STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no

II. Operator: Phillips Petroleum Company

Address: 4001 Penbrook Odessa, Texas 79762

Contact party: T. H. McLemore Phone: (915) 367-1257

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-3181.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

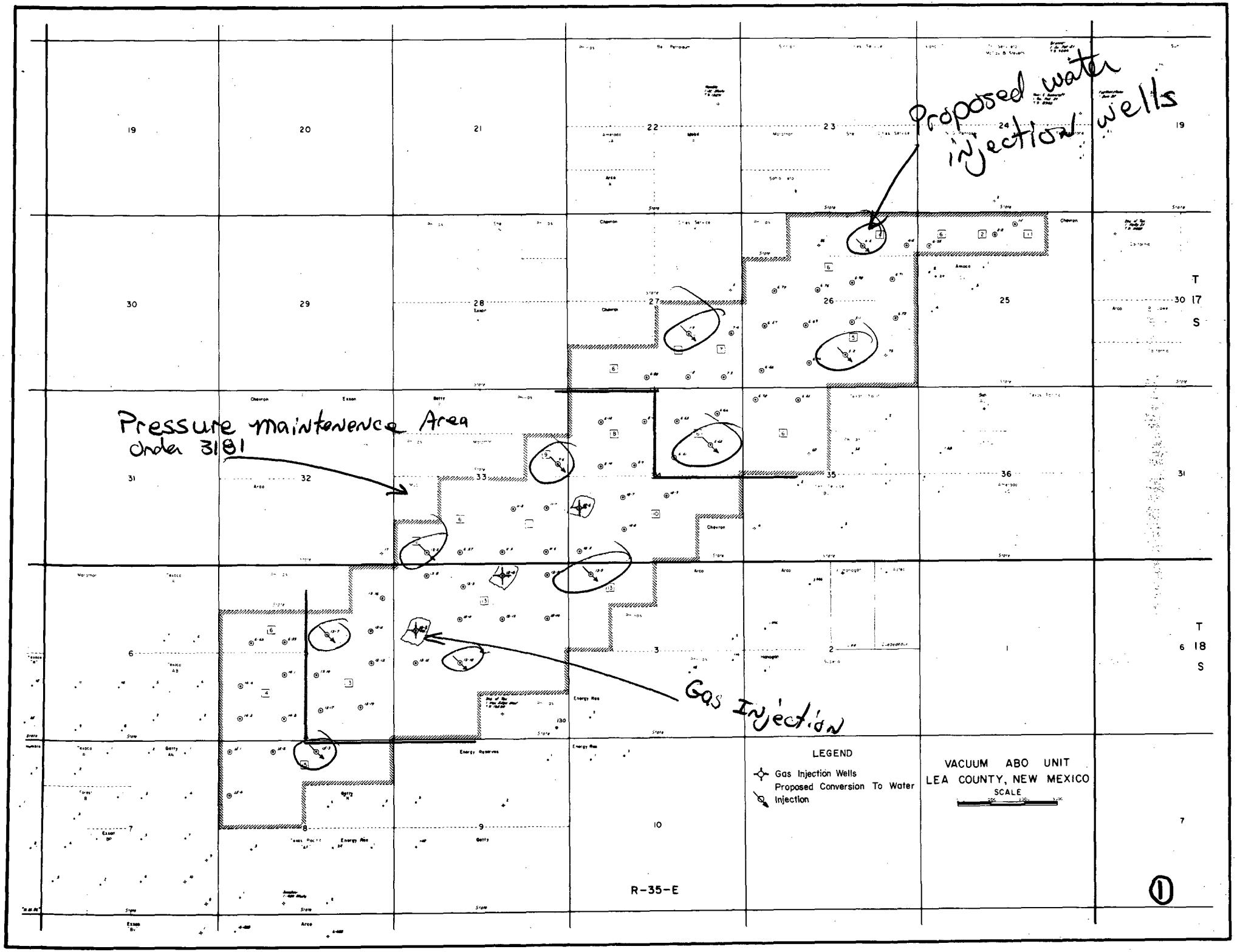
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: William J. Mueller Title Sr. Engineering Specialist

Signature: William J. Mueller Date: October 10, 1983

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. January 4, 1967, Case No. 3509, Application for Pressure Maintenance Project

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office


Proposed water injection wells
Pressure maintenence Area
Order 3181
Gas Injection
LEGEND
Gas Injection Wells
Proposed Conversion To Water Injection
VACUUM ABO UNIT
LEA COUNTY, NEW MEXICO
SCALE
R-35-E
T 17 S
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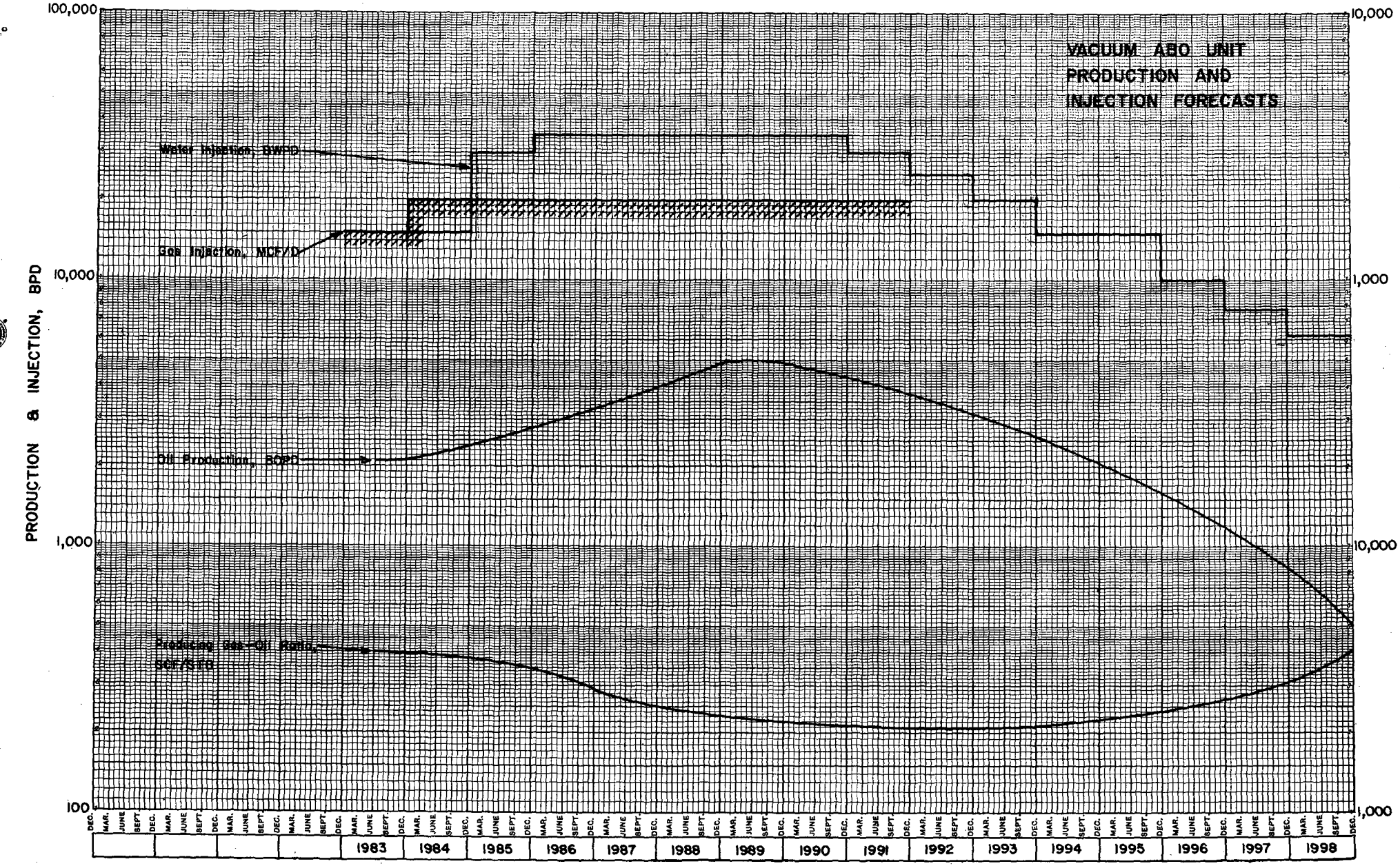
VACUUM ABO UNIT
PRODUCTION AND
INJECTION FORECASTS
Water Injection, BWPD
Gas Injection, MCF/D
Oil Production, BOPD
Producing Gas-Oil Ratio, SCF/STB
PRODUCTION & INJECTION, BPD
GAS INJECTION, MCF/D
GAS-OIL RATIO, SCF/STB
100,000
10,000
1,000
100
10,000
1,000
1,000
DEC. MAR. JUNE SEPT.
1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998

Exhibit 4

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
Phillips Petroleum Co. Vacuum Abo Unit																					
1-1	B	25	17	35	P	13 3/8"	315'	325	Circ.	8 5/8"	3367'	1300	Circ.	5 1/2"	9104'	629	3385' TS	8632'-8788' ABO	8809' PBTD	6/62	
2-2	C	25	17	35	P	13 3/8"	325'	375	Circ.	8 5/8"	3350'	575	1910' TS	5 1/2"	8979'	700	3000' TS	8646'-8744' ABO	8979'	1/62	
6-75	D	25	17	35	P	13 3/8"	332'	350	Circ.	8 5/8"	3400'	400	2300' TS	5 1/2"	9000'	560	2500' TS	8692'-8902' ABO	8962' PBTD	11/62	
4-5	A	26	17	35	P	10 3/4"	330'	450	Circ.	7 5/8"	3596'	2290	Circ.	5 1/2"	9100'	710	Circ.	8674'-8854' ABO	9100'	9/62	
4-6	B	26	17	35	P	10 3/4"	353'	450	Circ.	7 5/8"	3600'	2460	Circ.	5 1/2"	9085'	750	Circ.	8586'-8850' ABO	9085'	9/62	
5-1	J	26	17	35	P	13 3/8"	339'	300	Circ.	8 5/8"	3133'	300	1203' CALC	4 1/2"	9103'	1825	2633' CALC	8520'-8556' ABO	8564' PBTD	5/62	
5-2	O	26	17	35	P	13 3/8"	322'	325	Circ.	8 5/8"	3150'	300	1195' CALC	4 1/2"	8990'	875	453' CALC	8660'-8676' ABO	8681' PBTD	6/62	
6-66	M	26	17	35	P	13 3/8"	322'	350	Circ.	8 5/8"	3246'	400	2100' TS	5 1/2"	9132'	615	1700' TS	8408'-8514' ABO	8540' PBTD	4/62	
6-67	L	26	17	35	P	13 3/8"	335'	350	Circ.	8 5/8"	3275'	400	2000' TS	5 1/2"	9033'	520	2700' TS	8366'-8390' ABO	8391' PBTD	5/62	

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

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T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
6-70	G	26	17	35	P	13 3/8"	333'	350	Circ.	8 5/8"	3343'	400	2500' TS	5 1/2"	9032'	625	3150' TS	8578'-8648' ABO	8660' PBTD	7/62	
6-71	H	26	17	35	P	13 3/8"	356'	350	Circ.	8 5/8"	3365'	400	2800' TS	5 1/2"	9100'	715	Circ.	8494'-8896' ABO	9033' PBTD	8/62	
6-72	I	26	17	35	P	13 3/8"	310'	350	Circ.	8 5/8"	3321'	400	2300' TS	5 1/2"	9087'	565	2250' TS	8696'-8766' ABO	8743' PBTD	9/62	
6-76	F	26	17	35	P	13 3/8"	323'	350	Circ.	9 5/8"	3295'	750	1100' TS	5 1/2"	9058'	1040	1700' TS	8556'-8901' ABO	9018' PTD	4/63	
6-74	N	26	17	35	P	13 3/8"	312'	350	Circ.	8 5/8"	3355'	400	2300' TS	5 1/2"	9000'	525	750' TS	8628'-8686' ABO	8700' PTD	10/62	
6-79	E	26	17	35	P	13 3/8"	339'	350	Circ.	8 5/8"	3275'	400	2450' TS	5 1/2"	8975'	588	2200' TS	8527'-8820' ABO	8932' PTD	6/63	
6-69	K	26	17	35	P	13 3/8"	309'	350	Circ.	8 5/8"	3358'	400	2500' TS	5 1/2"	9099'	600	2600' TS	8416'-8469' ABO	8485' PTD	6/62	
1-8	O	27	17	35	P	13 3/8"	329'	325	Circ.	8 5/8"	3283'	950	1750' TS	5 1/2"	9100'	629	3692' TS	8445'-8598' ABO	8598' PTD	7/62	
1-9	J	27	17	35	P	13 3/8"	355'	400	Circ.	9 5/8"	3314'	600	Circ.	7 "	9058'	500	4150' TS	8720'-8876' ABO	9010' PBTD	2/64	
6-80	N	27	17	35	P	13 3/8"	320'	350	Circ.	8 5/8"	3250'	400	2350' TS	5 1/2"	9000'	751	500' TS	8522'-8871' ABO	8946' PBTD	8/63	Glorieta Perf 6076'-6108' Sqzd.

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
7-3	P	27	17	35	P	13 3/8"	300'	250	Circ.	8 5/8"	3154'	200	TOC 1150' TS	5 1/2"	9095'	700	2600 CALC	8344'-8450' Abo	8500' PBTD	5/62	
7-4	I	27	17	35	P	13 3/8"	337'	325	Circ.	8 5/8"	3139'	300	Circ.	4 1/2"	9002'	700	Circ.	8485'-8725' Abo	8873' PBTD	7/62	Abo perfs 8892'-8940' below CIBP capped w/ 1 sk. cmt. Perf @ 3100'. Circ. cmt to surface. Drill out cement.
14-3	N	5	18	35	P	13 3/8"	313'	190	Circ.	8 5/8"	3233'	250	1670' CALC	4 1/2"	9107'	200	5600' CALC	8561'-8830' Abo	9079' PTD	9/61	
9-5	H	33	17	35	P	13 3/8"	386'	350	Circ.	9 5/8"	3300'	2000	Circ.	5 1/2"	9038'	1000	5900' TS	8686'-8905' Abo	8994' PTD	7/63	6067'-6120' 6460'-6480' Glorietta Perfs sqzd w/cement
11-5	O	33	17	35	P	13 3/8"	318'	300	Circ.	8 5/8"	3166'	950	Circ.	5 1/2"	9003'	500	Surface CALC	8682'-8730' Abo	8735' PTD	2/61	
11-6	P	33	17	35	P	13 3/8"	297'	275	Circ.	8 5/8"	3133'	1050	Circ.	5 1/2"	9099'	525	Surface CALC	8616'-8730' Abo	8740' CIBP	4/61	
11-7	I	33	17	35	P	13 3/8"	314'	290	Circ.	9 5/8"	3099'	1125	Circ.	5 1/2"	9203'	800	Surface CALC	8634'-8900' Abo	9172' PTD	8/61	
11-8	J	33	17	35	P	13 3/8"	300'	300	Circ.	8 5/8"	3092'	300	Circ.	4 1/2"	9065'	1260	CIRC	8685'-8994' Abo	9039' PTD	5/62	

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OPERATOR LEASE & WELL NO.	LOCATION U S T R	WELL TYPE	SURFACE CASING CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
6-57	N 33 17 35	P	13 3/8"	320'	350	Circ.	8 5/8"	3300'	400	2300' TS	5 1/2"	8993'	540	3300' TS	8612'-8854' Abo	8960' PTD	3/61	
12-2	M 33 17 35	P	13 3/8	317'	350	Circ.	8 5/8"	3300'	700	Circ.	5 1/2	8902'	1100	3300' TS	8690'-8742' Abo	8785' PTD	7/61	
6-61	G 34 17 35	P	13 3/8"	334'	350	Circ.	8 5/8"	3250'	400	1500' TS	5 1/2"	9099'	656	1100' TS	8630'-8640' ABO	8640' PBTD	1/62	8640'-8835' Plugged w/ Hydromite
6-64	H 34 17 35	P	13 3/8"	316'	350	Circ.	8 5/8"	3244'	400	1000' TS	5 1/2"	9100'	520	1600' TS	8536'-8874' ABO	9067' PTD	4/62	
6-65	B 34 17 35	P	13 3/8"	310'	350	Circ.	8 5/8"	3271'	400	2000' TS	5 1/2"	9093'	544	3100' TS	8526'-8451' ABO	8565' CIBP	2/62	8574'-8898' Abo perfs below BP
6-68	H 34 17 35	P	13 3/8"	344'	350	Circ.	8 5/8"	3400'	400	2600' TS	5 1/2"	9000'	495	3950' TS	8700'-8706' ABO	8717' PBTD	7/63	8717'-8912' Hydromite Plug
8-9	F 34 17 35	P	10 3/4"	328'	550	Circ.	7 5/8"	3600'	1000	Circ. TS	5 1/2" Liner top @ 3416	9100'	950	Circ.	8408'-8788' ABO	9100'	5/62	
8-10	E 34 17 35	P	10 3/4"	324'	450	Circ.	7 5/8"	3600'	1300	Circ. TS	5 1/2"	9100'	550	3540' TS	8462'-8898' ABO	9063' PTD	3/62	
8-11	C 34 17 35	P	10 3/4"	335'	450	Circ.	7 5/8"	3600'	1220	460' TS	5 1/2"	9100'	750	Circ.	8384'-8908' ABO	9064' PTD	4/62	
8-12	D 34 17 35	P	10 3/4"	343'	350	Circ.	7 5/8"	3600'	1650	1150' TS	5 1/2"	9100'	670	Circ.	8486'-8755' ABO	8770' PBTD	12/64	8332'-8459' Hydromite Plug

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

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OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
10-5	M	34	17	35	P	13 3/8"	304'	375	Circ.	8 5/8"	3120'	1250	Circ.	5 1/2"	9100'	679	3195' TS	8694'-8740' Abo	8750' PBTD	4/61	8750'-8760' Hydromite Plug 8760'-8852' Hydromite Plug 9063'-8852'Sqzd 8883'-8969'Sqzd
10-6	L	34	17	35	P	13 3/8"	309'	375	Circ.	8 5/8"	3135'	1225	Circ.	5 1/2"	9100'	679	3280' TS	8702'-8833' Abo	8852' PBTD	7/62	BP capped w/ 1 sk cmt @ 8852'
10-7	K	34	17	35	P	13 3/8"	305'	375	Circ.	8 5/8"	3140'	1250	970' TS	5 1/2"	9099'	679	2960' TS	8534'-8549' Abo	8557' PBTD	10/62	8855'-8987'sqzd to 8807'. Hydromite to 8557'.
10-8	N	34	17	35	P	13 3/8"	302'	375	Circ.	8 5/8"	3193'	1350	400' TS	5 1/2"	9099'	679	3185' TS	8759'-8809' Abo	8776' PBTD	5/62	8777'-8805'plgd w/cement 8840'-8898'sqzd 75 sx 8920'-8998'sqzd 300 sx 9014'-9016'sqzd 10 sx
10-9	J	34	17	35	P	13 3/8"	307'	350	Circ.	8 5/8"	3210'	1400	Circ.	5 1/2"	9099'	679	570' TS	8754'-8844' Abo	8863' PBTD	7/62	8882'-8940' Hydromite plug

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

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OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
13-9	D	3	18	35	P	13 3/8"	316'	375	Circ.	8 5/8"	3301'	400	Circ.	5 1/2"	9139'	640	3300' TS	8803'-8817' Abo	8817' PBTD	5/61	8841'-9085'sqzd to 8922' 8817'-8865' Hydromite plug
6-78	D	35	17	35	P	13 3/8"	336'	350	Circ.	8 5/8"	3368'	400	2500' TS	5 1/2"	9000'	535	2500' TS	8612'-8632' Abo	8643' PBTD	5/63	8612'-8892'sqzd 130 sx 8670'-8684' Hydromite Shut in
6-85	C	35	17	35	P	13 3/8"	314'	350	Circ.	8 5/8"	3424'	400	2500' TS	5 1/2"	8950'	590	2200' TS	8848'-8874' Abo	8880' CIBP	9/63	Temp.Aban.Perf 8884'-8896' & 8900'-8901'
13-2	E	4	18	35	P	13 3/8"	301'	325	Circ.	8 5/8"	4986'	600	Circ.	5 1/2"	8980'	725	3800' CALC	8322'-8720' Abo	8907' PTD	10/60	DV Tool @ 7458'
13-3	C	4	18	35	P	13 3/8"	312'	350	Circ.	8 5/8"	3237'	1200	Surface CALC.	5 1/2"	8940'	1045	1390' CALC	8484'-8827' Abo	8940'	10/61	DV Tool @ 6924'
13-4	B	4	18	35	P	13 3/8"	317'	300	Circ.	8 5/8"	3216'	1200	Circ.	5 1/2"	8890'	1045	1658' CALC	8364'-8762' Abo	8823' PTD	5/61	DV Tool 6883' packer 8555'
13-6	A	4	18	35	P	13 3/8"	322'	350	Circ.	8 5/8"	3263'	1200	Circ. CALC.	5 1/2"	9144'	488	3290' TS	8608'-8627' Abo	8627' PBTD	7/62	8627'-9045' Hydromite plug 8938'-9045'sqzd 100 sx

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OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
13-8	D	4	18	35	P	13 3/8"	308'	375	Circ.	8 5/8"	3257'	1250	Circ. CALC	5 1/2"	8911'	640	3292' TS	8721'-8816' Abo	8876' PTD	5/61	
13-11	F	4	18	35	P	13 3/8"	305'	375	Circ.	8 5/8"	3244'	1250	Circ.	5 1/2"	9100'	670	3240' TS	8530'-8696' Abo	8696' PBTD	11/61	8642'-8730' Hydromite plug CIBP 8740' 8799'-8857'sqzd 150 sx CIBP 8950'& 8870'
13-12	G	4	18	35	P	13 3/8"	304'	375	Circ.	8 5/8"	3220'	1250	Circ.	5 1/2"	9100'	929	3080' TS	8716'-8732' Abo	8737' PBTD	5/61	8803'-8884'sqzd 50 sx 8803'-8910' 8929'-9020'sqzd 300 sx BP 8794'
13-14	H	4	18	35	P	13 3/8"	308'	375	Circ.	8 5/8"	3105'	1250	Circ.	5 1/2"	9100'	690	3100' TS	8804'-8820' Abo	8820' PTD	11/61	8874'-8960'sqzd 125 sx cmt plug 8847'-9056' 8820'-8847' Hydromite
13-15	L	4	18	35	P	13 3/8"	316'	375	Circ.	8 5/8"	3036'	1250	Circ.	5 1/2"	9099'	648	3000' TS	8558'-8582' Abo	8591' PBTD	11/61	8650'-8710'sqzd 150 sx 8857'-8993'sqzd 150 sx 8750'-9060' cmt plug 8635'-8750' cmt plug

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TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
13-18	K	4	18	35	P	13 3/8"	302'	375	Circ.	8 5/8"	3299'	1350	160' TS	5 1/2"	9099'	679	3250' TS	8793'-8859' Abo	8920' PBTD	9/61	Abo perfs 8875'-9000' sqzd 250 sx
6-59	F	5	18	35	P	13 3/8"	332'	350	Circ.	8 5/8"	3250'	400	2000' TS	5 1/2"	8982'	545	3600' TS	8508'-8742' Abo	8950' PTD	9/61	
6-63	E	5	18	35	P	13 3/8"	318'	350	Circ.	8 5/8"	3240'	400	2000' TS	5 1/2"	8999'	555	2300' TS	8233'-8813' Abo	8961' PTD	12/61	
14-1	K	5	18	35	P	13 3/8"	316'	290	Circ.	8 5/8"	3200'	200	2000' TS	4 1/2"	9006'	690	2500' CALC	8250'-8840' Abo	8977' PTD	7/61	
14-2	M	5	18	35	P	13 3/8"	300'	300	Circ.	8 5/8"	3451'	200	2200' CALC	4 1/2"	9062'	778	2000' CALC	8508'-8796' Abo	8810' PBTD	8/61	8811'-8958' Plgd w/ Hydromite
14-4	L	5	18	35	P	13 3/8"	305'	190	Circ.	8 5/8"	3199'	250	1639' CALC	4 1/2"	8950'	1000	4200' TS	8297'-8816' Abo	8908' PTD	10/61	
13-5	H	5	18	35	P	13 3/8"	304'	350	Circ.	8 5/8"	3276'	1050	Surface CALC	5 1/2"	9100'	575	3265' TS	8650'-8839' Abo	9064' PTD	7/62	

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	DEPTH SET FT	SX CEMENT	TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
13-10	J	5	18	35	P	13 3/8"	297'	350	Circ.	8 5/8"	3250'	1300	Circ.	5 1/2"	8956'	640	3250' TS	8254'-8700' Abo	8740' PBTD	9/61	8750'-8850' Plgd. 200 sx cement
13-13	I	5	18	35	P	13 3/8"	326'	375	Circ.	8 5/8"	3227'	1200	160'	5 1/2"	9099'	679	3200'	8547'-8952'	9069'	11/61	
13-16	A	5	18	35	P	13 3/8"	319'	375	Circ.	8 5/8"	3036'	1225	Circ.	5 1/2"	9100'	679	2790' TS	8706'-8802' Abo	9067' PTD	10/61	
13-17	O	5	18	35	P	13 3/8"	300'	375	Circ.	8 5/8"	3200'	1350	Circ.	5 1/2"	9099'	679	2590' TS	8726'-8798' Abo	8815' PBTD	10/61	8905'-9024' sqzd 125 sx Hydromite plug to 8815'
13-19	P	5	18	35	P	13 3/8"	313'	375	Circ.	8 5/8"	3310'	1400	420' CALC	5 1/2"	9093'	679	3170' CALC	8666'-8780' Abo	8841' PBTD	9/61	CIBP at 8850' filled cmt to 8841'
15-1	D	8	18	35	P	13 3/8"	308'	305	Circ.	8 5/8"	3254'	1100	145' CALC	5 1/2"	9049'	925	1293' TS	8226'-8800' Abo	8900' PTD	1/62	
15-2	C	8	18	35	P	13 3/8"	314'	310	Circ.	8 5/8"	3275'	1100	Circ.	5 1/2"	8969'	775	2860' TS	8684'-8952' Abo	8970' PBTD	2/62	CIBP w/8855' 8884'-8952' plgd w/cement

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
13-7	G	5	18	35	P	13 3/8"	297'	350	Circ.	8 5/8"	3233'	1200	Circ.	5 1/2"	8971'	529	3212' TS	8576'-8774' Abo	8948' PTD	10/61	
15-3	B	8	18	35	P	13 3/8"	304'	320	Circ.	8 5/8"	3274'	1355	Circ.	5 1/2"	9047'	810	3180' TS	8913'-8932' Abo	8932' PBTD	5/62	8932'-8994' cmt. plug
15-4	E	8	18	35	P	13 3/8"	318'	320	Circ.	8 5/8"	3274'	1200	Circ.	5 1/2"	9010'	775	3188' TS	8848'-8905' Abo	8910' PBTD	3/63	8912'-8956' Hydromite Plug

File: RE,VAU-VAU9

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
Phillips Petroleum Co.																					
EVGSAU																					
2622-086	C	26	17	35	P	13 3/8"	312'	375	Circ.	8 5/8"	3250'	400	2600' TS	5 1/2"	9000'	760	3100' TS	4444'-4466' San Andres	4482' PBTD	11/63	Abo perfs 8572'-8894' Plug w/100 sx cmt 8039'-8913' Cmt plug at 6312'-6700'
																					Glorieta perfs 6162'-6186'. Sqzd w/50 sx. Reperf 6170'-6182'. Sqzd w/30 sx. Reperf 6152'-6166'. Filled w/sand to 6125'. Cmt. plug to 4648'. San Andres perf'd 4506'-4542'. Sqzd below retainer at 4482' w/125 sx. Reperf San Andres 4444'-4466'.
Amoco Production Company																					
State 'CV' #2	E	25	17	35	P	13 3/8"	357'	350	Circ.	8 5/8"	3380'	280	1100' CALC	4 1/2"	9000'	1175	Circ	8740'-8805' Abo	8855' PBTD	8/64	Abo perfs 8887'-8896'
																					Sqzd w/150 sx. TOC 8855'. Perf 3970'-72'. Circ. cmt. to surface. Drld. out cement.
State 'CV' #2Y	E	25	17	35	P	13 3/8"	362'	350	Circ.	8 5/8"	3351'	250	1150' CALC	5 1/2"	8917'	900	Circ	8550'-8806' Abo	8887' PTD	2/71	Perf 4230'-32' & circ. cmt. to surface. Drld out cmt.

VACUUM ABO UNIT PRESSURE MAINTENANCE AREA

LEA COUNTY, NEW MEXICO

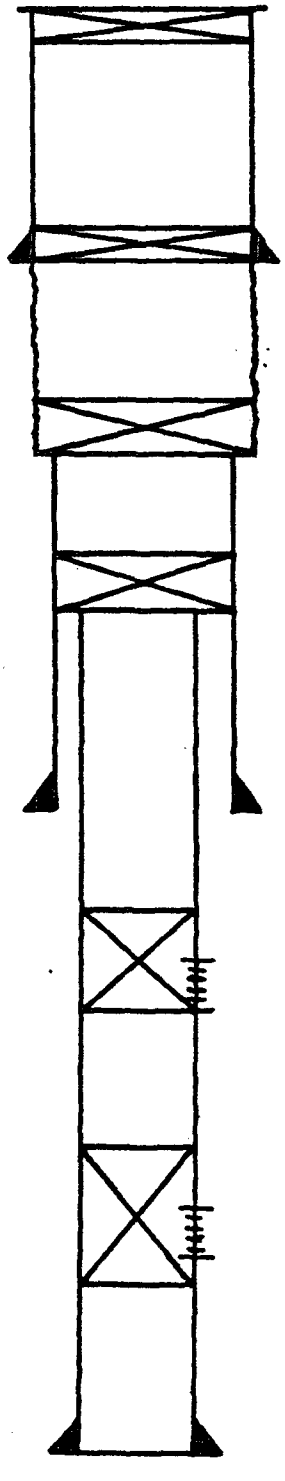
TABULATION OF ABO WELLBORE PENETRATIONS

T.S.--TEMPERATURE SURVEY; CIRC.--CIRCULATED; CALC--CALCULATED

OPERATOR LEASE & WELL NO.	LOCATION U	S	T	R	WELL TYPE	SURFACE CASING SIZE IN	SURFACE CASING DEPTH SET FT	SURFACE CASING SX CEMENT	SURFACE CASING TOP CEMENT FT	INTERMEDIATE CASING SIZE IN	INTERMEDIATE CASING DEPTH SET FT	INTERMEDIATE CASING SX CEMENT	INTERMEDIATE CASING TOP CEMENT FT	PRODUCTION CASING SIZE IN	PRODUCTION CASING DEPTH SET FT	PRODUCTION CASING SX CEMENT	PRODUCTION CASING TOP CEMENT FT	PRODUCING DEPTH FT	TOTAL DEPTH FT	DATE DRILLED	REMARKS
Exxon, U.S.A.																					
State 'K' #17	P	32	17	35	P	13 3/8"	324'	300	Circ.	8 5/8"	3253'	400	Circ.	5 1/2"	9000'	575	3210' TS	TA	5965' PBTD	6/61	Abo perfs 8771'8797 8603'-8748', 8527'-8364'. CIBP @ 8762' & 8530', 8130'-8530 - 50 sx cmt. plug. CIBP @ 6605' w/1 sk cmt. Glorieta perf'd 6459'-6513'. Sqzd w/75 sx. Glorieta perf'd 6134'-6144', 6340'-6350', 6306'-6315'. CIBP @ 6330' & 6280'. Glorieta perf'd 6061'-6100'. CIBP @ 5990' & capped w/35' cmt.
Getty Oil Company																					
State Hobbs 'N' #5	H	8	18	35	P	11 3/4"	300'	350	Circ.	8 5/8"	3300'	950	1245' TS	5 1/2"	9206'	4000	Circ.	8819'-8937' Abo	9151' PTD	7/80	DV tool @ 5982'.
State Hobbs 'N' #6	G	8	18	35	P	11 3/4"	318'	280	Circ.	8 5/8"	3308'	2000	Circ.	5 1/2"	9257'	2287	710 ' TS	8888'-8904' Abo	9080' PBTD	11/80	Abo perfs 9185'-9211' CIBP w/1 sk cmt. TOC @ 9080'
Mobil Producing Texas & New Mexico Inc.																					
State O' #2	L	33	17	35	P	13 3/8"	355'	300	Circ.	9 5/8"	3200'	1530	350' TS	7" liner	6369' top @ 2968'	850	Circ'	6119'-6155' Glorieta	6258' PBTD	7/64	Drld. to 9000' TD. 8090-8270',50 sx. cmt. plug

File: RE,VAU10-VAU11

Standard of Texas (Vac Edge Unit) #1
Unit O, Sec. 4, T-18-S, R-35-E
Lea County, New Mexico



0' - 30' 25 sx. cmt. plug

17" hole
13 3/8", 48# csg. 2 302'. Cmt'd w/270 sx.
TOC Circ.
270' - 300' 25 sx. cmt. plug

1130' - 1200' 50 sx. cmt. plug
9 5/8" csg. cut & pulled @ 1213'

3270' - 3400' 50 sx. cmt. plug
5½" csg. cut & pulled @ 3400'

12¼" hole
9 5/8" 40# csg. @ 4894'. Cmt'd w/550 sx.
TOC @ 2787' (calc.)

6000' - 6200' 25 sx cmt. plug
Perfs 6182' - 6200'

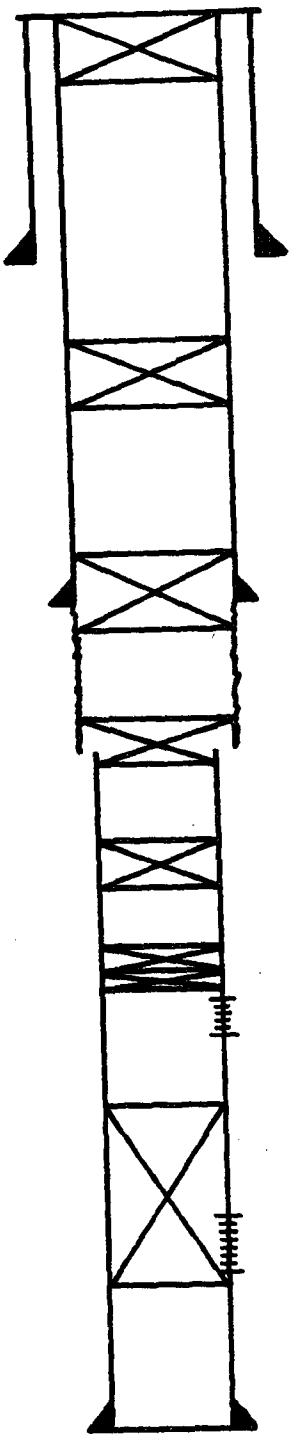
8550' - 8950' 50 sx. cmt. plug

Perfs 8880' - 8900'

8 3/4" hole
5½", 15.5 & 17# csg. @ 9072'. Cmt'd w/950 sx.
TOC @ 4559' (calc.)

TD 12630'

Cities Service State "K" #5
Unit H. Sec. 27, T-17-S, R-35-E
Lea County, New Mexico



0'-100' 30 sx. cmt. plug

17½" hole
13 3/8" csg. @ 351'. Cmt'd w/360 sx.

TOC circ.

1200'-1300' 27 sx. cmt. plug

12¼" hole
8 5/8" csg. @ 3200'. Cmt'd w/1800 sx.

TOC Circ.
3150' - 3250' 30 sx. cmt. plug

3435'-3535' 25 sx. cmt. plug
5½" csg. cut & pulled @ 3485'

4055' - 4155' 11 sx. cmt. plug

Set CIBP @ 6000' and capped w/7 sx cmt.
Perfs 6116' - 6165'

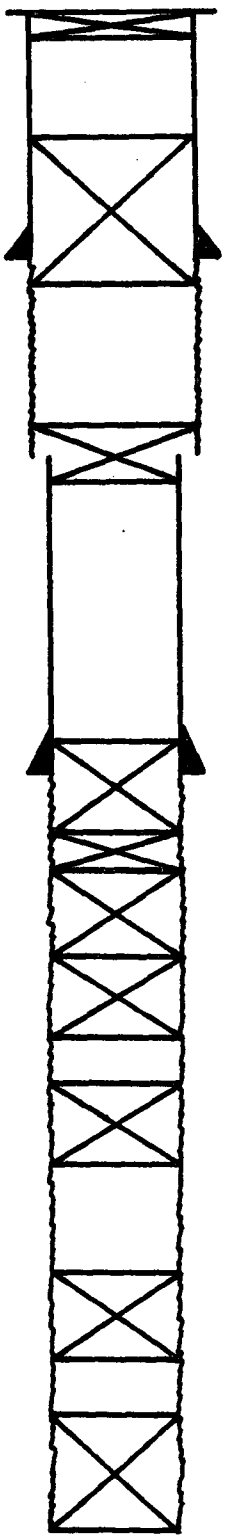
Sqzd. perfs and plugged back w/300 sx. TOC @ 6170'

Perfs 8807' - 8912'

7 7/8" hole
5½" csg. @ 8954'. Cmt'd w/926 sx.

TOC @ 2542' (calc.)

Phillips Santa Fe #73
Unit P, Sec. 26, T-17-S, R-35-E
Lea County, New Mexico



0 - 15' 10 sx. cmt. plug

172' - 360' 150 sx. cmt. plug
17½" hole

13 3/8" csg. @ 306'. Cmt'd w/350 sx.

TOC Circ.

1230' - 1330' 40 sx. cmt. plug
8 5/8" csg. cut & pulled @ 1280'

11" hole
8 5/8" csg. @ 3446' . Cmt'd w/400 sx.

TOC @ 2500' (survey)

3387' - 3890' 75 sx cmt. plug
3890' - 4160' 100 sx. cmt. plug
4160' - 5138' 395 sx. cmt. plug
5138' - 5650' 150 sx. cmt. plug

6250' - 6450' 80 sx. cmt. plug

3446' - 8999' 7 7/8" Open hole completion

7050' - 7250' 80 sx. cmt. plug

8685' - 8999' 100 sx. cmt. plug

PHILLIPS PETROLEUM COMPANY

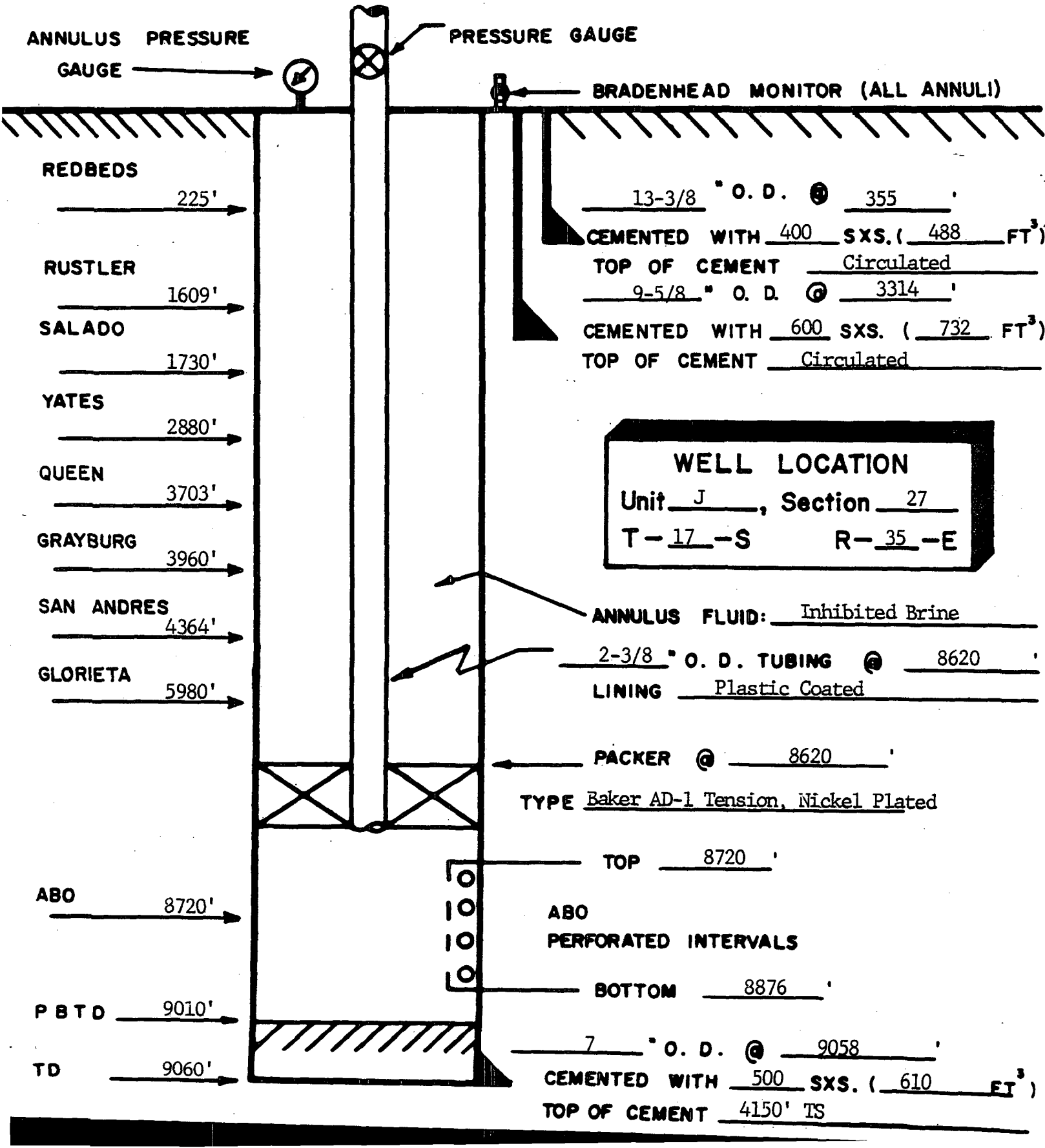
Vacuum Abo Pressure Maintenance Project

Typical Conversion to Injection Procedure for
Tract 5, Well 2; Tract 6, Well 68; Tract 13, Well 9;
Tract 13, Well 18; Tract 15, Well 3

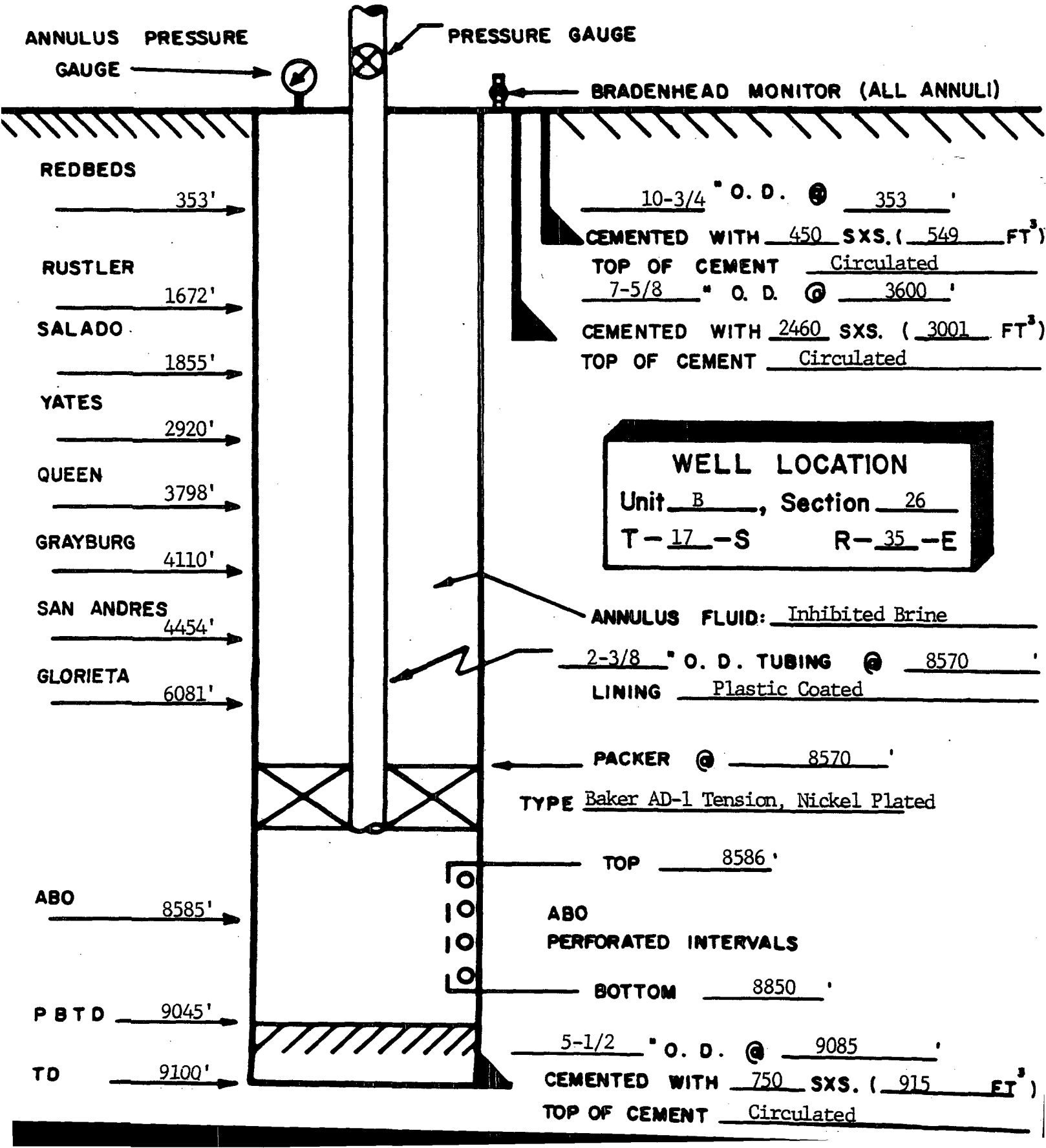
1. Move in completion unit, circulation unit, and drill string.
2. Attach blowout prevention equipment and pull the downhole production equipment out of the well.
3. Drill out the cement plugs to the original PTD of the well. Circulate the hole clean.
4. Selectivity perforate the Abo Reef formation with deep penetrating jet shots (1 or 2 per foot).
5. Acidize the perforations with 5,000 to 15,000 gallons of 15% HCl acid.
6. Swab the load back.
7. Run in and set the injection packer assembly with 2 3/8" internally plastic coated tubing at a point less than 100' above the top perforation.
8. Displace the tubing-casing annulus with inhibited brine.
9. Move out the completion unit and all other workover equipment and commence injection.

Exhibit 9

PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 1 WELL 9
CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 4 WELL 6
CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY

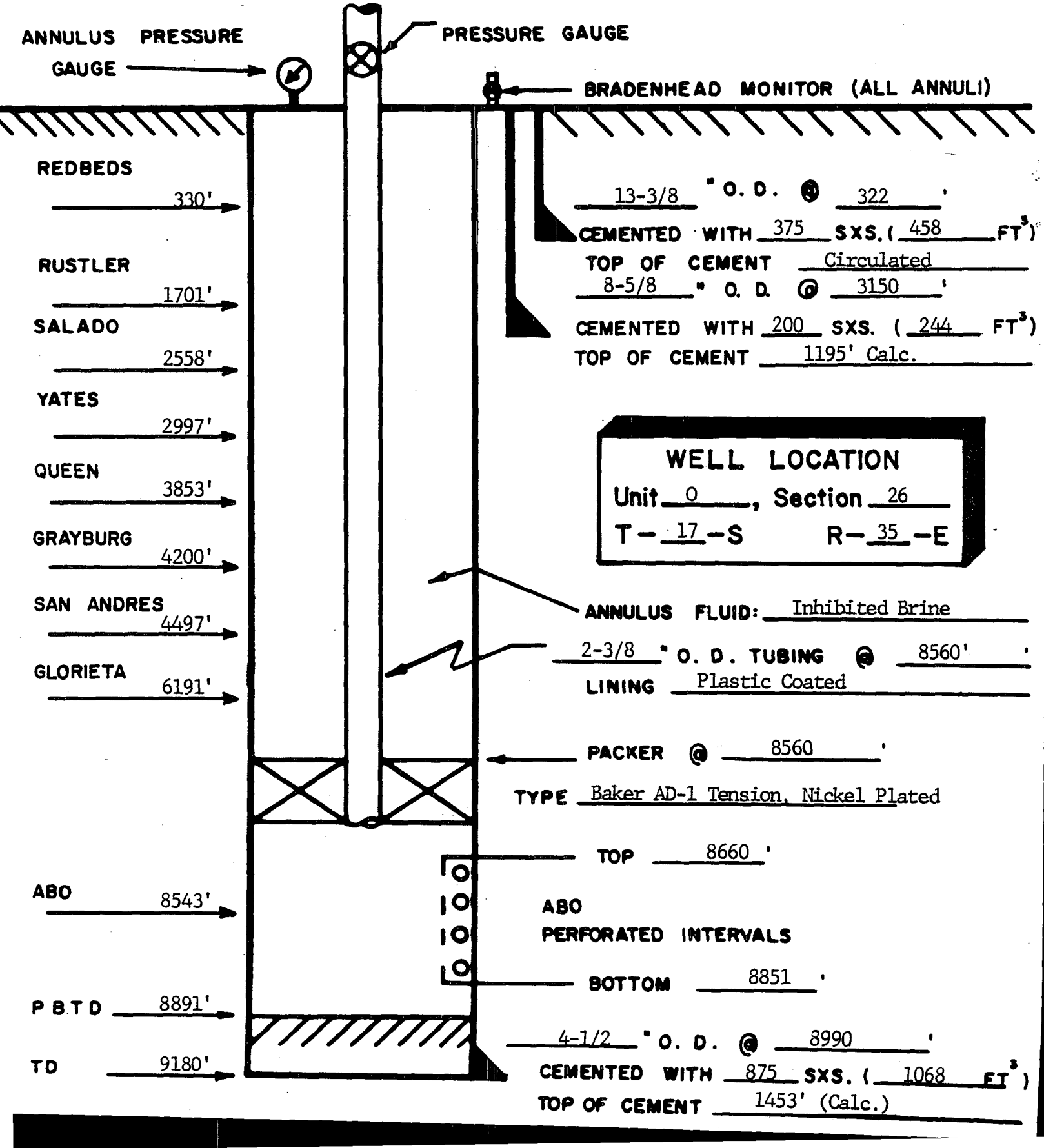
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT

N.M.O.C.D. R-3181 & R-3181A

VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO

TRACT 5 WELL 2

CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY

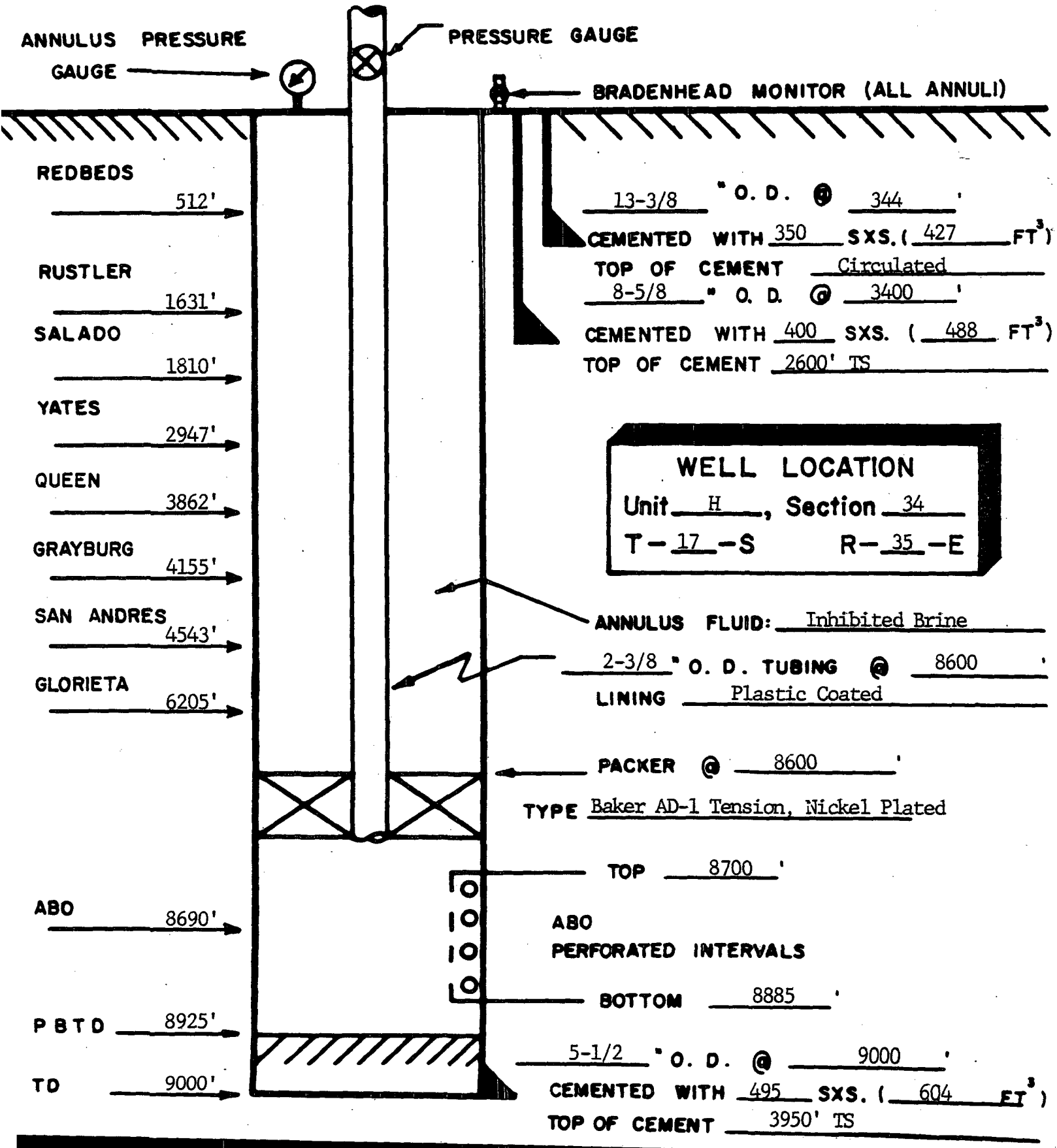
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT

N.M.O.C.D. R-3181 & R-3181A

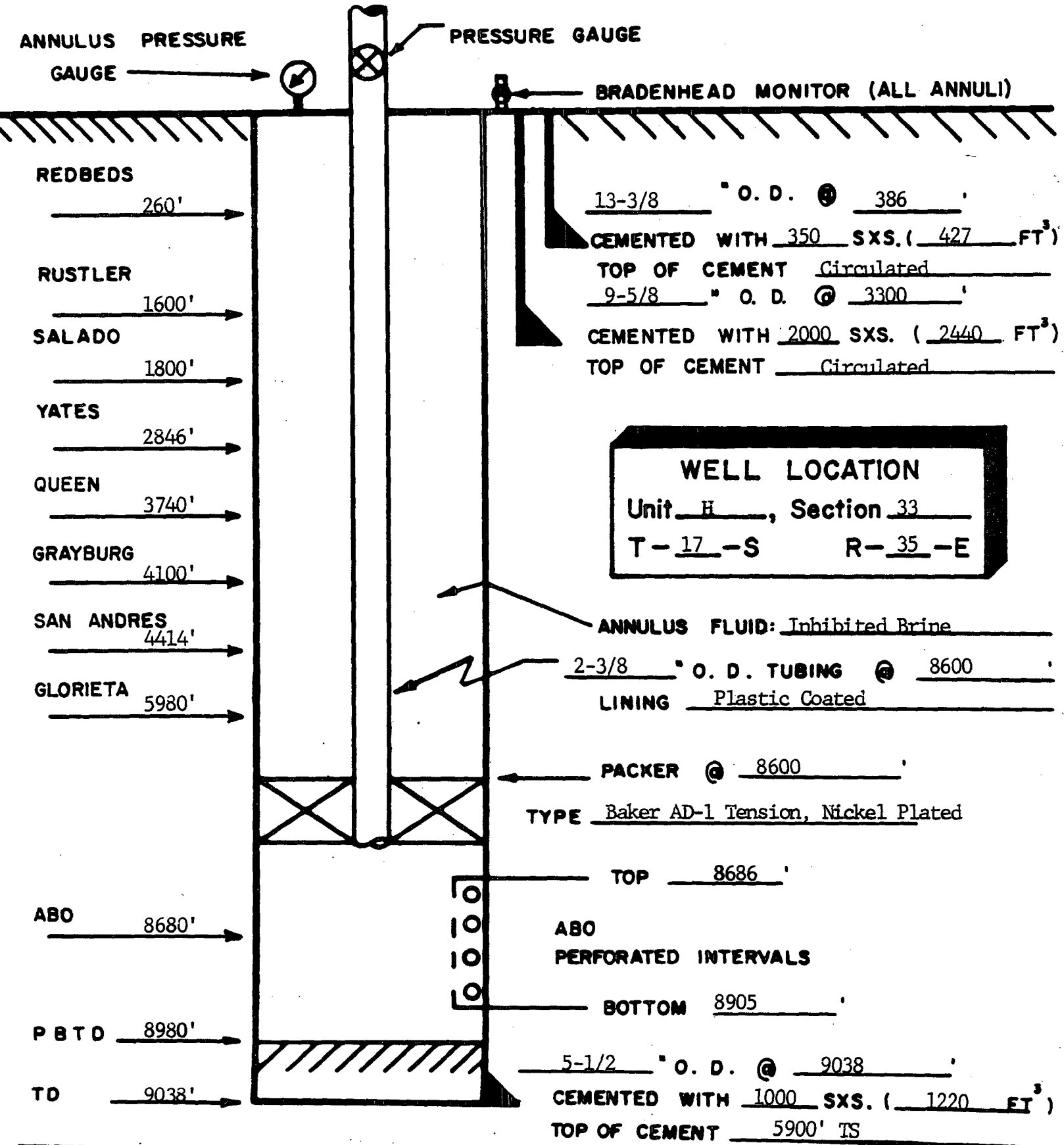
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO

TRACT 6 WELL 68

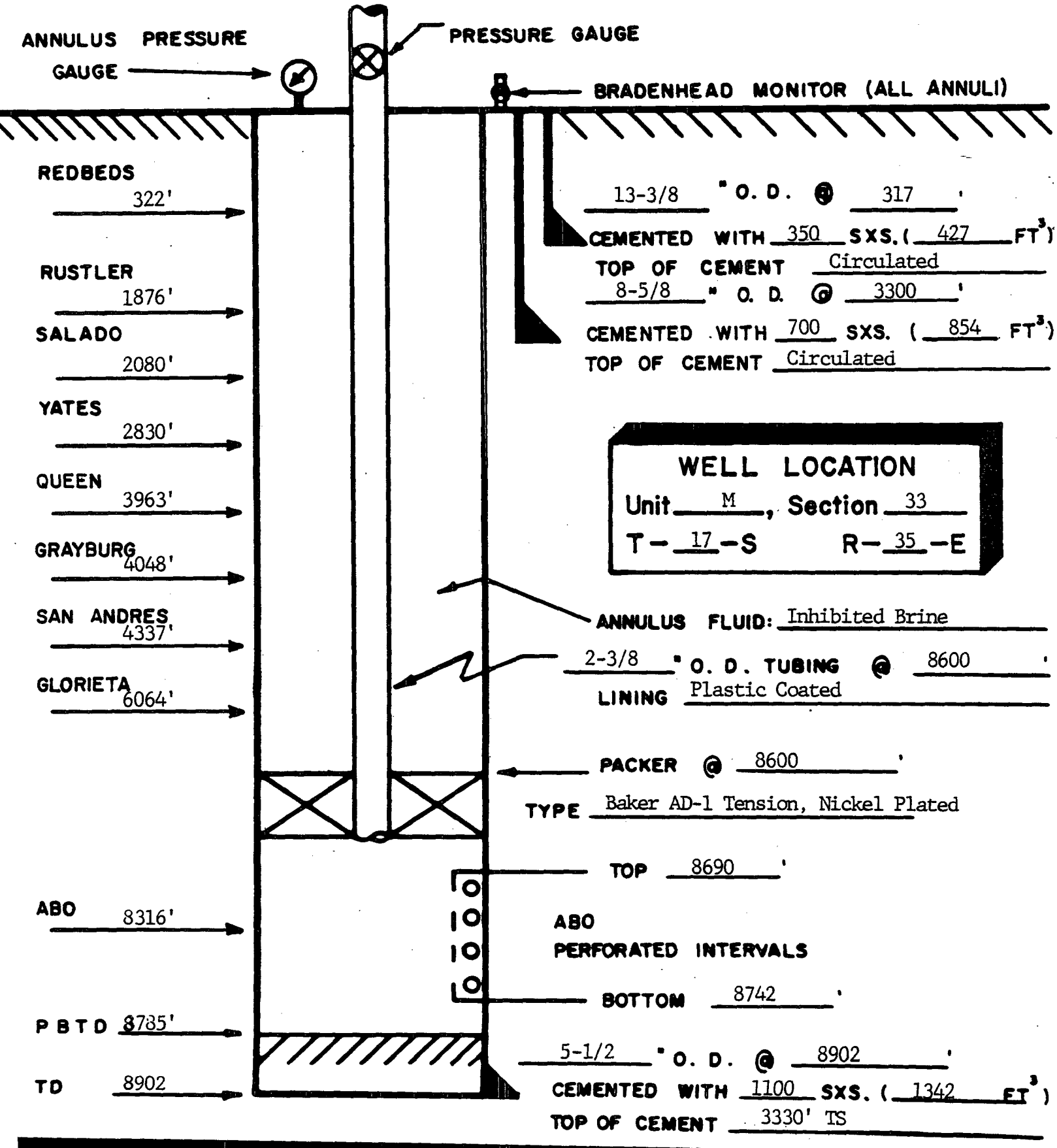
CONVERSION TO WATER INJECTION STATUS



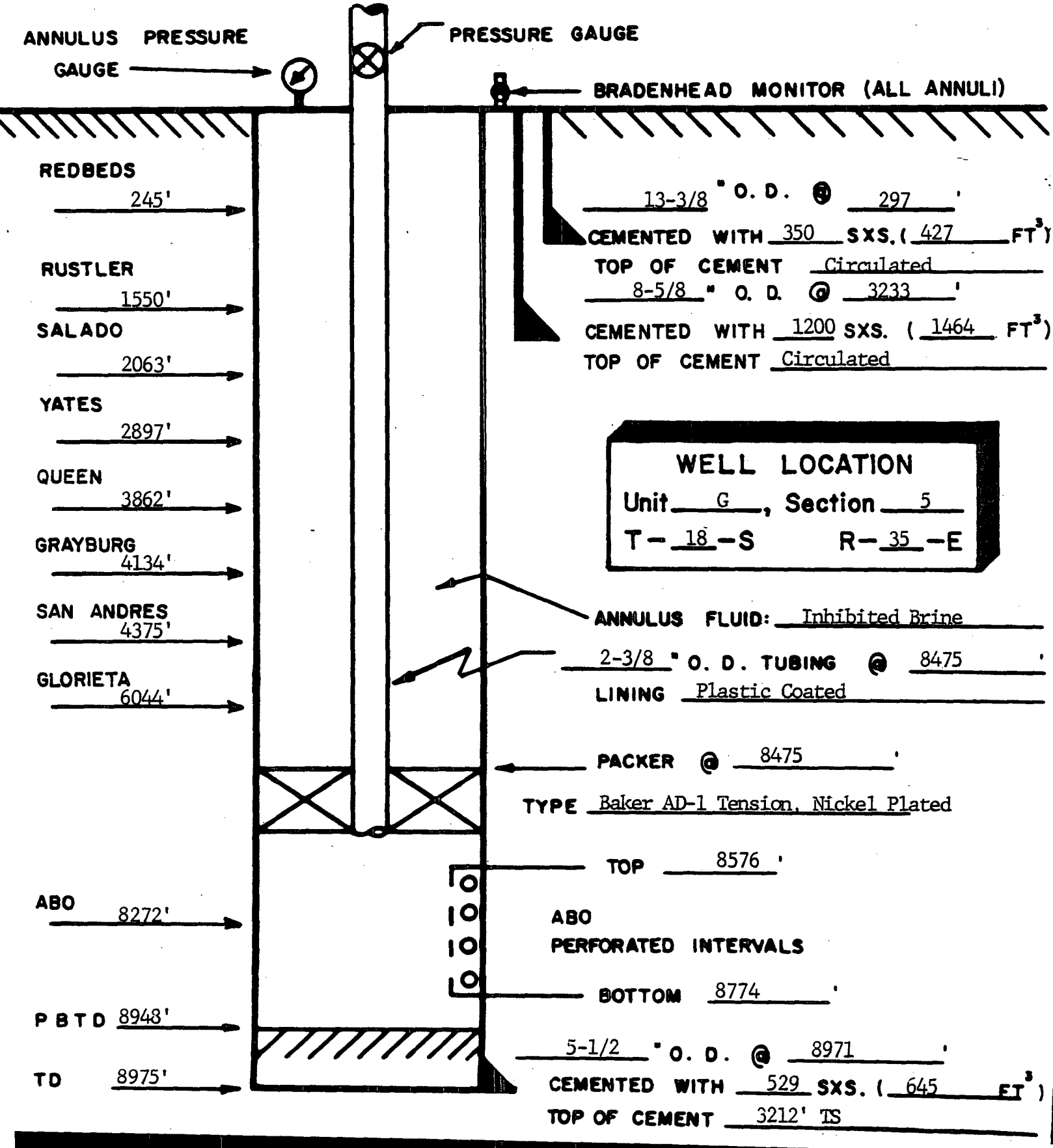
PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 9 WELL 5
CONVERSION TO WATER INJECTION STATUS



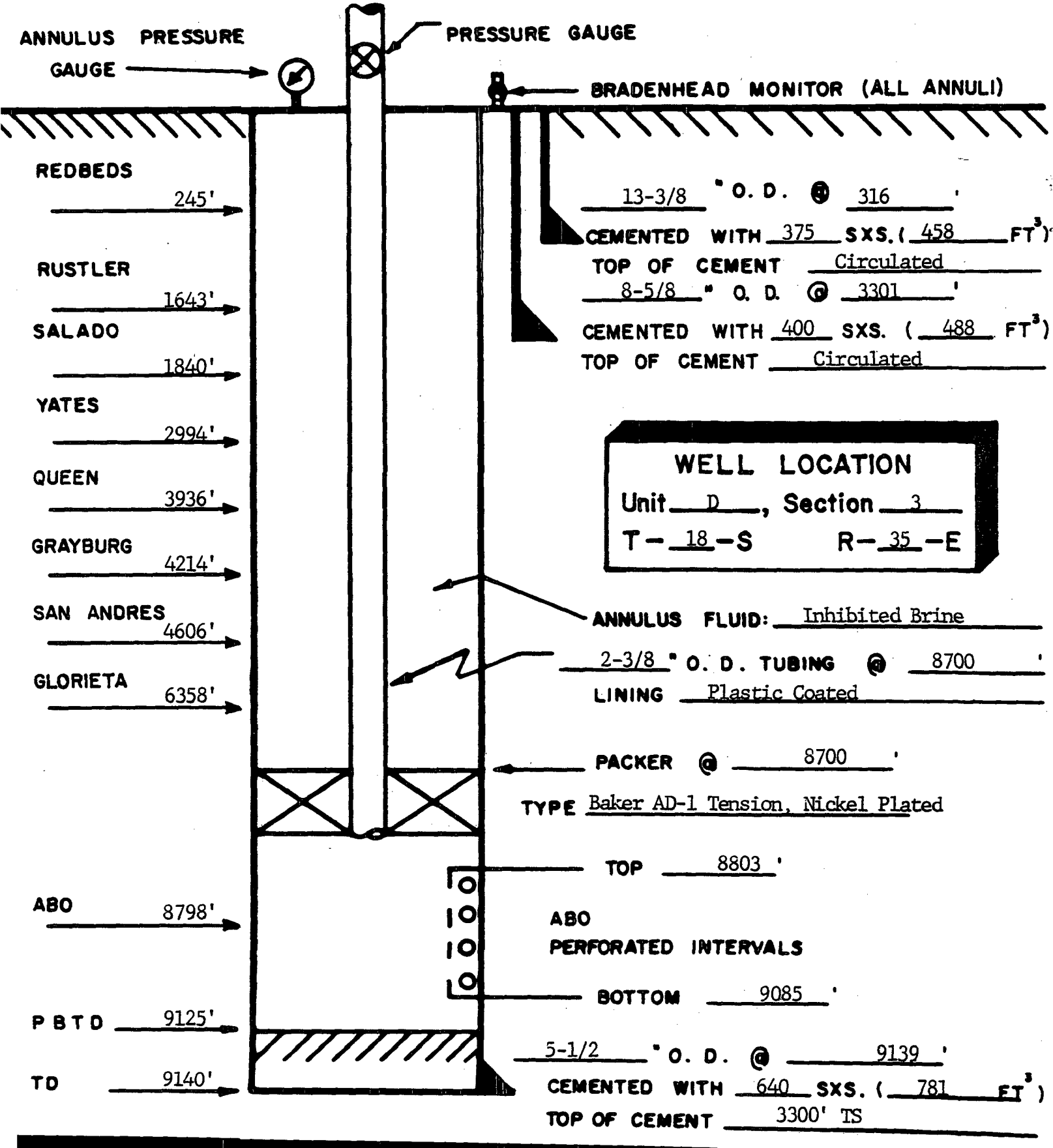
PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 12 WELL 2
CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 13 WELL 7
CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 13 WELL 9
CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY

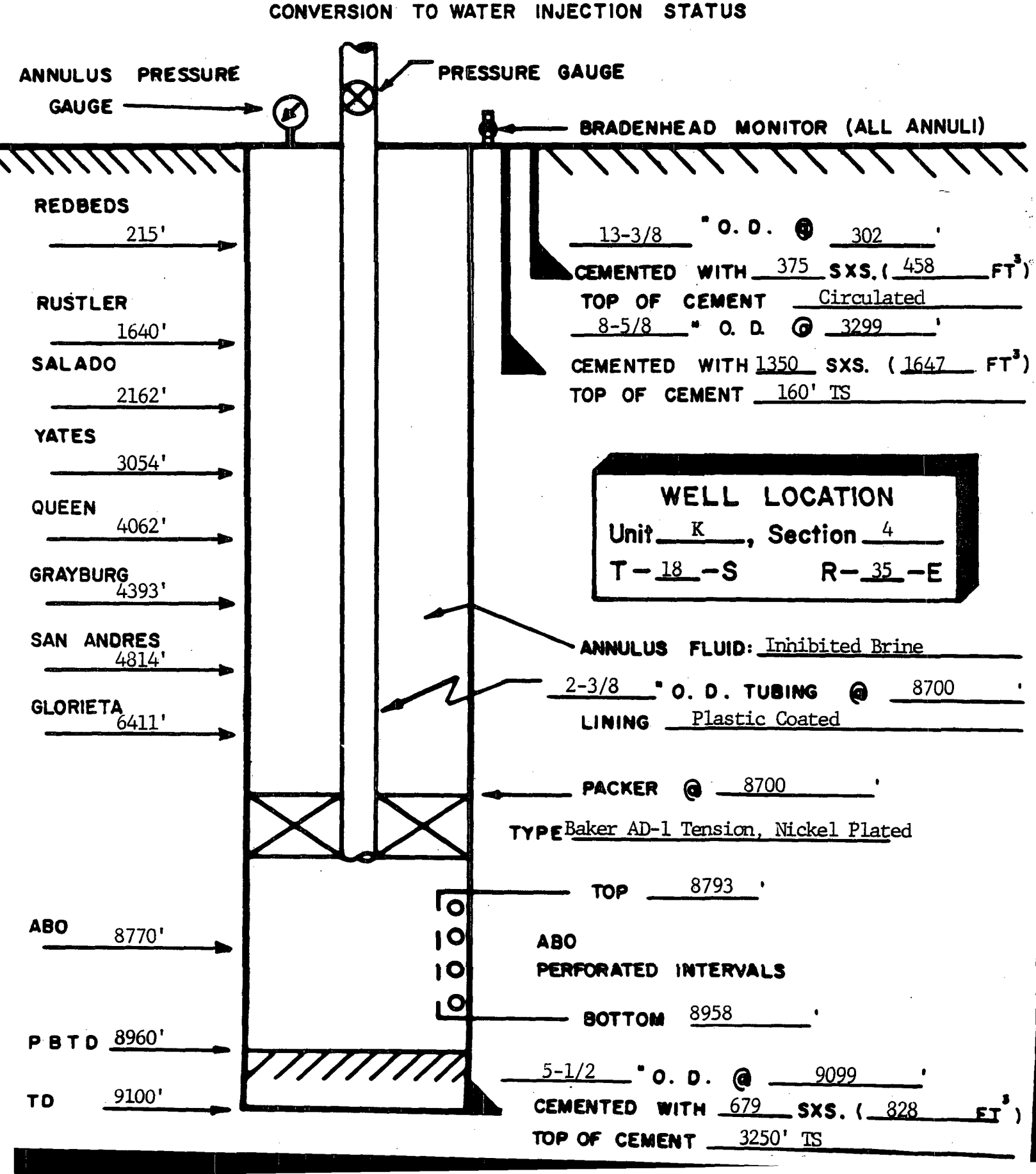
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT

N.M.O.C.D. R-3181 & R-3181A

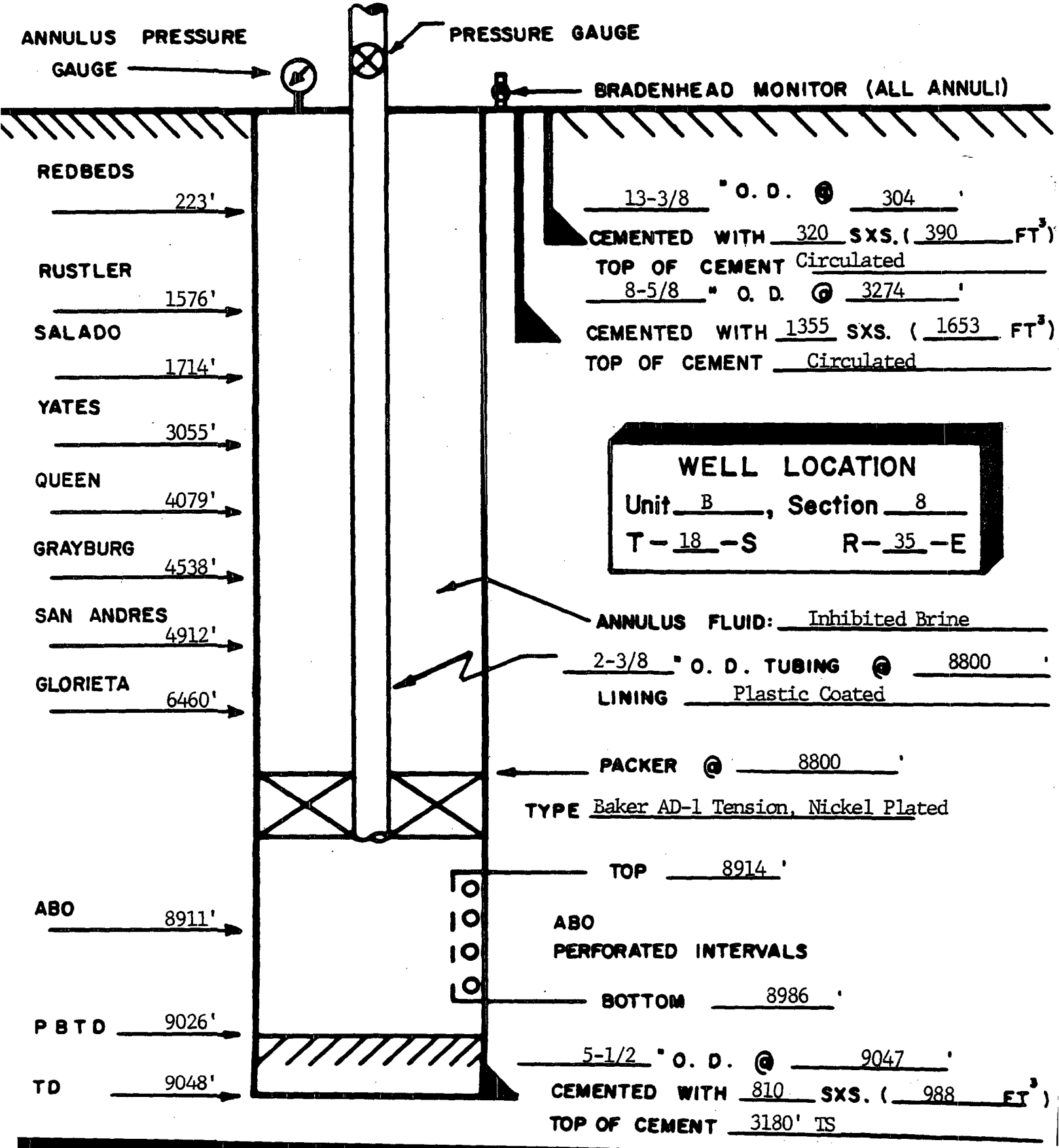
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO

TRACT 13 WELL 18

CONVERSION TO WATER INJECTION STATUS



PHILLIPS PETROLEUM COMPANY
VACUUM ABO UNIT PRESSURE MAINTENANCE PROJECT
N.M.O.C.D. R-3181 & R-3181A
VACUUM ABO REEF FIELD, LEA COUNTY, NEW MEXICO
TRACT 15 WELL 3
CONVERSION TO WATER INJECTION STATUS



VII. Data on proposed operation.

1. Average water injection shall be approximately 2000 BPD per well. Maximum daily water injection should not exceed 4000 BPD per well.

2. The system is closed.

3. The average injection pressure is anticipated to be zero. The maximum injection pressure should not exceed 1600 psig (0.2 psi/ft X 8000').

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : PHILLIPS
DATE : 11-30-82
FIELD,LEASE&WELL : RICE
SAMPLING POINT: WATER SOURCE WELL #508
DATE SAMPLED : 11-23-82

SPECIFIC GRAVITY = 1
TOTAL DISSOLVED SOLIDS = 469
PH = 7.88

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	2.6	54
MAGNESIUM	(MG)+2	4.4	54.4
SODIUM	(NA),CALC.	.01	.40
ANIONS			
BICARBONATE	(HCO3)-1	3.6	219.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.0	52
CHLORIDES	(CL)-1	2.5	88.8
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		1.3
BARIUM	(BA)+2		.02
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	2.33
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : PHILLIPS PETROLEUM
DATE : 11-30-82
FIELD,LEASE&WELL : RICE
SAMPLING POINT: SALT WATER DISPOSAL
DATE SAMPLED : 11-23-82

SPECIFIC GRAVITY = 1.09
TOTAL DISSOLVED SOLIDS = 133473
PH = 7.61

		ME/L	MG/L
CATIONS			
CIUM	(CA)+2	113.	2271.
NESIUM	(MG)+2	76.6	931.
ODIUM	(NA),CALC.	2088.	48005.
ANIONS			
ICARBONATE	(HCO3)-1	12	732.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	94.7	4550
HLORIDES	(CL)-1	2171.	76982.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		1.5
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C 86F
ARBONATE INDEX	1.31
ALCIUM CARBONATE SCALING	LIKELY
JLFATE INDEX	-5.2
ALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS. NEW MEXICO 88240

COMPANY : PHILLIPS PETROLEUM
DATE : 11-30-82
FIELD,LEASE&WELL : RICE
SAMPLING POINT: SWD 25%/ WSW #S08 75%
DATE SAMPLED : 11-23-82

SPECIFIC GRAVITY = 1.022
TOTAL DISSOLVED SOLIDS = 33721
PH = 7.8125

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	30.3	608.
MAGNESIUM	(MG)+2	22.5	274.
SODIUM	(NA),CALC.	522.	12001.
ANIONS			
BICARBONATE	(HCO3)-1	5.7	347.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	24.4	1176.
CHLORIDES	(CL)-1	544.	19312.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		1.3
BARIUM	(BA)+2		.01
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	.590
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	-42.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 11-30-82
IELD,LEASE&WELL : RICE
AMPLING POINT: SWD 50%/WSW #S08 50%
ATE SAMPLED : 11-23-82

PECIFIC GRAVITY = 1.045
OTAL DISSOLVED SOLIDS = 66973
H = 7.745

		ME/L	MG/L
CATIONS			
A IUM	(CA)+2	58.0	1162.
A ESIUM	(MG)+2	10.5	491.
DIUM	(NA),CALC.	1044.	24003.
ANIONS			
CARBONATE	(HCO3)-1	7.8	475.
RBONATE	(CO3)-2	0	0
DROXIDE	(OH)-1	0	0
LFATE	(SO4)-2	47.9	2301
LORIDES	(CL)-1	1086.	38535.
DISSOLVED GASES			
RBON DIOXIDE	(CO2)	NOT RUN	
DROGEN SULFIDE	(H2S)	NOT RUN	
YGEN	(O2)	NOT RUN	
ON(TOTAL)	(FE)		1.4
RIUM	(BA)+2		.01
NGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
RBONATE INDEX	.791
LCIUM CARBONATE SCALING	LIKELY
LFATE INDEX	-38.
LCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 11-30-82
IELD,LEASE&WELL : RICE
AMPLING POINT: SWD 75%/ WSW #S08 25%
ATE SAMPLED : 11-23-82

PECIFIC GRAVITY = 1.067
OTAL DISSOLVED SOLIDS = 100225
H = 7.6775

		ME/L	MG/L
CATIONS			
CIUM	(CA)+2	85.6	1716.
NESIUM	(MG)+2	58.6	715.
ODIUM	(NA),CALC.	1566.	36004.
ANIONS			
ICARBONATE	(HCO3)-1	9.9	604.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	71.3	3425.
HLORIDES	(CL)-1	1629.	57759.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		1.4
ARIUM	(BA)+2		.005
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C 86F
ARBONATE INDEX	1.02
ALCIUM CARBONATE SCALING	LIKELY
ULFATE INDEX	-25.
ALCIUM SULFATE SCALING	UNLIKELY

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601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 3-28-83
IELD,LEASE&WELL : VACUUM ABO BATTERIES #1
AMPLING POINT: BATTERY
ATE SAMPLED : 3-24-83

PECIFIC GRAVITY = 1.072
OTAL DISSOLVED SOLIDS = 106969
H = 6.31

		ME/L	MG/L
CATIONS			
ALCIUM	(CA)+2	120	2404.
IAGNESIUM	(MG)+2	70	850.
ODIUM	(NA),CALC.	1639.	37699.
ANIONS			
ICARBONATE	(HCO3)-1	4.4	268.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	77.0	3700
HLORIDES	(CL)-1	1748.	61986.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		96.4
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
ARBONATE INDEX	-.49
ALCIUM CARBONATE SCALING	UNLIKELY
ULFATE INDEX	-8.7
ALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 3-28-83
IELD,LEASE&WELL : VACUUM ARC BATTERY #2
AMPLING POINT: BATTERY
ATE SAMPLED : 3-24-83

PECIFIC GRAVITY = 1.052
OTAL DISSOLVED SOLIDS = 77667
H = 7.29

		ME/L	MG/L
CATIONS			
ALCIUM	(CA)+2	93.3	1870.
AGNESIUM	(MG)+2	76.6	931.
ODIUM	(NA),CALC.	1141.	26246
ANIONS			
ICARBONATE	(HCO3)-1	39.8	2428.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	87.1	4200
HLORIDES	(CL)-1	1184.	41990
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		103.
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C 86F
ARBONATE INDEX	1.24
ALCIUM CARBONATE SCALING	LIKELY
ULFATE INDEX	-6.2
ALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 3-28-83
IELD,LEASE&WELL : VACUUM ABO BATTERY #3
AMPLING POINT: BATTERY
ATE SAMPLED : 3-24-83

PECIFIC GRAVITY = 1.052
OTAL DISSOLVED SOLIDS = 77720
H = 7.06

		ME/L	MG/L
CATIONS			
ALCIUM	(CA)+2	120	2404.
AGNESIUM	(MG)+2	60	729.
ODIUM	(NA),CALC.	1139.	26200.
ANIONS			
ICARBONATE	(HCO3)-1	19.6	1195.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	87.4	4200.
HLORIDES	(CL)-1	1212.	42990.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		1.3
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
ARBONATE INDEX	.821
ALCIUM CARBONATE SCALING	LIKELY
ULFATE INDEX	5.18
ALCIUM SULFATE SCALING	LIKELY

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601 NORTH LEECH P O BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS PETROLEUM
ATE : 3-25-83
IELD,LEASE&WELL : VACUUM ABO BATTERY #4
AMPLING POINT: BATTERY
ATE SAMPLED : 3-24-83

PECIFIC GRAVITY = 1.059
OTAL DISSOLVED SOLIDS = 86726
H = 6.71

		ME/L	MG/L
CATIONS			
ALCIUM	(CA)+2	120	2404.
AGNESIUM	(MG)+2	70	850.
ODIUM	(NA).CALC.	1183.	27209.
ANIONS			
CARBONATE	(HCO3)-1	19.2	1171.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	85.3	4100.
HLORIDES	(CL)-1	1269.	44989.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		2.0
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
ARBONATE INDEX	.447
ALCIUM CARBONATE SCALING	LIKELY
ULFATE INDEX	3.10
ALCIUM SULFATE SCALING	LIKELY

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601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

OMPANY : PHILLIPS
ATE : 6-4-82
IELD,LEASE&WELL : EAST VACUUM UNIT FRESH WATER
AMPLING POINT: STORAGE TANK
ATE SAMPLED : 5-28-82

PECIFIC GRAVITY = 1.005
OTAL DISSOLVED SOLIDS = 7820
H = 7.46

		ME/L	MG/L
CATIONS			
ALCIUM	(CA)+2	4.9	98.1
AGNESIUM	(MG)+2	3.3	40.1
ODIUM	(NA),CALC.	112.	2582.
ANIONS			
ICARBONATE	(HCO3)-1	3.6	219.
ARBONATE	(CO3)-2	0	0
YDROXIDE	(OH)-1	0	0
ULFATE	(SO4)-2	58.2	2800
HLORIDES	(CL)-1	58.6	2079.
DISSOLVED GASES			
ARBON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
XYGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		.3
ARIUM	(BA)+2	NOT RUN	
ANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C 86F
ARBONATE INDEX	1.21
ALCIUM CARBONATE SCALING	LIKELY
ULFATE INDEX	-2.8
ALCIUM SULFATE SCALING	UNLIKELY

ESISTIVITY 12.6 @ 78°F

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

I, _____

ROBERT L. SUMMERS

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

ONE day ~~weeks~~

Beginning with the issue dated

SEPTEMBER 22, 19 83

and ending with the issue dated

SEPTEMBER 22, 19 83

Robert L Summers

Publisher.

Sworn and subscribed to before

me this 27 day of

September, 1983

Jane Paulowsky

Notary Public.

My Commission expires

3-27, 1987

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

OFFICIAL SEAL

Signature Jane Paulowsky

JANE PAULOWSKY

NOTARY PUBLIC - NEW MEXICO

NOTARY BOND FILED WITH SECRETARY OF STATE

My Commission Expires 3-24-87

40 **LEGAL NOTICE**
September 22, 1983

NOTICE is hereby given of the application of Phillips Petroleum Company, Attention: E.E. Clark, Manager of Operations, 4001 Penbrook, Street, Odessa, Texas 79762 — telephone (915) 367-1290, to the Oil Conservation Division, New Mexico Energy & Minerals Department, for approval of the following injection wells for the purpose of water injection.

Wells Nos.: Tract 5, Well #2, Tract 4, Well #6; Tract 1, Well #9; Tract 13, Well #9; Tract 6, Well #68; Tract 9, Well #5; Tract 15, Well #3; Tract 13, Well #18, Tract 12, Well #2; and Tract 13, Well #7.

Unit name: Vacuum Abo Unit.

Location: Township 17 & 18 South, Range 35 East, Lea County, New Mexico. The injection formation is Abo Reef at an approximate depth between 8600-9000 feet below the surface of the ground. Expected maximum injection rate is 5000 barrels per day per well and expected maximum injection pressure is 1500 pounds per square inch. Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501, within fifteen (15) days of this publication.