

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600



September 27, 1979

115 543-3465
70 2-#214

Mr. Dan Nutter
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sir:

El Paso Natural Gas Company requests approval of the attached "Application To Dispose Of Salt Water By Injection Into A Porous Formation" Form C-108.

The subject well, El Paso Natural Gas Company, Shell-State No. 13, is a depleted producing well from the Yates and Queen formations. It is our intention to cement-squeeze both these zones and drill deeper to the Greyburg section for waste water injection. There are no production wells in the Greyburg formation within a two mile radius of this well to my knowledge. The field operator for this unit is Getty Oil Company and the signed waiver is enclosed.

If there is any additional information needed, please contact me.

Very truly yours,

A handwritten signature in cursive script that reads "James B. Kelly".

James B. Kelly
Senior Engineer
Operations - Water Resources

JBK:rh
Attachments



DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

LABORATORY LOCATION

API WATER ANALYSIS REPORT FORM

DATE 12-9-77

LAB NO.

Company <u>BELLO PETROLEUM CORP</u>		Sample No. <u>1</u>		Date Sampled <u>12-8-77</u>	
Field		Legal Description		County or Parish <u>EDDY</u>	
Lease or Unit		Well <u>JONES #1</u>		Depth	
Type of Water (Produced, Supply, etc.)		Sampling Point <u>WELL</u>		Formation <u>MORROW</u>	
				Water, B/D <u>N.M.</u>	
				Sampled By	

DISSOLVED SOLIDS

CATIONS

mg/l

me/l

Sodium, Na (calc.)	<u>12,873</u>
Calcium, Ca	<u>1120</u>
Magnesium, Mg	<u>389</u>
Barium, Ba	

ANIONS

Chloride, Cl	<u>23,785</u>
Sulfate, SO ₄	<u>100</u>
Carbonate, CO ₃	<u>122</u>
Bicarbonate, HCO ₃	

Total Dissolved Solids (calc.)

Iron, Fe (total)

Sulfide, as H₂S

OTHER PROPERTIES

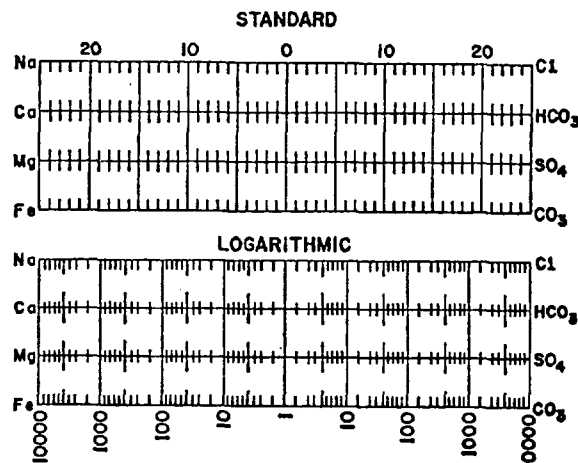
pH

Specific Gravity, 60/60 F.

Resistivity (ohm-meters) _____ F.

4.5 (Lx)
1.032

WATER PATTERNS — me/l

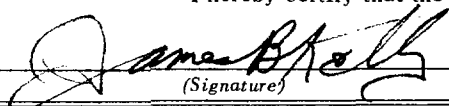


REMARKS & RECOMMENDATIONS:

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR El Paso Natural Gas Company		ADDRESS P. O. Box 1492, El Paso, Texas 79978	
LEASE NAME El Paso Nat. Gas Co.-Shell State	WELL NO. 13	FIELD Langlie - Mattox	COUNTY Lea
LOCATION UNIT LETTER "L" ; WELL IS LOCATED 660 FEET FROM THE West LINE AND 1980 FEET FROM THE South LINE, SECTION 32 TOWNSHIP 23-S RANGE 37-E NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	7-5/8	256	180
INTERMEDIATE	None		
LONG STRING	4-1/2	3719	200
TUBING	2-3/8	3219	NAME, MODEL AND DEPTH OF TUBING PACKER 1935
NAME OF PROPOSED INJECTION FORMATION Greyburg		TOP OF FORMATION 3820	BOTTOM OF FORMATION 3995 T.D.
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES? Perfs.	PROPOSED INTERVAL(S) OF INJECTION 3930 to 3990
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Queen - Oil		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH Yates - 3000 to 3184 and Queen 3537 to 3684 - Will squeeze both			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 1600		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA Queen 3770	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Glorieta - 5130
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) 75	MINIMUM 500	MAXIMUM 500	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSIG) Hydrostatic
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) State Owned		ARE WATER ANALYSES ATTACHED? Yes	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Getty Oil Company, Box 1231, Midland, Texas 79702			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes		ELECTRICAL LOG Yes	
PLAT OF AREA Yes		DIAGRAMMATIC SKETCH OF WELL Yes	

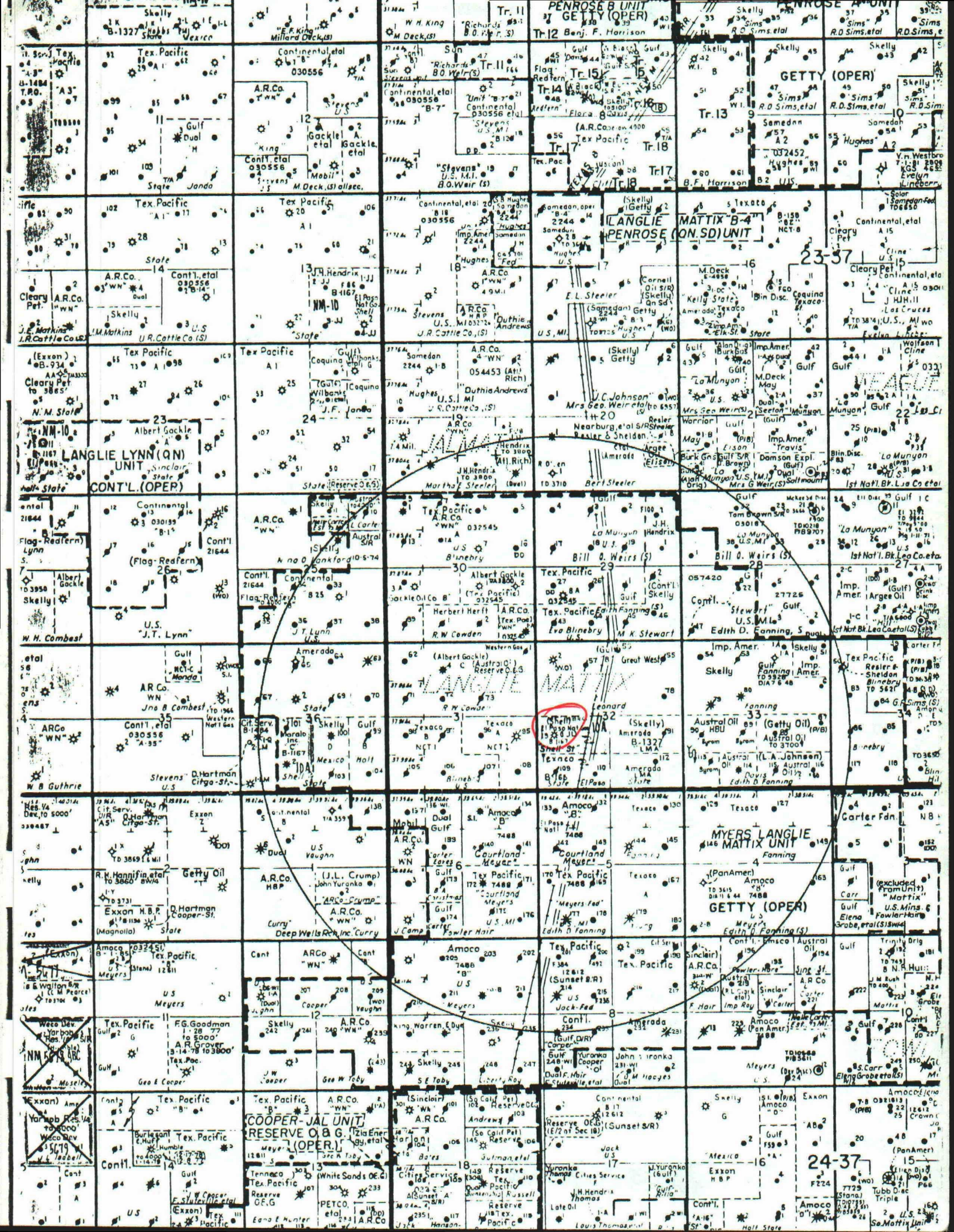
I hereby certify that the information above is true and complete to the best of my knowledge and belief.


(Signature)Senior Engineer
(Title)

9-25-79

(Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



Well Within $\frac{1}{2}$ Mile Radius of
EPNG Co. - Shell State No. 13
NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 32, T-23-S, R-37-E, Lea Co., N.M.

Sec. 32, T-23-S, R-37-E

Unit "B" - Getty Oil Co. - 330' FNL - 2210' FEL
5 $\frac{1}{2}$ " csg. @ 3508' - TD 3561'
Unit "C" - Getty Oil Co. - 880' FLN - 176 FWL
5 $\frac{1}{2}$ " csg. @ 3423' - TD 3564' Inject.
Unit "D" - Getty Oil Co. - 660' FNL - 660' FWL
5 $\frac{1}{2}$ ' csg. @ 3470' - NTD 3720'
Unit "E" - Getty Oil Co. - 1980' FNL - 660' FWL
5 $\frac{1}{2}$ " csg. @ 3732' - TD 3673'
Unit "F" - Getty Oil Co. - 1980' FNL - 1980' FWL
5 $\frac{1}{2}$ " csg. @ 3760' TD
Unit "G" - Getty Oil Co. - 1980' FNL - 1980' FEL
5 $\frac{1}{2}$ " csg. @ TD 3732'
Unit "J" - Getty Oil Co. - 1980' FSL - 1980' FEL
5 $\frac{1}{2}$ " csg. @ 3756' TD
Unit "K" - Getty Oil Co. - 1980' FSL - 1750' FWL Injection
5 $\frac{1}{2}$ " csg. @ 3725' TD
Unit "M" - Getty Oil Co. - 660' FSL - 660' FWL
3 $\frac{1}{2}$ " csg. - 3556' - 3598' Injection
3 $\frac{1}{2}$ " csg. @ 3676' - OTD 3870'
Unit "N" - Getty Oil Co. - 590' FSL - 2050' FWL
2-7/8" csg. @ 3656' - TD 3670
Unit "O" - Getty Oil Co. - 660' FSL - 2080' FEL
7-7/8" csg. @ 3727' - 2-3/8" csg. @ 3649' - TD 3727' Injection

Sec. 31, T-23-S, R-37-E

Unit "B" - Getty Oil Co. - 660' FNL - 1980' FEL
5 $\frac{1}{2}$ " csg. @ 3760' - TD 3760'
Unit "G" - Getty Oil Co. - 1980' FNL - 1980' FEL Injection
5 $\frac{1}{2}$ " csg. @ 3480' - TD 3642' - 260'-4 $\frac{1}{2}$ " Liner @ 3658'
Unit "H" - Getty Oil Co. - 1880' FNL - 560' FEL
5 $\frac{1}{2}$ " csg. @ 3708' TD
Unit "I" - Getty Oil Co. - 1980' FSL - 660' FEL Injection
5 $\frac{1}{2}$ " csg. @ OTD 3663'
Unit "J" - Getty Oil Co. - 1979' FSL - 1980' FEL
7" csg. @ 3447 - TD 3610'
Unit "O" - Getty Oil Co. - 660' FSL - 1980' FEL Injection
4 $\frac{1}{2}$ " csg. @ 3505' - 7" csg. @ 3450 - OTD 3645'
Unit "P" - Getty Oil Co. - 660' FSL - 660' FEL
7" csg. @ 1153, 2-7/8" @ 3660' - OTD 3670

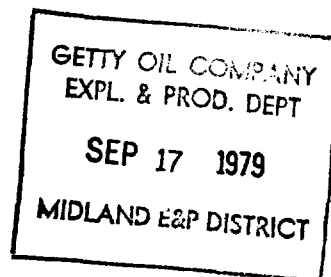
Sec. 5, T-24-S, R-37-E

Unit "B" - Getty Oil Co. - 660' FNL - 1980' FEL
5 $\frac{1}{2}$ ' Csg. @ 3755' TD
Unit "C" - Getty Oil Co. - 660' FNL - 1980' FWL Injection
4 $\frac{1}{2}$ " csg. @ 3734' - OTD 3734'
Unit "D" - Getty Oil Co. - 660' FNL - 660' FWL
5 $\frac{1}{2}$ " csg. @ 3680' - 3680'

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

September 14, 1979



Mr. Audra B. Cary
District Production Manager
Getty Oil Company
Box 1231
Midland, Texas 79702

Dear Sir:

Please be advised that this Company proposes, subject to approval of the Oil Conservation Commission of New Mexico, to convert and use for salt water disposal purposes its Shell State Well No. 13, located 660' FWL and 1980' FSL, Sec. 32, T-23-S, R-37-E, Lea County, New Mexico, in the Langlie-Mattox Field Unit, which your Company operates.

The zone to be used for salt water disposal is expected to be about 3960 feet in the most porous section of the Grayburg Formation.

Attached is the information relative to this well with the proposed completion recommendations. Please advise at your earliest convenience if you have any objection to this disposal. If this proposal meets with your approval, would you please so indicate by signing in the space provided for below and return two executed copies to this office.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James B. Kelly".

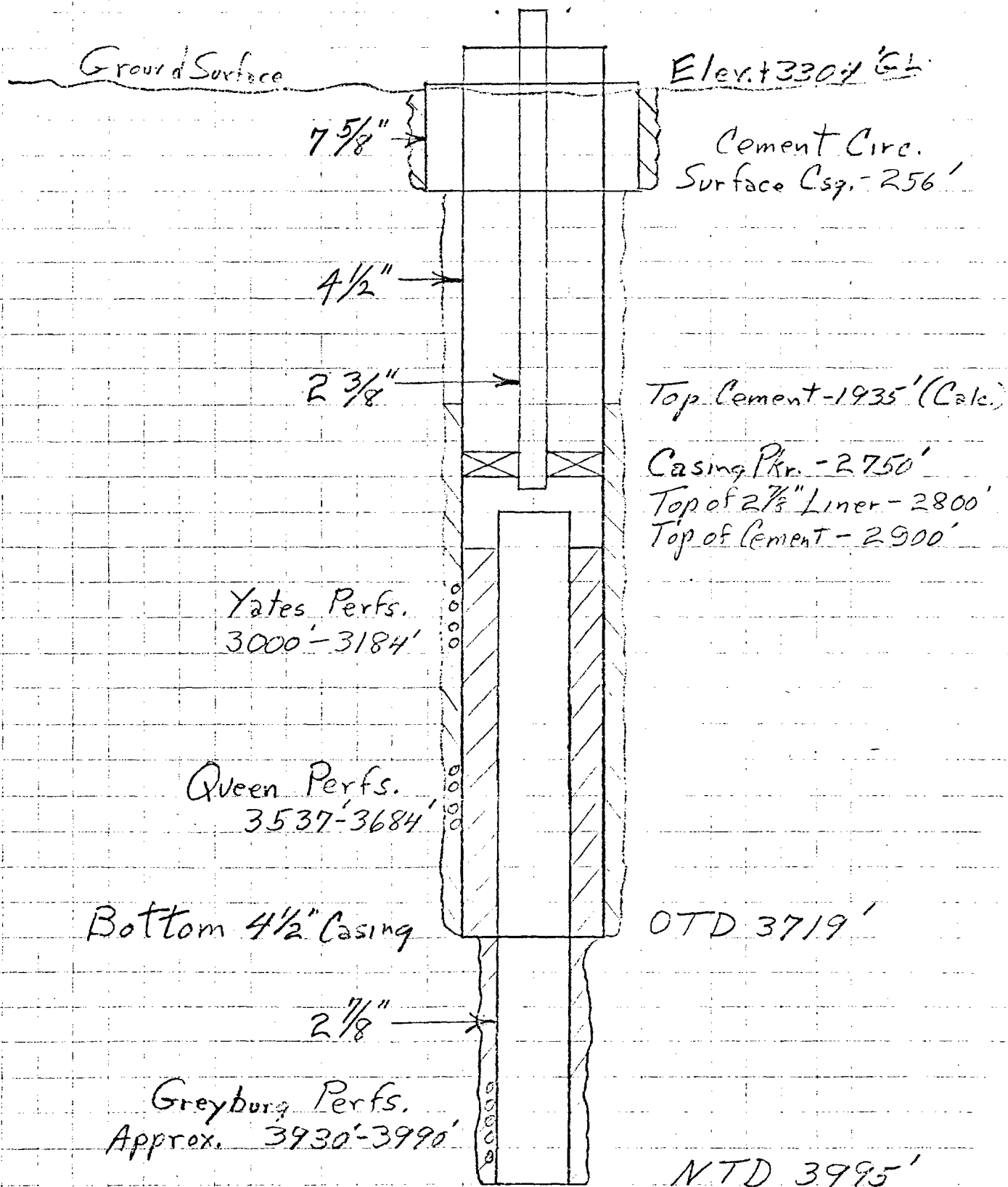
James B. Kelly
Senior Engineer
Operating Department - Water Resources

JBK:rh
Enclosure

APPROVED BY: Audra B. Cary Audra B. Cary
TITLE: District Production Manager
DATE: 9/20/79

Provided Yates and Queen Sand Intervals are squeezed separately to insure isolation of the Queen Sand flood interval.

J2 / No. 4 Plant SWD Well No. 1
El Paso Natural Gas Co - Shell State No. 13
NW 1/4 SW 1/4 Sec. 32, T23S, R37E, Lea County, N.M.



Proposed Completion - QBA

EL PASO NATURAL GAS COMPANY
WATER ANALYSIS

Report date 1-5-79

Sample Location Jal #4

Sample date _____

Sample source _____		
CATIONS	Calcium (Ca)	as ppm CaCO_3
	Magnesium (Mg)	as ppm CaCO_3
	Sodium (Na)	as ppm CaCO_3
TOTAL CATIONS		as ppm CaCO_3
ANIONS	Bicarbonate (HCO_3)	as ppm CaCO_3
	Carbonate (CO_3)	as ppm CaCO_3
	Hydroxide (OH)	as ppm CaCO_3
	Sulfate (SO_4)	as ppm CaCO_3
	Chloride (Cl)	as ppm CaCO_3
TOTAL ANIONS		as ppm CaCO_3
TOTAL HARDNESS		as ppm CaCO_3
ALKALINITY		as ppm CaCO_3
	Phenolphthalein	
	Total	
IRON ppm Fe		
SILICA ppm Si		
TURBIDITY		
TOTAL DISSOLVED SOLIDS (Mmhos)		
CAUSTICITY ppm (OH) as CaCO_3		
pH		
SULFITE (SO_3) ppm		
PHOSPHATES (PO_4) ppm		
	Poly	
	Ortho	
CHROMATE as ppm		

Pond #6 & #7	Pond #4 & #5, #8
80	2,200
360	280
2,233	124,614
2,673	127,094
0	180
1,244	0
1,292	0
97	1,914
40	125,000
2,673	127,094
440	2,480
1,914	0
2,536	180
.50	.10
-	16.5
12	6
10,000	14,000
12.0	8.0
.340	.001

Tests By Ellen Martin

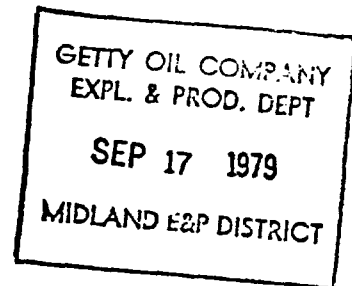
Remarks: _____

cc: Charlie Mathis

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

September 14, 1979



Mr. Audra B. Cary
District Production Manager
Getty Oil Company
Box 1231
Midland, Texas 79702

Dear Sir:

Please be advised that this Company proposes, subject to approval of the Oil Conservation Commission of New Mexico, to convert and use for salt water disposal purposes its Shell State Well No. 13, located 660' FWL and 1980' FSL, Sec. 32, T-23-S, R-37-E, Lea County, New Mexico, in the Langlie-Mattox Field Unit, which your Company operates.

The zone to be used for salt water disposal is expected to be about 3960 feet in the most porous section of the Grayburg Formation.

Attached is the information relative to this well with the proposed completion recommendations. Please advise at your earliest convenience if you have any objection to this disposal. If this proposal meets with your approval, would you please so indicate by signing in the space provided for below and return two executed copies to this office.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James B. Kelly".

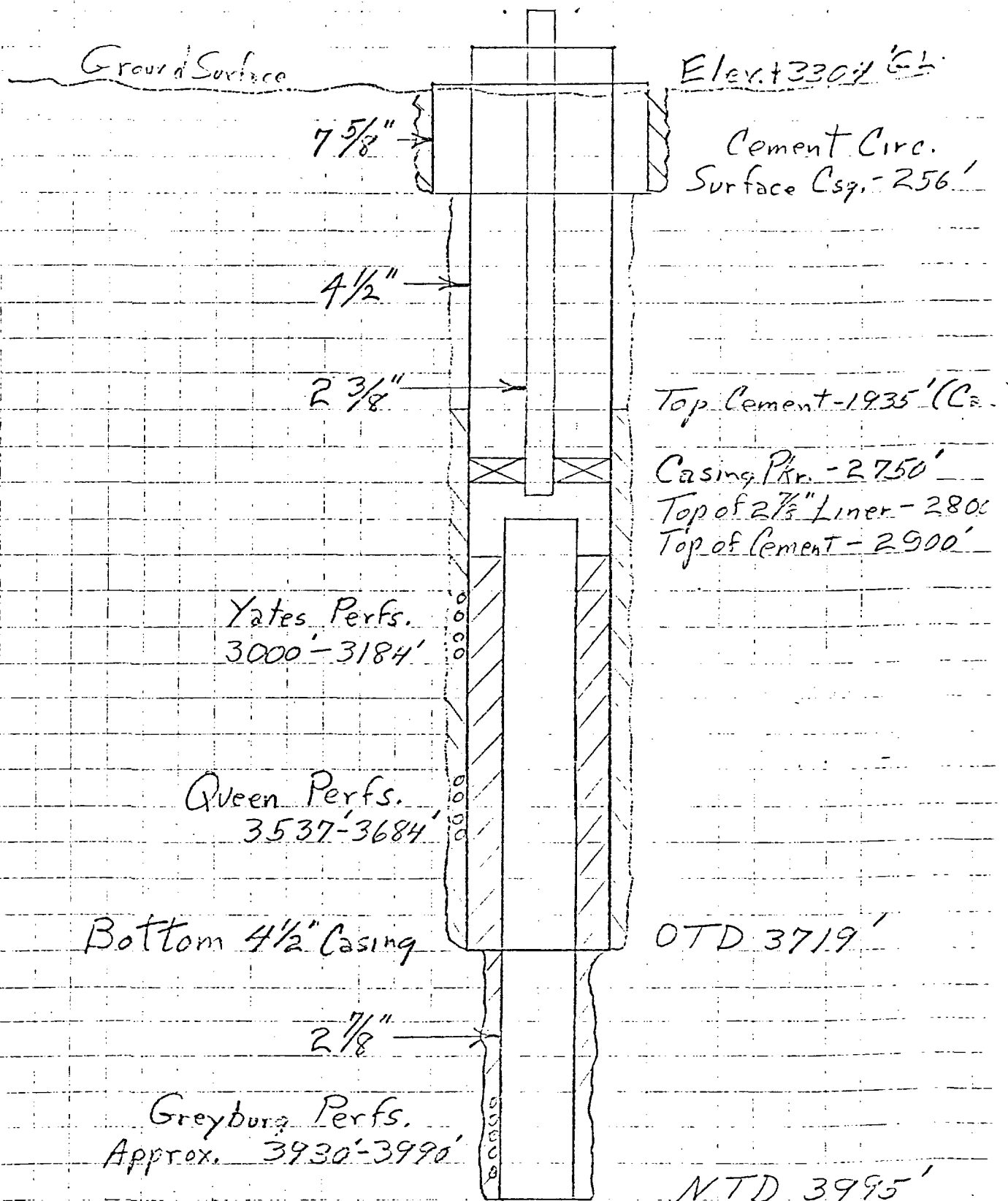
James B. Kelly
Senior Engineer
Operating Department - Water Resources

JBK:rh
Enclosure

APPROVED BY: Audra B. Cary Audra B. Cary
TITLE: District Production Manager
DATE: 9/20/79

Provided Yates and Queen Sand Intervals are squeezed separately to insure isolation of the Queen Sand flood interval.

J_a / No. 4 Plant SWD Well No. 1
El Paso Natural Gas Co - Shell State No. 13
NW 1/4 SW 1/4 Sec. 32, T23S, R37E, Lea County, N.M.



Proposed Completion - *JBK*