident-		

CONDITIONS OF APPROVA

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

SALT &-1.

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 & 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/SOM 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	÷
62 to 65 RED BED 65 to 76 RED SAND 76 to 107 GRAVEL 107 to 163 BROWN CLAY W/GRAVEL & 163 to 170 RED BED 170 to 178 LIME VERY HARD 178 to 225 RED BED 225 to 237 RED BED 237 to 252 ANHYDRITE & RED BED 252 to 268 LIME & ANHYDRITE W/SOM 252 to 268 RED BED 268 to 285 GYP. W/SOME RED BED	÷
65 to 76 RED SAND 76 to 107 GRAVEL 107 to 163 BROWN CLAY W/GRAVEL & 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/SOM 252 to 268 RED BED 268 to 285 GYP. W/SOME RED BED	
76 to 107 GRAVEL 107 to 163 BROWN CLAY W/GRAVEL & 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/SOM 252 to 268 RED BED 268 to 285 GYP. W/SOME RED BED	, ´
107 to 163	
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/SOM 252 to 268 RED BED 268 to 285 GYP. W/SOME 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/SOM 252 to 268 RED BED 268 to 285 LIME W/GYP. STRINGERS 285 to 305 GYP. W/SOME RED BED	SAND
178 to 225 RED BED 225 to 237 ANHYDRITE & RED BED 237 to 252 LIME & ANHYDRITE W/SOM 252 to 268 RED BED 268 to 285 LIME W/GYP. STRINGERS 285 to 305 GYP. W/SOME RED BED	
225 to 237 ANHYDRITE & RED BED 237 to 252 LIME & ANHYDRITE W/SOM 252 to 268 RED BED 268 to 285 LIME W/GYP. STRINGERS 285 to 305 GYP. W/SOME RED BED	
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285 to 305 GYP. W/SOME RED BED	•
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305 to 320 GYP. & ANHYDRITE	
320 to 328 RED BED	
328 to 360 ANHYDRITE W/LIME & SAN 360 to 410 RED TOCK & ANHYDRITE	D
360 to 410 RED ROCK & ANHYDRITE	
410 to 430 ANHYDRITE W/SOME LIME	
430 to 437 GRAY LINE (HARD) & A	NHYDRITE
437 to 445 ANHYDRITE	
"-456 45 to 456 ANHYDRITE & GRAY LIME	
456 to 555 SALT	,
555 to 567 SALT & SOME LIME	CJ (***)
567 to 576 SALT & BLUE SHALE VERY	LITTLE
	,
576 to 592 SALT 592 to 663 ANHYDRITE	. ,
Syz to ooj ANTIDRITE	

P.B.S.& S. 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	
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

B B	-HUGHES	DC.	.	. 1	SERV	ICE OP	ERATI	ONS		
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			ONS: (This agreement		7					
The undersign shall be subject to the	ned, as authorized agen ne terms and conditions	t of the custor	mer, agrees and acknowledge	wledges that	t the services,	materials, prod	lucts and	supplies	provided for in	this ore
to this order withou	t the consent of an au	thorized repre-	sentative of BJ-HUGH	IES inc.	Va.	,		ا موس	SIG CONGINIONS .	man api
3-2051	-	NOV	9 1979	SIGNED: Z	Ta	law?	771,1	6.	2.66	Ċ
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The undersign of the subject to this order without the content with th	the terms	ind condit	ions appeari	ing on the from I representative	nt and reve re of BJ-H	rse sides of th IUGHES Inc. SIGNE	1/	Suu U	au 7	n. 7.1	un fin	٠. ر
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A SU	BSIDIARY OF HUGHES TOOL C	וו	IĞIN	AINV		SON REQUEST	F GNL
,	BOX 2280 LONG BEACH, WALL		-		E 1/-30-79 NO.	30-86	
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BJ-HUGHES Inc. A SUBSIDIARY OF HUGHES TO COMPANY P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

JOB TICKET NO. 577 - 56007

SERVICE OFERMION

INVOICE

TERMS: NET 20TH PROX.
STATEMENTS ON REQUEST ONLY

PAYABLE AT LONG BEACH, CALIFORNIA

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TERMS: NET 20TH PROX.

A SUBSIDIARY OF HUGHES TOOL COMPANY

WINDSDA RACTION

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 10. Diffic.

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

Nov. 6

- 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. 22 Oct. 23 - Wayland Evans looking after_well. 41' - some water - (thinks 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 f @ 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 - 209' to 238' Oct. 27 (233 1/2 - 235 1/2 anhydrite)
- Sunday - DOW M
- 238 to 249 in Brown clay. - 7" bailer won't go to bottom because mud is so heavy Da. 28 Oct. 29 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 maxium of 2' drilling per trip tried FW del & 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 - Phil Withrow 12 A.M. CALLED AND DISCUSSED PROBLEMS
- Wayland - burned real bad IN ACCIDENT AT HOME
- driller wanting to the first transfer of the second and the second and the second are the second a Nov. 2 - driller wanting to go to work by hour Nov. 5 - Phil & Bill Taylor decirded to quit the hole @ 2850 Bill Gressett, NMOCC, gave approval to de SET aceme 5 1/2" casing at 285'

> - Welded shoe on 5 1/2 - running in 5 1/2 casing

9 5/8" joint

- cemented - curculated 30 + SXS-pulled out

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

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Nov. 6

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- running in 5 1/2 casing
- cemented - curculated 30 + SXS-pulled out
9 5/8" joint

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

move their unit on hole - drillers - Clyde & Dennis Tidwell - Pushers - Jack Burroughs & Morris Lucas - Monday - 445' in anhydrite Nov. 12 - Tuesday 456' - Top of salt Nov. 13 to 490' in salt - Shut down - gone deer hunting Nov. 14 - """"Ditto""" . Nov. 15 - Friday - drilled from 490 to 535' in salt Nov. 16 Nov. 17 - Sat. - Shut down THIN STRINGER OF - Sun. - 535 - 555' Salt & anhydrite & clay Nov. 18 - Mon. - 555' - at 2 PM 587' - some blue clay at Nov. 19 583' 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' - BJ on location - 614' - of 2 7/8" 8 round thread tubing in hole 12:30 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 EXCENSE. 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 clyis SLIPS - wait on cement - 3 hours - released rig ofter laying down joint waiting on cement - tubing TD - 583 - Baskets at 553 & 543 UP TO circulated water behind cement \$523' (30' above baskets -60'above 583'

- Bill Taylor rigging down

- Clyde Tidwell & Son - Artesia on way to

Nov. 8

THUMAN AARWAY

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 8:50 AM - BJ Pump truck arrived. Jim Calicoat connected suction to be 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#
9:31 - 1/2 BPM - 750#
9:34 - 7 RDM BJ pumper - for Frac (All Times NM) - Pump down 2 7/8" tubing in #2 well PI EPERATE - 10.5 BPM - 1250# 9:36 - started flowing out casing of #1 well @ 35% (after 9:40 only 60 bbls) 9:50 - switched No. 1 from pit to take TANK & - 10.5 BPM - 1250# Flow started to take 95% - slowed to 2 BPM - 500# 9;54 10:05 - Still @ 2 BPM - 500# 10:07 10.5 BPM - 800# - """""Ditto"""""""" 10:10 10:13 - NMOCC representatives arreved-Mike Williams Larry Brooks 10:15 - Flow to #1 tanks 98% - Slowed pumps to 2 BPM - 500# 10:36 10:39 - Slowed pumps to 1 BPM - 400# 10:40 - shut BJ down - connected hose from our pump to well #2 - checked pressure in pumphouse on pump discharge -10:46 PRESSURE Over 200#-letting #1 well bleed down

11:25 - Reconnected BJ - still 400 on their *Gauge*. 11:30 - Released BJ

Wat	ter Used		Barrels
Frac Tank	532 start - 350 end		182
one truck	load	=	140
Metered -	331227 end - 330,870	=	457
	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
 - 11:24 768- BPM 400#

shut down pressure, 300# switched pumps

- 2:00 Tried 15 bbls with red dye
- 2:08 Started again pumped 1700 bbls. No bre cut 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

2

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 ### rough 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 legist brine
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 DOL 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.		- 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 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.

BJE 9.10 24 30 1 0 2 5 0 K Slowed to 2 BAM - 900# 10:07 Pack to 121/2 BAM - 800# 10:30 AM Severel beam
10:30 AM Severel beam
10:40 AM
10:4

INVOICE

WALTER D. BRININSTOOL

2502 SO. CANAL

CARLSBAD, N.M. 88220

Permian Brine Gales & Service, Inc.): P.O. Box 1591 Odessa, Texas 79760

June 28, 1978

7.00 \$ 700.00 7" Casing 3.00 1,611.00 151.7' 2 7/8" Tubing .90 $\frac{1,306.53}{5,3,617.53}$	ANITY	DESCRIPTION	UNIT PRICE		AMOUNT	
37' 7" Casing 3.00 1,611.00 151.7' 2 7/8" Tubing .90					700.00	
151.7' 2 7/8" Tubing .90 \(\frac{1,306.53}{\\$3,617.53}\))O'	9 5/8" Casing	7.00		•	
\$ 3,617.53	37 *	7" Casing	3.00	- N	1,611.00	
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ILCO Supply Company, Inc.

Order Date: 26286 6/28/78

Permisa Brine Sales & Service, Inc.

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INVOICE NO. 26806

PATE June 30, 1978

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Odessa, TX 79760

Box 1591

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		• :			*	4 % Tax	1,139.71
							1.247.70

INVOICE

ABBOTT BROTHERS

WATER WELL CONTRACTORS

Nº 08965

July 1, 1978

wildred

Bex 637 HORBS, NEW MEXICO

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Fermien Brine Sales and Service	Ordered By Al Hio	kerson
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Odesan, Texas 79760	State New Mexi	co
Terms Net: 8% Interest After 20 Days		
To move in and out, \$200.00 each way.		\$ 400.00
1897 hrs. © 45.00 per hr.		8505 .00
Southwest L.P. Gas tickets #4647,4676,46	58 5 & 4717 .	270.71
	•	9175.71
	3 3/4 % Sales Tax	344.09
		9519,80



REPRESENTATIVE: JOB TICKET NO.

29291

BJ-HUGHES Inc.

P.O. BOX 2250 LONG BEACH, CALIFORNIA 90801

SERVICE OPERATIONS

INVEICE TERMS: NET 20TH PROX. STATEMENTS ON REQUEST ONL

PAYABLE AT LONG BEACH, CALIFORNIA

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	Odessa STATE Texa	ıs	FIELD	Eddy		3141	c MM		
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BJ-HUGHES Inc.
A SUBSIDIARY OF HUGHES TOOL

P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801

RULK MATERIAL

TERMS: NET 20 TH PROX.

STATEMENTS ON REQUEST ONLY PAYABLE AT LONG BEACH, CALIFORNIA

PERMIAN BRINE SALES & SERVICE INC 212 WEST FIFTH STREET ODESSA TEXAS 79760 Truck & Treller No. No. Loads Truck & Troiller No. No. Loads Other Equipment No. MILES FROM STATION TO WELL: 5339 CONTRACT CONDITIONS: (This agreement must be signed before work is commenced) The undersigned, an authorized agent of the customer, agrees and exhaultedges that the services, majerials, prioduct and supplied provided for in this order has before the truck of product and supplied provided for in this order has been been supplied to the format and reverse sizes of the customer copy before of majerials prioduct and supplied provided for in this order without the consent of an authorized representative of BJ-HUGHES Inc. SIGNED: ***TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) The undersigned, an authorized agent of the customer, agrees and exhaultedges that the services, majerials, prioduct and supplied provided for in this order has been precised and supplied provided for in this order has been precised and supplied provided for in this order has been provided for in this order has been precised. SIGNED: ***TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced) **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced. **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced. **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced. **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced. **TOTAL TO ADDITIONS: (This agreement must be signed before work is commenced. **TOTAL TO ADDITIONS:	•								DATE	6.30-	18 NO. 0	30-000	644
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BJ-HUGHES Inc.

A SUBSIDIARY OF HUGHES TOOL P. O. BOX 2250 LONG BEACH, CALIFORNIA 9010 BULK MATERIAL

TERMS: NET 20TH PROX. STATEMENTS ON REQUEST ONLY

PAYABLE AT LONG BEACH, CALIFORNIA

DATE 6-30-78NO.30-CUSTOMER'S OLD NEW TE OF x DISTRICT WELL WELL ORDER NO. 6/20 /78 Carlsbad OB WELL NO. #1 LEASE Eugenie, Carlsbad S Fermian Brine Sales & Service & Inc. COUNTY PARISH 212 west Fifth St. Eddy STATE STATE Texas FIELD Odessa WELL OWNER THORIZED BY Same (OFFICE USE ONLY) MAIL REMITTANCE TO: 83 Hughes Inc. P.O. Sox 3834 PERMIAN BRINE SALES & SERVICE INC Maio Post Office 212 WEST FIFTH STREET ODESSA TEXAS 79760 Dallas, Texas 75285 Truck & Treiler No. Na Loads Truck & Trailer No. No. Loods Other Equipment No. MLES FROM STATION TO WELL: 8607 SERVICE TICKET NO. 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 every hereof and no additional terms and conditions shall apply is order without the consent of an authorized representative of BJ-HUGHES Inc. SIGNED: QUANTITIES PRICE BRAND AND TYPE USED RETURNED CHARGED ORDERED 120 815.00 Class "C" Cement 4.10 Sock a Bentenite % Gel. in. MIXING 70 105 SERVICE 810-00 Cement And Additives RET'D MTL CHARGE WAITING MILEAGE /ten 00 806.03 Min. Charge CHARGE New Medico Les

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

IB TICKET NO. C 77

BJ-HUGHES Inc.

A SUBSIDIARY OF HUGHES TOOL

P. O. BOX 2250 LONG BEACH, CALIFORNIA 90801



SERVICE OPERATIONS

INVOCE TERMS: NET 20 TH PROX. STATEMENTS ON REQUEST ONLY PAYABLE AT LONG BEACH, CALIFORNIA DATE 10-20-78 NO. 20

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

JOHNSON BUILDING SYSTEMS RT. 4, BOX 740 381-4920 ODESSA, TEXAS 79763

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NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

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

Permian Brine Sales & Service, Inc Township Section 'mit ! effet Eddy 22Suth 27 East 4 tual Frictage La lation of Well. West 995 South feet from the iround Level Flev Freducing Formation 3126.4 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 consolied dated by communitization, unitization, force-pooling, etc? If answer is "yes," type of consolidation _ If answer is "no," list the owners and tract descriptions which have actually been consolidated. (I se reverse nide of 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 con- May 15,1978 Date Survey Registered Professional Engineer John

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N . OF COPIES RECEIVED N		PECEIVED	Form C-103 well
			Supersedes Old
DISTRIBUTION	-	COMETEN A TIME COMMITTEEN	C-102 and C-103
SANTA FE	NEW MEXICO OIL	CONSERVATION COMMISSIONS	Effective 14-65
FILE			
U.S.G.S.		o. c. c.	Sa. Indicate Type of Lease
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Permian Brine S.	ales & Service, Inc	*	Eugenie
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i. Location of Well	212 West 5th St.,Od	lessa, Texas 79760	10. Field and Faoi, or Wildcat
	00"		
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ACCORDING IN INC.	ressett	SUPERVISOR, DISTRICT II	JUL 2 6 1978
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STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION ARTESIA DISTRICT OFFICE

JERRY APODACA GOVERNOR

NICK FRANKLIN SECRETARY

July 21, 1978

PO. DRAWER DO ARTESIA, NEW MEXICO 682

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

> Eugenie Re:

> > #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

Supervisor, District II

J. a. Gresset

WAG:ro

7/24/7% Enclosure

Enclosure Mr. Gréssett - Careste lever déserces

Thanks

NEMEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Supersedes C-12 Effective 14-65

Ronald J. Eidson

3239

All distances must be from the outer boundaries of the Section Salt Water Permian Brine Sales & Service, Inc. Section 'mit Letter 22Syth 27 East Eddy Actual Footage Location of Well: West **99**5 South feet from the line and teet from the around Level Elev. Producing Formation Dedicated Acreage: 3126.4 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? If answer is "yes," type of consolidation _ Yes 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 certify that the information con-I hernby certify that the well location true and correct to the be May 15,1978 --641'-Date Surveyed Registered Professional Engineer John 676

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TITLE

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SIGNED .

INSTRUCTIONS

This form is to be filled with the exprepriate District Office of the Countssion not later than 20 days after the completion of any newly-iritied of despends well. It shall be uncompanied by one copy of all electrical and referentiately logs run on the well and a summary of all special tests conducted, including drill stem tents. All depths reported shall be measured depths. In the case of directionally triffed wells, true vertical depths shall disc, be reported. For multiple considerious, frems, 30 through 14 shall be reported for each zone. The form is to be filed in quantiplicate exception state land, where six copies are required. See Rule 1105.

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BJ-HUGHES Inc.

JOB TICKET NO. \$ 77. 29291

A SUBSIDIARY OF HUGHES T

COMPANY

P.O. BOX 2250 LONG BEACH, CALIFORNIA 90801

DICE TERMS: NET 20TH PROX. 4

PAYABLE AT LONG BEACH, CALIFORNIA

DATE 4-20-18 NO 20-206

JOB 6/38	/78 DISTRICT Carlabad NEW ₩ OLD CUSTO	MER'S R NO.		-
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shall be subject to the	ned, as authorized agent of the customer, agrees and acknowledges that the services materials, product the terms and conditions appearing on the front and reverse sides of the customer copy hereof and no adout the consent of an authorized representative of BJ-HUGHES Inc. SIGNED: ACENT	OF OWNER OF CONT	inditions shall	L AS
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THE ABOVE MATERIAL AND SERVICE OF A BOLLETIAN STEELS OF
CARLSBAD BRINE. STATION LAYOUT TICKET LEAN-TO LOADING PACK ROAD ROAD CANAL

4 FILL

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

- 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 occured 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 Anaylsis 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
 - 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) (5-102.8.1.d.4.; 5-210.8.6 & 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

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

- 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 (5-102.8.1.d.3.; 5-210.8.5).
 - 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 $\frac{\text{spills/leaks}}{\text{spills/leaks}}$ (3-106.C.3). Analysis should include sodium (Na⁺), potassium (K⁺), calcium (Ca⁺⁺), magnesium (Mg⁺⁺), bicarbonate (HCO3⁻), carbonate (CO3⁻), chloride (Cl⁻), sulfate (SO4⁻), and nitrate (NO3⁻) 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).



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0851

JUNE 30, 1978

EXIBIT 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		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 GYPSU
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		ANHYDRITH "/LIME & SAND
360	to	410		RED ROCK & ANHYDRITE
410		430		ANHYDRITE W/SOME LIME
430		437		GRAY LINE (HARD) & ANHYDRITE
437				ANHYDRITE
445		456		ANHYDRITE & GRAY LIME
456		555		
				SALT & BLUE SHALE VERY LITTLE
592	to	663		ANHYDRITE ANHYDRITE



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0634

November 30, 1979

EXHIBIT NO. 2

EUGENIE No.2 - Sec 17-T22S-R27E

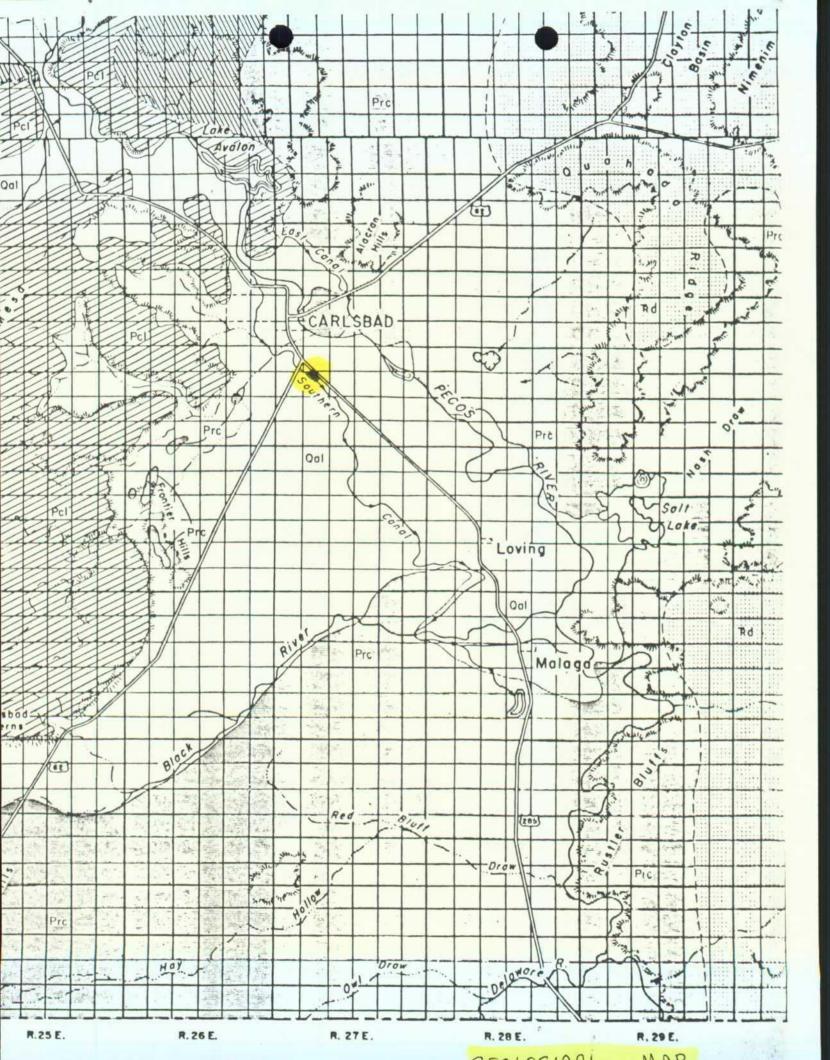
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Carlsbad, New Mexico

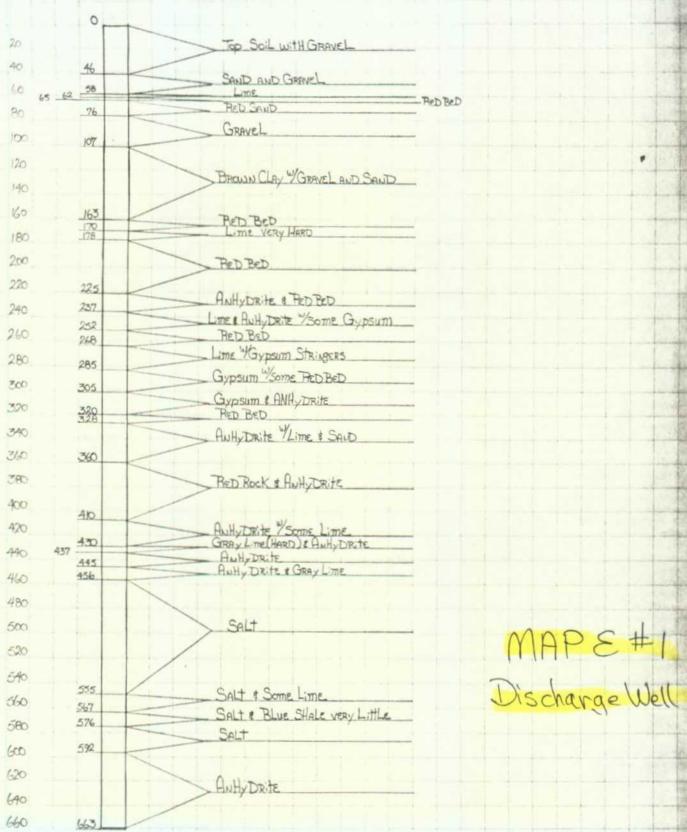
		Callabady New Mexical		Programme and the
to	18		TOP SOIL WITH GRAVE	el .
to	19		CAVE	44
to	46		CALICHE & GRAVEL	
to	50		SAND & GRAVEL .	45- 1-1 1/1-1-3
to	58		GRAVEL & LIME	
to	64		LIME	
to	65		RED BEDS	
to	78		RED SAND	
to	10	7	GRAVEL	
to	16	3	BROWN CLAY, GRAVEL	& SANI
to	17	1	RED BEDS	
to	17	8	LIME VERY HARD	· 持有事件的。
to	22	5	RED BEDS	10代课。
to	23	7	ANHYDRITE & RED BE	DS
to	25	<u> </u>	LIME & ANHYDRITE W	/ SOME
to	26	8	RED BED	The World
l to	28	3 O	LIME W/GYP. STRING	ERS
to	28	}	ANHYDRITE	$S_{\bullet,\bullet}^{(i)} = A_{\bullet,\bullet}^{(i)}$
			GYP. W/SOME RED BE	DS A
to	3	30	RED BEDS	· Signal
to	3	60	ANHYDRITE W/LIME	SAND
	to	to 19 to 46 to 50 to 58 to 64 to 65 to 78 to 10 to 16 to 17 to 17 to 22 to 23 to 25 to 26 to 26 to 30 to 31	to 19	to 225

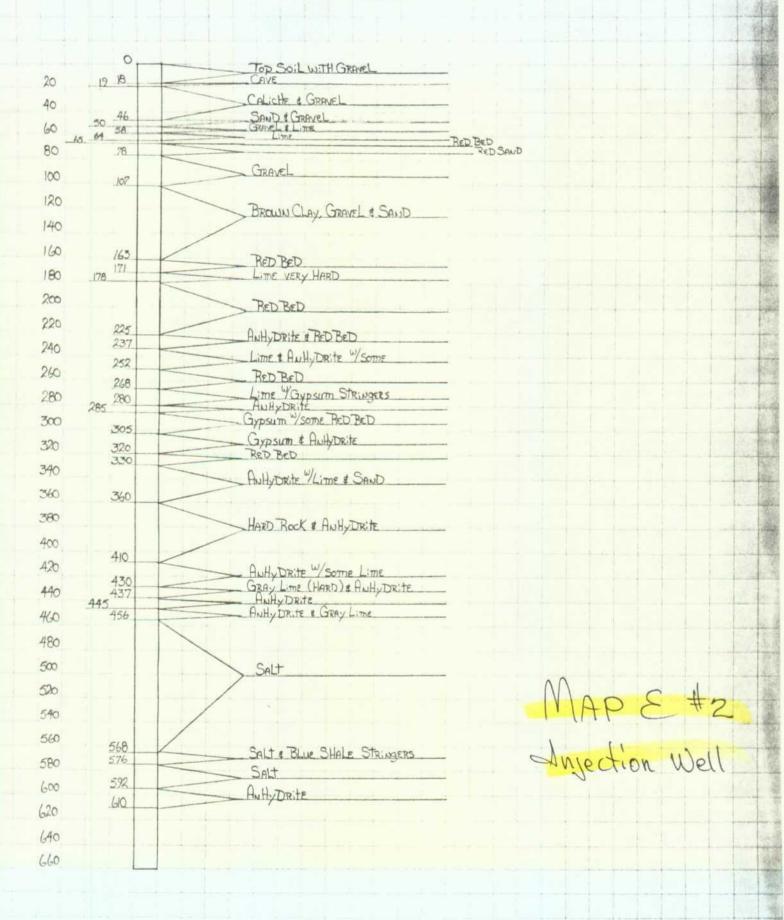
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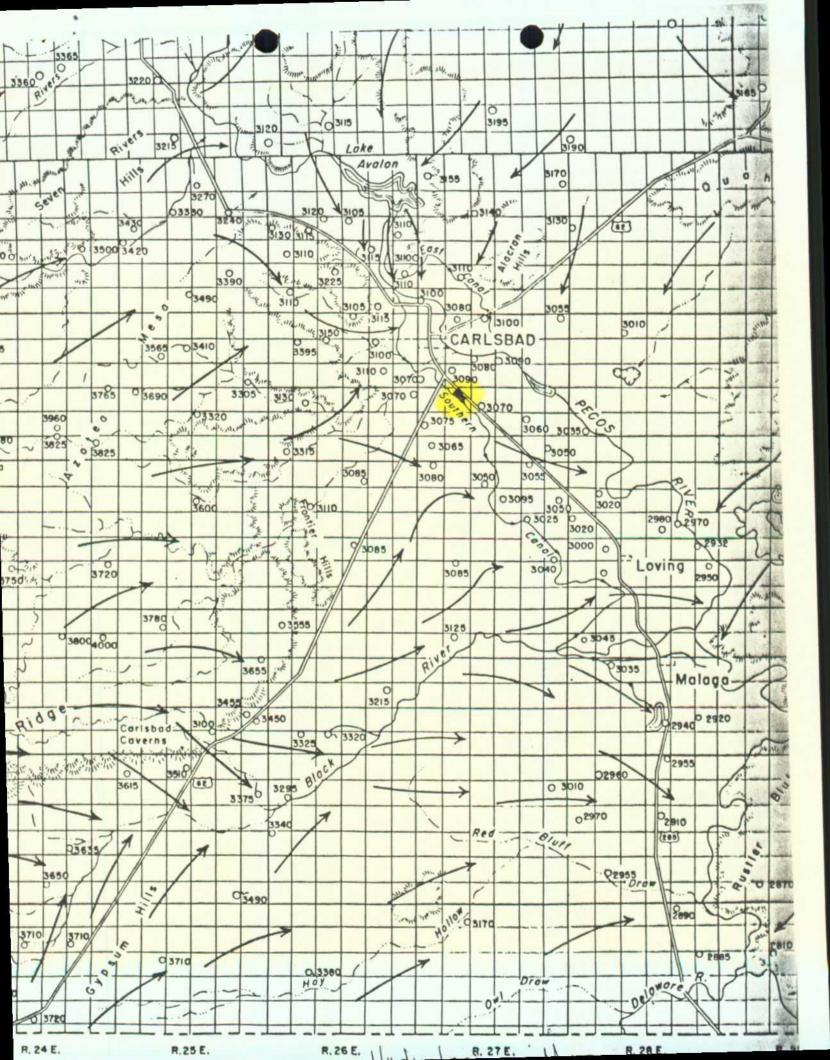
360 to	410HARD ROCK & ANHYDR	ITE W
410 to	430ANHYDRITE W/SOME I	IME KIN
430 to	437GRAY LINE (HARD) 6	ANHYDR
	445ANHYDRITE	
445 to	456ANHYDRITE & GRAY I	ime ,
456 to	568SALT	
568 to	576SALT & BLUE SHALE	•
576 to	592SALT	and and a
592 to	610ANHYDRITE	



Eugenie 1 - discharge well 4" = 20 Foot









Home Office 707 N. Leech, 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)	3,000,13	0.30
		(6)
Bicarbonate (HCO,)	2.05	220
Carbonate (CO 3 -)	3.90	238 1
Hydroxide (OH-)	Not	Found
Sulphate (SO)	Not	Found
Chloride (C1-)	84.59	4,063
Chlopide as Na Cl 20 25,8	5,315.70	310 968
chieras as Iva C 20 25 18	5,315.70	310,100
Total Dissolved Solids		316,702
		1
6.69 ph c 68 °F /0.0377@ 68 °F Dissolved Solids on Evap. at 103°-105° C		
Hardness as Ca CO ₃	00.00	4,900
Carbonate Hardness as CaCO, (temporary)	98.00	195
Non-Carbonate Hardness as CaCO, (permanent)	3.90 94.10	4,705
Alkalinity as CaCO,	3,90	195
Specific Gravity c 68° F 1,205	3.30	1 100
1.205		(A)

^{*} mg/l = milligrams per Liter

 $CaCO_3$ S. I. positive @ $86^{\circ}F$ (0.51)

 $CaSO_4$ S. I. negative (0.81)

^{*} me/l = milliequivalents per Liter

ρ	
Possible Combinations	1 2
Calcium Bicatornate Ca(HCO3) 3,9 mg/l ppm 259	0,025
Colcium Sulfat Ca SO4 78.59 5,344 4,435	0.4435
Magnesium Sulfat Mg 504 6.0 361 300	0.030
Calcium Chloride Ca Cla 9.51 528 438	0,043
Sodium Chloride Na Cl 5,306.91 310,410 257,602	25,760
Weight/gol - 10.04@ 68°F	
10 th	- 11.
If this sample were evaporated - The prob- solids concentrations would be as follows:	بنه ملماه
67 their solubilities.	en orow
Il of water evaporated	the first
Iron Opide Fez 83 0.54 mg	
Calcium Cathonat Ca CO3 195,00 mg	0.06
Colcum Sulfate CaSO4 5344 mg	1.69
Magnesium Sulfat Mg 504 361 mg	0,117
Calcium Chloride Ca Cl. 528 mg	0,17 9
Soolium Chloride Na Cl 310, 410 mg 9	77.97
	and the second
100 bbls of water evaporates	
Lon Oxide 0.019 #	50 mg/s 60 mg/s 60 mg/s 61 mg/s 61 mg/s
Calcium Carborot 6.825 #	
Calcium Sulfate 187.040 #	
Magnesium Sulfate 12.635	and the second second second second
Lodium Chloride 18,480 # Lodium Chloride 10,864.350	The second secon
Jotal solids 11,088.999 #	
11,000.111	العوائية على المستقد عدد المالية المال المالية المالية br>المالية المالية

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.
 - . We would definitely commit to notifying the EID within 48 hours if a leak or spill caused contamination.
- B. Post Operational Committment

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 PROTE 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;
 - <u>restore protected ground water if contaminated by your brine extraction activities.</u>
 - 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)
 - 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

JERRY APODACA GOVERNOR

> NICK FRANKLIN SECRETARY

June 6, 1978

POST OFFICE BOX BUSINGS STATE LAND OFFICE BUILD BANTA FE, NEW MEXICO \$75 (505) 827-2434

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.

ery 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).



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

GARREY CARRUTHERS
Governor

LARRY GCRCON 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

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

Sent to Muckey Monk

Street and No.
Box 2292

P.O. State and ZIP Code
Nobbs, NM

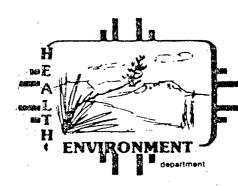
Postage

Certified Fee

Special Delivery Fee

BRINE STATION INSPECTION FORM

L'Ambert, Koschal
DATE /2/8 1986 EID INSPECTOR RAKER
DATE 12/8 1986 EID INSPECTOR RAKER FACILITY REP ON SITE Mickey Mank COUNTY Eddy Sec. 1
DO 323
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
TIMED INDUCTION/INDUCTION HINDD
WELL HEAD PRESSURE PSIG PUMP PRESSURE 135 PSIG
LEAKS AROUND WELL OR PUMP None
STORAGE AREA
STORAGE AREA
FOR PONDS:
GENERAL LINER APPEARANCE
TWOWNER OF EDGEROLDS
AMOUNT OF FREEBOARD ANY SIGN OF OVERFLOW OR LEAKS
LEAK DETECTION SYSTEM FLUIDS DRY
DIN DITION DISTEN INCIDE DIN
FOR TANKS:
GENERAL APPEARANCE Total 4,000 bbls 4 tanks Silver tanks
GENERAL APPEARANCE Total 4,000 bb/s 4 tanks 5/Ner tanks LABLED PLAINLY B/ACK X YES NO New tanks in BERMED TO PREVENT RUNOFF YES X NO CHECK CONTENES TO ASSURE PROPER PLANTS AND ASSURE PROPERTY AND ASSURED PROPERTY AND ASSURE PROPERTY AND ASSURED PROPERTY ASSURED PROP
BERMED TO PREVENT RUNOFF YES Y NO - CHECK CONTENTS TO ACCUPE DEPOSITE THE ALBERT WATER
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH
NUMBER OF TANKS FOR BRINE 4 FRESH WATER /
LOADING AREA
PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE X YES NO
PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE X YES NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM YES 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 Colored 5 to 6 yrs in operation



STATE OF NEW MEXICO

DENISE D. FORT DIRECTOR

ENVIRONMENTAL IMPROVEMENT DIVISION

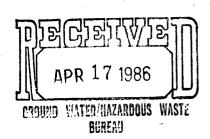
P.O. Box 968, Santa Fe, New Mexico 87504-0968 (505) 984-0020

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 II, 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 Improveme P.O. Box 968 Santa Fe, New Mexico 87

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

Dear Mr. Westbrook:

Steve-Here's the shuff from B+E.

Foods leke OCD accepted the transfer

that The 2 wills are in complicance

under the Thing the Part III discharge

plan. In your to write back to that

effect of they no objections from

you all. Call we of any dominants

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 Sante 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

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. ∜arbro

tb

Enclosure

cc: Mickey Monk

Phil Withrow



OIL CONSERVATION DIVISION

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

December 18, 1982

Carlatery

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,

JDR/jc

P. O. HOX 2068

SANTA FE. NEW MEXICO 87501

ST FOR ALLOWABLE

NOV 14 1984

	I ALAN PINNER DATE		OR ALLOWABLE AND ISPORT OIL AND HATU	O. C.		
1.	B & E, Inc			•		!
	P. O. Box	2292 Hobbs, New Mex	ico 88240		75	EC'D
Reson(s) for filing (Check proper box) Charge in Transporter of: New Well Charge in Transporter of:				К		
	Recompletion	City C	·• []		\$ 12\tag{1}	1 49 1984
	Change In Ownership XX	Coninghead Cas Cond	ensole		NOV	1 -7 120-4
	If change of ownership give name and address of previous owner	Permian Brine Sale	s. Box 1519. O	dessa, Texas 7976	0	
11.	DESCRIPTION OF WELL AND	Nell No. Pool Name, Including	Comutton	hind of Lease	1.0400 No.	
	Eugenie **	l Wildcat'		State, Federal or Fee Fee		
	Unit Letter 1 : 641	Feet From The W L.	ine and 995	Feet From The S		
	Line of Section 17 To	a stable 22 S Range	27 E . NMPM,	Eddy	County	
III.	DESIGNATION OF TRANSPOR	TER OF OIL AND NATURAL G	AS			
	None of Authorized Transporter of Ci			which approved copy of this form	is to be sent)	•
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I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given		APPROVED: APR 2 1985				
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Mark 25, 1985			Fill out only Justions I. H. M. and VI for changes of exact, well name at number, or transported or other such theory of condition			

JCE KING

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

December 18, 1982

Carlolly

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

January Land	UOX 2088				
RECEIVER BY A FE N	EW MEXICO 87501				
MAR 29 1965 REDUEST FOR ALLOWABLE					
AUTIDITY TION TO TRANSPORT OIL AND NATURAL GAS					
B & E, Inc.					
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I hereby certify that the rules and regulations of the Oil Conservation fivesion have been complied with and that the information given	APPROVED: APR	2 1985			
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SANTA FE, NEW MEXICO 87501 NOV 14 1984 REQUEST FOR ALLOWABLE TOTHER DIF AND Q. C. D. AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS ARTESIA, CUTT DE B & E, Inc. P. O. Box 2292 Hobbs, New Mexico 88240 Reason(s) for liling (Check proper bos) Other (Please explain) New Well Cil Recompletion NOV 1 49 1984 Change In Ownership If change of ownership give name Permian Brine Sales, Box 1519, Odessa, Texas 79760 and address of previous owner. II. DESCRIPTION OF WELL AND LEASE Paol Name, Including Committee Leuse No Eugenie 🗯 1 Wildcat Stote, Federal or Fee Fee Location W Unit Letter ______ Feet From The ___ Feet From The ____ To . 1ship 22 S Line of Section Range , NMPH, III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS Address (Cive address to which approved copy of this form is to be sent) Name of Authorized Transporter of Cil Name of Authorized Transporter of Casinghead Gas or Dry Gas Address (Give address to which approved copy of this form is to be sent) Unit is gas actually connected? If well produces oil or liquids, 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 Compl. Ready to Prod. Date Spudded Total Depth P.B.T.D. Elevations (DF, RKB, RT, CR, etc., "tame of Producing Formation Top Oil/Gas Pay Tubing Depth Perforations Depth Cusing Shoe TUBING, CASING, AND CEMENTING RECORD HOLE SIZE CASING & TUBING SIZE DEPTH SET SACKS CEMENT V. TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load all and must be equal to or exceed top allowable for this depth or be for full 24 hours) Date First New Oil Hun To Tanks Date of Test Producing Method (Flow, pump, gas lift, etc.) Longth of Tool Tubing Pressure Cosing Preseure Chote Sixe Actual Prod. During Test Oil-Eble. Nater - Hbla. GAS WELL

Arisal Ired. Teat-METAD Leasth of Test Bbie. Condensate/AUACF Gravity of Condensate Teeling Method (puor, back pr.) (al-Jada) sweesit gnide Cosing Pressure (Shut-In) Choke Size

VI. CERTIFICATE OF COMPLIANCE

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

/Tule (Deta) DIL CONSERVATION DIVISION

APPROVED Original Signed By Leslie A. Clements TITLE . Supervisor District II

If this is a sequest for allowable for a newly drilled or despensit

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 mans or number, or transporter, or other such change of condition Separate Forms C-104 must be filed for each pool in multiply multiply 4/11/86

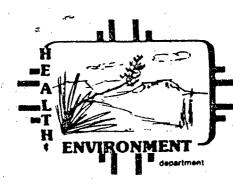
YESTERDAY DUFF, AND I MET WITH MICKY MONR, & ROBER YARBRO FROM BE ABOUT WHATS GOON ON WITH THE TRANSFER OF OWNERSHIP.

BOTTEM LINEIS THAT IF OCD TRANSFERED OWNERSHIP TO BEE WE'LL THRE THAT AS TRANSFERING DP TOO AND THEY HAVE UNTIL DEC'87 TO RENEW! COME UNDER PARTS.

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

Some

DENISE D. FORT DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

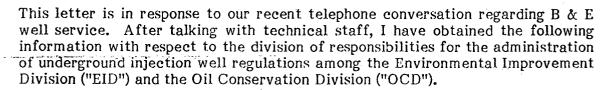
P.O. Box 968, Santa Fe, New Mexico 87504-0968 827-2990

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:



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-lll of WQCC regulations must be complied with.

BUREAU

EQUAL OPPORTUNITY EMPLOYER

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 regulators 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 I referred him to Duff had been half-owner of the Carlsbad station all along. I said that if Duff determined that the Part Westbrook to answer that question. 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 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 by the deadline, 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-

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.

PAISE,

Duff is going to write BEE & Tell

them they need to transfur DP

from Permian & Sibnit Modification

For any Changes, OR?

PAGE PHIL WITHROW CALLED 3/24/86 9T~ 1130

HE AND MICKEY MONE WERE ON THE PHONE, HE WOULDN'T NEED TO KNOW WHAT HE HAD TO DO TO GET INTO COMPLIANCE WITH REGS, HE BOUGHT OUT PERMIAN'S SHAPE OF CARUSBAD BRINE STATION WHEN OUD STICE RAN THE CLASS 3 PROGRAM, HE SAID HE HAUGHT HE HAD PERMIAN'S OUD PERMIT & THAT IT TRANSPERED & HE WOOLDN'T NEED TO MODIFY UNTIL RENEWAZ.

I COULDN'T MAKE MUCH SENGE OUT OF FILES WHILE ON THE PHENTE SO I TOCK HIM YOU WOULD CALL HIM BACK ON THURSDAY

Jon -

223-0762





STATE OF NEW MEXICO

DENISE D. FORT

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 38240

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

Dear Mr. Withrow:

P 612 426 698

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

Sento Sento

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.

Iconferred 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 Vater Quality Control Commission. It is our belief that you have been

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 WOCC 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

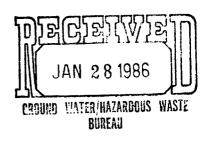
Ground Water Section

PGM:pgm

cc: Garrison McCaslin, EID District IV Manager Duff Westbrook, EID Legal Bureau PA16E -

I think the most appropriate course of action would be to write them and tell them 1) they must promptly comply by the rigo. We respect to this weel; 2.) If they have any other facilities, they must tell us about them within 10 days, I and bring those facilities into compliance within 30? days; and 3) I there are any other facilities which they don't tell an about land we have of them later) or y they fail to come into compliance as respect to any facility, that then light action will ensure because the Assurances don't ocen to have the necessary effect. See what Ernie them to have the necessary effect. See what Ernie them to have the necessary effect.

Enne - Vinnight Vago woldings Rom
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country of Star the wind load
of the Party in anxious of the



Pareye, Sony I held this My evor. I agree is 10 up (unless I'm totally misunderstanding the whole import) on course of action. at this time to the head Bureaul because of time crunch) we don't have much of a choice.
I forwerer, yours on top of this

of I'll back you up of you want
too take immediate and/or other, more
action 7 hanks

Paige, I did discuss with but. Z agree with him. The Zinger is to tell B&E that they must inform is now (nothin 30 days) of all state facilities requiring discharge plans.





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 3 x 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 3 % 5 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 5-101.1. 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.

DENISE D. FÓRT 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

I talked with Ernie Rebuck 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 WOCC 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 exlicitly what was required of brine stations under the WOCC 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) "e had contacted 3&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.

Idon'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/HW3

DENISE D. FORT



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

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 discharges 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 no 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 dishcarger 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 requirments 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 \$5-101.1.2a.

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 dishcarge plan, is one way of dealing with this problem.

DW/rb

Expibit A Carly Court from the 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:

- 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.
- 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:

NAME OF PARTY PERCENTAGE B & E, INC. 70% Permian 30%

Income distribution shall be made monthly by B & E.

DELINQUENT ACCOUNTS: Any accounts which are delinquent for a two

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year period will be charged off as an operating expense.

- 5. PURCHASES OF BRINE WATER BY B & E, INC.: It is contemplated that
 B & E will purchase a substantial portion of the brine produced by the process.
 B & E shall pay the price normally paid in the area for the brine purchased by it.
- 6. WARRANTY OF MINERAL TITLE: The parties herein acknowledge that B & E does not warrant to Permian title to the brine to be sold. The parties agree that in the event it becomes necessary for payment of royalties on the brine to be sold, any back royalty payments will be split between the parties based on their division of the net profits and any expenses incurred in the negotiation or litigation concerning said royalty payments or title will be borne by the parties in the same percentage as the division of net profits.
- 7. TERMINATION: This Agreement shall remain in full force and effect so long as commercial quantities of brine are produced or until terminated as provided for herein. In the event a party wishes to abandon the operation he shall give the other party 15 days' written notice of his intention to abandon and the parties will jointly agree upon the salvage value of the equipment located upon the premises and the party wishing to continue the operation shall pay to the abandoning party a percentage of the salvage value equal to the abandoning party's percentage ownership in the operation as determined in paragraph 3 above. Such abandonment shall constitute the termination of this Agreement.
- 8. <u>AMENDMENT</u>: This Agreement expresses the full Agreement of the parties and shall not be amended, except by written agreement executed with the same formalities of this Agreement and shall be binding upon the heirs, Personal Representatives and assigns of the parties.

B & E, INCORPORATED

28	ATTEST:	
29	By	By
30	Secretary	Phil Withrow, President
31		PERMIAN BRINE SALES AND SERVICE
32	ATTEST:	
	Ву	By By
- 1		A. L. Hickerson, President

Exhibit B. Carlsland love FileDRAFT COPY

FOR DISCUSSION PURPOSES ONE MICORMICK & FORBES

AGREEMENT

THIS 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, B & E is the owner of the following described land in Eddy County, New Mexico:

> Commencing at the NW corner of the SW4 SW4 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 ft.; thence South 59 degrees 30 minutes East a distance of 64.9 ft.; thence South 66 degrees 50 minutes East a distance of 100 ft.; thence South 78 degrees 05 minutes East a distance of 100.0 ft.; thence South 83 degrees 58 minutes East a distance of 104.5 ft.; thence North O degrees 43 minutes West a distance of 427 ft. to the South right of way line of the road connecting U. S. Highway 285 and 180; thence Easterly along the said right of way line to its intersection with a line parallel to and 50 ft. distant to the point of beginning of the tract herein described - the said point being marked with an iron rail set in concrete; thence Easterly along the said right of way line to a point that bears South 74 degrees 45 minutes East a distance of 223.5 ft.; thence South 60 degrees 39 minutes East along the said right of way line a distance of 28.4 ft. to the NW corner of the Mays Lumber Company Tract; thence South 1 degree 56 minutes West along the West boundary of the said tract a distance of 350 ft.; thence at an angle to the left of 86 degrees 02 minutes a distance of 155 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 Westerly 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.

WHEREAS, the parties desire to establish a process to produce brine water on the above described property.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

- Permian agrees to install a brine process on the above described premises, including the drilling of a brine well, construction of storage tanks, pump, and truck loading facilities.
- Permian agrees to install the process in a workmanlike manner, in accordance with the best proved methods and use its best efforts in good

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faith to minimize the cost of construction. 1 2 The actual cost of construction shall be borne by the parties in the following percentages: 3 NAME OF PARTY PERCENTAGE 4 B & E, Inc. 5 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 Permian shall be the operator of the process and shall have exclusive charge, control and supervision of the operation. Permian, as operator, 12 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 Mexico. Permian shall be responsible to obtain and file all bonds and assur-15 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 ATTEST: 19 20 Phil Withrow, President Secretary 21 PERMIAN BRINE SALES AND SERVICE, TAC. 22 ATTEST: 23 By_ 24 A. L. Hickerson, President Corporate Secretary 25 26

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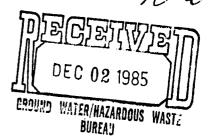
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-2-

Txhibit C

AGREEMENT, ASSIGNMENT AND BILL OF SALE

STATE OF NEW MEXICO 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 supplimental agreement (copies attached) for the joint operation of that certain brine water station located in the SM/4 SM/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:

- The May 1978, Letter and Supplemental Agreement is bereby 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.

v. 1/0:0

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 ____, 1983. day of

Commission expires on . ke 20 1987 .

THE STATE OF TEXAS

COUNTY OF ECTOR

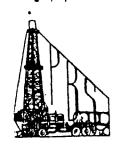
BEFORE ME, the undersigned authority, on this day personally appeared A.L. Hickerson, known to me to be the person whose name is subscribed to the foregoing instrument as President of Permian Brine Sales, Inc., a corporation, and acknowledted to me that he executed the same for the purposes and consideration 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 _____, 1933. une 30

County.

Notary Commission expires on

une 20 1987 .



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0531

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 STLES, INC

BY:

A.L. HICKERSON, PRESIDENT

STATE OF TEXAS

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 day of All A.D., 1983.

NOTARY PUBLIC IN AND FOR ECTOR

COUNTY, TEXAS

Ernie Rebuck . Chref GW/HW Bureay Request made by: Date of Request: 12/0/85 Person Attorney should contact: Jake Morgan Telephone No. 290/ Emergency (explain)

Normal Coul ASAP, please. Priority: 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, WOCC, or OHSRO Legal opinion: With reference to Sec. 5-101. I of the WQCC near, Review enforcement letter for legal abequacy Review submittal to federal or state government agency for legal adequacy Review draft contract or agreement femplegal adequacy Cotain inspection order in Districts Court
Status report dated April 1987 He afached docum Status report Status report dated fip: 30, 100 for effect transfer of a brine time (please specify) the brine well changed ownership some time. however it dis a 1900d operation and we are not parlicularly please fill in as applicable:

notification. Name of case Attorney assigned to case To Be Completed by Chief Attorney This matter has been referred to with the following instructions Internal #. Crief Attorney

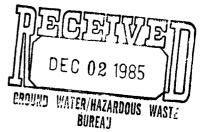
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AGREEMENT, ASSIGNMENT AND BILL OF SALE

STATE OF NEW MEXICO X
COUNTY OF LEA



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 supplimental agreement (copies attached) for the joint operation of that certain brine water station located in the SM/4 SM/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.

y: 1/0;

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 ____, 1983. day of

Any Commission expires on uke 20 1987

THE STATE OF TEXASX

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 acknowledted 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

ry Commission expires on

ne 20 1987.

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FOR DISCUSSION PURPOSES ONE: MCCORMICK & FORBES

AGREEMENT

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WHEREAS, the parties desire to establish a process to produce brine water on the above described property.

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faith to minimize the cost of construction. 1 2 The actual cost of construction shall be borne by the parties in 3. the following percentages: 3 NAME OF PARTY PERCENTAGE 4 B & E, Inc. 80% 5 Permian 20% 6 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 removed without damage to the surface, which B & E shall own in fee simple, 9 10 Permian shall own the balance of the process. 11 Permian shall be the operator of the process and shall have exclusive charge, control and supervision of the operation. Permian, as operator, 12 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 ATTEST: 19 20 Secretary Phil Withrow, President 21 PERMIAN BRINE SALES AND SERVICE, TNC. 22 ATTEST: 23 Ву___ 24 A. L. Hickerson, President Corporate Secretary 25 26

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FOR DISCUSSION PURPOSES ONLY McCORMICK & FORBES

SUPPLEMENTAL AGREEMENT

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NAME OF PARTY PERCENTAGE 29 B & E, INC. 70% Permian 30%

Income distribution shall be made monthly by B & E.

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- AMENDMENT: This Agreement expresses the full Agreement of the parties and shall not be amended, except by written agreement executed with the same formalities of this Agreement and shall be binding upon the heirs, Personal Representatives and assigns of the parties.

- /		b a E, INCORPORATED
28	ATTEST:	
29 30	BySecretary	ByPhil Withrow, President
31	ATTEST:	PERMIAN BRINE SALES AND SERVICE
J	By	ByA. L. Hickerson, President



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

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, 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

day of ______, A.D., 1983.

NOTARY PUBLIC IN AND FOR ECTOR

COUNTY, TEXAS

	Ton	
amples		TITIN TOTAL DEDON'T
	Na "	FIELD TRIP REPORT GROUND WATER SECTION
	K	GROUND WATER SECTION
	Ca	SLD USER CODES County Fam.
	Mg	SLD USER CODES County Ground Water: 59300
	HCO3	
	C03	NO ₃ , HC, & Toxics: 59600 - UIC: 59500
	S04	FACILITY VISITED
	TDS	
111111	X////////	Name of Facility: B&E Carlsbad Brine Station (formerly Permian Brine) Location: on Hwy 285 at junction with Hwy 180.
	NO3+ NO2	Hocacion. On hwy 200 at Junction with hwy 180.
	NH3	Discharge Plan Number: DP- 323
	kjeld N	Type of Operation: brine extraction and sales
111111	11111111	Type of operation string extraorion and sales
	As	ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT
	Ba	EID Inspector(s): Sares, Morgan
	Cd	Date of Inspection or Visit: 11/12/85
	CN	Discharger's Representative Present During EID Visit:
	Cr	Name: Jerry Hanaway
	F	Title or Position: Manager
	Pb	Purpose of Visit:
	Hg	a. Evaluation of Proposed Discharge Plan
	Se	b. Compliance Inspection of Discharge with Approved Plan X
	Ag	c. Other (specify)
	U	Inspection Activities During Field Visit:
	V	 a. Inspection of Facilities or Construction (specify)
	Ra 226	General housekeeping.
	Ra 228	· · · · · · · · · · · · · · · · · · ·
<u>/////</u>	<u> </u>	
	Cu	 b. Sampling of Effluents (give sampling locations)
	Fe	•
	Mn	
	Phenols	Con 14 and Community Weeken (since manage on 1 anations of small s)
111111	Zn	c. Sampling of Ground Water (give names or locations of wells)
	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	
	Al	
	B Co	d. Evaluation of geology, soils, water levels or other physical
	Mo	characteristics of the location (specify)
	Ni	Characteristics of the location (opecity)
111111	1//////////////////////////////////////	
	pH	·
	Conduct.	e. Other (specify)
:#i:_		Observations and Information Obtained during the Visit:
17		B&E has purchased station from Permian Brine - we were never notified of the
88		transfer. They are planning to modify the surface facilities soon. I said they
No.	1	should get the DP officially transferred to them and then send in a modification.

Hanaway referred me to Mickey Monk of B&E for these arrangements. Facility looks generally clean and well-run.

ACTION REQUIRED

Monk contacted me by phone 11/13, I explained requirements.

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

QIL CONSERVATION DIVISION

JOE D. RAMÉY

Director



OIL CONSERVATION DIVISION

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.

(ours very truly,

Director

JDR/jc



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0531

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" 0.D., 40#/ft. casing was set at 349' and 170 sacks of cement was circulated. A string of 7" 0.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 -

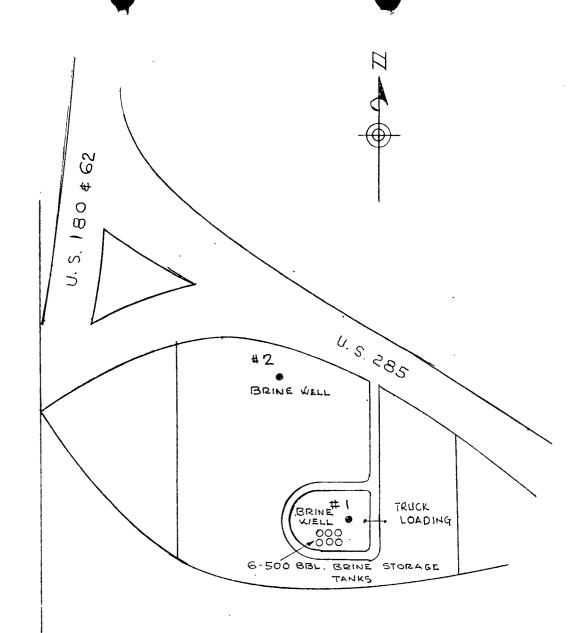
A search of the area surrounding the brine station did not reveal the presence of any fresh water wells.

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.

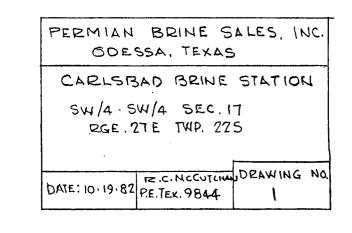
Sample connections are provided at the well heads of the brine wells.

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

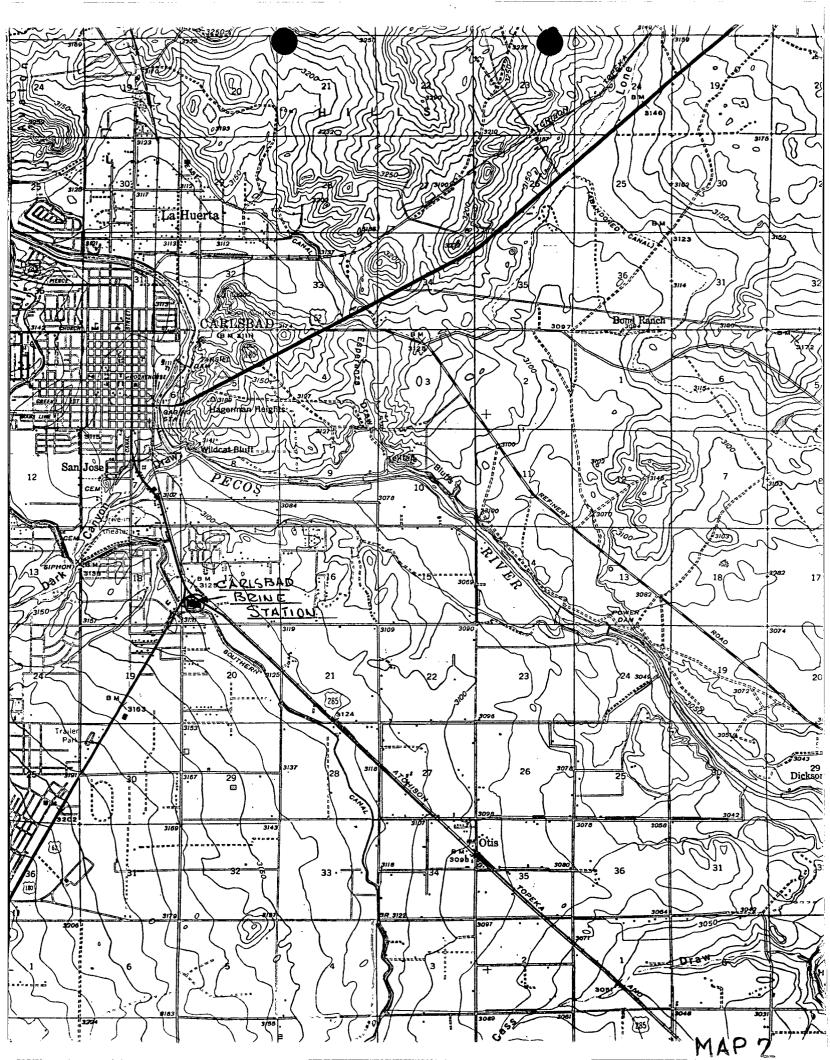
Since there are no water wells in the vicinity of the brine station no facilities for monitoring are available.



SCALE 1" = 200'



SW COR.





P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

JUNE 30, 1978

EXIBIT 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	to	65	
65	to	76	 PED SAND
107	to	163	 BROWN CLAY W/GRAVEL AND SAND
			LIME & ANHYDRITE W/SOME GYPSUM
252	to		
268	to	285	 LIME W/GYPSUM STRINGERS
		305	 GYPSUM W/SOME RED BED
305	to		
		430	 ANHYDRITE W/SOME LIME
			GRAY LINE (HARD) & ANHYDRITE
		567	
			SALT & BLUE SHALE VERY LITTLE
592	to	663	 ANHYDRITE



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0531

November 30, 1979

EXHIBIT NO.2

EUGENIE No.2 - Sec 17-T22S-R27E

PAGE

Carlsbad, New Mexico

		our rounds	
0	to 1	8	TOP SOIL WITH GRAVEL
18	to 1	9	CAVE
19	to 4	6	CALICHE & GRAVEL
46	to 5	0	SAND & GRAVEL - SOME WATER
50	to 5	8	GRAVEL & LIME
		4	
		5	
		8	
		07	
		63	İ
		71	
		.78	
		: 25	
		237	
		252	
		268	
		280	!
		285	
		305	‡ I
		320	
		330	
330	to 3	360	_ANHYDRITE W/LIME & SAND

EXHIBIT NO.2 PAGE 2

360	to	410	-HARD RO	OCK 8	S ANHYI	RITE
410	to	430	-ANHYDRI	ITE V	W/SOME	LIME
430	to	437	-GRAY L	INE	(HARD)	& ANHYDRITE
437	to	445	-ANHYDR]	ITE		
445	to	456	-ANHYDRI	ITE 8	GRAY	LIME
456	to	568	-SALT			
568	to	576	-SALT &	BLUE	E SHALE	STRINGER
576	to	592	-SALT			
592	to	610	-ANHYDRI	ITE		

DISTRIBUTION	Vr.0		• •	o E	CEIVED .	lorm () - Lovisë i	
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U.S.G.S.					C. D.	Section (a)	RECEIVED
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with X o.	OR DELPE	N BAC	HI'VR.	ОТНЕР		Eugen	ARTESIA, OFFICE
Permian I	Brine Sale	s & Servi	ce, Inc.			2	Tiver, or Wildon
Box 1591	, 212 W. 5	th St., O	dessa, Te	xas 79	760		
4. Location of well							
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Salt Top	456' Bott	om 592					No /
None						No	
28.			ING RECORD (Re				
CASING SIZE	17#	285	~	OLE SIZE	125 sx Ci	rculated	None None
2½"	6.5#	583	5"		100 sx Ci	rculated	None
29.	L	INER RECORD			37.	TUBING RECO	PRD
SIZE	TOP NO	воттом ne	SACKS CEMENT	SCREE	N SIZE	None	PACKER SET
31, Perioration issects	(Interval, size and	Laumber)		3:	ACID, SHOT, FRAI	CTURE, CEMENT SOL	IELZE. ETC.
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				··			10 18-800 M
33.		and the second of the second o	PPO	DUCTION			_ الروسين
Date First Production	Frodu	iction Method (Flor			nd type pumpj	Well Status	(Prod. or Shut-in)
11-22-79		Water Pum					Water
Date of Text	Hours Tested	Choke Size	Frod'n, For Test Ferro i	Cil = BLL	$\frac{G_{10} - MCI}{I}$	Water = 1-1 i.	Gaz = 11 matro
Flow Tubing Press.	Casing Pressur	e Calculated 14 Figur Parte	- 1 - 101.	Ga:	TIE		Friends = A: (Corr.)
34. I inposition of class	(Sold, used for fue	d, vented, etc.)	-!			97 7462	
35. List of Attachness					OIL CONSE	EVATION BU	
10. Thereby control	a five officionarion of	houn on both side	s of this form is t	rae und compl	ere to the lost of 6%	WATION DIVISION	
SIGNED	. Occa	erson		Preside			11-30-79
	-Hickerson						



JAN 17 1980

O. C. D. ARTESIA, OFFICE





P. O. BOX 1591

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0531

November 30, 1979

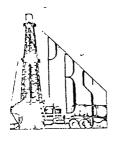
EUGENIE No.2 - Sec 17-T22S-R27E

Carlsbad, New Mexico

0 to 18		TOP SOIL WITH GRAVEL
18 to 19		
19 to 46		_CALICHE & GRAVEL
19 60 40		SAND & GRAVEL - SOME WATER
46 to 50	·	GRAVEL & LIME
50 to 58		T.TMF
58 to 64		DED DED C
64 to 65		_ KED 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
171 to 1.3		RED_BEDS
178 to 237		ANHYDRITE & RED BEDS
225 to 23?		TIME CANUVIDITE W/ COME CV
237 to 252		LIME & ANHYDRITE W/ SOME GY
252 to 2:3		
268 to 28)		_LIME W/GYP. STRINGERS
280 to 285	OIL CONSERVATION DIVISIO	_ANHYDRITE
285 to 3:5		_GYP. W/SOME RED BEDS
305 to 323	· · · · · · · · · · · · · · · · · · ·	_GYP. & ANHYDRITE
220 to 3:		RED_BEDS
320 EO 3 -		_ANHYDRITE W/LIME & SAND
330 to 35.		

ĸ	,	L	

		410				-
410	to	430	-ANHYD	RITE	W/SOME	LIME
430	to	437	-GRAY	LINE	(HARD)	& ANHYDRITE
437	to	445	-ANHYD	RITE		
445	to	456	-ANHYD	RITE	& GRAY	LIME
456	to	568	-SALT			
568	to	576	-SALT	& BLU	JE SHALI	E STRINGER
576	to	592	-SALT	:	,	:
592	to	610	-ANHYD	RITE		



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

J. 1 1 0 1580

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

O. C. D. ARTESIA, OFFICE

ODESSA, TEXAS

79760

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 inadvertantly were put into our file without typing, thus casing 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

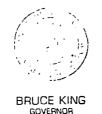
cc Phil Withrow

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		O. C. D.	į		
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I. OIL GAS WELL WELL	other- Brine Wate	er Well	7. Unit	Agreement Name	
Name of Crerator			8. Form	or Lease Name	
Permian Brine Sal	les & Service, Inc.		Eu	genie	- 1
. Address of C; erator			9. Well		
Box 1591, 212 W.	5th St., Odessa, Tex	as 79760	2		
4. Location of Well			10. Fie	ld and Pool, or Wildcat	
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CONDITIONS OF APPROVAL, IF ANY

H OF COPIES MECEIVED	L			Form C -103	
DISTRIBUTION			RECEIVED	Supersedes Old	
SANTA FE		NEW MEXICO OIL CONSER	VATION COMMISSION	C-102 and C-103 Effective 1-1-65	
FILE	1/4	•			
U.S.G.S.		7	JAN 1 0 1980	5a. Indicate Type of Lease	
LAND OFFICE			<u> </u>	State Foo [X)
OPERATOR	171		O. C. D.	5. State Oil 6 Gas Lease No.	
• • •	1.4.4.	_	ARTESIA DEFICE		
	SUN	RY NOTICES AND REPORTS ON WE			777
(DO NOT USE THIS FO	HAPELI	RY NOTICES AND REPORTS ON WE 1000 SALS TO DRILL OR TO DEEPEN OF PLUG BACK TION FOR PERMIT - 12 FORM C-1011 FOR SUCH PA	TO A DIFFERENT RESERVOIR.		VII
				7. Unit Agreement Name	777
OIL GAS	. 🔲	other. Brine Water We.	11		
Canle of C; erator				8. Farm or Lease Name	-
Permian Brine	Sal	s & Service, Inc.		Eugenie	1
. Address of Cherator				9. Well No.	
Box 1591, 212	W.	th St., Odessa, Texas	79760	2	
4. Location of Well				10. Field and Pool, or Wildcat	
M		288 FEET FROM THE South	497		
UNIT LETTER	—·-	PEET PROM THE	LINE AND FEET F		777
West		10N 17 TOWNSHIP 22S	27E		III
· * L		TOWNSHIP	NANGE NA		III
	1111	15. Elevation (Show whether DF,	RT, GR, etc.)	12. County	111
	////	GL 3126		Eddy	III
.1.	Chec	Appropriate Box To Indicate Nati	re of Notice Report or		ست
NOTIO		NTENTION TO:	•	ENT REPORT OF:	
			0000000		
PERFORM REMEDIAL WORK	7	PLUG AND ABANDON RI	MEDIAL WORK	ALTERING CASING	X
TEMPORARILY ABANDON	ī	ء اب	OMMENCE DRILLING OPHS.	PLUG AND ABANDONMENT	Ħ
PULL OR ALTER CASING	1	· —	SING TEST AND CEMENT JOB		لـــا
	_		OTHER		
**************************************					\Box
17. Describe Proposed or Co work) SEE RULE 1103.	mpleted	Operations (Clearly state all pertinent details,	and give pertinent dates, inclu	ding estimated date of starting any prop	osed
work) see Rule 1103.					
It:	is p	oposed to set the 5½" o	asing and cemen	t @ 285'	
ins	tead	of 350' as originally a	approved. All f	resh water	
has	bee	penetrated and the red	beds are sloug	hing on	
the	cab	e tools.	5		
				·	
α	/				
. I hereby certify that the	interpoly	n above is true and complete to the best of m	knowledge and belief.		
	4	1/01/01			
With.	DA	CALL BOW		DATE	
A.L. Hicker	cson	Pres	ident		
150	0.	1	· · · · · · · · · · · · · · · · · · ·	7	_
APPROVED BY N.Cl.	4	esset will SU	PERVISOR, DISTRICT L	1 <u>IAN 18 198</u> 0	<u>J</u>
D				-01	

ONDITIONS OF APPROVAL, IF ANY:



LARRY KEHOE

SECRETARY



OIL CONSERVATION DIVISION ARTESIA DISTRICT OFFICE

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.

NO. OF COPIES RECEIV	FD		•	•				C-105
DISTRIBUTION					RECE!	VED		ised now
SANTA FE						VED N COMMISSION	1	
FILE ,	WE	ELL COMPL	ETION OF			N REPORT A	ND LUG L	Off A G is Lease No.
LAND OFFICE					JAN 10	1980		
OPERATOR						_	1777	177717777777777777777777777777777777777
					0. C.			
IG. TYPE OF WELL					ARTESIA, C	OFFICE	That	g moon out [1, 1, 1]
	OIL WELL	GAS WEL		DRY	01 HER -	Brine Wat	er Well	
b. TYPE OF COMPLE							r, r'err	or Leme Name
MILL X ON	ER DELPEN	P_UG B4C+	hi:	VR.	OTHER			enie
2, Name of Creater							A. West	.t.
Permian B	rine Sales	& Serv	ice, In	ıc.			2	1 dr. 1 i c. 1, cl di.d. dt
•	212 tr EL	L CL (М	70	7.00	1	TOTAL CONTRACTOR
4. Location of Well	, 212 W. 5t	n St.,	oessa,	тех	as /9	760		MALLANIEN.
UNIT LETTERM	1004750 12	88	E B 014 7 HE C	South	1 1115 4 1 7	497		
			- H UM 1 PE		IIIII.	7777711	11111	annithititi.
THE West LINE OF	sec. 17 Two	P. 225 R	se. 27E	NMPM				
15. Date Studded	10. Date T.D. Her	sched 17, Flate	· Jong Lilke	adv to Pi	od.) 12.	evutium (DF, l	TKB, RT, GR, etc.	19. Elev. Cantangheda
Oct.22,1979	11-19-7	9 11-	-22-79		(GL 3126		_
20. Total Lepth	21. Frlug	Back f.U.	1 2 1:	t Multiple	Compl., Ho	w .a. Interva Dalled	in not my Toeln	Carle Loois
618'	58						``	X
24. Producing Interval-	s), of this completio	a Tel, betto	ni, Home					25. Was Pares trouble Curve
Salt Top 26. Type Electric and C	456' Botto	m 592						No No
	omer Jona nun	•					1.	7, Work Well - Tired
None			CINC DECO	DD (D		s set in well)		No
CASING SIZE	WEIGHT LB./F		H SET		E SIZE		TING RECORD	AMOUNT PULLES
5½"	17#	285		8"	. 3122		irculated	None
						200 5% 0	<u> </u>	None
2½"	6.5#	583	3'	5"		100 sx C	irculated	None
29.	LIN	ER RECORD				30.	TUBING R	ECORD
SIZE	тор	воттом	SACKS CEMENT		SCREEN	SIZE	DEPTH SET	PACKER SET
	Nan	<u>e </u>	<u> </u>				None	
			<u> </u>					
31, Perforation here to	(Interval, size and z	umber)			3.:.	ACID, SHOT, FE	RACTURE, CEMENT	SQUEEZE, ETC.
					DEPTH	INTERVAL	AMOUNT AND	KIND MATERIAL USED
	None					No	ne	
	None					No	ne	
	None					No	ne	
33.	None			PRODL	IC TION	No	ne	
33. Date I list Production		ion Method iFL	ne org, gas li					atas (Prod. or Shut-in)
	Product	ion Method <i>(Flo</i> 'ater Pun					We,1 : 1	mas (Prod. or Shut-in) ne Water
Date I first Production	Product		np Frodfill i	ft, pampi			We,1:1	
Date First Production 11-22-79 Date of Text	Product W	ater Pun	r rod'i i lent i or	ft, pampi	ng = Size on M = 1814.	d type purspj	Wester Bri	ne Water Sur=Intimum
Date First Production 11-22-79	Product W	ater Pun	r rod'i i lent lor	ft, pampi	ug = Size an	d type purspj	Wester Bri	ne Water
Date I first in Startion 11-22-79 Date of Text Flow Turning I ress.	Freduct W Hours Tested Cashing Fressure	ater Pun Theke The	r rod'i i lent i or	ft, pampi	ng = Size on M = 1814.	d type purspj	Wester Bri	ne Water Gic=Tiffication Cif Gravity = Aliffcon.
Date First Production 11-22-79 Date of Text	Freduct W Hours Tested Cashing Fressure	ater Pun Theke The	r rod'i i lent i or	ft, pampi	ng = Size on M = 1814.	d type purspj	Wester Bri	Gue Tulivano
Date First Production 11-22-79 Date of Text Flow Turning Fress. 34. Fing with a field.	Freduct W Hours Tested Cashing Fressure	ater Pun Theke The	r rod'i i lent i or	ft, pampi	ng = Size on M = 1814.	d type purspj	Wester Bri	Distriction of Gravity = Alignoria,
Date First Production 11-22-79 Date of Text Flow Turning Fress. 34. Fing with a field.	Freduct W Hours Tested Cashing Fressure	ater Pun Theke The	r rod'i i lent i or	ft, pampi	ng = Size on M = 1814.	d type purspj	Wester Bri	Distriction of Gravity = Alignoria,
Date First Production 11-22-79 Date of Text Flow Turning Fress. 34. Fing with a field.	Product W Hours (este) Cann, Heasure (vold, used for fuel,	Tater Pun The Chee Cine The Ch	np reading least lor 1 = in	fr. pumpi	$\frac{1}{2} = Size \ an$ $\frac{1}{2} = ist 1.$ $\frac{1}{2} \frac{1}{2} = \frac{1}{2}$	d (vpc par.p)	Wester Bri	ne Water Garanti British Cal Scavity = All (Con.)
Date First Production 11-22-79 Date of Text Flow Tubing Fress. 34. Unit of Arra Great	Product W Hours (ested Canny) ressure (Nold, used for fuel,	Take Time Take Time Take Time to the second on the both side	np reading least lor 1 = in	fr. pumpi	$\frac{1}{2} = Size \ an$ $\frac{1}{2} = ist 1.$ $\frac{1}{2} \frac{1}{2} = \frac{1}{2}$	d (vpc par.p)	Wester Bri Water - Print Control of the Material Control of the Co	ne Water Garanti tenno Cal Scavny = All (Con.)
Date First Production 11-22-79 Date of Text Flow Turning Fress. 34. Frequential Fields 35. East of Afric Green	Canny Freesure (Nold, used for fuel,	Take Time Take Time Take Time to the second on the both side	ap restinct restin	fr. pampi	$\frac{1}{2} = Size \ an$ $\frac{1}{2} = ist 1.$ $\frac{1}{2} \frac{1}{2} = \frac{1}{2}$	d type pursp) (111	wester in the second to the se	ne Water Garanti tenno Cal Scavny = All (Con.)

NEW MEXICO OIL CONSERVATION COMMISSION DRAWER DD ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator Bris	re Salery	Samuel !	Leeso Eng	enie	_	Well #	
Location of Well		Section /7		hip	Range 27	County	Ly
Drilling Contractor			Type	of E	quipment	slant a	report 10-16-
leitness		APPROVEI	D CASING PR	<u>OGRAM</u>			
Size of Hole	Size of	Casing	Weight Per Foot	New	or Used	Depth	Sacks Cemen
8 "	51/2	r	17			350	circ,
43/4"	278	'/	6.4			580	"
Casing Data: Surface	•		,				·
Inspected by		— 	d) (Rejecte				
Cementing Pro	gram		,			required	
Type of Shoe TD of hole 22							
New-used csg.	<u> 289</u>	with 125	sacks n dditives 2	eal c To c C	ement are		е
Plug down @Cement circul	17:05 (M) (PM)	Date	<u>6-7</u> of Sa	19 cks 2.	5 sof	
Cemented by			With	assed	by La	sset	•

Permian Brine Sales Eugenie #2 M-17-22-27 111-201-79

Ran 278 to 540 and Comented With 100 SX Class C 2% CC Circulated 20 SX. Centerlizer C 10 ft - 280 ft - 320 ft 395 ft + 445 ft Basket located @ 570 ft + 580 ft TD C 616 Plug down C 130 Pm BJ Cemented 27/8 Tubing Used But Trated to 6000 PsI

DISTRIBUTION	NEW NEW	MEXICO OIL CONSER	RA FOIL COMMISSION	D .	50 - 0 Ibrm C • 101 Revised 1-1-1)/5-2303
U.S.G.S. 2			SEP 5 1979	• [5A. Indicate	Type of Lease
LAND OFFICE DPERATOR			O. C. C.		5, State Oil	6 Gin Leaso No.
APPLICATIO	N FOR PERMIT TO	DRILL, DEEPEN, C				
16. Type of Werk	TONT ENWITTE	DRIEL, DELL'EN, C	N I LOO LACK		7. Unit Agri	Contract Name
b. Type of Well		DEEPEN	PLUG B	ACK	8. Farm or L	uane llame
OIL GAS WILL	OTHER Brine	e Water Well '	ZONE MULT	TIPLE 204E	Eugeni	<u> </u>
Permian B	rine Sales &	Service, Inc			9. Well 135.	
3. Address of Common					10. Field an	d Foct, or Wild-at
		St., Odessa, 1288 ,		l LINE	min	11111111111111111111111111111111111111
11111111111111111111111111111111111111	West (N		225 - 27	E men	1. County	
					Eddy	
			Frogosea Depth 19	9A. Formation		20. natery or C.T.
al. inevations (show whether DF,	KT, etc.) 21A. Kind	6 Status Plug. Bond 21 S5,000 N		Salt	22. Approx	C.T.
3126 G.L.		_	ot selected y	yet	Oct	. 1, 1979
	Ξ: ω C C: P	ROPOSED CASING AND	CEMENT PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT		SACKS OF		EST. TOP
8" 4 3/4"	5 1/2" 2 7/8"	17# 6.4#	350' 580'	75 S 50 S		Circulated Circulated
		<u> </u>	300			CIICUIUCCU
to 350', handhole inside imately 600' will fracture across to the circulated devell No. 1 at	g 5 1/2" cast the 5 1/2" ca ,hang 2 7/8" e the rock sa e Eugenie #1 own the 2 7/8 nd out the t	an 8" cable ing, and circ sing to the tubing to 58 alt section be well, 327' as in well No.	ulate cement bottom of the 0' and circul etween 580-60 way. Fresh way 2, through	Then rock late ce 00 with ater with the sal	drill salt a ment. fresh	a 4 3/4" t approx- We then water n be
City of Can	listed natif	ied			FOR 90	ROVAL VALID D DAYS UNLESS G COMMENCED,
				EX	KPIRES	-15-80
IN A GOVE SPACE DESCRIBE PR TIVE TOSE, GIVE BLOWOUT PREVENTE		PROPOSAL IS TO DEEPEN OR	PLUG BACK, GIVE DATA ON	PRESENT PRO	DUCTIVE ZONE	AND PROPOSED NEW PROD
I hereby certify that the information			•		^	1
Signed Colle	1 2012	Title Pres	ident)ote 9-	<u>-79</u>
APPHOVED BY D. C. STONES	Gresset	TITLE SUPERV	SOR, DISTRICT I		OATE	CT 1 5 1979
COMBINIONS OF APPROVAL, IF	AIT!			Notify N	MOCC	in sufficient

Cement must be circulated to surface behind 5/2"+27/8" casing

Notify N.M.O.C.C. in sufficient time to witness comenting the 5/2/42 / Casing

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

स्रोतकाद । व हे व्हेश्यत

WEL CATION AND ACREAGE DEDICATION AT

- ,		•		1	1se			No.
	Permia	in Brine Sale Tsessio	Servi		Salt Water	t.'y		
	M	17	2	2Suth	27East	Ed	dy	
,	1288	teet that the	South	fine and	497 :-		West	
ne	1200		y Formation	Free		II. 4 - 11.F		Tel set & lesje
	3126.4		Salt					A
1	Outline th	ne acreage de	dicated to the	subject well	by colored pencil	or hachure	marks on t	he plat below.
2	interest s	nd royalty)						thereof (both as to working
3	If more th	an one lease	of different ov	nership is dedi force-pooling.	cated to the well.	, have the	THE BLE	flavorno been consoli-
							SEP 5	1979
	[] Yes	[] No	H answer is	yes." type of co	nsolidation		7.5	_
	If annwer this form	is ''no,'' list if necessary).	the owners an	d tract descript	ions which have a	ctually be	क्षाह्यारू वात	Ged (I se reverse side of
	No allowa forced-poo sion	ble will be assiding, or otherw	signed to the v use) or until a	vell until all int non-standard un	erests have been lit, eliminating su	Consolida ch interes	ted (by con ts, has been	nmunitization, unitization, napproved by the Commus-
					1			CERTIFICATION
		•			! 			
İ		'			1		I hereby	certify that the information con
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}		ŀ			ł	j	1771	R topol ledge and belief
		1			!		a.d.	Algeria
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			'		NGINEER		I heraby	ceitify that the well-foration
1					STATE		shown on	this plat was placed from field
					0 0	```` ```	1	actual surveys rade by me or
					67.			and correct to the best of mu
	. 		' 	Z	676			e and belief
49	770 2				MEXICO/S	ÿ I	_	ug. 15,1979
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	88		, []	•				Et Pend Court en
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	; ;/ ;	_					Sit	ille but
GETATURA	. Esseri	g 623.7%					Contilicate	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. Yarbro 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 is 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

ce: 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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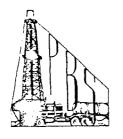
Please let me know if you need additional information.

Yours very truly,

Claude F. Tabor City Administrator

CFT:vg

cc: B & E, Inc.



P. O. BOX 1591

PERMIAN BRINE SALES, INC.

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

79760

PHONE 332-0531

September 4, 1979

RECEIVED

SEP 5 1979

D. C. C. ARTESIA, DEFICE

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

1 641 W 9955 .497W

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.

RECEIVED

SEP 1 7 1979

POLLUTION CONTROL

Very truly yours,

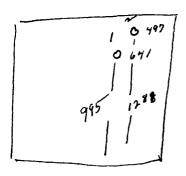
PERMIAN BRINE SALES, INC.

A.L. Hickerson

President

ALH/sp Attachment

cc Phil Withrow



NO OF COPIES RECEIVED	5			REC	EIV	Form C-10 Increase	
SANTA FE		NEW	AEXICO OIL CON	SERVATION	LCOMMISSION	'	Type of Lease
FILE	١١١١				VIREP1978 AND	LOG State	ree X
U.S.G.S.	2					5, Diate On 8	. than Leane No.
LAND OFFICE				Ο.	C.C.	mm	
OPERATOR					IA, DFFICE		
Bus. of Mines			<u>,,, ,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			7. Unit Agree	ment Name
	OIL	GAS			Doning Bloks		
b. TYPE OF COMPLE	TION	L WELL	L DRYL	OTHER	Brine wate	r Well	ase Mann
WELL X OLL		N PLUG BACK	DIFF. RESVR.	OTHER		Euge	enie
2. Name of Cymrater						9. Well No.	
	Brine Sale	es & Servi	ce, Inc.	<u>/</u>		1	
3. Address of the permits		_		_		1	Pool, or Wildout
P.O. Box	1591, 21	2 West 5th	1 St., Ode	ssa, Te	xas 79760	William Will	ldcat
4. Location of her.							
M		005	Court	h.	641		
UNIT LETTERM	LOCATED	993 FEET F	ROM THESOUT	LINE AND		FROM Lundy	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
THE West LINE OF	sec. 17 -	we. 225 ec	E. 27E NMPN				
15. Date Spudded			Compl. (Ready to		levations (DF, RKI	s, RT, GR, etc.) 19, E	iev. Cashinghead
6-14-78	6-28-	78 6	5-30-78		3126 G.L.		3129
20. Total Depth	21. Flu	g Back T.D.		le Compl., Hov		, Rotary Tools	Cable Tools
663		587	iuiiy				All
24. Producing Interval(s), of this comple	tion - Tor, Potton	i, Mame			25	, Was Directional Survey
	_						.,,
456 Top of		592 Botto	om of Salt				No
26. Type Electric and C		_				I '	s Well CoreJ
Cable Tool	Driller	s Log				1	<u>//o</u>
28.			ING RECORD (Rep	oort all strings	set in well1		T
CASING SIZE	WEIGHT LB.	71. DEPTH		LE SIZE		NG RECORD	MOUNT PULLED
9 5/8" 7"	40					circulated	
	23	456	9	li .	135 SX	circulated	None
 29.		INER RECORD			30.	TUBING RECO	L
SIZE	TOP	воттом	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
31.2	10.	201,011	JACKS CEWENT	JOHLER	2 7/8	587 '	No
31. Perforation Record ((Interval, size aff	Thumber [المراجعة المراجعة	30.	ACID, SHOT, FRAC	TURE, CEMENT SQUE	EEZE, ETC.
		إلح ارتا إخالنا	11/1/15/11		INTERVAL	AMOUNT AND KIND	
		4	2000				
	None	# SEP 21	1983		None		
	None		رالر				
	C	L CONCERVA	MOISIVID MOIT				
33.		SANT	A 17 2		DNA		
Date First Freduction	Produ	ction Method (Flor	ving, gas lift, pump	ping = Size and	ftype pump)	Well Status	(Prod. or Shut-in)
IN A CONTRACT	1,12	1300 30	11	0/1 ///	/ · · · · · · · · · · · · · · · · · · ·	10. as	On Dellar Day
Date of Test	Hours Tested	Choke Size	Fred'n. For Test I eriod	Oil - Frl.	Gus = MCF	Water = 131 1.	Sast Cil Carlo By
Flow Tubing Day	Contra Danie	a Calaulus de	- (2)1 - (-2)1	<u></u>		131.1	10 2 /2
Flow Tubing Press.	Casing Pressur	e Calculated 24 Hour Bate	- (11 - ME).	G48 = M	Vioter	- Bli. Cil G	JAN 10 18
34. Disposition of Gas (Sold, used for for	cl. vented etc.)	·			Test Witnessed By	<u>v v 1</u>
34. Lasposition of Gas (oom, asea joi ju	., remeu, eac.)				rett minessed by	7-21
35. List of Attachments							
Drillers L							
56. I hereby certify that		houn or both side	s of this form is to	ue and complet	e to the best of my	knowledge and belief.	
	2.1	./		:/	• / ,	•	7/11/20
/	ゲービー	1. K. 1 1.K.	1 1	26-16	decit	/	114/78
SIGNED	1-16	(1-1 100	TITLE			DATE/	1

INSTRUCTIONS

This form is to be filed with the approximation of the Commission not later the approximation of any newly-drilled or despend well. It shall be accompanied by one copy of all electrical and ratio-activity beganned, the well and a summary of all special tests and ducted, including shall be measured depths. In the case of inectionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 36 through 34 shall be reported for each zone. The farm is to be filed in quintuplicate except on state land, where six copies are required. See half 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

	Southeastern New Mexico Northwestern New Mexico						ew Mexico		
T. 7 RiverT. QueenT. Graybu	456 592	T. T. T. T. T. T. T. T. T.	Canyon Strawn Atoka Miss Devonian Silurian Montoya		C. Kirtla C. Pictur Cliff I Menef Point Mance	nd-Fruitl red Cliffs louse re Lookout s	and	T. T. T. T. T. T. T. T.	Penn. "B" Penn. "C" Penn. "D" Leadville Madison Elbert McCracken
T. Gloriet T. Paddoc T. Blineb: T. Tubb T. Drinkar T. Abo T. Wolfcar T. Penn.	a	T. T. T. T. T. T. T. T. T. T. T. T.	McKee	T	T. Gallup Pase Greenhorn T. Dukota T. Morrison T. Todilto T. Entrada T. Wingate T. Chinle T. Permian T. Penn. "A" GAS SANDS OR ZONES			T. T. T. T. T. T. T. T. T. T. T.	Granite
No. 2, from.	· · · · · · · · · · · · · · · · · · ·	mar	to		lo. 5, fro	m	to		
No. 1, from		•••••••••••	nd elevation to which was	•••••	hole.	••••••	feet,		
·			FORMATION RECORD (•••••			fcet.		
From	To I	kness Teet	Formation		From	То	Thickness in Feet		Formation

From	То	Thickness in Feet	Formation	From	То	Thickness in Feet	Formation
						1 (1111) 1110 A. 1. 1. 1. 2. 3	SEP 21 1983
							- CONSERVATION DIVISION SANTA FE
	<u> </u>			<u> </u>	L	<u> </u>	

P.B.S.& S. 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	
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	
305 to 320	
320 to 328	RED BED
328 to 360	ANHYDRITE W/LIME & SAND
360 to 410	RED TOCH & ANHYDRITE
410 to 430	ANHYDRITE W/SOME LIME
	GRAY LINE (HARD) & ANHYDRITE
437 to 445	ANHYDRITE
445 to 456	
456 to 555	SALT
555 to 567	SALT & DOME LIME >
567 to 576	SALT & BLUE SHALE VERY LITTLE
576 to 592	SALT
592 to 663	ANHYDRITL

BYRON JACKSON INC.

CEI	MENTING AFFIDAVIT
the facts herein below set our	of lawful age and having full knowledge of t do state: I am employed by Byron Jackson Inc.
On 6-20, 19 78	, BYRON JACKSON INC. performed the cementing
operation herein described for	r REMINN BRINE SALES & SPRICE CU on their
was # /	THE MITHE SHES ASSISTE CO ON CHEST
well No. 7/ / on the	e <u>FUSENIE CARIBAD STATION</u> lease County, State of <u>NIPWI MEN</u> .
located in Eddy	County, State of Alein MEA.
provided by the Customer Compa	pe of string was <u>Surface</u> . Information any states that the casing was $\frac{3}{3}$ in. O.D. d that the casing depth set was $\frac{347}{5}$ feet. terials were used:
170 SACKS CLASS	
•	
	•
An estimated 20 sacks	of excess cement was circulated out of the well.
hole size wasinche	vided by the Customer Company states that the es, and total depth was feet. For als were used to place plugs as indicated:
Plug from ft. to	ft. with sacks of
· · · · · · · · · · · · · · · · · · ·	•
SIGNED:	BYRON JACKSON INC.
SIGNED:	1 ,
BY	Warin All
	

DATE: 6.20.78

DISTRIBUTION ANTA FE	Form C-103 Supersedes Old C-103 and C-103 Effective 1-1-65		
U.S.G.S. LAND OFFICE JPERATOR /		JUL 2 0 1978 D. C. C. ARTESIA, DEFICE	State In 6 Jas Lease No.
SUNDRY	Y NOTICES AND REPORTS ON	WELLS ACT TO A DIFFERENT RESERVOIR.	
OIL CAS MELL MELL MELL	OTHER Brine Water	Well	7. ' nit Agreement Nome F. Flam or Lease Ivame
Permian Brine Sale	es & Service, Inc. V		Eugenie
P.O. Box 1591, 212	West 5th St.,Odess	a, Texas 79760	9. Well 182.
. Location of Aell	995 FEET FROM THE SOUTH	•	10. Field and Fool, or Wildcat Wildcat
•	n 17 TOWNSHIP 22 SO		
	15. Elevation (Show whether		
	3126 GL		Eddy Allilli
Check A NOTICE OF IN	appropriate Box To Indicate N TENTION TO:		ther Data T REPORT OF:
FERFORM REMEDIAL WORK TEMPORARILY ABANDON OR ALTER CASING OTHER	CHANGE PLANS	REMEDIAL WORK COMMENCE DRILLING OPNS. CASING-TEST-AND-TENSHT JQB X OTHER	ALTERING CASING Y
Used 9 5/8 - 40# - Used 7" - 23# - 45 (-27-78 Dre	1349.4' Depth Sold Cuit Ligator Co	170 sacks cement concerned on c	
.1 hereby certate that the intermation of	(1101- L	resilont	9-19-18
W. a. An		PERVISOR, DISTRICT II	JUL 2 6 1978

CONDITIONS OF APPROVAL, IF ANY:

		Fig. 1	-		The City of	vice o	n for send f	a con li di 📆		
	U-MUGHES Subsidiary of Hu	·	PANY		IN				20TH PROX	
L P	. O. BOX 2250 LONG	BEACH CALIFO	BNIA 90801			LE AT LONG			ON REQUES	STONLY
<u> </u>					D/	ATE 6-	•		30-19	135
JOB 6/20		Carlsba	ad.	MET [3	WELL		RDER NO.	S		
CUSTOMER PO	reconstruction of the State St	ales & Serv	rice, Inc.	WELL NO	. #1		LE	ASE EUE	enie Car	lsced
ADDRESS 21	2 West Fifth	St.		COUNTY	Eddy		\$1/	TE NM	1. 1. 1.	
Od.	essa -	i state Texa	is"	FIELD		<u></u>				
AUTHORIZED BY			727/20	WELL OW	NER	Same				
18560	7 m \$5.	(OFFICE USE	ONLY)	<i>*</i> .			Cr Call	D 6-20	- u -	30
					,		IVED AT		(E)/	200
				*			RT OPERA		مرسيع	100
P	ERMIAN BRIN	E SALES &	SERVICE	NC	•		SH OPERA			- <u>00</u>
· 2'	12 WEST FIF	TH STREET					EASED 4	20	(1)	00
01	DESSA TEXAS	79760				MIL	ES FROM S	TATION T	O WELL	7
						BUL	K TICKET	NO. B. 7	7-217	972
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		roduction 🔲	Remedial 📗	Socks	Brand	Туре	% Gel		Admizes	
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Bottom Plugs:		Abe:	26 19/8	Volume o		132	. 83./CU. 1	Τ.	LPS.	. Cu. ₹*
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STAGE NO.	PREV. GA			PTH_3/			RESSUR	15	7	P.S.I.
The undersig	PREV. GA CONTRA ined, as authorized age	CT CONDITION int of the custome	S: (This agreement	must be si	gned before the services.	work is co	mmenced) roducts and	supplies p	ravided for m	this erro
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SERVICE OPERATIONS

TERMS: NET 20TH PROX.

EDSDES .	О. вох 2250	LONG BEACH, CA	ALIFORNIA 90801			LE AT LONG B	EACH, CAL	IFORNIA.	5 ON REQUES	TONLY
DATE OF 6/28	/78	DISTRICT Car	lsbad	WELL E		CI	STOMER'S DER NO.			
CUSTOMER	Permian	Brine Sales	& Service Tr.C.	WELL NO	#1		LEA	s Euge	nie Cark	sbad S
ADDRESS	212 West	Fifth 5t.		COUNTY PARISH	Eddy		STA	TE NM		
CITY	Odessa	STATE	Texas	FIELD						
AUTHORIZED BY			77760	WELL OW	NER	Same				
48560		(OFFICE	EUSE ONLY)			TRUC	K CALLEI	0 6.2	8億/	1. 45
						ARRIV	VED AT JO	В	A!! 2	00
			ES & SERVICE	INC		STAR	TOPERAT	TION	£ 4	.28
		T FIFTH ST				FINIS	HOPERAT	TION		.00
O	DESSA	TEXAS 7976	00			RELE	ASED	6.2	8 PM 6	15
						 	FROM ST			1
•		· 					TICKET	NO. 13,	77	730
Type Job: Prod	i Casing		Depth: 453 Ft.	CEMENT	DATA:	Bulk 🔀 :	Socks]	060	377
	ermediate	Production		C. Service	Brand	Type	% Gel		Admires	
	} n		Depth: 663 VFt.	065		<u> </u>		3%	A7	
Size & Wt. Casir			Depth: 453 F1.	135	\$X		1 .			
Size & Wt. D. Pi	pe or Tubir		Depth: Ft.)	(()	146	. (64)	<u> </u>	1.05	
Top Plugs:]	<u> </u>	Type: Rub	ber	Weight of			SS./GAL.	т	LBS.	/GAL. /CU. FT.
Bottom Plugs:	33/3	Type:	1/2= 10 1	Volume o		1.32 .	1 100 .1		, , , , , , , , , , , , , , , , , , , 	
Pump Tr. No.	1361	Fluid Pump	peds 0/8 BAL	<u> </u>	_Sacks Ce	ment Treate	d With	<u>`</u>	of	
STAGE NO.		V. GALS.	US 1974MAX. DE		3 FT.	MAX. PR		20	10	P.S.I.
shall be subject to the to this order without 3-205/	ned, as author ne terms and c	ized agent of the conditions appearing	ITTONS: (This agreement sustomer, agrees and acknowing on the front and reverse septembers, and the sustained of BJ-HUGH	owledges that ides of the ci	t the services	materials, pro	ducts and so additional	terms	Conditions of	
PRICE REF. NO.						J AGE		11.79	CONTRACTO	-
0 201.02		ent Pump Uni						7. 17		
261.00		on Pump Uni								20
298.00		le Shoe Regu						$=\mp$		00
0298.00		at Shoe Regu	lar						169	1
<u>) 298.00</u>	1	ralizer				- 			27	50
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<u> </u>	ļ					ع	A Tr	EFE	43	7
						<u> </u>	6 TOTA	96	642	84
0 999.30	4%	dow to	regico Sho	s fic	cipts	Day			25	11
	-								(208	55
	 									
	1									<u> </u>

REPRESENTATIVE:

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

WELL OWNER OPERATOR OR AGENT!

NEW MEXICO OIL CONSERVATION COMMISSION DRAWER DD ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

				(a		
Operator Pryn	NAN BriNe Sales &	Lease	Enge	nci	Well #	
Location 9	UnitM Section 95 S 17	n	Townsh	ip Range	County <i>Eddy</i>	
Drilling Contractor	<i>,</i>			of Equipment ble Toula	,	
Soneractory	· · · · · · · · · · · · · · · · · · ·					
	<u>APPR</u>	OVED CAS	ING PRO	<u>GRAM</u>		
Size of Hole	Size of Casin	i .	ht Per	New or Used	Depth	Sacks Cement
123/4	103/4		4	335	335	Circulate
8	7	3	2		453	Circulate
Casing Data: Production	_joints of	_inch	#	Grade		
1	(Appr	oved) (R				
Inspected by		***************************************		date		
Cementing Pro	ogram <u>8</u> Size of	Casing	7" s	acks cement.	required	135
1	used fexas let Float					
1	92 Set 453 F					
-used csg.	. @ 453 with	/35 s	acks ne	at cement ar	ound sho	e
	((((((((((((((((((((Chlorid	e
•	6:/0 (@) (P				2 -	
Coment Circu	lated Yes Byxon Jac	1.	IVO. C	or sacks		
Tamp Survey	Dyron Jac	(PII) Do	to	ton co	. <u>LU. LU.2.</u>	aver
Casing test	ran @ (AM)	(PM) Da	te	top cer	úene @	
Method Used		(1)	Witne	essed by		
Checked for s	shut off @ (AM) (PM)	· Date			
Method used		•	Witne	essed by		
•						
				•		
<u> </u>						

BYRON JACKSON INC.

CEMENTING AFFIDAVIT

I. [LAPREN 1	4/1/En, being	of lawful	age and have	ving full	knowledge of
the facts herein	below set out	do state:	. I am empl	oyed by By	ron Jackson Inc.
on 6-20	, 19 <u>78</u> ,	BYRON JAC	KSON INC.	performed	the cementing
operation herein	described for	KRMIAN	Bline SA	PES & SPUC	e CO on their
Well No. #/	on the	EUCEN	if CAPISI	BAD STAT	ر کمم) lease
located in £	Ods	County, S	tate of 1	IPUI ME	<u>. </u>
		_			
					17-22-27
CASING CEMENTING	: Name or typ	e of strin	gʻwas	RFACE	Information
					9.5/8 in. O.D.
set in /2/2				th set was	<u>3/7</u> feet.
For this job the	following mat	erials wer	e used:		
170 SACKS	CLASS		· · · · · · · · · · · · · · · · · · ·		
				F	RECEIVED
					JUN 2 3 1978
			·		0011 2 0 1370
			•		O. C. C.
				,	
An estimated 2 CEMENT PLUG: In					out of the well.
hole size was	_	-			
this job the fol					
Dlug from	£4 40	£ .	eres della		- F
Plug from		L L •	WICH	Sacks	of
					
	•				
					
	SIGNED:	BYRON TA	CKSON INC.		•
	- <u> </u>	1 1			
•	BY	Warren	all		
•	DATE:	6.20.	78		

DRAWER DD ARTESIA, NEW MEXICO

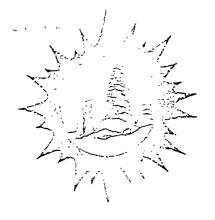
FIELD REPORT FOR CEMENTING OF WELLS

Operator Ternes Brine Salar Service du	Lease	2	Well #	/				
Location gyst Section of Well 641 W 17	n Towns!	nip Range	County					
Drilling Contractor	Type Cal	of Equipment le took to sta	+ 6-12	2-18				
Witness APPR	OVED CASING PRO							
Size of Hole Size of Casin	weight Per Foot	New or Used	Depth	Sacks Cement				
123/4" 103/4"	54		335	Cerc.				
8 5/8"	36		550	′′				
Casing Data:		1						
Surface \ joints of	inch - #	Grade						
	<u>roved)</u> (Rejected			·				
Inspected by M.			1.					
Cementing Program								
Size of hole 12 - Size of Casing 3 - Sacks coment required 160								
Type of Shoe used in Float collar used No Btm 3 jts welded 121								
TD of hole Set Si Feet of the Inches # Grade								
New-used csg. @ 372 with 1/1 sacks neat cement around shoe								
Plug down @ \n-il (AM) (PM) Date 6/20/3								
Cement circulated No. of Sacks No. of Sacks Witnessed by								
Temp. Survey ran @ (AN) (PM) Date top cement @								
Casing test @ (AM) (PM) Date								
Method Used Witnessed by								
Checked for shut off @ (AM) (PM) Date								
Method used	Witne							
Remarks:								

DISTRIBUTION &	٠, ز.م	1 21.510	ERVA FOR COMMISSION	N	30-0 Form C-101 Revised 1-1-	15 - 22574 65
U.S.G.S.		MAY 26	1978		STATE	Type of Lease
OPERATOR /		O. C. ARTESIA, D			.5, State OII	& Gas Lease No.
APPLICATION	FOR PERMIT TO	DRILL, DEEPEN,	OR PLUG BACK		7. Unit Agre	rement Nanie
b. Type of Well OIL WELL GAS WELL WELL	Prin	DEEPEN 🗌 e Water Wel		BACK	8. Farm or L	_
2. Name of Operator		/	ZONE LA	ZONE L	9. Weli No.	enie .
Permian Brine S 3. Address of Operator P. O. Box 1591,			sa, Texas 797	60		A Poet, or Wildeat
4 111 11	<u>M</u>	ATED 995	FEET FROM THE SOU	I th _LINE		
				TITITE OF THE STAT	12. Sounty Eddy	
21. Elevations (Show whether DF, F			19. Proposed Depth 1,450 21B. Drilling Contractor	Salt		20. Hotory of C.T. C.T.
3,126' G.L.	one w	ell -\$5,000 0003738 8	Not Selected	l Yet	1	ne 10, 1978
23.			D CEMENT PROGRAM			
	SIZE OF CASING	WEIGHT PER FOO				EST. TOP
12"	10-3/4" 8-5/8"	54# 36#	335' 550'		SX.	Circulated Circulated
We propose to d 10-3/4" casing inside the 10-3 hang 8-5/8" cas the upper rock circulation.	at 335' and /4" casing ting and circ salt section	circulate conthe top of the top of the top of the control of the c	ement. Then f the salt at t. Then dril	drill a approx l an 8" in open	10" hoimately hole hole APPROVA OR 90 DAY	ole y 500', through for
IN ABOVE SPACE DESCRIBE PROTIVE ZONE. GIVE BLOWOUT PREVENTER Thereby certify that the information Signed (This space for St.	above is true and comp	Title Presid	inpwiedge and belief.	ON PRESENT PRO	DUCTIVE ZONE Date 5-	AND PROPOSED NEW PROPU
CONDITIONS OF APPROVAL, IF A Hole must be at least 2" larger than the serface casing	Cement cons		,	Notify N.M.	vitness c	n sufficient ementing casing

All distances must be from the outer boundaries of the Section

<u>M</u>	17	22South	27 East	Eddy
9 9 5	ser see. Sou	th He man	641	eer ta communication with the world
	Fore turing Source		T exe	the state of the s
126.4				
tutione to	e actrage dedicate	d to the subject we	ll by colored pencil	or bachure marks on the plat here w
If note the	an ore lease is d ad rovaity)	ledicated to the well	outline each and ic	dentify the conversity there if both as to wor
		ferent - whership is d itization, force-poolir		I, have the interests of all owners been con-
) es	No If ans	wer is "ves!" type of	consolidation	
V			:	
	f necessary)	where and trace descr		actually been consolidated. Use reverse so
				consididate: (by communitization, upd., at
forced-poor sion.	ling, or otherwise to	r until a non-standard	unit, eliminating su	uch interests, has been approved by the con-
	1			CERTIFICATION
		!	1	hereby certify that the information
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		**************************************		Milliation
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	1		1	! I hereby certify that the well local shown on this plat was plotted from
	!		• 	notes of actual surveys made by m
	1		l	s true and correct to the best of
	1	ļ.	1	knowledge and belief
	+			
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	1		i	
1	1	1	1	Registered Fin tessional Engineer
ر <u>-</u> ۱۹۶	1	1		i and r. and Surveyor
395;3	1		1	and r. and Surveyor



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 1973

Mr. Roger E. Yarbro Attorney at Law McCormick and Forbes P. O. Box 1718 Carlsbad, New Mexico 88220

O. C. C. ARTEBIA, DEFICE

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,

Rober E. Yarbro

REY: bw

cc: George Watkins, Esquire

INVENTORY OF SOLUTION MINING WELLS OIL CONSERVATION DIVISION, 1981

Address P.O. ROX 1591 212 W.5 th St. Odesso Tx. 79760 Phone 1-9[5-382-053] Mr. 381-0664 Well unit # Z Lse Evene Location Ut. M. 1288 FSL/ 497 FWL T. 225 R. 278 Sec. 17 NW 1/4 SW 1/4 SW 1/4 County Eddy Purpose of well (brine supply, LPG storage, potash dissolution) BRINE SVPPLY II. DRILLING / SITING INFORMATION Contractor (Connact open.) 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 30 HN 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, cag tested to 1000 according to 1000	OPERATOR / LOCATION INFORMATION	
Phone 1-915-382-0531 Well unit # Z Lse Eugenic Location Ut, M. 1288 FSL/ 497 FWL T. 225 R. 278 Sec. 17 NW 1/4 SW 1/4 SW 1/4 County Eddy Purpose of well (brine supply, LPG storage, potash dissolution) BRINE SVPPLY II. DRILLING / SITING INFORMATION Contractor (Connect of R.) Date drilling started 10-22-79 Date drilling completed 11-19-79 Drilling method CABLE TOO (Elevation of ground surface 3126 How measured Date measured 8-15-79 Order of survey Name of surveyor 30 HN 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:	Operator PERMIAN BRINE SALES & SEEV. INC	-
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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	Name of surveyor	-
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	su / A	~
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	Describe casing tests performed TRG TESTED TO GOOD Dei con losted to	1000
as por incitations		
	w for I VI HICKENSON	•

- * = 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.

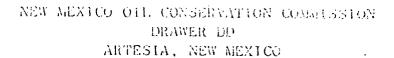
From	To	Size of	Size of	Weight per	Sacks of	Estimated
		Hole	Casing	Foot	Cement	Top of cmt.
Was mud	cake	on bore wa	all removed	l before cement	ing production	n casing?
Was sal	t sat	urated cen	menting mat	erial used opp	osite salt fo	rmation? <u>No</u>
Is site	with	nin 1/2 mil	le of anoth	er well? If s	o, use note to	o explain. <u>No</u>
W	ELLS	5 W/IN	1/2 MILE	INDUSTRI	AL PROPER	2Ty.
				·		
Site pr	epara	ation (cond	crete pad,	graded dirt, p	it, etc) <u>Gr</u>	RADED DIRTE
<u>CAL</u>	CHE	NOPIT				
Type of	surf	ace seal o	or well—hea	d (locking sec	urity cap, wel	lded, etc.)
W	ELL	- HEAD	- SEE	ATTACHED	SKETCH	·
deviati	on of	`hole from	vertical,	ntered while d centralizers:	used, tools lo	of circulation, ost or stuck,
	-					0', 320', 395', 445'
	 					
						
				(use back of si	heet if more s	space is required)

D. TRUUTION					•	S		Lorm () - Revisee	
SANTA FE			NEW MEXIC	ם סוו כסא	RECEI	VED VED	ON .	Sa. Indicate	Type of Lease
FILE		WELL CO	DMPLETION					State L	Joe X
LAND OFFICE					JAN 10	1980		5, attre on	& Gas Lease (i.e.
OPERATOR					O. C.	n		177777	
					ARTESIA,				
la. TYPE OF WELL	OIL		GAS	. [_	atan Ma	1	rement (Larce
b. TYPE OF COMPLE	TION		WELL	DRY	OTHER _	Brine W	ater we	8. Farm or 1	Le me l'ime
WELL X OVE		E.N	PLUG BACK	DIFF.	OTHER			Eugen	ie
2. Name of Constant	vina Cal		orni ao	Tna				9, Well He.	
Permian B	True pare	25 & 3	er Arce,					10. Freld ar	d Pool, or wildeat
Box 1591	, 212 W. S	oth St	., Odess	a, Tex	as 79	760			
4. Location of Well									
UNIT LETTER M	. LOCATED	L288	FLET FROM THE	South	LINE AND	497	FIET FROM		
					IIIII	111111	MITTE	1 cunty	
THE West LINE OF 15. Date Spudded	sec. 17	TWP. 22	S RGE. 27	E NMPM					
Oct. 22,1979	t .	4				GL 3126		GK, etc.) 19.	Liev. Contanghedd
20. Total Depth	21. Ph	Back T.L	$\frac{1}{2}$	2. If taultipl	e Compl., Ho	w 23. into	rvals - Hote Jed By i	ry Tools	Cable Toois
618 ' 24. Producing interval(s		583'	Notice Name				→ :	·	<u> </u>
24. Freducing interval(s	s), or this comple	110ff == 10ff	Bottom, Fame					2	 Was Directional Survey Made
Salt Top		om 59	2						No
26. Type Electric and C	Stiler Logs Run	. •					1	27. W	as Well Cared
None			CASING RE	CORD (Rep	ort all string	s set in well)		N	0
CASING SIZE	WEIGHT LB	./FT.	DEPTH SET		E SIZE		MENTING REC	CORD	AMOUNT PULLED
5½"	17#	•	285'	8"		100 sx	Circul	ated	None
25"	6.5#		583'	5"		100 57	Circul	2+0d	None
				1-		100 37	CILCUI	accu	NOILE .
29.	L	INER REC	ORD			30.		TUBING RECO	RD
SIZE	TOP	ne	OM SACKS	CEMENT	SCREEN	SIZ		one	PACKER SET
	. 110	1116						one	
31, Perforation Becord (Interval, size an	d sumber)			3::.	ACID, SHOT,	FRACTURE	CEMENT SOL	JECZE, ETC.
					DEPTH	INTERVAL	AMC	UNT AND KIN	D MATERIAL USED
	None						None		
				5500	1631011				
				FRUIJI	JCTION			1 12 11 12 1	
33. Date First Production	Prodi	action Meths	od (Flowing, ga		ing = Size an	d type pump)		Theorem Status	(Prod. or Shut-in)
	Produ	uction Metho			ing = Size an	d type pump)		1 .	Water
Date First Production	Fredi		Pump Size Frod	s lift, pampi	ng = Size an Cil = 1814.			1 .	
Date First Prediction 11-22-79 Date of Test	Hours Tested	Water	Pump Size Prod Test	s lift, pampi	OH = 1814.	Gan A	(C) Wor	Brine	Water Gan_Cit Natio
Date First Production 11-22-79		Water	Pump Size Prod Tent Ined 14 ii	s lift, pumpi	Cil = Bhl.	Gan A	(7) Wei	Brine	Water
Date First Prediction 11-22-79 Date of Test	Hours Tested Castr.q Pressur	Cheke Cheke Calculions	Pump Size Frod' Tent Inted 14- orlinate	s lift, pumpi	OH = 1814.	Gan A	Witer = 1911.	Brine	Water Gen=Cit ivano Snovity = All (Con.)
Date First Production 11-22-79 Date of Text Flow Tubing Fress.	Hours Tested Castr.q Pressur	Cheke Cheke Calculions	Pump Size Frod' Tent Inted 14- orlinate	s lift, pumpi	OH = 1814.	Gan A	Witer = 1911.	Brine	Water Gen=Cit ivano Snovity = All (Con.)
Date First Production 11-22-79 Date of Test Flow Tubing Fress. 34. Imposite a strong (Hours Tested Castr.q Pressur	Cheke Cheke Calculions	Pump Size Frod' Tent Inted 14- orlinate	s lift, pumpi	OH = 1814.	Gan A	Witer = 1911.	Brine	Water Gen=Cit ivano Snovity = All (Con.)
Date First Production 11-22-79 Date of Test Flow Tubing Fress. 34. Imposite a strong (Hours Tested Custing Pressur Sold, used for fu	Water Cheke Calculations Color from the color central.	Pump Size Frod' Tent Inted 14- orlinate	s lift, pampi	CH = 1861.	(A) X	(C) Wester = 1911.	Brine or = 1941. Orl	Water Government (Con.)
Date First Production 11-22-79 Date of Tent Flow Tubing Fress. 24. Flag artifacted and 7 35. Lint of Attachments.	Cusing Pressur	Water Cheke Calculations Color from the color central.	Pump Size Frod Tent Ited 14- il - otte.)	s lift, pampi	CH = 1861.	(All 12 K	(C) Wester = 1911.	Brine or = 1841. Out of Attheoried B	Water Government (Con.)

WE F COMMENTER PLANE						3 2 2503
DISTRIBUTION		MEXICO OIL CONSE	R 年 日 日 西 M s SVC	D .	50 - C)/5-2303,
SANTA FE			0FD = 400		Revised 1-1- 5A, Indicate	Type of Lease
U.S.G.S. 1			SEP 5 197	/9	STATE	- rer [X]
DPERATOR 1		•	O. C. C.		5. State Oil	& Gus Leano No.
OF ENATOR			ARTESIA, DEFI	CE	יווווו	
APPLICATIO	N FOR PERMIT TO	DRILL, DEEPEN,	OR PLUG BACK			
In. Type of Werk					7. Unit Agre	rement Name
b. Type of Well DRILL X		DEEPEN	PLUG	BACK	8. Farm or L	urtea l'ama
OIL GAS WELL	nows Brine	water Well	SINGLE MU	TONE	Eugeni	
L. Nome of Operator		774001 17011		1042	9. Well No.	
Permian B 3. Address of Cherator	rine Sales &	Service, Inc	· /		2	
•	212 W 5+b 0		Texas 79760	,	Will	nd Pool, or Wildnes
4. Location of Well UNIT LETTE	212 W. 5th S		EET FROM THE SOUT		TITTE	
ONTI CELLE		······································		LINE		
AND 497 FEET FROM	THE West LIN	E OF SEC. 17	WP. 225 FOE. 2	27E NMPM	12. County	mHHH;
					Eddy	
				<i>\\\\\\</i>	THILL	
			9, Proposed Depth	19A. Formation Salt		26, notary or C.T. C.T.
21. Mevations (Show whether DF,	RT, etc.) 21A. Kind	6 Status Plug. Bond 2	1B. Drilling Contractor	Daic	22. Approx	Date Work will start
3126 G.L.			Not selected	yet	Oct	. 1, 1979
23.	井 旬 0 0	77407 2 ROPOSED 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 S		Circulated
4 3/4"	2 7/8"	6.4#	580'	50 S	х.	Circulated
to 350', han hole inside imately 600' will fracturacross to the circulated devell No. 1 a	ose to drill g 5 1/2" casing 5 1/2" casing 2 7/8" e the rock sage Eugenie #1 own the 2 7/8 and out the total Matty	ing, and circles ing to the tubing to 58 alt section be well, 327' as in well No.	culate cement bottom of th 30' and circu between 580-6 away, Fresh v 2, through	t. Then he rock alate ce 500 with vater wi the sale.	drill salt a ment. fresh ll the t sect APP FOR 96	a 4 3/4" t approx- We then water n be
N ABOVE SPACE DESCRIBE PR	ER PHOGRAM, IF ANY.			N PRESENT PRO	DUCTIVE ZONE	AND PROPOSED NEW PROD
hereby certify that the information	10.		•		٨	<i>t</i> .
igned of Alle	LI OCH	Tule Pres	sident)ate 9- ^	-79
(This space for S						
1) 10	Gresset	STIPERV	ISOR DISTRICT	. .	0	CT 1 5 1979
ONDITIONS OF APPROVAL, IF		TITLE DOLLAR	a-v-4 workstrail	<u> </u>	DATE	
				Notify N	MOCC	in sufficient

Cement must be circulated to surface behind 5/2"+27/8" casing

Notify N.M.O.C.C. in sufficient time to witness cementing the 5/2/42 Reasing



FIELD REPORT FOR CEMENTING OF WELLS

Operator Bri	ne Sales & Servine	Leaso	Eugen	il	Well #	7
	Unit Section		0	Range 27	County	Ly
Drilling Contractor			Type of	Equipment tools to	start a	perof 10-16-
* le itness	<u>APPRO</u>	VED CAS	ING PROGR	<u>AM</u>		
Size of Hole	Size of Casing	Weigh Foo	1	lew or Used	Depth	Sacks Cemeni
£ 8"	512"	1 / /		***************************************	350	inc.
43/4"	27/8"	6.4			580	()
Casing Data:						
Surface	joints of	inch	# Gr	ade		
	(Appro	ved) (Re	ejected)_			
Inspected by				date		
Cementing Pro	ogram					
Size of hole	8" Size of	Casing ,	5/2 Sec	ks cement	required	
l l	used Luile Float					
i	89 Set 289 F.e		.,			
	. @ 289 with /	*************	بينكبند بينه زبللبطت	'جاستابذن		е
+ sax	· · · · · · · · · · · · · · · · · · ·	_additi	ves 270	e C		
Plug down @	12:05 (AH) (PM) Date_	11-6-	79		
Cement circu	lated you	- 	No. of	Sacks 2	5 suf	
Cemented by	· · · · · · · · · · · · · · · · · · ·		Witness	sed by So	esset	_

Permian Brine Sales

SIL OF SERIES RECEIVED	<u>(</u>)		Francis (S. Nac.
			Form C-103 Supersedes Old
DISTRIGUTION	NEW MEXICO OIL CONS	RECEIVED	C-102 and C-103
SANTAFE	NEW MEXICO OIL CONS	ERVATION COMMISSION	Effective 1-1-65
FILE		10 N 1 0 1666	
U.S.G.S.		JAN 1 0 1980	5a. Indicate Type of Lease
LAND OFFICE		45	State Fee X
OPERATOR /		O, C, D,	5. State Oil & Gas Lease No.
		ARTESIA OFFICE	
SUNDR'	Y NOTICES AND REPORTS ON		
IDO NOT USE THIS FORM FOR PROI	POSALS TO DRILL OR TO DEEPEN OR PLUG B ON FOR PERMIT - " (FORM C-101) FOR SUC	ACK TO A DIFFERENT RESERVOIR. H PROPOSALS.)	
1.			7. Unit Agreement Name
01L 645 WELL	other. Brine Water N	vel 1	\
Name of Creator	Diffe Macel	/	8. Farm or Lease Name
	/	•	
Permian Brine Sales	& Service, Inc.		Eugenie
. Address of Cylerator			4. "ell Ivo.
Box 1591, 212 W. 5t	th St., Odessa, Texas	<u> 79760 </u>	2
4. Location of Well			10. Field and Pool, or Wildcat
M 12	188 FEET FROM THE South	LINE AND 497 FEET FRO	M
West	N 17 TOWNSHIP 22S	27E	
THE CINE, SECTIO	N	NAME	
	15. Elevation (Show whether	DF, RT, GR, etc.)	12. County
	GL 3126		Eddy (IIIIIII
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Eddy
Check A	Appropriate Box To Indicate N	ature of Notice, Report or O	ther Data
NOTICE OF IN	TENTION TO:	SUBSEQUEN	NT REPORT OF:
	·		
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON		COMMENCE DRILLING OPNS.	PLUG AND ABANDONMENT
PULL OR ALTER CASING	CHANGE PLANS	CASING TEST AND CEMENT JOB	
_		OTHER	
' OTHER			
	erations (Clearly state all pertinent dete	ils, and give pertinent dates, includin	ng estimated date of starting any proposed
work) SEE RULE 1103.			
		•	
It is pro	posed to set the 5½'	casing and soment	0 2051
ingtood o	f and an existential	casing and cement	@ 205
	f 350' as originally		
	penetrated and the a	red beds are slough:	ing on
the cable	tools.		•
•			
	· .		
I hereby cents that the inforgation	shove is true and complete to the best	of my knowledge and belief.	
/// ///	1/01/0		
(d. L. Wel	kelsen		
A.L. Hickerson		esident	DATE
1		· -	
110 /1	the state of the s	SUPERVISOR, DISTRICT IL	JAN 1 8 1980
IN' (1. XXX)	sel TITLE	SUPLKI 130K, DISTILLE TO	UOCI 8 I MAI

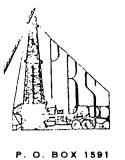
. ONDITIONS OF APPROVAL, IF ANY:

- COLCINES ACCIVED		Form C - 103	
SANTA FE NEW MEXICO OIL CONSERVATI	IUM EBRAICEIUM (A)	Supersedes (C-102 and C-	-103
CILE 1/	"RECEIVED"	Effective 1-1	
U.S.G.S.	AN 17 1980	State State	e of Lease Fee X
OPERATOR /	AN I I 1000	5. State Oil 6 G	
	0 C D	- mm	
SUNDRY NOTICES AND REPORTS ON WELLS TOO NOT USE THIS FORM FOR PROPOSAL TO BRILL ON TO DILEPEN OF PLUG BACK TO A USE "TAPELICATION FOR PERMIT = " (FORM C-10)1 FOR SUCH PROPOS	RTESIA, OFFICE DIFFERENT RESERVOIR. ALS.1		
on Cas OTHER- Brine Water Wel	1	7. Unit Agreeme	it Name
Hanie of C; erator		8. Farm or Leas	e liame
Permian Brine Sales & Service, Inc.		Eugeni	e
Box 1591, 212 W. 5th St., Odessa, Texas 7	9760	2	
s. Location of Well M. 1200 Courth	407	10. Field and Pa	ool, or Wildcat
UNIT LETTER M 1288 FEET FROM THE SOUTH LINE	AND 497 FEET FRO	minin"	mmin
THE West LINE, SECTION 17 TOWNSHIP 225 RA	NGE 27E NMPN		
15. Elevation (Show whether DF, RT,	GR, etc.)	12. County	
Check Appropriate Box To Indicate Nature of	of Nation Pupart or O	L Eddy	_077777777
NOTICE OF INTENTION TO:	· •	THE PORT OF	:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIA	AL WORK	ALTE	RING CASING
COMMEN	NCE DRILLING OPNS.	PLU6	AND ABANDONMENT
PULL OR ALTER CASING CHANGE PLANS CASING OTHE	TEST AND CEMENT JQB		_
OTHER			
17. Describe Fignored or Completed Operations (Clearly state all pertinent details, and	give pertinent dates, includin	ig estimated date of	starting any propose
work) SEE RULE 1103.			
Completion			
Ran 285' of 17# 5½" casing. B.J.	Cemented on 1]	L/6/79 with	ı
125 sx Class C cement with 2% A-7 circulated. Let set 36 hours. Do			
tools. No water.			
Ran 583' of 6.5# 2 7/8 tubing. B 100 sx of Class C cement with 2% A	.J. Cemented 11	1/20/79 wit	:h
circulated. Let set 24 hours.	4-7 Calcium Chi	oride ceme	int
November 21, 1979 fractured across	s to Eugenie No	o. l in sal	tt & shale
stringer between 576' and 592'.			
	•		
·			
I hereby certify that fid information above is true and complete to the best of my know	wledge and belief.		
J. L. BURELISE		DATE	
A.L. Hickerson Preside)nt	JAIL.	
SUPERV	ISOR, DISTRICT II	DATE JA	AN 181980

CONDITIONS OF APPROVAL, IF ANYI

71011			/ ME XICO		RE ISERVATIO	CEIV	DMMISSION	!, <u>चित्र</u>	Horm C+1 Revised Indicate	Type of being	 (x)
OFFICE	12 J	WELL COMPL	ETION	JK KEC		C.	D.			RECEIVED	
H. TYPE OF COMPLE	TION	GAS WEI		DRY	OTHER	Bri	ne Wate	m Mail	ugeni	O.C.D.	
Permian B 3 Address of Cremion Box 1591 4. Location of Well					as 79	760)	2		Theol. of Alleran	
UNIT LITTER M					MILLI			11111	994		
Oct.22,1979 70. Total Eeptn 618'	11-19- 21, Plo	ı	-22-79 √ 22.)		GL	3126	, liotary Toc	c.) 12. E	Cuite Tools	
24. Producing interval(s Salt Top 26. Type Electric and C	456 Bott	tion - Top, Botte	on., Dame							No S Well Cared	
None		CA	SING RECO	ORD (Rep	ort all string	s set	in well)		No		.
CASING SIZE .	WEIGHT LB.	28	н se т 5 '	8"	E SIZE	12	S sx Ci	NG RECORD	đ	None None	E D
2½"	6.5#	58	3'	5"		10	0 sx Ci	rculate	d	None	-
29,	<u> </u>	INER RECORD					3r.	TUBIN	IG RECOR	RD	
SIZE	TOP	воттом ne	SACKS C	CEMENT	SCREEN		SIZE	None	5ET	PACKEP SET	
31. Perforation head ([d number)			DEPTH			AMOUNT A		MATERIAL USED	- ·
	None						Non	e		1-18-80	للر
33. Date First Production 11-22-79		uction Method (Flo Water Pur	np	lift, pampi		id typ		B:	rine	(Prod. or Sharen) Water	
Date of Test	Hours Tested	Choke Size	Frod'n. Tent 1		Oil — Bhl.	1	vian = MOD	Water = 13	11.	Jan — if Iratio	
Flow Tubing Fress.	Caping Pressur	e Silcul ned : Hour tyate	4- (1) - 1s		Gar = !	 MKII *	Water	_ Bet.	01.3	tovity = A: 1 (Core.)	
34. Impositi m oi Gas (Sold, used for fu	el, a ented, etc.)						Test Witne	nssed By	<u> </u>	
35. Lint of Another ents			****								-
Signi DA Lo	(A//	Prince on touth sed	es of this fo	Đ	reside		the lext of my		·	1-30-79	-

T. Anhy 225'
T. Salt 456'
B. Salt 592'



PERMIAN BRINE SALES, INC.

JAN 1 7 1980

O. C. D. ARTESIA, OFFICE

24-HOUR BRINE SERVICE THROUGHOUT THE PERMIAN BASIN

ODESSA, TEXAS

PHONE 332-0531

November 30, 1979

EUGENIE No.2 - Sec 17-T22S-R27E

Carlsbad, New Mexico

		8	
18	to 19	9	CAVE · ·
19	to 4	6	_CALICHE & GRAVEL
46	to 50	0	SAND & GRAVEL - SOME WATER
		8	
58	to 64	4	LIME
		5	
		8	
		07	
		6 3- <i></i>	
		71	•
		78	
		,	
		37	
		52	
			•
		68	
268	to 28	80	LIME W/GYP. STRINGERS
280	to 28	85	ANHYDRITE
285	to 30	· 05	GYP. W/SOME RED BEDS
305	to 32	20	GYP. & ANHYDRITE
		30	
		6 0	
5.50		~ ~	

360	to	410	-HARD	ROCK	& A	NHYD	RITE	
410	to	430	-АИНУ[ORITE	W/S	OME	LIME	
430	to	4 3 7	-GRAY	LINE	(HA	RD)	& ANHYDRIT	Ε
437	to 4	445	-ANHYI	ORITE				
445	to	456	-АNНҮГ	RITE	& G	RAY	LIME	
456	to!	568	-SALT					
568	to !	576	-SALT	& BLU	JE SI	HALE	STRINGER	
576	to !	592	-SALT	:	•		:	
592	to (610	-ANHYI	ORITE				

INVENTORY OF SOLUTION MINING WELLS OIL CONSERVATION DIVISION, 1981

* = please attach pertinent documents

III. FORMATION INFORMATION

			Formation Record		
From	To	Thickness	Formation (nam	e, description)	

Logs	(spa	ecify	type)	D	RI	LLERS	FM. LOG.				
						·			· ·		
							 			· · · · · · · · · · · · · · · · · · ·	
Iden	tify	where	logs	are	on	file _	NMOCD FILES.				
								,			
7											

- * = please attach pertinent documents
- IV. AQUIFER INFORMATION

Aquifers encountered during drilling

From	To	Aguifer	: Amount of	Quality
		Description	Water	of Water
		·	entering hole	

NONE REA AS/MRHIERRISON.

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 (59. 4+bg.

OIL CONSERVATION DIVISION, 1981

INVENTORY OF SOLUTION MINING WELLS

* = please attach pertinent documents

. PRODUCTION / BRINE STORAGE INFORMATION	used as a stand by.
Method of production (describe fully) WATER P	
DOWN TBG IN GUGENIE # 2 # PROS	
TBG IN # Z , ACROSS A FRACTO	PRE. Csq "annulus Shut
off in #1 well. FW PUMPED DOWN @	_
·	
Was well used previously for some purpose other than	n brine supply, potash
dissolution, or LPG storage. If so use note to expl	ain
Use of brine DRILLING, PROD.	
Source of injection water (be specific)	F 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 DRNKG. H2OLINE
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)*

INVENTORY	ΩE	SOLUTION !	MINING	WELLS	OTI	CONSERVATION	DIVISION, 1981	L
FLAA (FLA L OL)	O.	DOLUTION I	LITIATIAG	HELES		CONSCINENTION	D1 1 1 5 1 0 1 0 1 9 1 7 0 1	•

= please attach pertinent documents
. 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?
Specify company or agency which is monitoring leakage
If pit leakage has been monitored in past use note to explain
Comments on production history (note if production rates or brine
concentrations have changed through time) STABLE AS PER MR IIICKERS
SEF ATTACH,

= please attach pertinent	documents
I. ABANDONMENT / PLUGGING	RECORD
Date well abandoned/plugge	ed
Reason for well abandonmer	nt or plugging NO INTENTIONS TO PEA.
-	·
	ibe fully, include amounts of cement, est. top,
plug type, depth, etc.)	
noted, natural subsidence	dence noted, subsidence monitoring, leakage features noted nearby, LPG storage data, etc.) D. NOT EQUIPPED FOR MONITORING SUBS. NO
LEAKAGE NOTEM. +mks	
	·
•	
	Recorded by Larry Brooks
	Doto

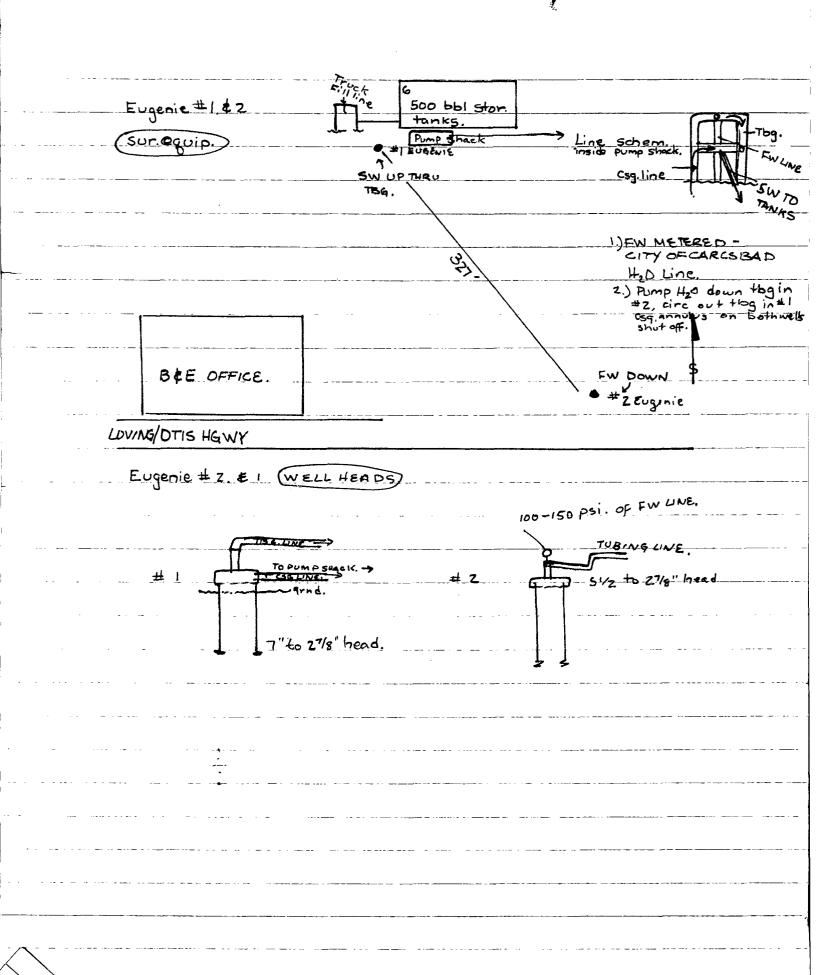
Permian Brine Salen

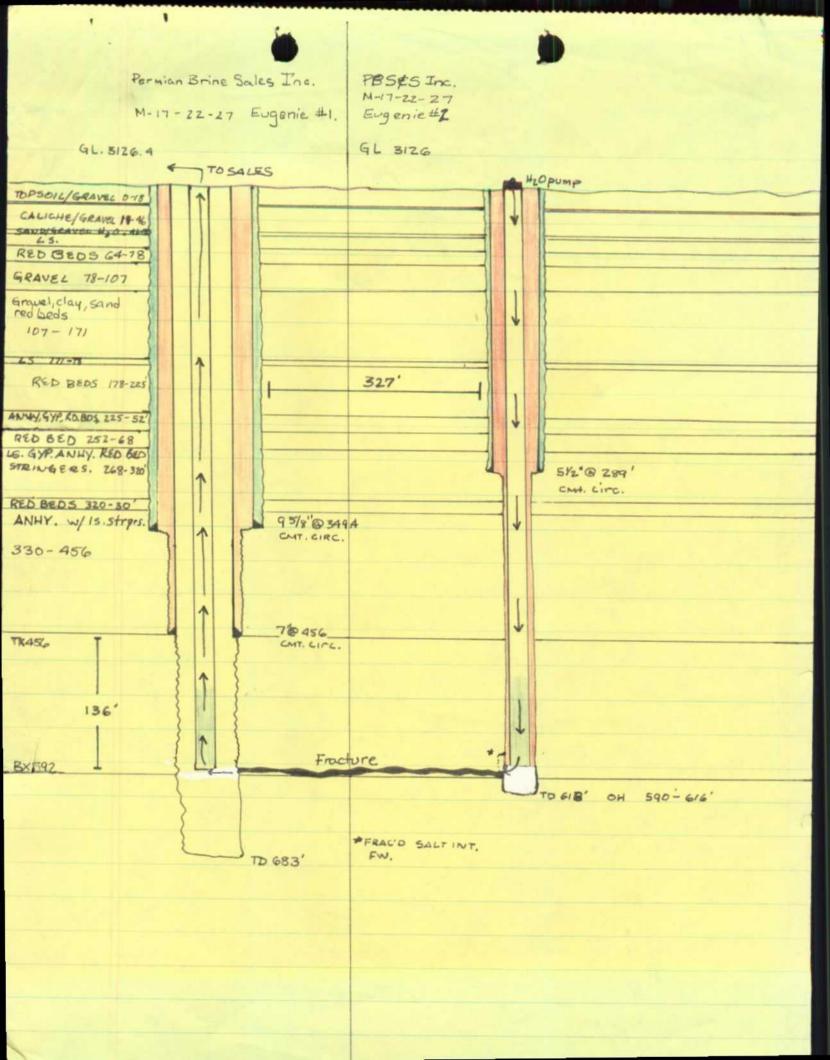
Eugenie #2

M-17-22-27

11-20-79

Ran 27/8 to 540 and Cemented With 100 SX Class C 2% CC Circulated 20 SX. Centerliger C 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 27/8 Tubig Used But Treated to 6000 PSI





= please attach pertinent documents
• OPERATOR / LOCATION INFORMATION
Operator Permian Brine Sales Inc.
Address DO. 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. 278 Sec. 17 NW 1/4 SW 1/4 SW 1/4
County Eddy
Purpose of well (brine supply, LPG storage, potash dissolution)
BRINE SUPPLY
II. DRILLING / SITING INFORMATION
Contractor PHIL WITHERW - DWNER
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 Sohn w. WEST.
Total depth of hole <u>663' PB</u> TD 587'.
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 cog. tstd. to 1000 ps; as per Hickerson
Other tests

NO C.I. S RILEIVED	5 6 Ew	MEXICO OIL CONSER	VA FOR COMMISSION		30-0.	15-2-25,
SANTA FE FILE	911	MAY 26	rational.		1	Type of Lease
LAND OFFICE	3 004	D. C. C	-		.5. State Oil	& Gas Lease No.
OPERATOR		ARTESIA, DE	- •		mm	
APPLICATI	ON FOR PERMIT TO	DRILL, DEEPEN, C	R PLUG BACK		7. Unit Agre	ement Name
b. Type of Well DRILL		DEEPEN	•	BACK	8. Farm or L	ease Name
OIL GAS WELL 2. Dame of Operator	OCHER Brin	e Water Well	ZONE X MUL	ZONE	Euge	nie
Permian Brine 3. Address of Operator	Sales & Servi	ce, Inc.			9. Well No.	1
P. O. Box 159	l, 212 West 5t	th St., Odess	a, Texas 7970	60		d Pool, or Wildcat
	TER LOC					
AND 641 FEET FRO	M THE West LIN	SE OF SEC. 17	228 RGE. 2°	7E NMPM	12. County	
					Eddy	
		19	. Proposed Depth 1	9A. Formation		20. Rotary or C.T.
			1,450	Salt		C.T.
21. Elevations (Show whether D 3,126 G.L	one v	& Status Plug. Bond 21	B. Drilling Contractor Not Selected	Yet	1	Date Work will start 10, 1978
23.	1.0.0.	LOOO3738 8 1 2 PROPOSED CASING AND				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH			EST. TOP
12" 10"	10-3/4" 8-5/8"	54# 36#	335 ' 550'		sx.	Circulated Circulated
We propose to 10-3/4" casing inside the 10-hang 8-5/8" casing the upper rocition.	g at 335' and -3/4" casing d asing and circ	circulate ce to the top of culate cement	ment. Then the salt at . Then dril.	drill a appro; 1 an 8"	i 10" ho cimately ' hole t	ole 7 500', through
city of Carl	stal notified	2		F Di EXPIRE	APPROVAI OR 90 DAY RILLING CO	S UNLESS
IN APOVE SPACE DESCRIBE F				PRESENT PRO	ODUCTIVE ZONE	AND PROPOSED NEW FROM
hereby certify that the informa-	1600	Title Preside			Date5:	19-78
(This space fo	r State Use)					
APPROVED BY W.C.	Gussett	TITLE SUPERVI			DATE	UN 1 2 1978
CONDITIONS OF APPROVAL.	least Cement	the circulated take	N	•		sufficient
2" larger than to	Ce sparfage remand	to the total "	pr.	time to	witness ce	emenung casin g

OIL CONSERVATION DIVISION, 1981

INVENTORY OF SOLUTION MINING WELLS

- * = 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	Size of	Weight per	Sacks of	Estimated
		Hole	Casing	Foot	Cement	Top of cmt.
Was mud	lcake	on bore wa	all removed	before cement	ing production	n casing? _ M/A
Was sal	t sat	urated ce	menting mat	erial used opp	osite salt for	mation? <u>wo</u>
Is site	with	nin 1/2 mi	le of anoth	er well? If s	o, use note to	o explain
		IN	DUSTRIA	L PROP.	ONLY WELL	LOC. WIN YZ
mi	is	Eugenie	# 2.			· · · · · · · · · · · · · · · · · · ·
		•		graded dirt, p		
		•	Grade	d dirt & cali	che	
				7		
Type of	surf	ace seal o	or well–hea	d (locking sec	urity cap, wel	lded, etc.)
		We	11 head	see exetch	•	
deviati	on of	hole from	m vertical,	ntered while d centralizers)_ wa ⊹er @	used, tools lo	of circulation,
1140001	· · · ·		0000, 000.	/ water w		
	—,—			-		
		<u></u>		(use back of s	heet if more	space is required)

DISTRIBUTION	NEW MEXICO OIL CON	Form C-103 Supercedes Old C-102 and C-103 Effective 1-1-65	
U.S.G.S. LAND OFFICE	, A	JUL 2 0 1978 D. C. C. ARTESIA, DEFICE	State Dit & Das Lease No.
IDD NOT USE THIS FORGETOR FOR LADIO	NOTICES AND REPORTS OF	BACK TO A DIFFFRENT BESTRUCIO	7. Unit Agreement Cone
DIL GAS	Brine Water	Well	8. Flam or Lease Name
Permian Brine Sale			Eugenie 9. Weil No.
Location of Well	West 5th St., Odes:	SA, TEXAS 79760 LINE AND64]FEET FR	10. Field and Pool, or Wildrat Wildrat
THE West LINE, SECTION		outh MANGE 27 East NAP	
	15. Elevation (Show whether 3126 GL		Eddy
Check A NOTICE OF IN		Nature of Notice, Report or C	Other Data NT REPORT OF:
FLAF CPM REMEDIAL WORK TEMPORARILY ABANDON FULL OR ALTER CASING	PLUG AND ARAMDON CHANGE PLANS	PEMEDIAL WORK COMMENCE DRILLING OPNS. CASING-TEST-AND-CEMENT JQB X OTHER	ALTERING CASING DOUG AND ABANDONMENT
OTHER 1. Lessing Proposed or Completed Openack, SEE RULE 1103.	rations (Clearly state all pertinent de	tails, and give pertinent dates, includi	ng estimated date of starting any proposed
Used 9 5/8 - 40# - Used 7" - 23# - 45	6' Depth	135 sacks cement of with 4 sacks calci	um chloride
6-29-78 Drie No	lled ant wales i	pling & be utruscon	remont 18 horer Ald iled to 658 7
. Thereby ceristy that the intermution	Bove is true and complete to the best	of my knowledge and belief. IresiSout	OATI 7-19-78
Wa. Dr	esset , s	UPERVISOR, DISTRICT II	JUL 2 6 1978

ONDITIONS OF APPROVAL, IF ANY:





NEW MEXICO OIL CONSERVATION COMMISSION DRAWER DD ARTESIA, NEW MEXICO

FIELD REPORT FOR CEMENTING OF WELLS

Operator Tornes-Brine		nice dra	Lease	iganil			Well #	Well #/			
Location 993 of Well 647	Unit ^M	Section 17		10Wnship Rai		Range 27	County				
Drilling Contractor				Type Cale	of E	quipment le te sta	st 6-17	2-78			
Witness		APPROV	ED CASI								
Size of Hole	Size o	f Casing	Weigh Foo	. 1	New	or Used	Depth	Sacks	Cemen		
123/4"	18	3/4"	54				335	Cer	C		
	.8	74" 58"	36		-	-	350	. 11			
Casing Data:				• •		1		<u>{</u>			
Surface _ joints of \(\frac{45/8}{8}\) inch \(\frac{45}{8}\) inch \(\frac{45}{8}\)											
Surface 12											
Increated by		(Approv					1.0 102		•		
Inspected by	:)		<u> </u>		aate	7191718				
Cementing Pro	T										
Size of hole_											
Type of Shoe							s welded	yes			
TD of hole Sh									-		
New-used csg.							ound sho	e			
+sax Plug down @_\r		~ (10)	additiv	es							
Cement circul	ated	100		-No. o	f Sa	cks 20		-			
Cemented by	<u>B2</u>	· .	-	Witne	ssed	ph/line	<u>i 57.12</u>	<u>Kliilly</u>			
Temp. Survey	ran @	(AM) (P	M) Dat	е	·	top cer	ment @				
Casing test @		(AM) (P	M) Dat	e	·						
Method Used				Witne	ssed	by					
Checked for st											
Wethod used				Witne	ssed						
temarks:											
-											





NEW MEXICO OIL CONSERVATION COMMISSION DRAWER DD ARTESIA, NEW MEXICO .

FIELD REPORT FOR CEMENTING OF WELLS

Operator Pry	mian Brine Sales S	Lease E	igenie	Well #	,				
Location	Unit M Sect 195 S 17	ion To	vnship Ra 22 2	nge County 7 <i>Eddy</i>					
Drilling Contractor		T	ype of Equip						
	<u>AP</u>	PROVED CASING	PROGRAM						
Size of Hole	Size of Cas	ing Weight Foot	Per New or	Used Depth	Sacks Cemer				
123/4	103/4	54	325	335	Circulate				
8	7	32	·	453	Circulate				
Production Surface joints of inch # Grade (Approved) (Rejected) Inspected by date Cementing Program									
Type of Shoe	Size used fexas fet Flo	at collar use	d No Btm	3 jts welded					
-used csg	92 Set 453 . @ 453 with x	h_/35 sack	s neat cemen	t around sho	oe Ve				
Plug down @_	6:10 (@)	(PM) Date &	- 28-78						
Cement circu	lated ye	S N	o. of Sacks	20					
	Byron Ja								
3	ran @ <u>(</u> AM) @ <u>(</u> AM)								
1 3		·							
Method Used									
Method Used Checked for	shut off @	(AM) $(PM) \cdot D$	ate						
Checked for		· · · · · · · · · · · · · · · · · ·							

* = please attach pertinent documents

III. FORMATION INFORMATION

Formation Record							
From	To	Thickness	Formation (name,	description)			

SEE DITACHED EM. REP.

Logs	(sp	ecify	type)_	DRI	LLERS	LOG				 	
		····						· · · · · · · · · · · · · · · · · · ·			·
Iden	tify	where	logs	are o	n file	0cD	FILES.			 	
		·								 	

NO FITTING CO	5				REC	ΕI	v 🙈	•	Form C-10 Revised 1	
SANTA FE							,	Ţ.a.	Indicate T	ype of Lease
FILE	1 - w	ELL COMPL			ISERVATION			21.00	State [Fee X
U.S.G.S.	2 "	LLL COMI L	LIIONO	N NECC	JIMI LOUD	(A)	KO TO THE	5. 5	tate Oil &	Gas Lease No.
LAND OFFICE					-	С Г	,	Ĺ		
OPERATOR						. C. C				
Bus. of Mices										
IC. TAPLEDE WELL								7. 1	idt Aureer	hent Name
b. TYPE OF COMPLE	OIL WELL	WEL WEL		CRY	C7 HER _	Brine	⊇ Wate	r Well	orm or Le	
NEW (T) NO	*	PLU	6 [] F:	FF.				1	_	,
2, ivanue of perator	DEEPEN	L BAC	K PE	s√R. L	CTHER			9. V	Euge	nie
Permian F	Brine Sale	s & Serv	rice. T	nc. //					ו	
3. Address of Crefator		 					·	10.	Field and	i'eel, or Wilacut
P.O. Box	1591, 212	West 5t	h_St.,	Ode	ssa, Te	xas	79760		Wil	dcat
4. Location of Well										
UNIT LETTERM	LOCATED	995_ FEET	FROM THE _	Sout	h_ LINE AND	64	T FEE		71111	
1.7 c c ±	י ר ר	226	225					111111	County	
THE West LINE OF 15. Date Spudded	16. Date T.D. Re	ve. 225 s	e Court (R	endy to F		ZZZZ	os (DE RA)	R RT GR C	e II 19 Fi	ov Cashirahagi
6-14-78	6-28-7	į	6-30-7		10. 1		6 G.L.		13. 1.1	3129
20. Total Depth		Back T.D.	22.	H Multipl	e Compl., Ho		. Intervals	, Rotary Too	ols ,	Cable Tools
663	5	87		Many		Ì	Drilled By			A11
24. Producing Interval(s	s), of this completi	on - Top, Botto	om, Name						:25.	Was Directional Survey
]	Made 1
456 Top of		592 Bott	om of	Salt						No
26. Type Electric and C	-								27. Was	Well Cored
Cable Tool	. Drillers	Log							N	0
28.			ASING RECO	ORD (Rep	ort all strings	set in v				
2 5/8"	WEIGHT LB./	FT. DEPT	THSET	но. 12	E SIZE	170		NG RECORD	10404	MONT PULLED ,
7"	23	456		9				circul		None
	23	456)			133	SX	circul	Lated	None
29.	LI	NER RECORD				30.		TUBII	NG RECOR	D
SIZE	ТОР	воттом	SACKS	EMENT	SCREEN		SIZE	DEPTH	SET	PACKER SET
							2 7/8	587"		No
31. Perforation Record	Interval, size and	number)			32.	ACID, S	HOT, FRAC	TURE, CEM	ENT SQUE	EZE, ETC.
					DEPTH	INTERV	/AL	AMOUNT	AND KIND	MATERIAL USED ,
						 -	37			
	None						None	 		
										<u> </u>
33.				PROD	UCTION	DNA				
Date First Production	Produc	tion Method (F1	owing, gas l	ift, pump			ımp)	We	·ll Status (Prod. or Shut-in)
										· WI A
Date of Test	Hours Tested	Choke Size	Prod'n. Test Pe		Oil - Bbl.	Ga	s - MCi	Water I	3bl. C	Gas Oil Tollo By
	Tiours residu		1.0001	-				ł		7002
F71 10 1 1 10	710ars 7ested									
Flow Tubing Press.	Casing Pressure	Calculated :	24- Oil - P	bl.	Gas - h	icr	Water	- Bbl.	Oil C:	OVIEW (FOLG)
	Casing Pressure	Hour Rate	24- Oil - P	bl.	Gas - N	icr	Water			W 18
34. Disposition of Gas (Casing Pressure	Hour Rate	24- Oil Pi →	bl.	Gas - N	icr	Water		Oil C:	W 18
34. Disposition of Gas (Casing Pressure	Hour Rate	24- Oil Pi →	bl.	Gas — N	ier	Water			1 2 18 1 1 2 18
34. Disposition of Gas (35. List of Attachsjents	Casing Pressure Sold, used for fuel	Hour Rate	24- Oil - H	bl.	Gas — N	ier	Water			1 2 18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
34. Disposition of Gas (Caning Pressure Sold, used for fuel	Hour Rate	→		Gas - N			Test Witn	nessed By	1 2 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
34. Disposition of Gas (35. List of Attachments Drillers I	Caning Pressure Sold, used for fuel	Hour Rate	→					Test Witn	nessed By	1 2 18 1,4/25
34. Disposition of Gas (35. List of Attachments Drillers I	Caning Pressure Sold, used for fuel	Hour Rate	→					Test Witn	nessed By	1.21 1.21 1.4/78

INSTRUCTIONS

This is more than the appropriate of the Commission not later than the completion of any newly-diff. For deepened well, it shall be accompanied by one copy of all electrical and ratio-activity logs run conhe well and a summary of all special tests conducted, including diff stem tests. All depths reported shall be measured depths. In the case of fire-tinnally diffied 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 filled in quintuplicate except on state land, where six copies are required. See Bule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

		Southea	stern	New Mexico					Northy	vestem 1	Ne	w Mexico
T. Anhy	·		Т.	Canyon		T.	Ojo A	lamo			Т.	Penn. "B"
T. Salt												Penn. "C"
B. Salt	59	92	_ Т.	Atoka		T.	Fictur	ed Cliffs			Γ.	Penn. "D"
T. Yate												Leadville
T. 7 Ri	vers		_ T.	Devonian		T.	Menef	ee			T.	Madison
T. Quee	n		_ T.	Silurian		T.	Point	Lookout			Γ.	Elbert
T. Gray	burg		_ T.	Montoya		T.	Manco	s			Γ.	McCracken
T. San	Andres _		_ T.	Simpson		T.	Galluj	·			Γ.	Ignacio Qtzte
												Granite
T. Padd	lock		_ Т.	Ellenburger		T.	Dakot	а			Γ.	
T. Bline	ebry		_ T.	Gr. Wash		T.	Morris	on			r.	
T. Drink	k ard		_ T.	Delaware Sand		T.	Entrac	la			Γ.	<u> </u>
T. Abo.			T.	Bone Springs		T. Wingate					Γ.	
	-					T. Chinle						
T. Penn)		_ T.			T.	Permi	an		7	Γ.	
T Cisco	(Bough	C)	_ T.			T.	Penn.	"A"—		7	Γ.	
•				OIL	OR GAS	SA	NDS	OR ZON	IES			
No. 1, fro	m			.to		Νo.	4, fro	m		,	.	.to
No. 2, from	m		·	to		No.	5, from	m				.to
No. 3, from	m		•••••	to		Νo.	6, from	nr				.to
				IM	IPORTANT	W.	ATER	SANDS				
Include da	ata on ra	te of water infl	an wa	d elevation to which	water rose i	n h	ole.					
Vo. 1, from	n	***************************************		to		•••••		•••••	fcet.	•		***************************************
No. 2, from	n	*************************	·	to	***************************************		• • • • • • • • • • • • • • • • • • • •					
No. 3, from	n	*\	·	to		• • • • • • •	•••••		fcet.			
								,				-
No. 4, Iron	מ	*										······································
		- 		ORMATION RECOR	D (Attach o	oddi	tional	sheets i	necesso	ıry)		
From	То	Thickness in Feet		Formation		F	rom	То	Thicknes in Feet		•	Formation
	}))							

P.B.S.& S. 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	GYF. W/SOME RED BED
305 to 320	GYP. & ANHYDRITE
320 to 328	KED BED
328 to 360	ANHYDRITE W/LIME & SAND
360 to 410	RED TOCK & ANHYDRITE
410 to 430	
430 to 437	GRAY LINE (HARD) & ANHYDRITE
437 to 445	
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

INVENTORY OF SOLUTION MINING WELLS

OIL CONSERVATION DIVISION, 1981

* = please attach pertinent documents

IV. AQUIFER INFORMATION

Aquifers encountered during drilling

From	To	Aquifer Description	Amount of Water entering hole	Quality of Water
60-		. ?	?	₹w,
				as per mil

operator states no fw encounters except @ 60'

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)
CMT. CIRC. an SUR. Eint csq.

INVENTORY OF SOLUTION MINING WELLS

- * = please attach pertinent documents
- V. PRODUCTION / BRINE STORAGE INFORMATION

Method of production (describe fully) inj fresh Hzo down +bg in #2
well produce salt water from #1. Csq. line. Csq. annolus
shut off. in #1. Common fracture allows the flow from #2 to 1.
Water travels down tog @ 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
Ise of brine Daniel (1900)
Jse of brine DRILLING/PROD.
Source of injection water (be specific)
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 DRNKG 420.

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)*

= p	tease	attac	n per	tinent	. 0001	ments									
,	PRODUC	TION	/ BRI	NE STO	RAGE	(cont	inued)							•
Bri	.ne sta	rage	facil	ities	(desc	ribe)		<u>G</u> /	<u>500</u>	Ы	<u> </u>	st	orage	tar	n ks
Cur	rent o	condit	ion/s Tan	tatus ks	of br	rine st	torag	e pi	<u> </u>	No	Pi	Τ, ε	xæþt	٥ م	verflo
Is Spe	brine cify c	stora compan	ge pi y or	t curi	rently whic	/ being	g mon monit	itor orin	ed for	r le <age< td=""><td>akage </td><td>∋?</td><td>NO P</td><td>,T.</td><td>N/A</td></age<>	akage 	∋?	NO P	,T.	N/A
If	pit le	akage	has	been n	nonito	red in	n pas	t use	e not	e to	exp:	lain	•		NA
	ments centra	•			_								_		
		••													
												· · · · ·			
													· · ·		
	······································		·												

• = please attach pertinent documents	;
/I. ABANDONMENT / PLUGGING RECORD	
Date well abandoned/plugged	
	ging NO INTENTIONS TO P\$A
Method of Plugging (describe fully, plug type, depth, etc.)	include amounts of cement, est. top,
	noted nearby, LPG storage data, etc.) MONITORED FOR SUBSIDENCE NO LEARAGE
	·
	•
	Recorded by Larry Brooks
	Date 10/26/81



BAROID DIVISION

N L Industrie nc. P.O. Box 1679 Houston, Texas 77001



WATER ANALYSIS REPORT

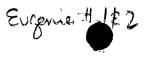
BAROID TREATING CHEMICALS

PERMIAN A	BRINE SAL	f= S			SHEET NUMBER
CARLSBA	_	esh sua	for all	-0	DATE
FIELD	<u> </u>	<i>20</i>	COUNTY OR PARSH	Ty	STATE NEX
LEASE OR UNIT	WELL(S) NAN	IE OR NO.	WATER SOURCE (FC	RMATION)	
DEРТН. РТ ВНТ, F	Nater WEL	TEMP, F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF DAY
7-18.78	TYPE OF WATER PRODUCED	SUPPLY	☐ WATE	RFLOOD	SALT WATER DISPOSAL
•		WATER ANALYSIS	PATTERN ICATES me/I* SCALE	UNIT)	
Na ⁺ 20 15	10	5 0	<u>, , , , , , , , , , , , , , , , , , , </u>		15 · 20C1-
Ca**	· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • •		HC03-
Mg ⁺⁺					SO4=
Fe ***					
DISSÖLVED SOLIDS			DISSOLVE	D GASES	
CATIONS Total Hardness	me/l* 1.8	<u>mg/1*</u>	Hydrogen S Carbon Dic	Sulfide,H≥S	mg /l * mg ·l *
Calcium, Ca ++	,6	/2			mg/ *
Magnesium, Mg	1.2		6		
Iron (Total) Fe · · ·	********		PHYSICAL	. PROPERTIES	
Barium, Barr Sodium, Nar(calc.)	5/		<u> </u>		8.25
ANTONIC		·	Eh (Redox		MV
ANIONS Chloride, Cl	47	/70	Specific G O Turbidity,	•	
Sulfate, SO ₄				olved Solids (calc.	32/6 mg 1
Carbonate, CO ₃			<u>ತೆಂ</u> Stability Ir	ndex @F	4
Bicarbonate, HCO ₃ Hydroxyl, OH	<u>4</u> .	<u>.3</u> <u>2</u>	<u>6 ⊋ .</u> 3 CaSO₄ Soli	@F ubility @ F	mg '
Sulfide, S-	</td <td></td> <td></td> <td>@F</td> <td> mg l'</td>			@F	mg l'
	<u> </u>	_		4 Possible (calc.)	mg · l ^
	 			4 Possible (calc.) Tydrocarbons	mg l` ppm(Vol Vol)
SUSPENDED SOLIDS (QUA	ALITATIVE)				
Iron Sulfide ☐ Iron O	Oxide 🔲 — Calcium (Carbonate 🔲	Acid Insoluble 🔲	* NOTE: me	l and mg/l are commonly
REMARKS AND RECOMME				used intercho respectively.	angeably for epm and ppm . Where epm and ppm are tions should be made for
A.L. HICKERS	ical Pik	x 1591	COESSA TX		32 0531
STO ENGINEER	DIST. NO.			OFFICE PHONE	E HOME PHONE
analyzed Cree	DATE 7/25/	78 DISTRIBUTION	CUSTOMER BTC ENGINEER O	AREA OR R BTC LAB	DISTRICT OFFICE



BAROID DIVISION

N L Industrier Inc. P.O. Box 1678 Houston, Texas 77001



VATER ANALYSIS REPORT

BAROID TREATING CHEMICALS

) _E	PMIAN	BAME	SAG	ES			_ , ,,,,_				,	SHE	ET NUN	/BER
COMBANY	PARLSBA				•							DAT	E	
FIELD			5) NAME OI	R NO.		OUNTY O			(10N)			STA	CLI	Mex
DEPTH, FT.	ВНТ, F	SAMPLE SOURCE	-00	TEMP, F	w	ATER, BI	BL/DAY	OIL	, 88L	/DAY		GAS	, ммс ғ	7/ DAY
DATE SAMPL	ED	TYPE OF WATER	ell	:										
		X PRODUCED	WAT	ER ANALY			WATE	ERFLC				5 4	ALT WA	TER DISPOSAL
Na ^{+ 2}	0 15	(NUMBE 10		ION SYMBOL I	NDICA			UNIT	10		1	5		²⁰ C1 ⁻
Ca++				1 1 1 1		1 1 1	•	-1 1		1 1		1		HC03
		 		++++		+++	1-1-1	++		+ +	+	 	-++-	
Mg ⁺⁺	 	++++++	+++	++++		+-+-	+++	+-+	+	++		++	++	SO4 =
Fe ++	<u> </u>							11	1				11	CO3=
DISSOLVE	D SOLIDS					DI	SSOLVI	ED G	SES					
CATIONS Total Hardi Calcium, C Magnesium Iron (Total Barium, Ba Sodium, Na ANIONS Chloride, C Sulfate, SO Carbonate, Bicarbonat Hydroxyl, C Sulfide, S =	CO3 e, HCO3 The state of the		1.4 3.8 1.4 2.4 2.4 2.4 2.4 2.4 3.9 2.4 2.4 3.9 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7	132- 204 3	028 157.	2 PH Sp Tr St Tr St MM	drogen Disygen, CAYSICA (Redo: ecific Corbidity, atal Disability as Cascax. Bascaxidual	L PR x Pote Gravit , JTU solve Index Iubili D4 Po	OPER ential y Unit d Sol @_ enty @_ enty @_ ssible ssible	2 RTIE:) s ids(c F F F e (cal	alc.)_ c.)		33	mg [* mg [* mg [* mg [* mg [* mg [* mg [* mg [* mg [* mg [* ppm(Vol Vol)
Iron Sulfide			ium Carb	onate 🗖	٨٥	id Insol	ا مامار		* NÕ	TF,	me l	and me	a Lare	commonly
REMARKS	AND RECOMME	NDATIONS:	X / SG	ADDRESS		14 mson		A -S	use res use spe	ed inte pectived, co ecific	erchar vely. rrecti gravi	ngeably Where ons sh ty.	y for ep epm a rould b	om and ppm are be made for
ANALYZED	- 7	DA	TE ,	DIST'RIBUTION	ı _ ı	CUSTOM				AREA				OFFICE
	Cre	- 17	25/18				GINEER	OR [LAB				S SUPERVISOR

	Initials	Date
Prepared by		
Approved by		

10 11 10 10 10 10 10 10 10 10 10 10 10 1		·		
		1 =====	2 3	4 ====
	1	Bols.		Bbls.
	Eugenie Jan. Fel March	كالمتراب والمحانة المراب والمراب	State 24	Sold
1981	Jan.	47990	Jan	26890
	Fel	52456	Fely	30460
	March	46646 38866 41866	march	25290
	(10 bil.	38866	april	10710
	May June July Lugust Lept	41866	May	34310
	June	49773	Quele	35870
	Guly	58310	744	35550 31060
	lugust	71044	Cug	3/060
)	Slept	54344	Dept	48240
1 198h		31156		
1 7 7 8 0	Jan Geb	22853		16860
3	March	32743	march	20550
4	(acil)	3/083		33362
5	Caril	28150		26744
5	()	39340		3/100
7	Queles	62903	10,01	24700
3	Quarist	30146	Mua	29860
9	Sept	4/233	Sept	29860 30462
0	Guly August Sept Oct	30146 41233 46646 34133	Oct	25290
1	Nov	34133	Nou	25290 16290 27290
2	Dec	43966	Dec	27290
3				
1979	Jan Del- March Cipril May	24000 15853	Jan	1-0-
5	Del	15853	Gel	19448
6	march	21070	march	19448
7	april	/673/	Ciprel	17000
3	rnay	16731 19260 18595	May	15015
9	June	1/8595	- Charles	14300
1	Hely	15866	- Dela	15980
	august.	21400	- Cara	29200 26560 24580 30270
3	Das	14550	Cet	24581
	Oct Nov Dec	17790		3/270
j	700	15046	War	19/70
				780105
		1,126,486	31.4.7	
		7 = 36,354	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	25,143
		(+5 mo -7 5?)		

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INTERNATIONAL UNICHEM

601 NORTH LEECH

P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY: B AND E INC.

DATE: 5-20-82

FIELD, LEASE & WELL: EUGENIE #1

SAMPLING POINT: BRINE WELL

DATE SAMPLED: 5-19-82

SPECIFIC CRAVITY = 1.208
TOTAL DISSOLVED SOLIDS = 307897
PH = 6.58

			ME/L	MG/L
CATIONS		•		
CALCIUM MACNESIUM SODIUM	(CA)+2 (MG)+2 (NA),CALC.		78.6 12.3 5167.	1576. 149. 11881
2NO INA				
BICARBONATE CARBONATE HYDROXIDE SULFATE CHIORIDES	(HCO3)-1 (CO3)-2 (OH)-1 (SO4)-2 (CL)-1		2.5 0 0 67.6 5188	152. 0 0 3250 183958
DISSOLVED CASES	3			•
CARBON DIOXIDE HYDROGEN SULFIDE OXYGEN	(CO2) (H25) (O2)		NOT RUN NOT RUN NOT RUN	
IRON(TOTAL) BARIUM MANGANESE	(FE) (BA)+2 (MN)		NOT RUN NOT RUN	. 7
SCALIN	IG INDEX	TEMP		
CARBONATE INDEX CALCIUM CARBONATE 50	ALING	30C 86F -1.0 UNLIKELY		RECEIVED
SULFATE INDEX CALCIUM SULFATE SCAL	ING	30 UNLIKELY		MAY 2 5 1982

Q. C. D.

ARTESIA, WHICE

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