

# Getty

2000-12-35 >

Getty Oil Company

Central Exploration and Production Division

Oil Conservation Commission  
State Of New Mexico  
P.O. Box 1088  
Santa Fe, New Mexico

Re: Myers Langlie Mattix Unit Expansion  
Langlie Mattix Pool  
Lea County, New Mexico

Gentlemen:

**ILLEGIBLE**

Under the provisions of Order No. R-4680, Getty Oil Company respectfully requests administrative approval to expand our Myers Langlie Mattix Unit waterflood project in the Langlie Mattix Pool, Lea County, New Mexico. ~~Proposed~~

- (1) Getty Oil Company seeks authority to expand its project by injection of water into the Langlie Mattix through an additional twenty-nine (29) injection wells within the current Myers Langlie Mattix Unit boundary.
- (2) The expansion will require the conversion of seventeen (17) singly completed wells to water injection, those being:

Myers Langlie Mattix Unit

Location

<u>Well No.</u>	<u>Unit</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>	<u>R.P.</u>	<u>R.C.</u>
5	A	30	23S	37E	3470	3522 - 3540
22	K	28	23S	37E	3325	3382 - 3424
30	K	30	23S	37E	3450	3517 - 3570
32	I	25	23S	37E	3420	3478 - 3510
75	E	32	23S	37E	3400	3528 - 3572
77	G	32	23S	37E	3375	3422 - 3484
84	H	34	23S	37E	3270	3420 - 3535
87	I	33	23S	37E	3300	3364 - 3498
93	K	32	23S	37E	3400	3420 - 3450
111	O	32	23S	37E	3300	3352 - 3457
117	M	34	23S	37E	3350	3435 - 3571
130	A	5	24S	37E	3420	3470 - 3580
163	I	4	24S	37E	3400	3446 - 3487
167	I	5	24S	37E	3420	3498 - 3633
181	M	4	24S	37E	3350	3409 - 3573
189	M	2	24S	37E	3400	3400 - 3589
226	E	11	24S	37E	3350	3444 - 3540

- (3) The expansion will require drilling twelve (12) injection wells on undeveloped tracts, those being:

<u>Myers Langlie Mattix Unit</u>	<u>Location</u>					<u>Pk.</u>	<u>Pds</u>
<u>Well No.</u>	<u>Unit</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>			
15	G	30	23S	37E			
41	O	30	23S	37E			
59	A	31	23S	37E			
81	G	33	23S	37E			
126	A	4	24S	37E			
128	C	4	24S	37E			
148	G	4	24S	37E			
165	K	4	24S	37E			
183	O	4	24S	37E			
185	M	3	24S	37E			
204	C	7	24S	37E			
212	G	7	24S	37E			

- (4) Getty Oil Company seeks permission to inject water into the above 29 wells at a pressure not to exceed 1200 psig surface.

The proposed expansion will completely develop the Myers Langlie Mattix Unit on 80 acre five spot waterflood patterns. We estimate that an additional 3,360,000 barrels of oil reserves will be recovered as a result of this expansion.

The following exhibits are included:

- (1) Exhibit I is a plat showing the location of the proposed injection wells and the location of all other wells within a radius of two miles from said proposed injection wells and the formation from which said wells are producing or have produced. The plat also indicates lessees within a two mile radius.
- (2) Exhibit II is a tabular summary of all wells located within one-half mile of the proposed injection wells which penetrate the injection zone. The tabulation shows: casing diameters and depths, cement volumes used, known or calculated cement tops, completion intervals, and total depths.
- (3) Exhibit III is a type log of the area from Myers Langlie Mattix Unit Well No. 32. Tops are marked and the proposed injection interval is indicated.
- (4) Exhibit IV is downhole sketches of the proposed injection wells. The sketches show: the diameter and setting depths of all casing strings, the quantities used and tops of cement, the perforated or open hole intervals, the tubing strings, and the type and location of packers.
- (5) Exhibit V is downhole sketches of all plugged and abandoned wells within one-half mile radius of the proposed injection wells which penetrated the injection zone. The sketches show the size and location of all plugs and the date of abandonment.

- (6) Exhibit VI is a current analysis of the water which will be injected. The injection water is purchased from Getty's Jal Water System. Source of the water is the Capitan Reef. The produced water will be re-injected.
- (7) Exhibit VII is a list of the available surface instantaneous shut-in pressures after fracture treating Myers Langlie Mattix Unit wells. These pressures are based on a hydrostatic column of fresh water equal to a .433 psi/ft. gradient. As can be noted, these pressures vary. Much of this variation is probably due to pressure gauge differences. We therefore averaged all the pressures to account for the gauge differences and came up with an average of approximately 1200 psig. We believe water can be injected up to this surface pressure without causing formation fracturing.

In the future, if the formation fracturing pressure is determined to be in excess of 1200 psig, supportive information will be submitted.

A copy of this application has been sent to the following offset operators by certified mail:

Amoco Production Company  
Drawer A  
Levelland, Texas 79336

Atlantic Richfield Company  
Box 1710  
Hobbs, New Mexico 88240

Tom Brown, Inc.  
Box 2608  
Midland, Texas 79701

Carter Foundation Producing Company  
P.O. Box 900  
Kermit, Texas 79745

Continental Oil Company  
Box 460  
Hobbs, New Mexico 88240

El Paso Natural Gas Company  
600 Bld. of the Southwest  
Midland, Texas 79701

Gulf Energy and Minerals - U.S.  
P.O. Box 670  
Hobbs, New Mexico 88240

John H. Hendrix Corporation  
525 Midland Tower  
Midland, Texas 79701

King, Warren & Dye  
Box 1505  
Midland, Texas 79701

Pearson-Sibert Oil Company of Texas  
901 W. Missouri  
Midland, Texas 79701

Petroleum Corporation of Texas  
Box 911  
Breckenridge, Texas 76024

James L. Evans  
P.O. Box 900  
Padre Island, Texas 78597

Imperial American Management Company  
507 Midland Savings Bld.  
Midland, Texas 79701

Very truly yours,

*Dale R. Crockett*

Dale R. Crockett  
Area Superintendent

*Cable Pipe Project is now in line  
also about 1200 feet completed.*

ELB/cap

Exhibit I  
Two Mile Radius Map

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

Exhibit II  
Tabular Summary Of All Wells Within  
One-Half Mile Of The Proposed Injection  
Wells Which Penetrate The Injection Zone

WELL NAME	WELL NO.	WELL LOCATION			CASING SIZE		HALF MILE RADIUS WELLS		CEMENTING NO. SX.	CEMENT TOP TD	PAY INTERVAL
		UL.	SEC.	T	R	DEPTH	WELL	WELL			
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	4	G	34	23S	37E	13 3/8 9 5/8 7	329 2917 9510	300 1500 650	Surface Surface(Calc) 3804(Calc)	9827	5287' - 5794' Blimebry
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	16	G	34	23S	37E	7 5/8 4 1/2	336 3632	175 800	Surface(Calc) 1004(Calc)	3638	3393' - 3555' Queen
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	12	J	34	23S	37E	9-5/8 7	325 3600	300 800	Surface 117	3600	3404' - 3572' Queen
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	2	B	34	23S	37E	13 3/8 9 5/8 7	314 2928 9337	300 1500 675	Surface(Calc) Surface(Calc) 3412(Calc)	9371	5298' - 5428' Teague-Blimebry
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	18	B	34	23S	37E	13 3/8 7 5/8 5 1/2	322 2918 9582	300 800 500	Surface 375 5350	9737	3420' - 3545' Queen
Carter Found. Prod. Co. - Mattix federal	2	C	3	24S	37E	13 3/8 7	302 3309	175 875	Surface Surface Surface	3605	3432' - 3605' Queen
Carter Found. Prod. Co. - Mattix Federal	4	D	3	24S	37E	9 5/8 7	300 3678	300 1000	Surface Surface	3675	3501' - 3612' Queen
Carter Found. Prod. Co. - Mattix Federal	5	E	3	24S	37E	9 5/8 7	300 3667	300 1000	Surface Surface	3667	3496' - 3614' Queen

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION UL. SEC. T.</u>	<u>R</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>HALF MILE RADIUS WELLS</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>ID</u>	<u>PAY INTERVAL</u>
Carter Found. Prod. Co. -	3	J	3	24S	37E	13 3/8	312	175	3674	3497' - 3655'
Mattix Federal						7	3315	875		Queen
Carter Found. Prod. Co. -	6	0	3	24S	37E	9 5/8	311	300		3496' - 3646'
Mattix Federal						7	3670	1000		Queen
Carter Found. Prod. Co. -	1	F	3	24S	37E	8 3/4	1294	300		3508' - 3652'
Mattix Federal						7	3407	400		Queen
Atlantic Richfield Co. -	1	M	6	24S	37E	12 1/2	272	200		3246' - 3503'
						9 5/8	2780	700		Queen
						7	3246	100		
Jim Camp "WN"										
Pearson Sibert Oil Co. -	1	A	10	24S	37E	9 5/8	326	250		3507' - 3621'
Mattix Federal						5 1/2	3425	400		Queen
Pearson Sibert Oil Co. -	1	D	11	24S	37E	10 3/4	228	250		3608' - 3654'
Fowler Hair						5 1/2	3508	400		Queen
Continental Oil Company -	2	A	12	24S	37E	8 5/8	1250	450		3442' - 3573'
Vaughn B-12						5 1/2	3652	1225		Queen

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION</u>			<u>CASING</u>		<u>HALF MILE RADIUS WELLS</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>ID</u>	<u>PAY INTERVAL</u>
		<u>UL.</u>	<u>SEC.</u>	<u>T</u>	<u>R</u>	<u>SIZE</u>					
Carter Found. Prod. Co. - Bline-Cade Unit	11	P	34	23S	37E	8 5/8 5 1/2	355 3648	150 1450	Surface Surface	3650	3490'-3560' Queen
Carter Found. Prod. Co. - Bline-Cade Unit	14	I	34	23S	37E	7 5/8 4 1/2	337 3690	150 800	Surface(Calc) Surface(Calc)	3660	3396'-3564' Queen
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	17	P	34	23S	37E	7 5/8 4 1/2	355 3617	175 800	Surface 350'	3625	3412'-3571' Queen
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	1	A	34	23S	37E	13 3/8 9 5/8 7	322 2999 7104	300 1400 500	Surface(Calc) Surface(Calc) 2715(Calc)	7484	5312'-5789' Teague-Blinebry
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	2	H	34	23S	37E	13 3/8 9 5/8 7	324 2914 7174	300 1450 500	Surface(Calc) Surface(Calc) 2785(Calc)	7331	5290'-5780' Teague-Blinebry
Carter Found. Prod. Co. - E. C. Hill "B" Fed.	3	B	34	23S	37E	13 3/8 9 5/8 7	314 2928 9337	300 1500 675	Surface(Calc) Surface(Calc) 3412(Calc)	9371	5298'-5428' Teague-Blinebry
Carter Found. Prod. Co. - E. C. Hill "M"	1	H	34	23S	37E	13 3/8 9 5/8 9100	331 2919 9100	300 1400 650	Surface(Calc) Surface(Calc) 3394(Calc)	9290	9110'-9290' Teague-McKee (Simpson)
Carter Found. Prod. Co. - E. C. Hill "M"	4	A	34	23S	37E	13 3/8 9 5/8 7	323 2902 9399	300 2000 265	Surface(Calc) Surface(Calc) 7072(Calc)	9400	9120'-9310' Teague-McKee (Simpson)

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION UL. SEC.</u>	<u>HALF MILE RADIUS WELLS</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>ID</u>	<u>PAY INTERVAL</u>
Imperial Management Co. -	1	B 33 23S 37E	9 5/8 1053 7 6350	425 550	Surface 1522(Calc)	6350	5741'-5923 Teague-Blinebry		
Fanning "B"	1	A 33 23S 37E	9 5/8 1052 7 6249	370 500	Surface 1960(Calc)	6287	5405'-5883' Teague-Blinebry 611'-6268' Imperial Tubb- Drinkard		
James L. Fanning -	6	H 33 23S 37E	8 5/8 1050 5 1/2 5700	460 500	Surface 1892(Calc)	5700	5410'-5630' Teague-Blinebry		
Carter Found. Prod. Co. -	1	I 34 23S 37E	13 3/8 308 7 3301	175 800	Surface 150	3562	3429'-3528' Queen		
Carter Found. Prod. Co. -	2	O 34 23S 37E	13 3/8 301 7 3301	175 850	Surface Surface	3536	3410'-3534' Queen		
Carter Found. Prod. Co. -	3	P 34 23S 37E	13 3/8 302 7 3302	175 850	Surface Surface	3533	3406'-3533' Queen		
Carter Found. Prod. Co. -	7	H 34 23S 37E	13 3/8 302 7 3297	175 875	Surface Surface	3554	3485'-3554' Queen		
Carter Found. Prod. Co. -	8	A 34 23S 37E	13 3/8 311 7 3311	200 875	Surface Surface	3538	3418'-3505' Queen		

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION UL. SEC. T</u>	<u>R</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>HALF MILE RADIUS WELLS</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>ID</u>	<u>PAY INTERVAL</u>
Petroleum Corporation of Texas - Lankford	1	G 25 23S 36E	13 8 5 1/2	60 1195 3460	75 700 200	Surface(Calc) Surface(Calc) 1937(Calc)	3637	2955'-3190 Yates		
John H. Hendrix - Steeler	1	0 19 23S 37E	8 5 1/2	367 3689	250 235	Surface 1899(Calc)	3700	3362'-3625' Queen		
Gulf Oil Corporation - M. K. Stewart	3	M 28 23S 37E	8 5 1/2	892 6294	350 510	Surface 2478(Calc)	6300	5426'-5778' Teague-Blinebry		
Gulf Oil Corporation - M. K. Stewart	4	I 28 23S 37E	8 5 1/2	891 6275	340 510	Surface 2390(Calc)	6277	5408'-5766' Teague-Blinebry		
Gulf Oil Corporation - M. K. Stewart	5	J 28 23S 37E	8 5 1/2	907 5897	350 430	Surface 2622(Calc)	5900	5425'-5784 Teague-Blinebry		
Gulf Oil Corporation - C. E. La Munyon	32	C 28 23S 37E	8 5 1/2	884 6300	340 500	Surface 2492(Calc)	6308	5447'-5772 Teague-Blinebry		
Gulf Oil Corporation - C. E. La Munyon	33	G 28 23S 37E	8 5 1/2	888 6287	350 510	Surface 2403(Calc)	6300	5456'-5826' Teague-Blinebry		
Gulf Oil Corporation - C. E. La Munyon	38	F 28 23S 37E	8 5 1/2	912 5899	350 440	Surface 2548(Calc)	5900	5418'-5656' Teague-Blinebry		
Tom Brown, Inc.	1	E 28 23S 37E	8 5 1/2	317 3652	150 200	Surface 2560	3652	3568'-3652' Queen		

<u>WELL NAME</u>	<u>WELL LOCATION</u>				<u>CASING SIZE</u>	<u>DEPTH</u>	<u>HALF MILE RADIUS WELLS</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>TD</u>	<u>PAY INTERVAL</u>
	<u>WELL NO.</u>	<u>UL.</u>	<u>SEC.</u>	<u>T</u>	R						
Myers Langlie Mattix Unit	225	H	10	24S	37E	10 3/4 5 1/2	210 3396	210 525	Surface(Calc) Surface(Calc)	3625	3396'-3625'
Myers Langlie Mattix Unit	235	I	7	24S	37E	9 5/8 7	1210 3410	300 300	70(Calc) 77(Calc)	3570	3410'-3570
Myers Langlie Mattix Unit	236	J	7	24S	37E	9 5/8 7	1205 3419	300 200	65(Calc) 1663(Calc)	3585	3419'-3585'
Myers Langlie Mattix Unit	246	0	7	24S	37E	9 5/8 7	1225 3407	300 300	85(Calc) 774(Calc)	3595	3407'-3595'

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION</u>	<u>HALF SEC.</u>	<u>R</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>TD</u>	<u>PAY INTERVAL</u>
Myers Langlie Mattix Unit	190	N 2 24S 37E	8 5/8 5 1/2	1150 3500	450 200	Surface 2076(Calc)	3600	3500'-3600'		
Myers Langlie Mattix Unit	192	C 10 24S 37E	8 5/8 5 1/2	258 3347	200 800	Surface Surface	3652	3347'-3652'		
Myers Langlie Mattix Unit	194	A 9 24S 37E	10 3/4 5 1/2	227 3605	200 300	Surface(Calc) 1575(Calc)	3605	3505'-3554'		
Myers Langlie Mattix Unit	195	B 9 24S 37E	8 5/8 5 1/2 DY @ 1165	265 3519	150 200 150	67'(Calc) 1995(Calc) Surface(Calc)	3608	3519'-3608'		
Myers Langlie Mattix Unit	196	C 9 24S 37E	8 5/8 5 1/2	260 3525	150 200	Surface(Calc) 2001(Calc)	3595	3525'-3595'		
Myers Langlie Mattix Unit	198	A 8 24S 37E	8 5/8 5 1/2	282 3398	225 300	Surface(Calc) 1113(Calc)	3686	3398'-3686'		
Myers Langlie Mattix Unit	199	B 8 24S 37E	8 5/8 5 1/2	286 3390	225 300	Surface 1105(Calc)	3561	3390'-3561'		
Myers Langlie Mattix Unit	202	A 7 24S 37E	8 5/8 4 1/2	360 3671	225 350	Surface 1005(Calc)	3671	3446'-3600'		
Myers Langlie Mattix Unit	203	B 7 24S 37E	8 5/8 4 1/2	354 3703	225 1510	Surface 720	3705	3423'-3601'		
Myers Langlie Mattix Unit	210	E 7 24S 37E	13 5/8 5 1/2	306 2748 3480	300 600 445	Surface 2748(Calc) Surface	3595	3480'-3595'		

WELL NAME	WELL NO.	WELL LOCATION			CASING		CEMENTING NO. SX.	CEMENT TOP	TD	PAY INTERVAL
		UL.	SEC.	T	SIZE	DEPTH				
Myers Langlie Mattix Unit	211	F	7	24S	37E	13 9 7	295 1240 3398	300 425 925	Surface(Calc) Surface(Calc) Surface	3520'-3592
Myers Langlie Mattix Unit	213	H	7	24S	37E	13 9 7	328 1248 3400	300 405 475	Surface(Calc) Surface(Calc) Surface	3400'-3574
Myers Langlie Mattix Unit	214	E	8	24S	37E	10 5 1/2	323 3460	200 300	Surface(Calc) 1175(Calc)	3460'-36000
Myers Langlie Mattix Unit	217	H	8	24S	37E	8 5/8 1/2	1198 2638	625 600 100	Surface(Calc) Surface(Calc) Surface(Calc)	3410'-35800
Myers Langlie Mattix Unit	218	H	9	24S	37E	13 8 7	239 1285 3143	200 200 150	Surface(Calc) 247(Calc) 1826(Calc)	3412'-35500
Myers Langlie Mattix Unit	219	F	9	24S	37E	10 5 1/2	258 3138	300 350	Surface 472(Calc)	3138'-35450
Myers Langlie Mattix Unit	222	E	10	24S	37E	10 7	255 3367	250 1100	Surface 2090	3367'-36400
Myers Langlie Mattix Unit	224	G	10	24S	37E	8 5 4" 1/2	510 3311 3145-3672	270 750 400	Surface Surface(Calc) 3145(Calc)	3530'-36024

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION UL. SEC. T</u>	<u>R</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>HALF MILE</u>	<u>RADIUS</u>	<u>WELLS</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>TD</u>	<u>PAY INTERVAL</u>
Myers Langlie Mattix Unit	154	E 2 24S 37E	8 5/8	363	5 1/2	3399	250	Surface	250	Surface	1250	3399' - 3640
Myers Langlie Mattix Unit	157	K 2 24S 37E	8 5/8	389	5 1/2	3438	250	Surface	250	Surface	1300	3664
Myers Langlie Mattix Unit	158	L 2 24S 37E	8 5/8	367	5 1/2	3440	250	Surface	250	Surface	1250	3596
Myers Langlie Mattix Unit	159	I 2 24S 37E	10 3/4	261	7	3325	150	Surface	150	Surface	800	3440' - 3596
Myers Langlie Mattix Unit	169	K 5 24S 37E	8 5/8	325	5 1/2	3597	300	Surface	300	Surface	2410	3619
Myers Langlie Mattix Unit	173	K 6 24S 37E	9 5/8	555	7	3464	400	Surface	400	Surface	331	3597
Myers Langlie Mattix Unit	174	N 6 24S 37E	9 5/8	363	7	3419	400	Surface	400	Surface	525	3467' - 3620
Myers Langlie Mattix Unit	175	O 6 24S 37E	8 5/8	349	5 1/2	3620	300	Surface	300	Surface	2570	3620
Myers Langlie Mattix Unit	179	O 5 24S 37E	9 5/8	1180	7	3455	750	Surface(Calc)	750	Surface	1970	3401' - 3570
Myers Langlie Mattix Unit	180	P 5 24S 37E	15 1/2	23	8 1/4	3446	20	Surface	20	Surface	100	3446' - 3646

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION</u>	<u>CASING SIZE</u>	<u>DEPTH</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>TD</u>	<u>PAY INTERVAL</u>
		<u>UL.</u> <u>SEC.</u> <u>T</u>	<u>R</u>	<u>SZ</u>				
Myers Langlie Mattix Unit	116	P 33 23S	37E	8 5/8 5 1/2	297 3425	200 300	3598	3428' - 3598' 2 stage
Myers Langlie Mattix Unit	118	N 34 23S	37E	10 3/4 5 1/2	295 3306	150 400	3570	3454' - 3538'
Myers Langlie Mattix Unit	127	B 4 24S	37E	13 8 5/8 7 3349	416 1243	50 100 125	3620	3349' - 3620'
Myers Langlie Mattix Unit	129	D 4 24S	37E	7 5/8 4 1/2	408 3680	300 400	3680	3498' - 3597
Myers Langlie Mattix Unit	132	C 5 24S	37E	8 5/8 4 1/2	352 3734	225 335	3734	3430' - 3694'
Myers Langlie Mattix Unit	144	G 5 24S	37E	7 5/8 4 1/2	1186 3687	480 500	3687	3410' - 3542
Myers Langlie Mattix Unit	145	H 5 24S	37E	13 10 3/4 8 5/8 5 1/2	174 593 1289 3430	85 Mud 200 200	3588	3410' - 3588'
Myers Langlie Mattix Unit	146	E 6 24S	37E	8 5/8 5 1/2	1341 3400	Surface 1819(Calc)	3590	3400' - 3547'
Myers Langlie Mattix Unit	149	H 5 24S	37E	12 8 5/8 7 3459	201 1250 100	Surface Surface(Calc) 2561(Calc)	3701	3459' - 3665'

HALF MILE RADIUS WELLS										
<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION</u>	<u>CASING</u>	<u>DEPTH</u>	<u>CEMENTING</u>	<u>CEMENT TOP</u>	<u>PAY</u>	<u>TD</u>	<u>INTERVAL</u>	
		<u>UL.</u>	<u>SEC.</u>	<u>T</u>	<u>SIZE</u>	<u>NO. SK.</u>				
Myers Langlie Mattix Unit	89	K	33	23S	37E	10 1/4 5 1/2	150 300	Surface(Calc) 1355(Calc)	3640	3503' - 3626'
Myers Langlie Mattix Unit	91	I	32	23S	37E	8 5/8 5 1/2	225 325	Surface 2393	3692	3413' - 3690'
Myers Langlie Mattix Unit	94	L	32	23S	37E	7 5/8 4 1/2	180 200	Surface 1809	3720	3537' - 3603'
Myers Langlie Mattix Unit	95	I	32	23S	37E	8 5/8 5 1/2	400 300	Surface 1377(Calc)	3663	3510' - 3618'
Myers Langlie Mattix Unit	109	M	32	23S	37E	10 3/4 7 5/8 3 1/2	250 400 250	Surface Surface 1580(Calc)	3676	3598' - 3506'
Myers Langlie Mattix Unit	112	P	32	23S	37E	9 5/8 7	303 3660	Surface 2067	3660	3420' - 3590'
Myers Langlie Mattix Unit	113	M	33	23S	37E	8 5/8 5 1/2	225 325	Surface 1350(Calc)	3685	3474' - 3685'
Myers Langlie Mattix Unit	114	N	33	23S	37E	9 5/8 7	1420 3300	Surface(Calc) 667(Calc)	3600	3300' - 3600
Myers Langlie Mattix Unit	115	O	33	23S	37E	12 1/2 8 5/8 5 1/2	250 700 100	13'(Calc) Surface(Calc) Surface(shot holes in csg. & circulated cement)	3623	3575' - 3623'

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>WELL LOCATION UL. SEC.</u>	<u>HALF MILE RADUS WELLS</u>	<u>CASTING SIZE</u>	<u>DEPTH</u>	<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>
"yers Langlie Mattix Unit	73	G 31 23S 37E	7 5/8 1205	5 1/2	3480	500 600	Surface Surface
"yers Langlie Mattix Unit	74	H 31 23S 37E	8 5/8 500	5 1/2	3708	225 1000	Surface Surface
"yers Langlie Mattix Unit	78	H 32 23S 37E	13 1/4 191	10 3/4	230	190 100	Surface Surface
"yers Langlie Mattix Unit	79	E 33 23S 37E	15 1/2 214	8 5/8 1225	3350	150 100 200	Surface 280(Calc) 124(Calc)
"yers Langlie Mattix Unit	80	P 33 23S 37E	12 1/2 170	8 5/8 1342	3440	25 400	(liner 2989-3620) 2989
"yers Langlie Mattix Unit	83	E 34 23S 37E	8 5/8 330	5 1/2 3615	300 300	uncemented 1212(Calc) Surface	2230
"yers Langlie Mattix Unit	85	K 34 23S 37E	8 5/8 350	5 1/2 3572	300 3572	Surface 2220	3
"yers Langlie Mattix Unit	86	L 34 23S 37E	8 5/8 331	5 1/2 3595	300 300	Surface 2300	3
"yers Langlie Mattix Unit	87	I 33 23S 37E	8 5/8 935	5 1/2 6017	650 560	Surface 2600	6
"yers Langlie Mattix Unit	88	J 33 23S 37E	8 5/8 331	5 1/2 3595	300 300	Surface 2300	3

WELL NAME	WELL NO.	WELL LOCATION		CASING SIZE	DEPTH	HALF MILE RADIUS	WELLS	CEMENTING NO. SX.	CEMENT TOP	TD	PAY INTERVAL
		UL.	SEC.								
Myers Langlie Mattix Unit	47	M	28	23S	37E	9 5/8 5 1/2	309 3650	200 300(Stg)	Surface 413'	3655	3488' - 3616' Stg. tool @ 1175' Upper 100 sxs Lower 200 sxs
Myers Langlie Mattix Unit	49	C	34	23S	37E	13 3/8 9 5/8	296 2857 9790	300 2500 660	Surface Surface 3996(Calc.)	2043'	(7" cut & pulled from 3875' - plug- ged to 3500' - No record of plug)
Myers Langlie Mattix Unit	50	D	34	23S	37E	8 5/8 5 1/2	322 3598	300 300	Surface 2200	3598	3426' - 3528'
Myers Langlie Mattix Unit	51	A	33	23S	37E	10 3/4 7	265 3630	200 400	Surface 119(Calc.)	3630	3372' - 3598'
Myers Langlie Mattix Unit	53	C	33	23S	37E	8 5/8 5 1/2	265 3649	200 400	Surface 603(Calc.)	3649	3383' - 3621
Myers Langlie Mattix Unit	55	A	32	23S	37E	8 5/8 4 1/2	319	250 3713	Surface 2150	3716	3472' - 3655'
Myers Langlie Mattix Unit	56	B	32	23S	37E	8 5/8 5 1/2	333 3518	200 350	Surface 2250	3595	3422' - 3522'
Myers Langlie Mattix Unit	57	C	32	23S	37E	8 5/8 5 1/2	1192 3423	400 200	Surface 1900(Calc.)		3423' - 3564
Myers Langlie Mattix Unit	58	D	32	23S	37E	8 5/8 5 1/2	1200 3470	500 200	Surface 1847(Calc.)	3623	3510' - 3575
Myers Langlie Mattix Unit	63	A	36	23S	36E	8 5/8 5 1/2	307 3485	225 500	Surface 2200	3600	3485' - 3600'

WELL NAME		HALF MILE RADIUS WELLS					
WELL NO.	WELL LOCATION UL. SEC. T R	CASING SIZE	DEPTH	CEMENTING NO. SX.	CEMENT TOP	ID	PAY INTERVAL
Myers Langlie Mattix Unit	28 I 30 23S 37E	8 5/8 4 1/2	275 3800	150 400	Surface 1578 (Calc.)	3800	3456'-3596' (2-76 Sqz. holes in csg. 814'-909') 3523'-3759'
Myers Langlie Mattix Unit	31 I 30 23S 37E	10 3/4 7 5/8 5 1/2	250 1250 3523	200 400 500	Surface(Calc.) Surface(Calc.) 1000'	3759	
Myers Langlie Mattix Unit	33 J 25 23S 36E	13 3/8 8 5/8 5 1/2	306 1214 3478	300 400 940	Surface Surface 450	3643'	3312'-3643
Myers Langlie Mattix Unit	34 K 25 23S 36E	13 3/8 9 5/8 7	300 1179 3434	300 450 980	Surface Surface 210'	3620	3422'-3475'
Myers Langlie Mattix Unit	37 0 25 23S 36E	10 3/4 7 5/8 5 1/2	295 1204 3478	200 500 800	Surface 250' 1240'	3602	3478'-3602
Myers Langlie Mattix Unit	38 P 25 23S 36E	10 3/4 7 5/8 5 1/2	298 1214 3489	200 500 900	Surface Surface Surface	3635	3508'-3635'
Myers Langlie Mattix Unit	39 M 30 23S 36E	8 5/8 5 1/2	1237 3485	500 600	Surface 600'	3650	3485'-3650'
Myers Langlie Mattix Unit	43 M 29 23S 37E	9 5/8 7	1272 3446	500 250	Surface 1251 (Calc.)	3663	3446'-3633
Myers Langlie Mattix Unit	44 N 29 23S 37E	9 5/8 7	1223 3409	500 300	Surface Surface	3630	3409'-3630'
Myers Langlie Mattix Unit	45 0 29 23S 37E	10 3/4 7	304 3403	150 350	Surface 330'	3625	3382'-3607

<u>WELL NAME</u>	<u>WELL NO.</u>	<u>HALF MILE RADIUS WELLS</u>				<u>CEMENTING NO. SX.</u>	<u>CEMENT TOP</u>	<u>TD</u>	<u>PAY INTERVAL</u>	
		<u>WELL LOCATION</u>	<u>UL.</u>	<u>SEC.</u>	<u>R.</u>		<u>CASEING SIZE</u>	<u>DEPTH</u>		
Myers Langlie Mattix Unit	3	C 29	23S	37E	13 3/8	300	375	Surface	3615	3496' - 3598'
			7		3470	650	650	Surface		
			4 1/2		3612	700	700	Surface		
Myers Langlie Mattix Unit	4	D 29	23S	37E	13 5/8	42	45	Surface	3620	2772' - 3103' (Jalmat perfs - Langlie - Mattix TA)
			5 1/2		1190	400	200'			
			3479		150	2336(Calc)				
Myers Langlie Mattix Unit	6	B 30	23S	37E	8 5/8	733	300	Surface(Calc)	3620	3476' - 3620
			5 1/2		3476	200	1952(Calc)			
Myers Langlie Mattix Unit	7	C 30	23S	37E	8 5/8	328	300	Surface	3629	3558' - 3586
			5 1/2		3678	310	1910 (Surv.)			
Myers Langlie Mattix Unit	10	A 25	23S	37E	13 5/8	157	75	Surface	3641	3459' - 3641'
			5 1/2		1210	150	432(Calc)			
			3459		150	2317(Calc)				
Myers Langlie Mattix Unit	13	E 30	23S	37E	8 5/8	330	300	Surface	3662	3554' - 3628
			5 1/2		2300	300	2300			
Myers Langlie Mattix Unit	14	F 30	23S	37E	8 5/8	325	300	Surface	3651	3568' - 3624'
			5 1/2		3651	300	2600			
Myers Langlie Mattix Unit	16	H 30	23S	37E	9 5/8	1147	500	Surface	3696	3473' - 3696'
			7		3474	250				
Myers Langlie Mattix Unit	17	E 29	23S	37E	13 3/8	36	36	Surface	3745	3640' - 3724
			8 5/8		1136	550	550	Surface		
			6		3476	125	125			
			4 1/2		3232	400	400			
			3758							

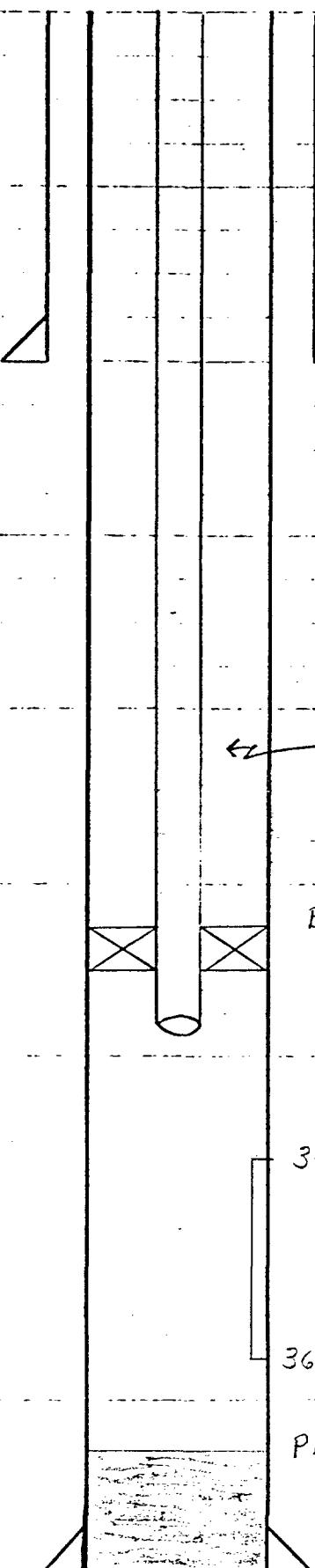
Exhibit III  
Type Log Of The Area

Exhibit IV  
Downhole Sketches Of Proposed Injection Wells

MYERS-LANGLIE MATTIX UNIT

WELL NO. 32

UL. I, SEC. 25-T23S-R36E



3478

Queen Perfs.

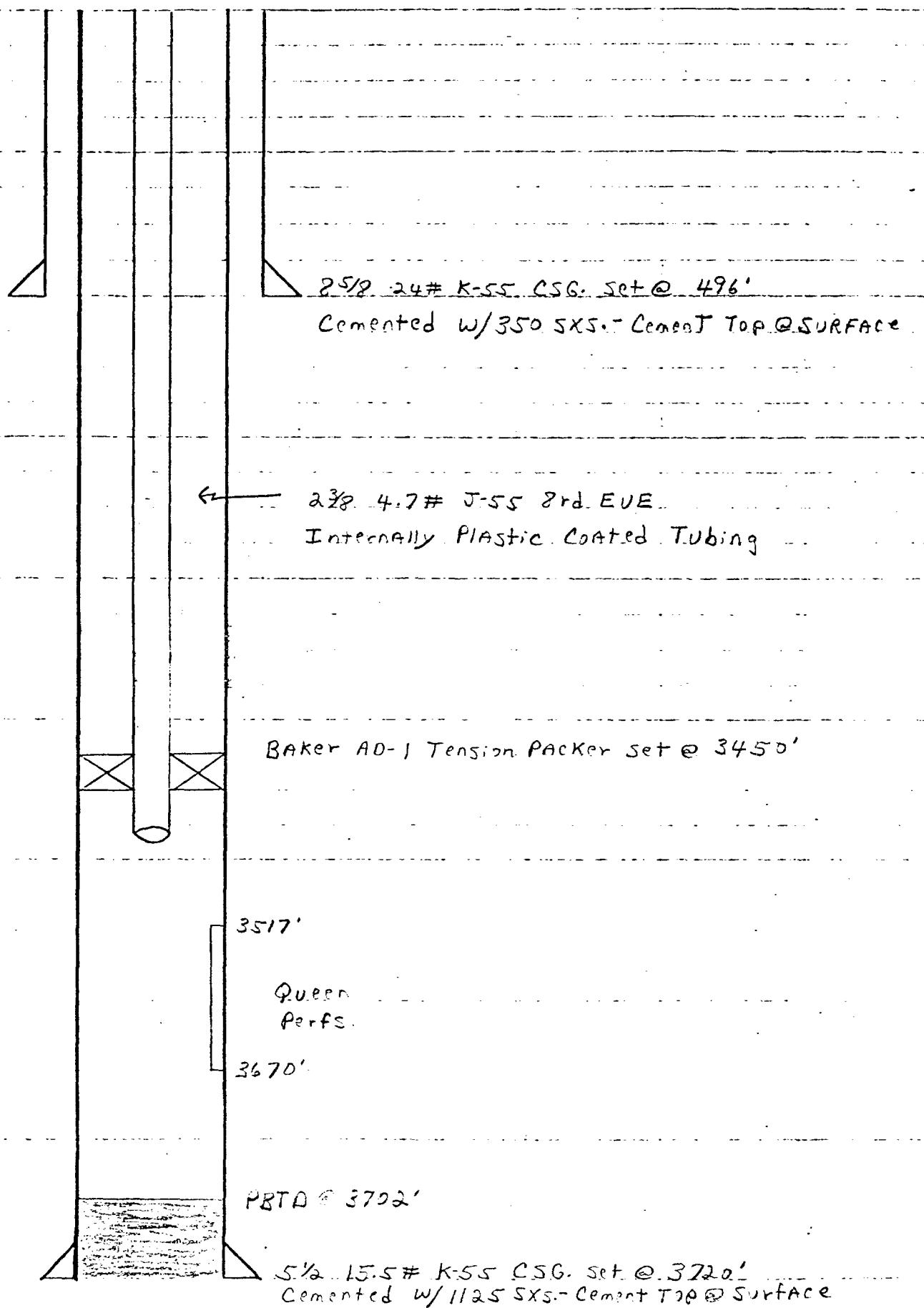
3630

PBTI @ 3664'

5 1/2" 15.5# K-55 CSG. Set @ 3731'  
Cemented w/1000 SXS-Cement Top @ SURFACE

MYERS-LANGLIE MATTIX UNIT  
WELL NO. 30

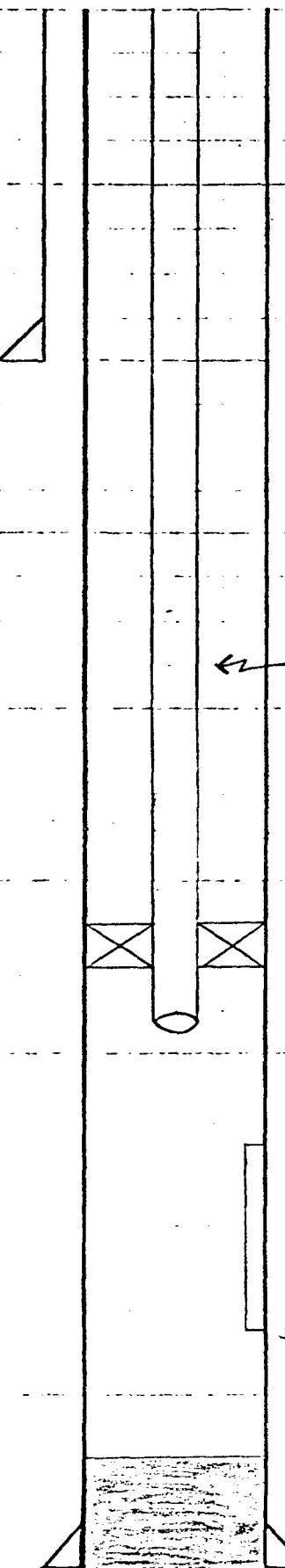
UL K, Sec. 30-T23S-R37E



MYERS-LANGLIE MATRIX UNIT

WELL NO. 22

ULK, Sec. 28-T23S-R37E



958 32# CSG Set @ 298'

Cemented w/175 SXS.

Cement Top @ SURFACE

248 4.7# J-55 2nd EYE

Internally PLASTIC Coated TUBING

BAKER AD-1 Tension Packer Set @ 3325'

3391'

Queen Perfs

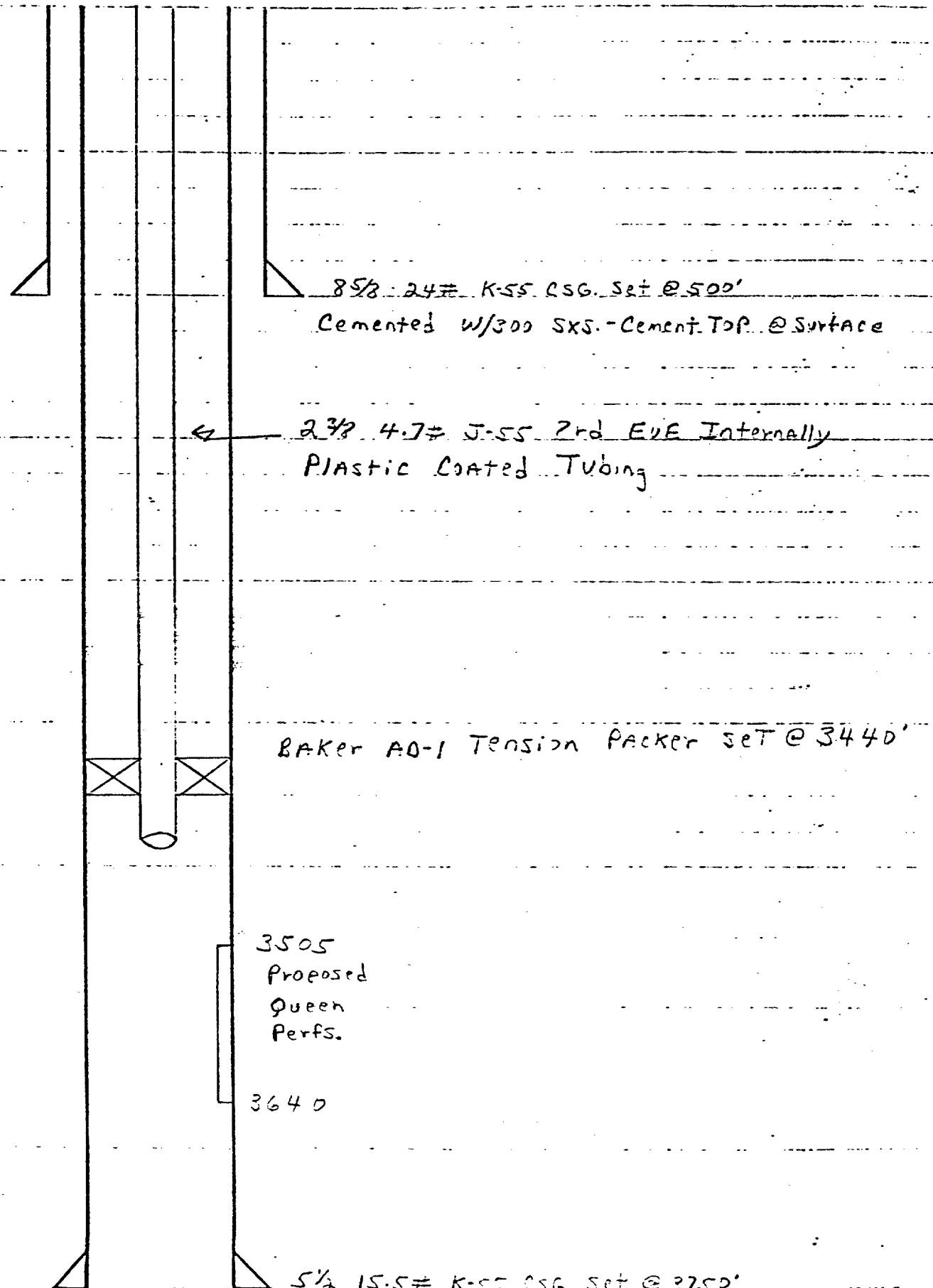
3644'

PBTC @ 3732'

5½" 14# CSG, Set @ 3762' Cemented w/601 SXS.  
CALC. Cement Top @ 800'

MYERS-LANGLIE MATTIX UNIT  
WELL NO. 15

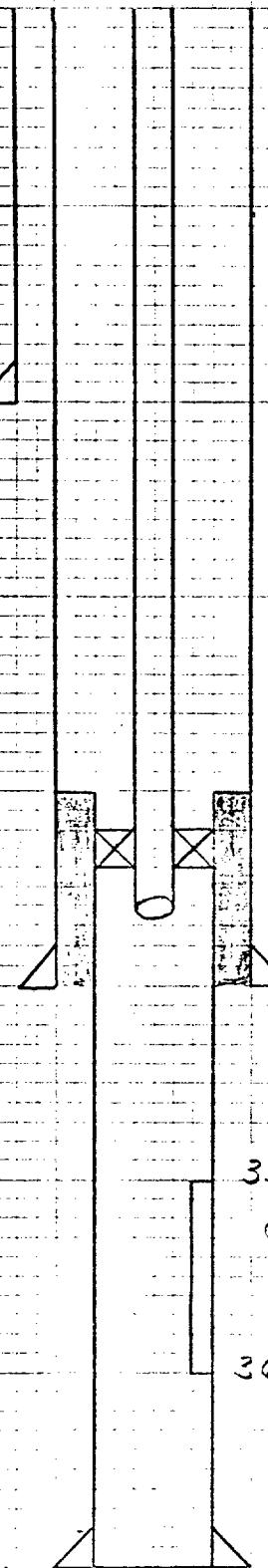
PROPOSED WELL TO BE DRILLED  
UL G, Sec. 30-T23S-R37E



MYERS LANGLIE MATTIX UNIT

WELL NO. 5

UL A, SEC. 30-T23S-R37E



10 3/4 32# CSG. Set @ 700'

Cemented w/ 300 SXS.

Cement Top @ SURFACE

TOP 4 1/2" Liner @ 3210'

BAKER AD-1 TENSION PACKER set @ 3470'

7" 20# CSG. Set @ 3510' Cemented w/ 200 SXS.

CALC. Cement Top @ 1750'

3530'

Proposed  
Queen  
Perfs

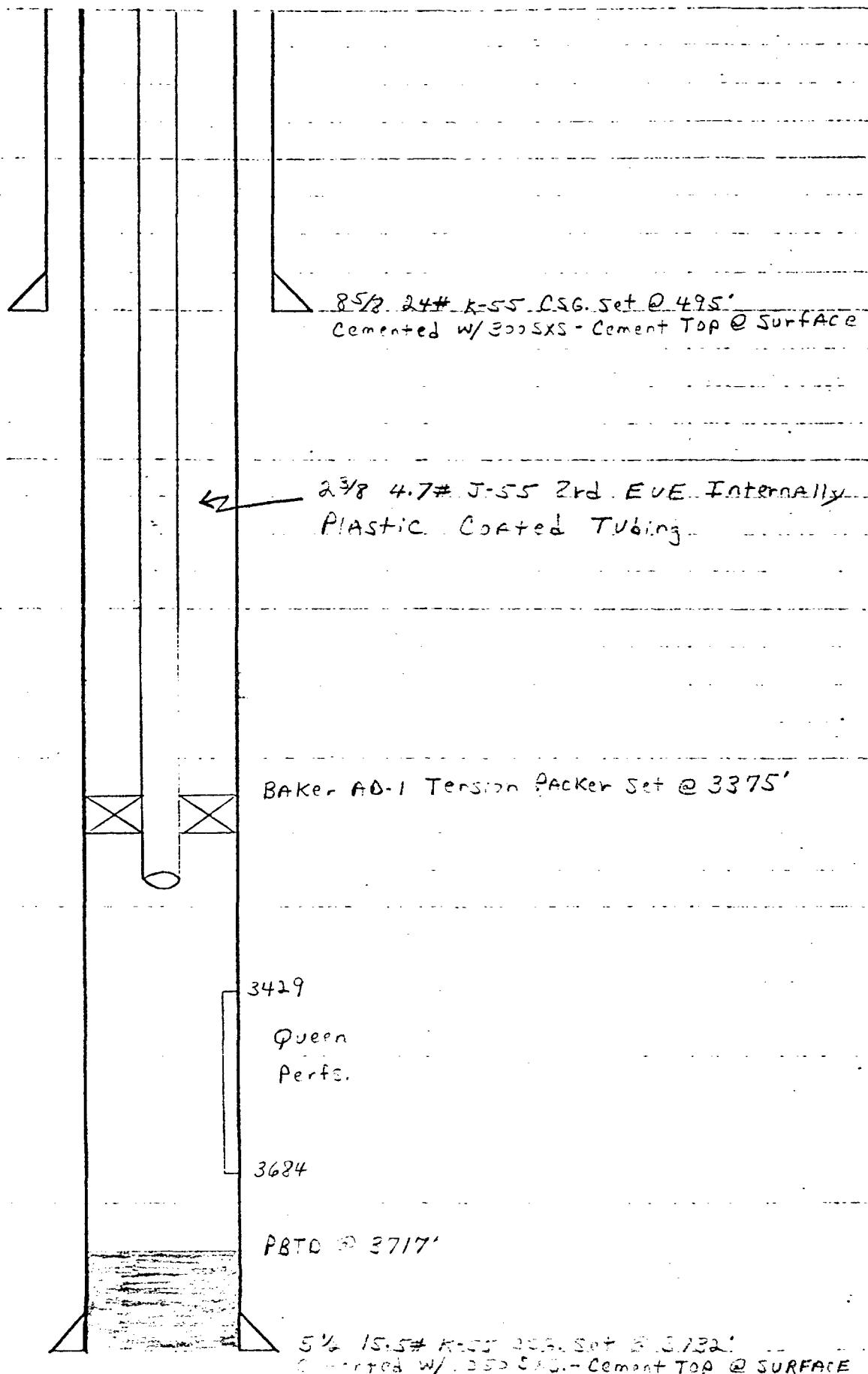
3640

4 1/2 9.5# K-55 Liner Set @ 3750' (Proposed)

Cemented w/ 100 SXS - Cement Top @ 3210'

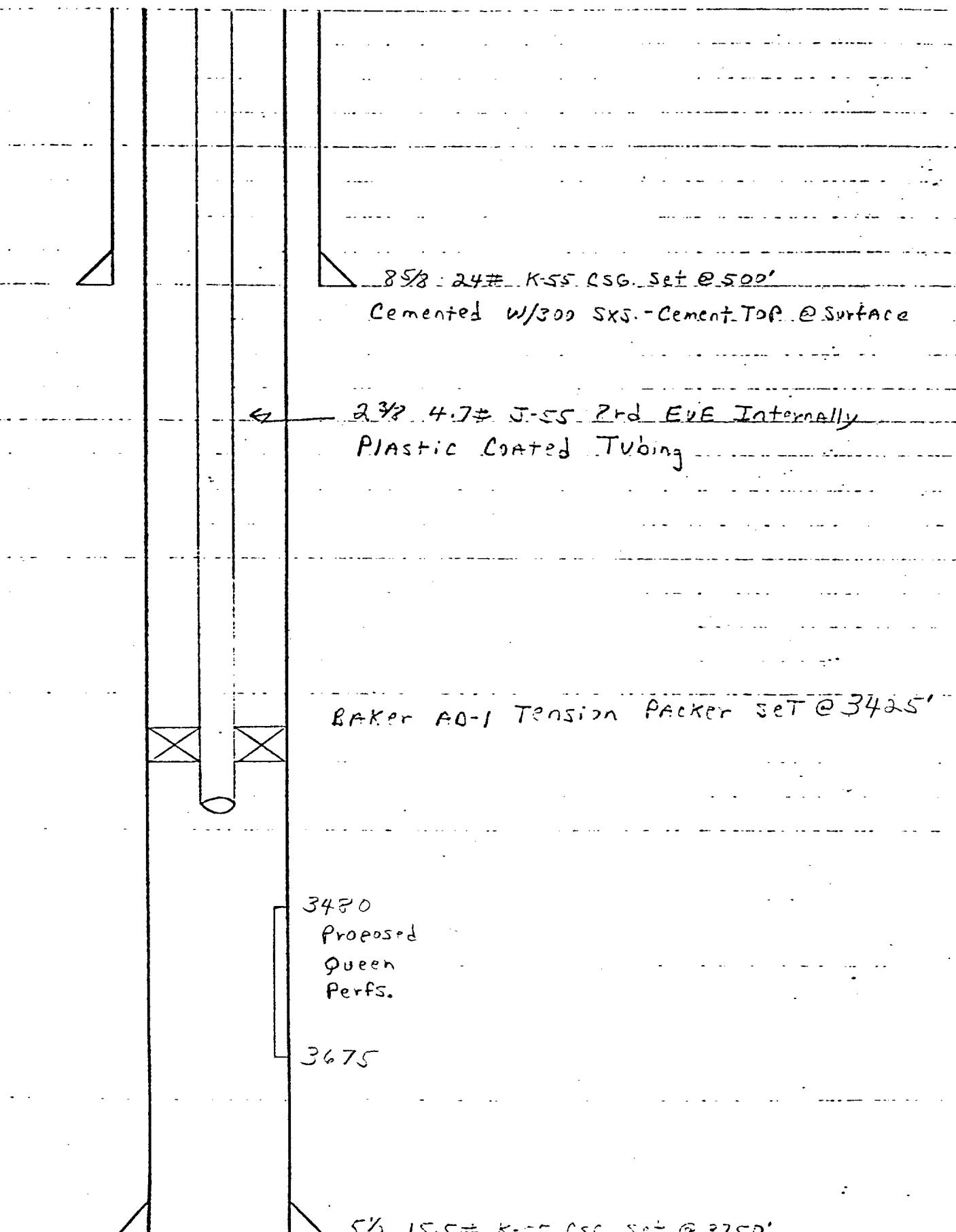
MYERS-LANGLE MATTIX UNIT  
WELL NO. 77

ULG, Sec. 32-T23S-R37E



MYERS-LANGLIE MATTIX UNIT  
WELL NO. 81

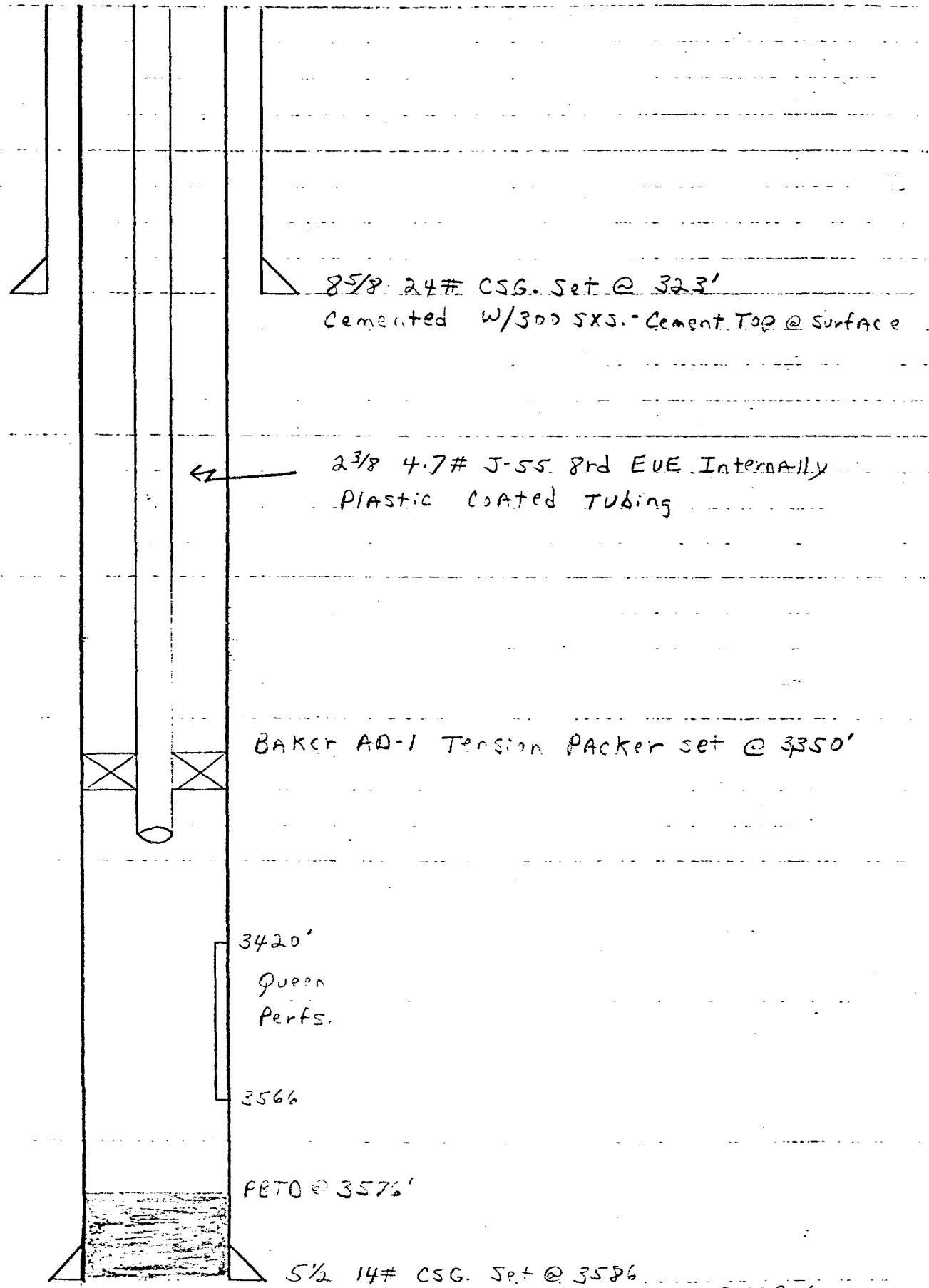
PROPOSED WELL TO BE DRILLED  
UL 6, Sec. 33-T.23S-R37E



MYERS-LANGLIE MATTIX UNIT

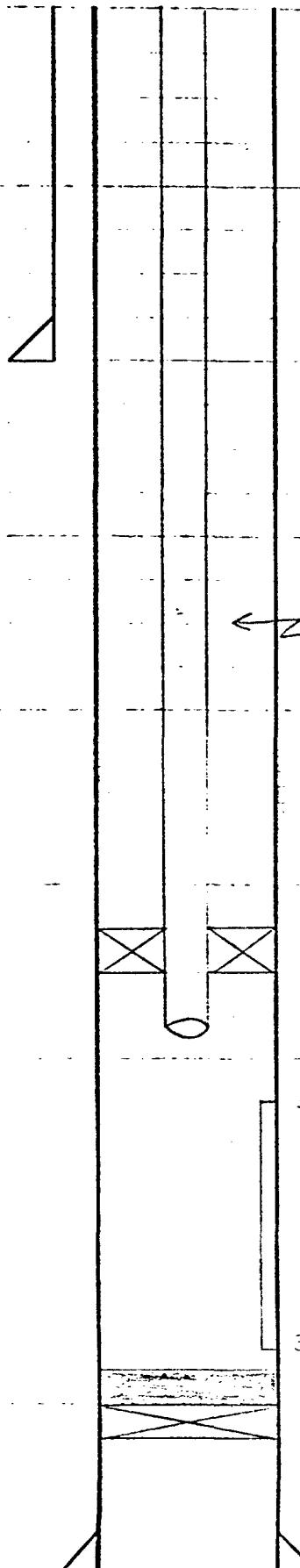
WELL NO. 84

UL H, Sec. 34-T23S-R37E



MYERS-LANGLIE MATTIX UNIT  
WELL NO. 87

UL I, Sec. 33-T23S-R37E



8 5/8 CSG set @ 935'

Cemented w/ 650 lbs.

Cement Top @ Surface

← 2 3/8 4.7# J-55 8rd EUE Internally  
Plastic Coated Tubing

BAKER AD-1 Tension Packer Set @ 3300'

3366'

Queen

Perfs.

3578'  
3 5X. cement plus 3600'-3633'

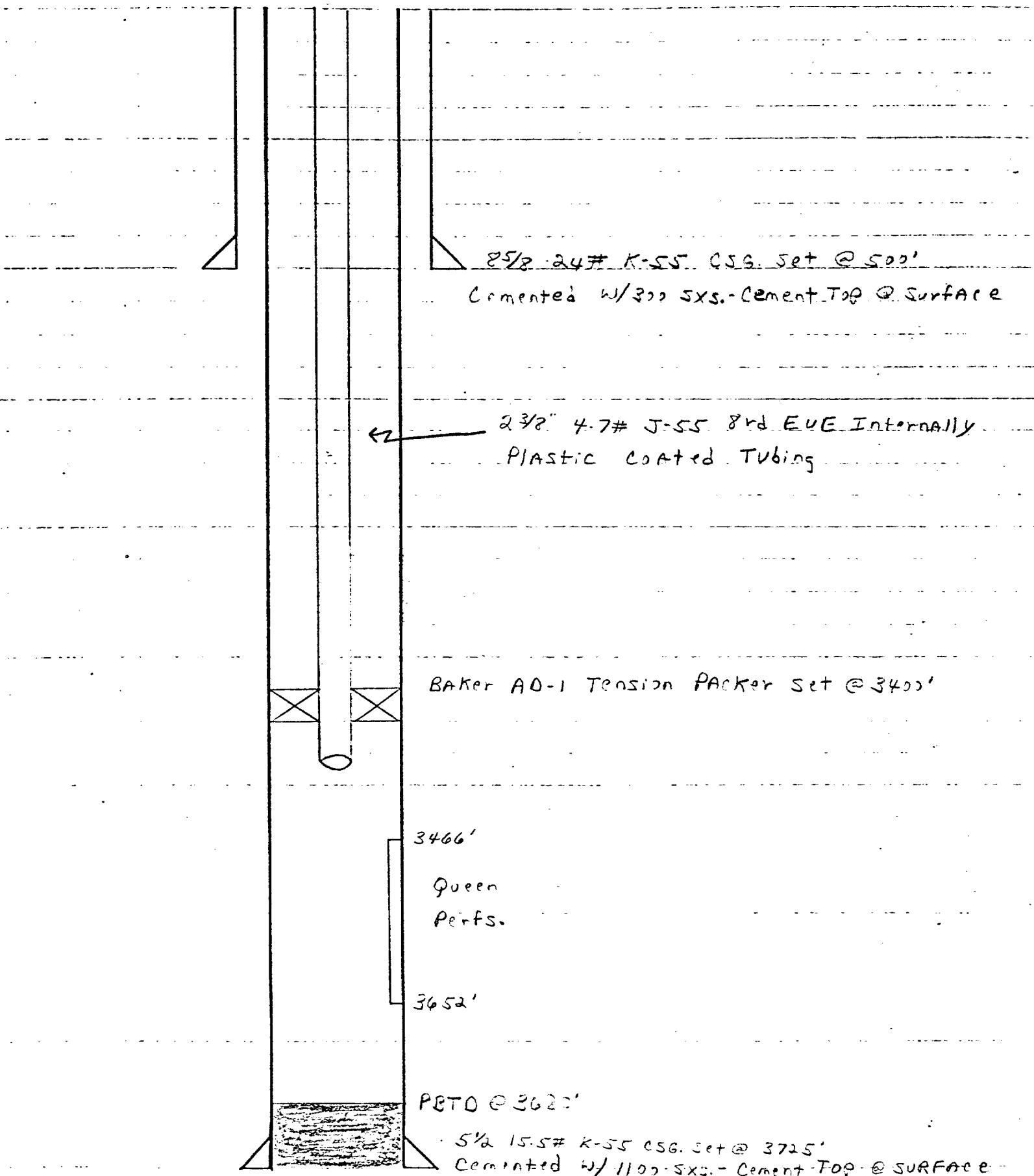
CIRP @ 3633'

5 1/2 15.5# + 17# CSG set @ 6717'

Cemented w/ 560 lbs. Cement Top @ 2602'

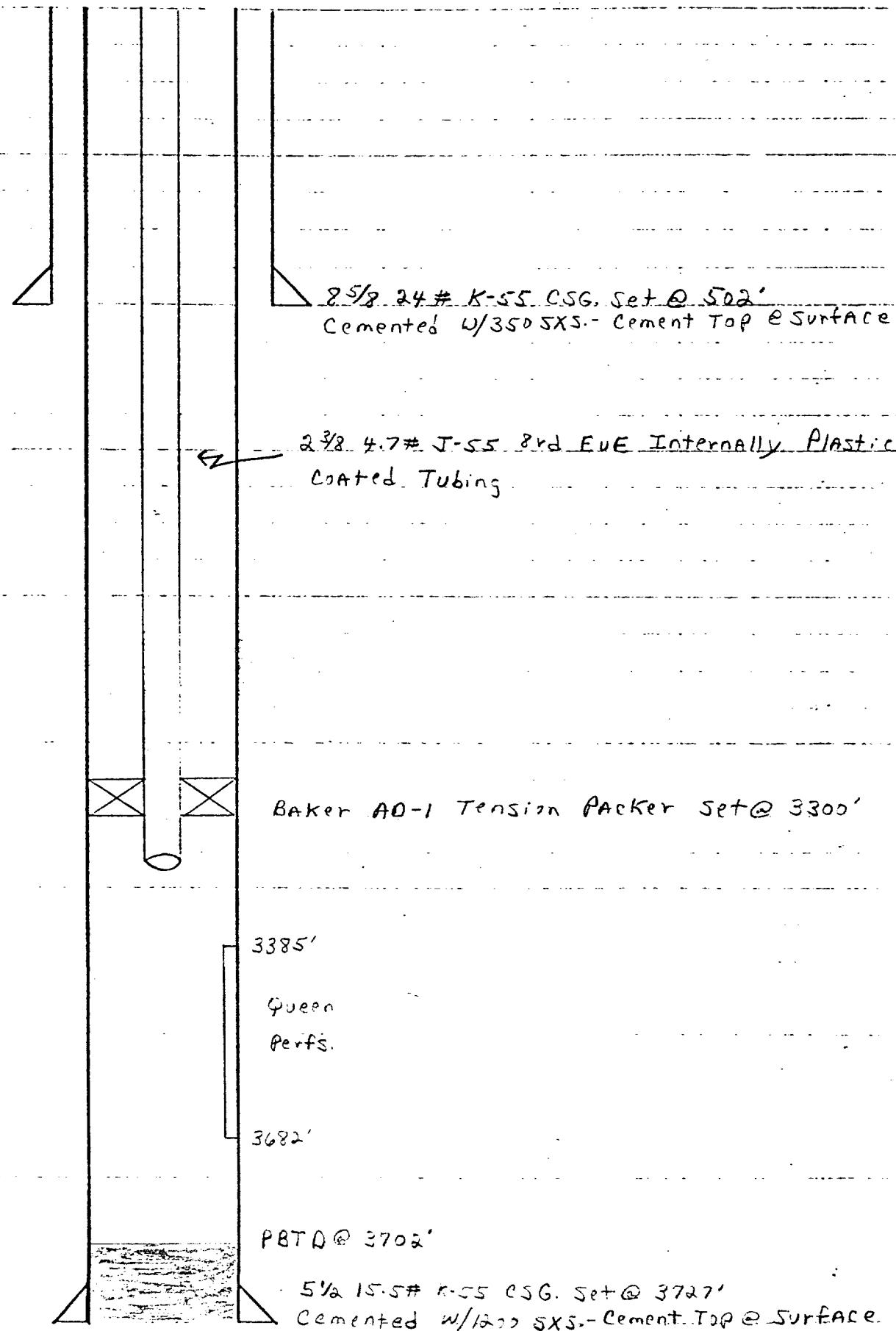
MYERS-LANGLIE MATTIX UNIT  
WELL NO. 93

UL K, SEC. 32-T23S-R37E



MYERS-LANGLIE MATTIX UNIT  
WELL NO. III

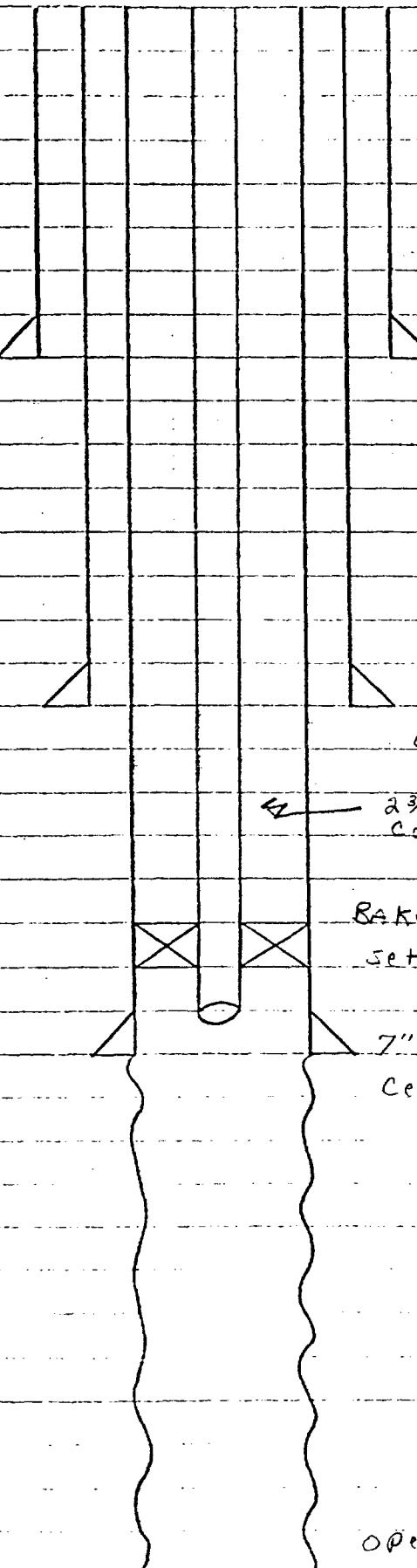
UL 0, Sec. 32-T23S-R37E



MYERS-LANGLE MATIX UNIT

WELL NO. 117

UL M, SEC. 34-T23S-R37E



13" 40# CSG. SET @ 336'

Cemented w/ 252 SXS - CALC. Cement Top @ surface

9 5/8 34# CSG. SET @ 2540'

Cemented w/ 500 SXS - CALC. Cement Top @ 434'

2 3/8 4.7# J-55 8rd EUE Internally PLASTIC  
Coated Tubing

BAKER AD-1 TENSION Packer  
SET @ 3350'

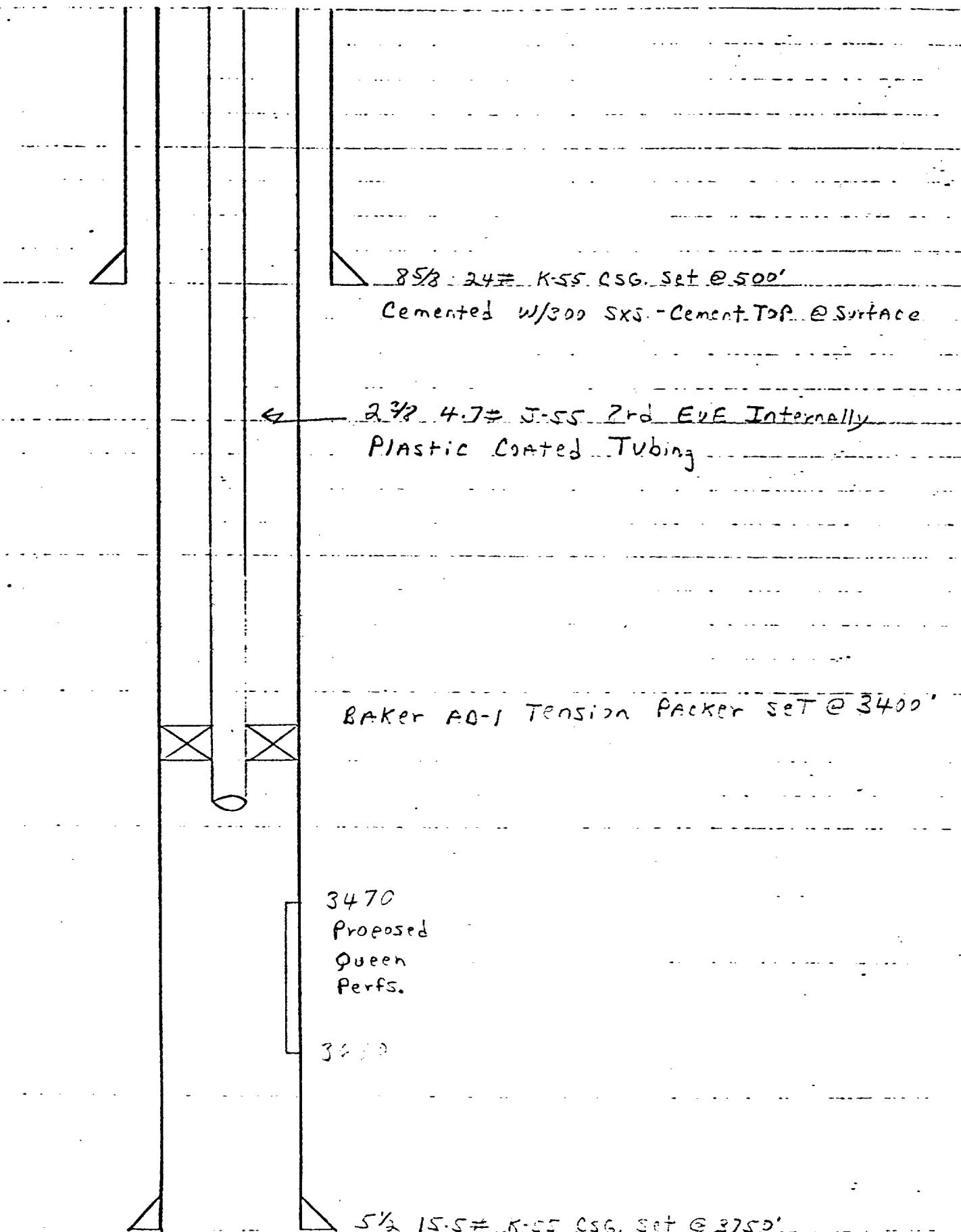
7" 24# CSG. SET @ 3435'

Cemented w/ 100 SXS - CALC. Cement Top @ 2557'

Open Hole TD @ 3571'

MYERS-LANGLIE MATTIX UNIT  
WELL NO. 126

PROPOSED WELL TO BE DRILLED  
UL A, SEC. 4-T24S-R37E



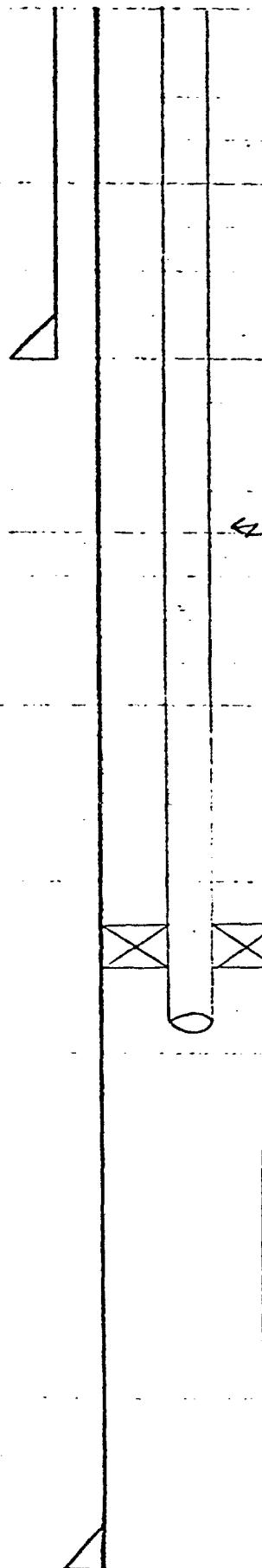
5 1/2 15.5# K-55 CSG. SET @ 3750'  
Cemented w/1200 SX5 - Cement Top. @ SURFACE

MYERS-LANGLIE MATTIX UNIT

WELL NO. 128

PROPOSED WELL TO BE DRILLED

ULC, Sec. 4-T24S-R37E



8 1/2 - 24# K-55 CSG Set @ 500'

Cemented w/300 SXS - Cement Top @ Surface

2 3/8 - 4 1/2# J-55 2nd EYE Internally

Plastic Coated Tubing

BAKER AO-1 Tension Packer Set @ 3450'

3520

Proposed  
Queen  
Perfs.

3680

5 1/2 - 15.5# K-55 CSG Set @ 3750'

Cemented w/300 SXS - Cement Top @ Surface

MYERS LANGIE MATTIX UNIT

WELL No. 130

UL A, Sec. 5-T24S-R37E

8 5/8" 32# CSG. Set @ 1180'

Cemented w/ 950 SXS. - Cement Top @ SURFACE

TOP Liner @ 3150'

5 1/2" 17# CSG. Set @ 3410'

Cemented W/ 450 SXS. - CALC. Cement Top @ SURFACE

BAKER AD-1 Tension Packer Set @ 3420'

3470'

Proposed Queen  
Perfs.

3680'

4" FLUSH Joint

9.5# K-55 Liner

Set @ 3750'

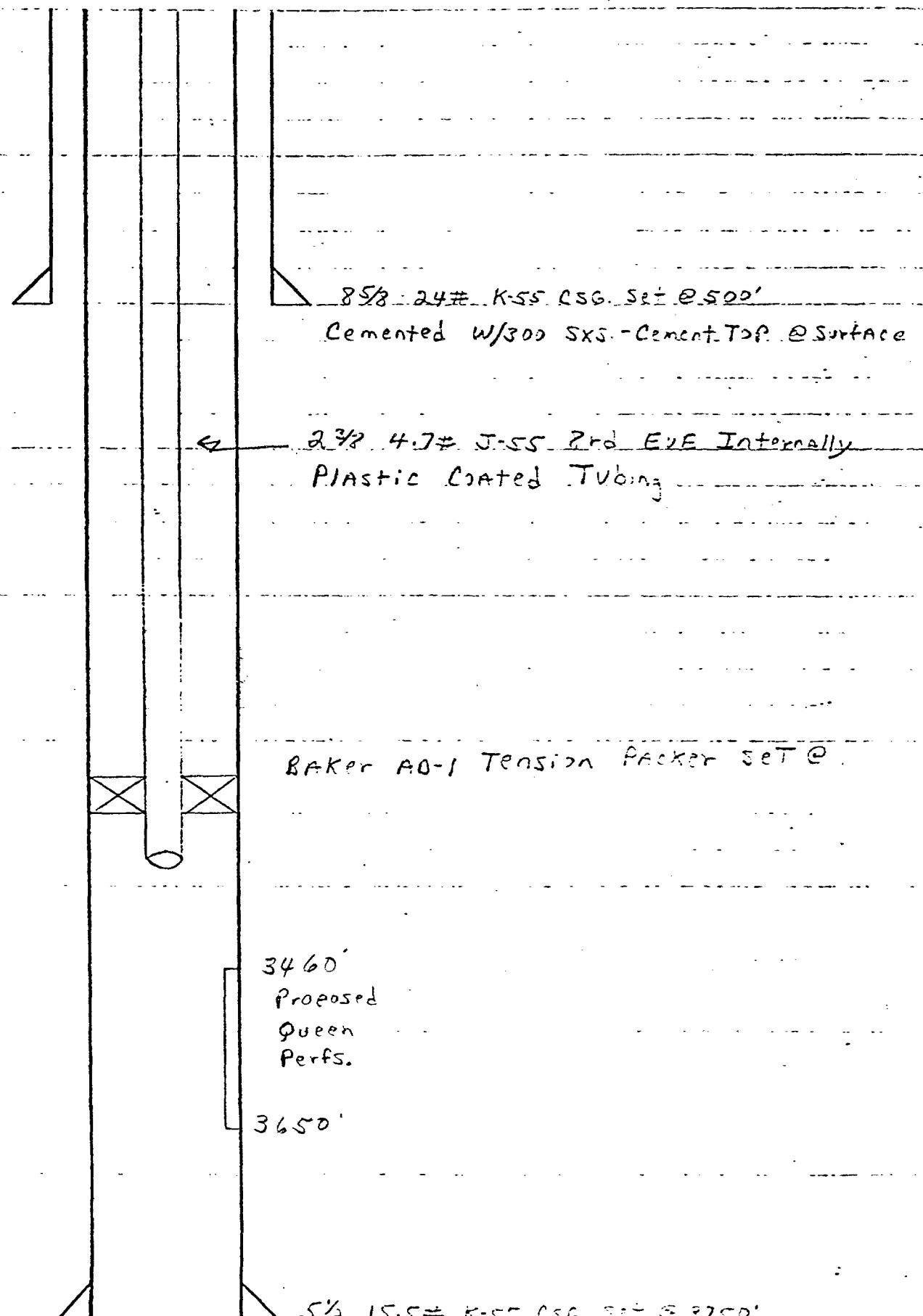
Cemented w/ 150 SXS - Cement Top @ 3150'

# MYERS-LANGLIE MATTIX UNIT

WELL NO. 148

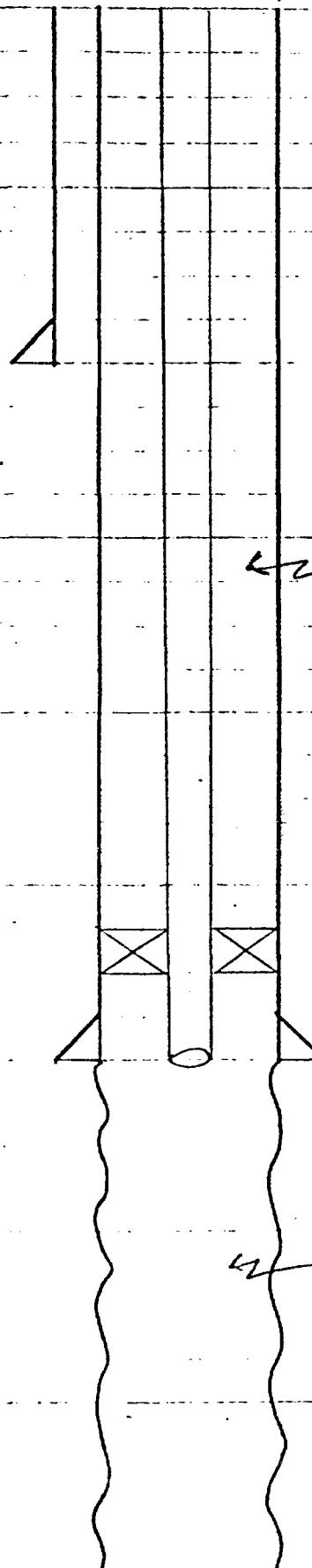
PROPOSED WELL TO BE DRILLED

UL G, Sec. 4-T24S-R37E.



MYERS-LANGLIE MATTIX UNIT  
WELL NO. 163

UL I, Sec. 4-T24S-R37E



8 1/8 28# CSG Set @ 1399'

Cemented w/ 400 SXS.

CALC. Cement Top @ Surface

← 2 3/8 4.7# J-55 2nd EUE Internally  
Plastic Coated Tubing

Baker AD-1 Tension Packer  
Set @ 3400'

5 1/2 17# CSG Set @ 3466'

Cemented w/ 400 SXS.

CALC. Cement Top @ 420'

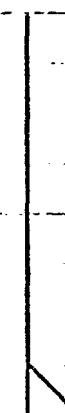
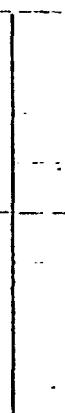
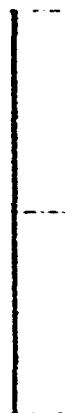
← 4 3/4 Open Hole

Open Hole TD @ 3639'

MYERS-LANGLIE MATTIX UNIT

WELL NO. 165

PROPOSED WELL TO BE DRILLED  
UL K, Sec. 4-T24S-R37E.



8 1/2 - 24# K-55 LSG. Set @ 500'

Cemented w/300 SXS. - Cement Top. @ Surface

2 3/8 - 4.7# J-55. 2nd EUE Internally  
Plastic Coated Tubing

Baker AC-1 Tension Packer set @ 3420'

3480

Proposed  
Queen  
Perfs.

3665

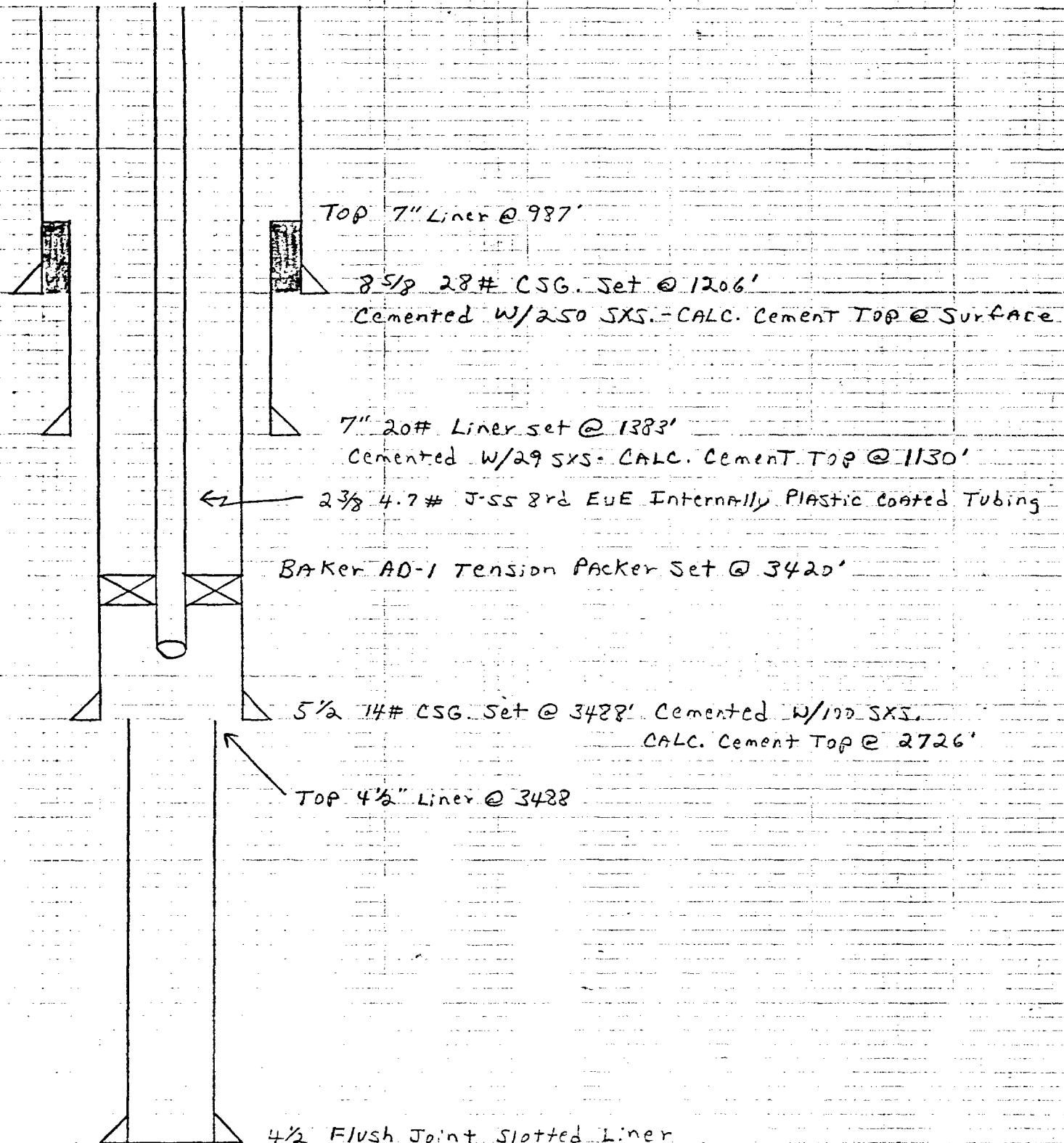
5 1/2 15.5# K-55 LSG. Set @ 3750'

Cemented w/1200 SXS. - Cement Top. @ SURFACE

# MYERS LANGIE MATTIX UNIT

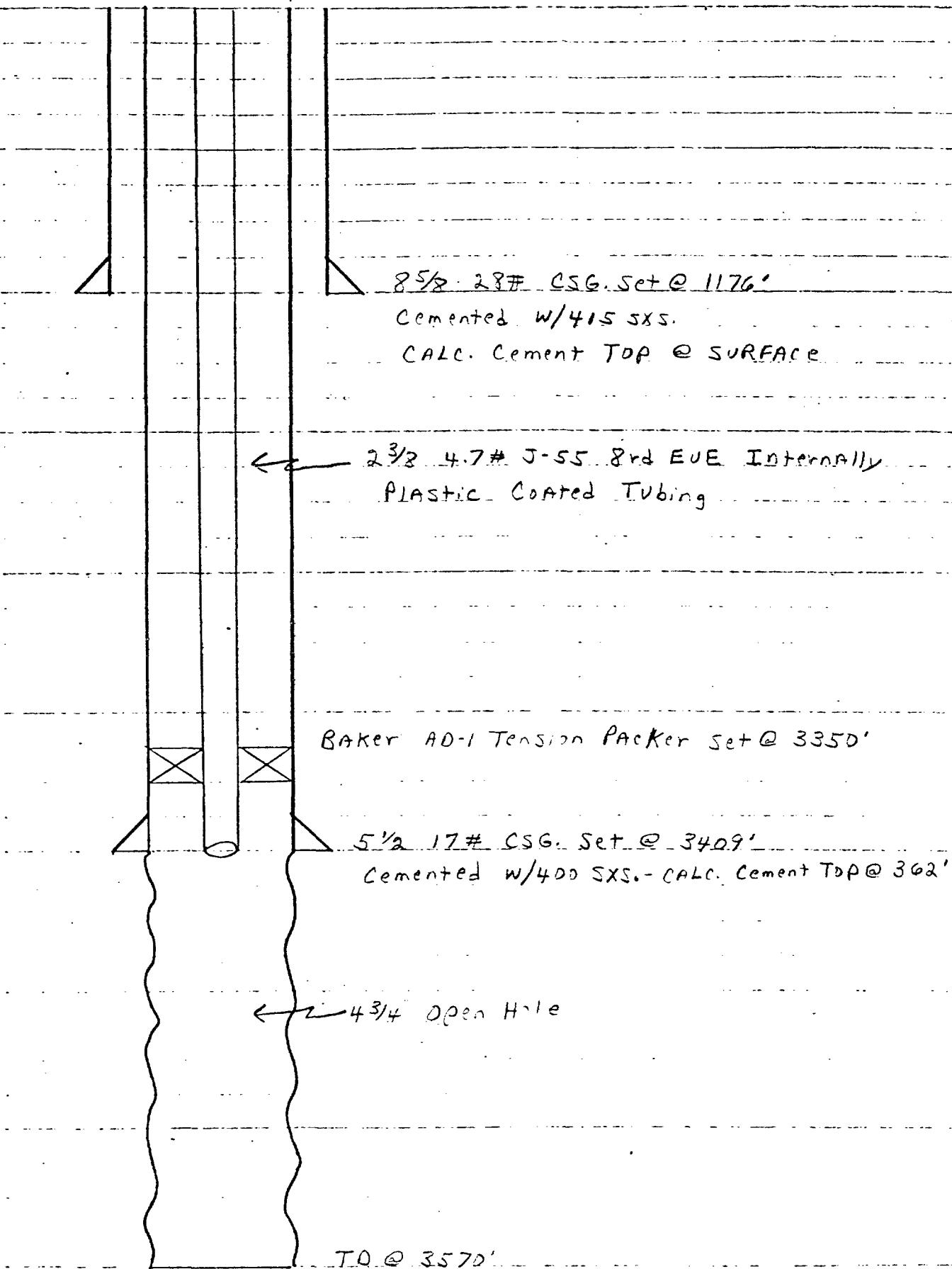
WELL NO. 167

ULI, Sec. 5-T24S-R37E



MYERS-LANGLIE MATTIX UNIT  
WELL NO. 181

UL M, Sec. 4-T24S-R37E

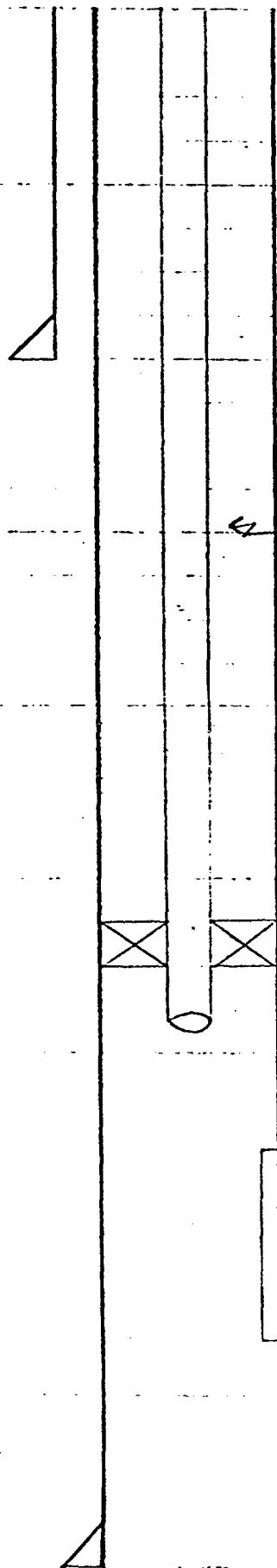


MYERS-LANGLIE MATTIX UNIT

WELL NO. 183

PROPOSED WELL TO BE DRILLED

UL 0, SEC. 4-T24S-R37E



8 1/2 - 24# K-55 CSG. SET @ 500'

Cemented w/300 SXS - Cement Top @ Surface

2 3/8 - 4.7# J-55 Prod E/F Internally

PLASTIC Coated TUBING

BAKER AO-1 Tension Packer SET @ 3450'

3510

Proposed  
Queen  
Perfs.

3650

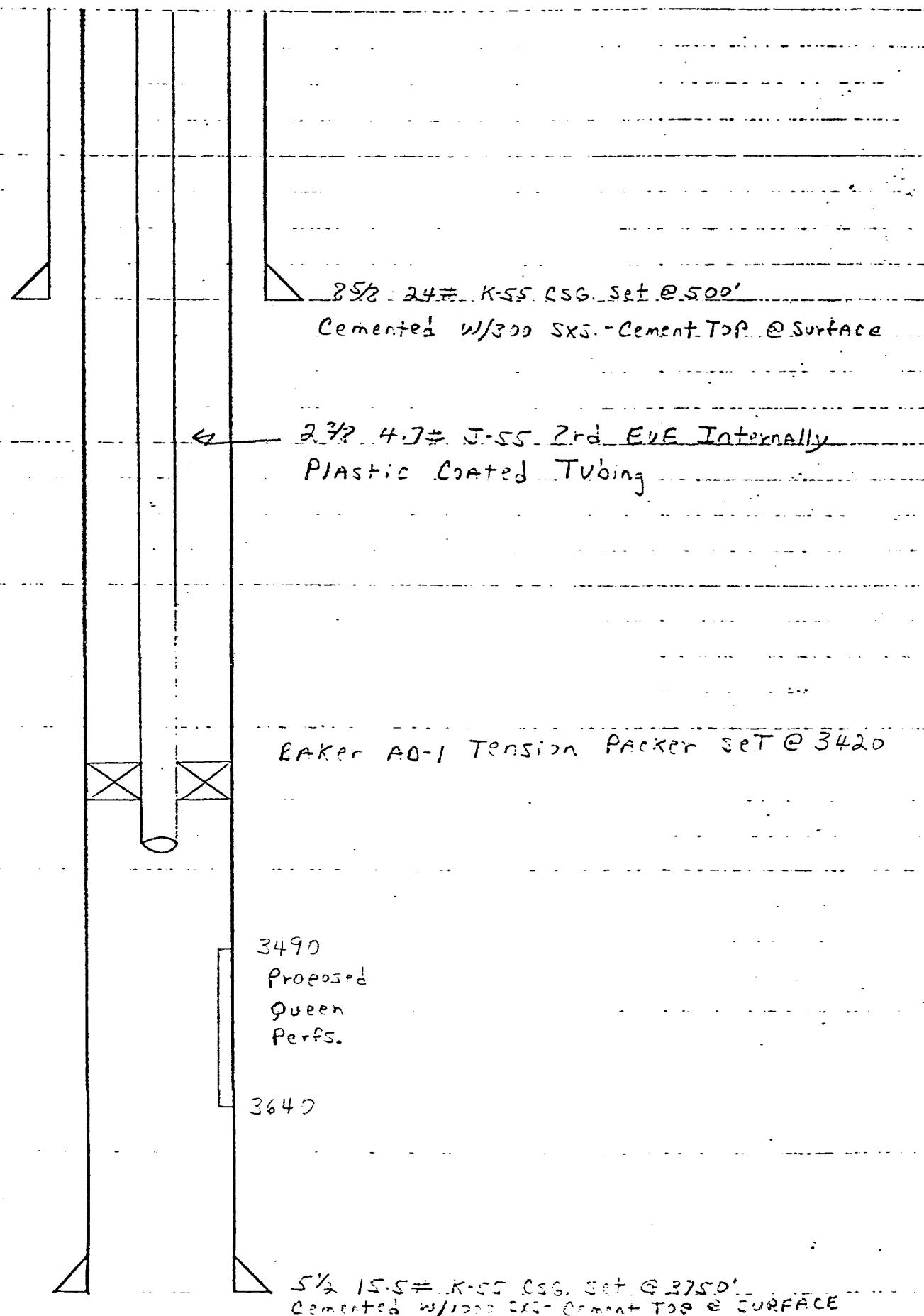
5 1/2 - 15.5# K-55 CSG. SET @ 2750'

Cemented w/300 SXS - Cement Top @ SURFACE

MYERS-LANGLIE MATTIX UNIT

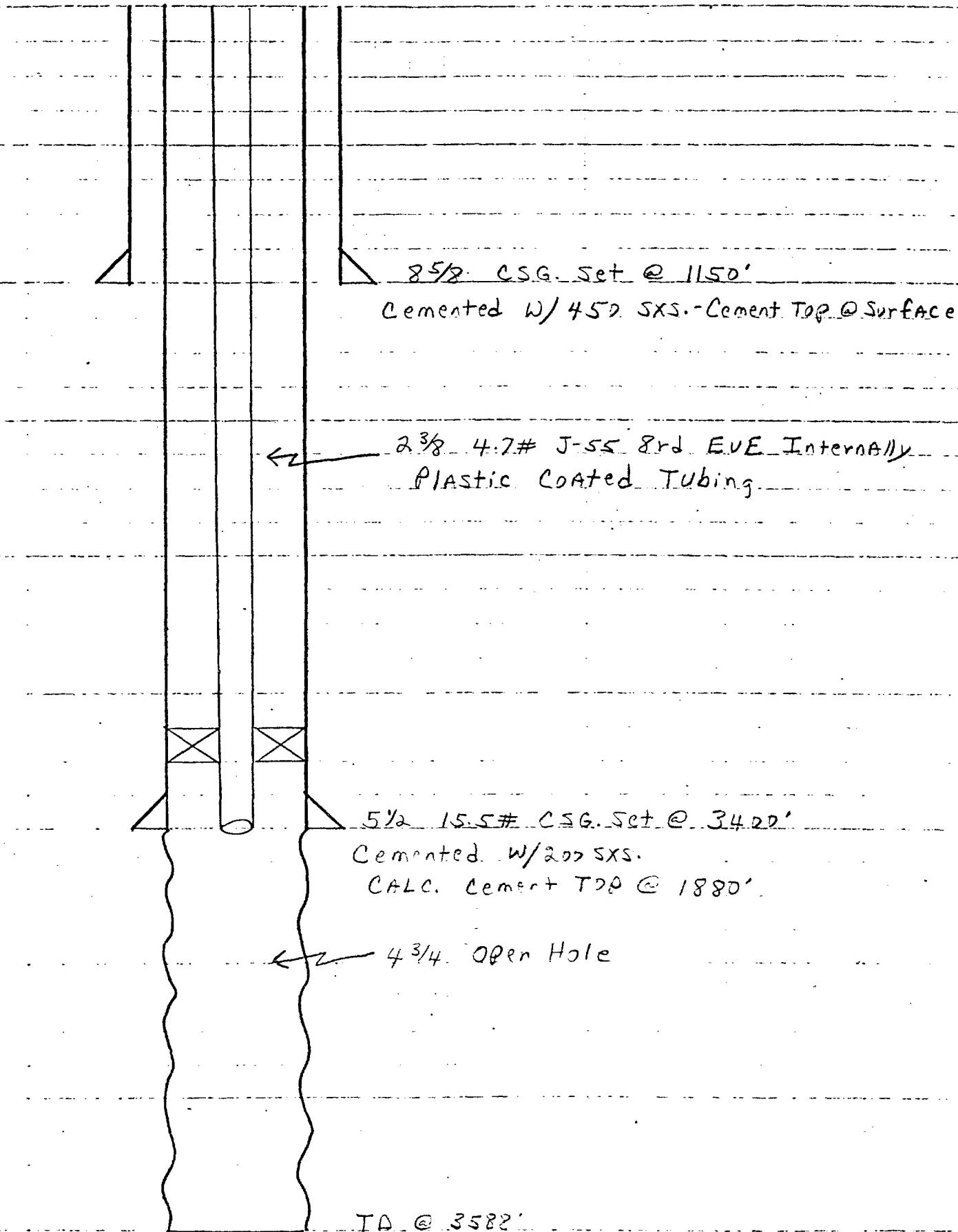
WELL NO. 185

PROPOSED WELL TO BE DRILLED  
UL M, Sec. 3-T24S-R37E



MYERS-LANGLIE MATTIX UNIT  
WELL NO. 189

UL M, SEC. 2-T24S-R32E



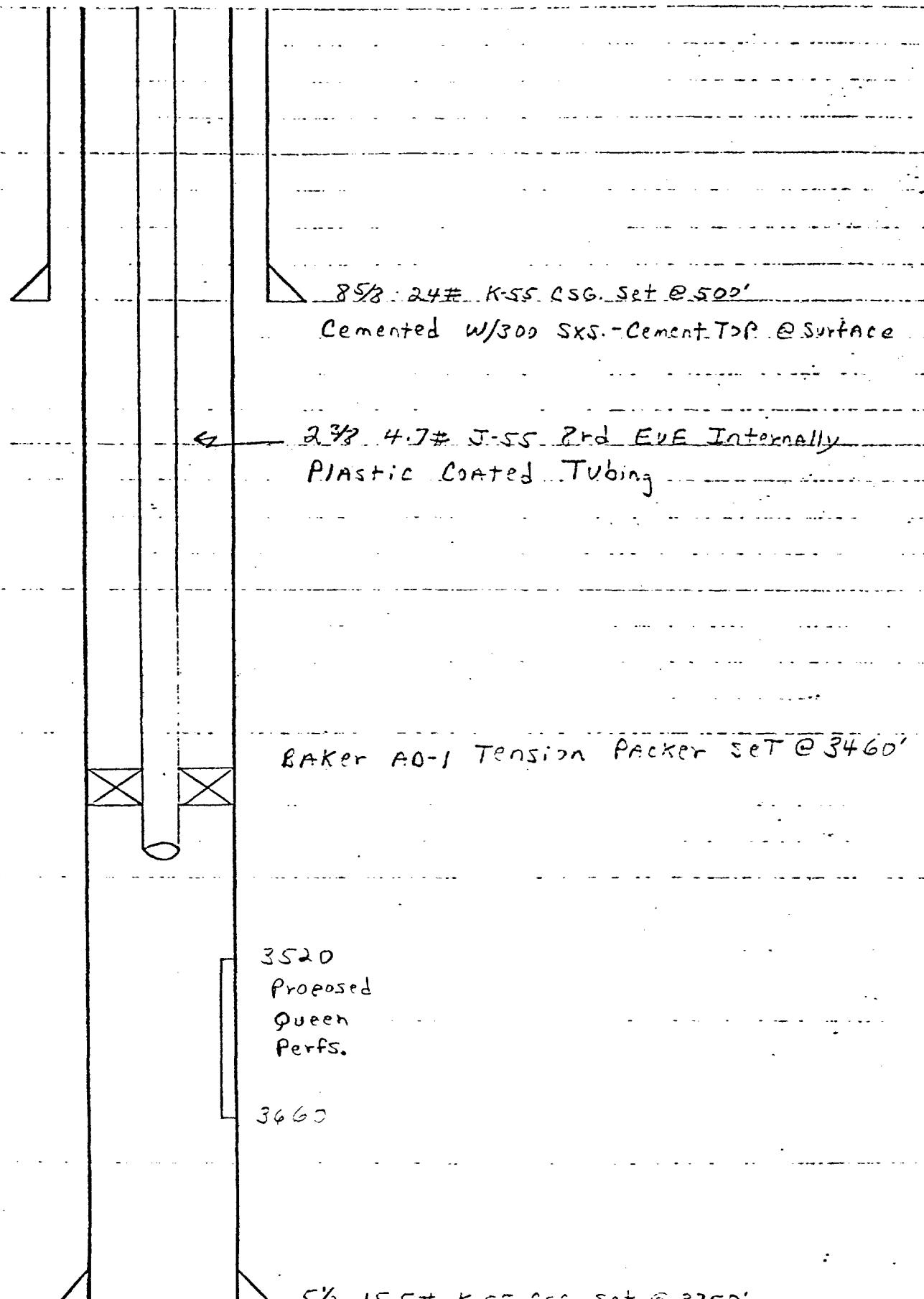
TD @ 3582'

# MYERS-LANGLIE MATTIX UNIT

WELL NO. 204

PROPOSED WELL TO BE DRILLED

UL C, Sec. 7-T24S-R37E

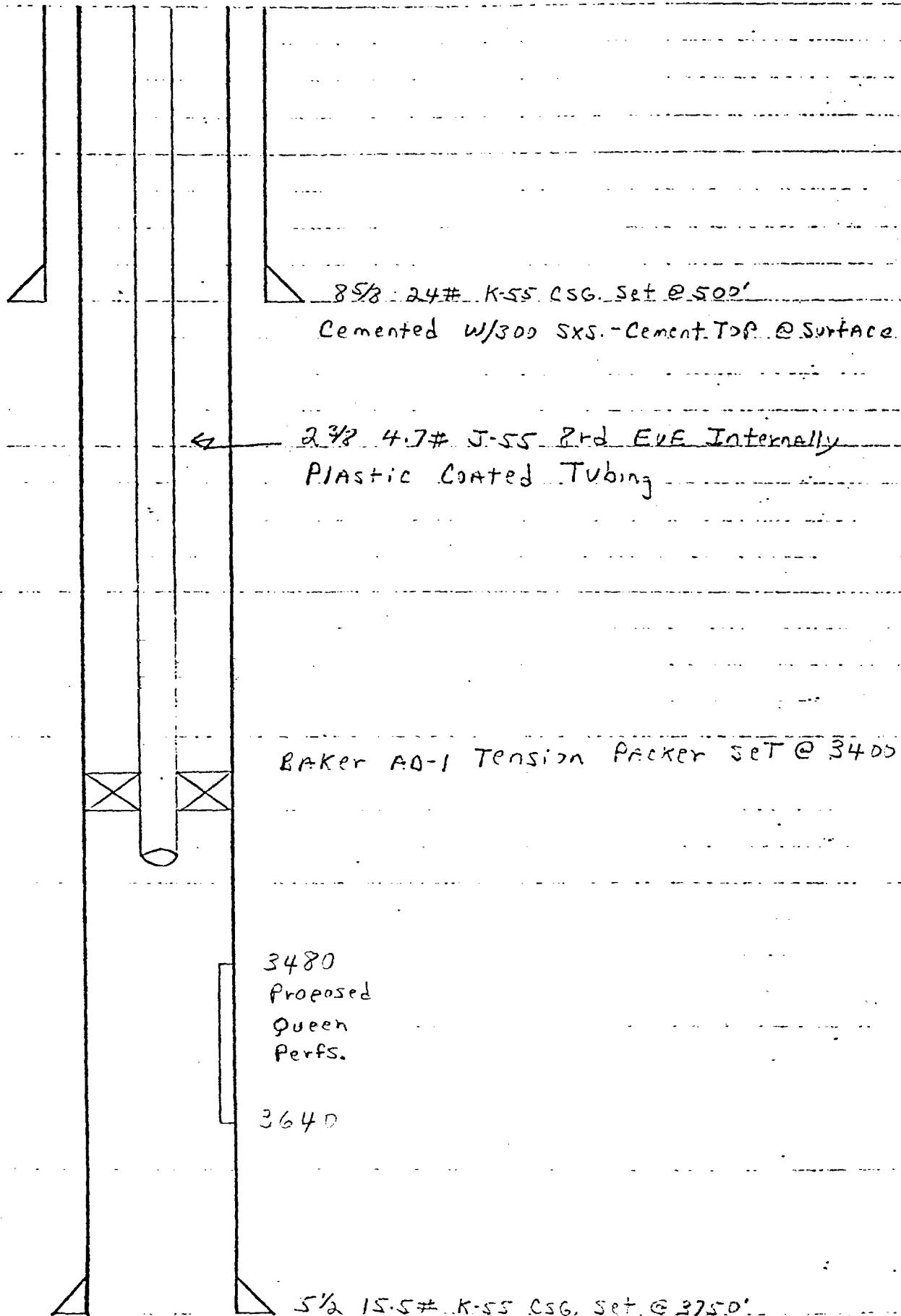


# MYERS-LANGLIE MATTIX UNIT

WELL NO. 212

PROPOSED WELL TO BE DRILLED

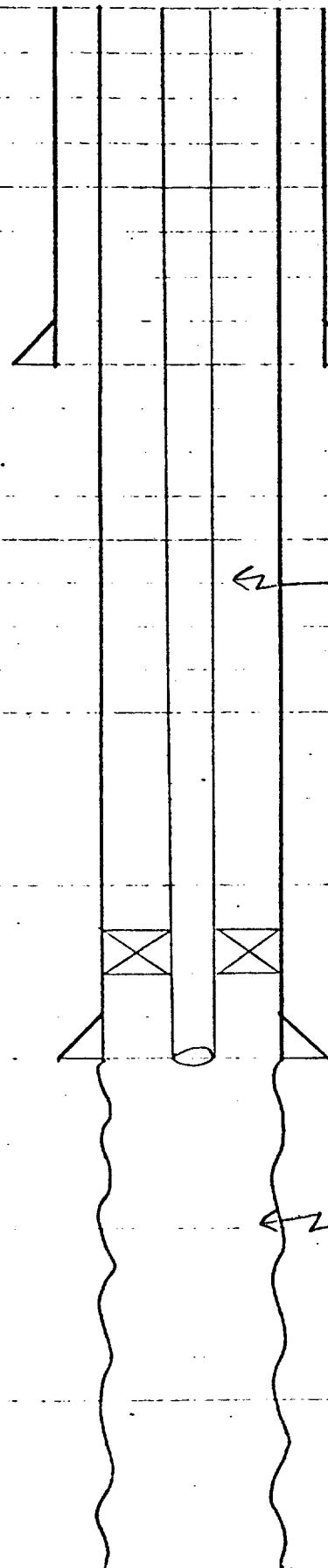
UL G, Sec. 7-T24S-R37E



# MYERS-LANGLIE MATTIX UNIT

WELL NO. 226

UL E, Sec. 11-T 24S-R 37E



8 1/2 CSG. Set @ 1387'

Cemented w/ 100 SXS.

CALC. Cement Top @ 868'

2 3/8 4.7# J-55 8rd EVE

Internally Plastic Coated Tubing

BAKER AD-1 Tension Packer

@ 3380'

7" CSG, set @ 2444'

Cemented w/ 100 SXS.

CALC. Cement Top @ 2566'

6 1/4" open Hole

TD @ 3760'

Exhibit V  
Downhole Sketches Of All Plugged And  
Abandoned Wells Within One-Half Mile  
Radius Of The Proposed Injection Wells

CARTER FOUNDATION PRODUCING CO.

E.C. HILL "E" NO. 2

UL H, SEC. 34 - T23S-R37E

P&A 1/22/75

105X CEMENT PLUG SURFACE - 15'

13 3/8 CSG. @ 250'

70 SX CEMENT PLUG 300'-403'

CUT 9 5/8 CSG. @ 386' & PULLED

250 SX CEMENT PLUG 2400'-2577'

250 SX CEMENT PLUG 2577'-3377'

9 5/8 CSG. SET @ 2914' CEMENTED W/1400 SX'S.

ESTIMATED CEMENT TOP @ 386'

CUT 7" CSG. @ 3333' & PULLED

250 SX CEMENT PLUG 4872'-6302'

25 SX CEMENT PLUG 7000'-7107'

25 SX CEMENT PLUG 9050'-9200'

EZ DRILL BP SET @ 9200'

7" CSG. SET @ 9577 CEMENTED W/650 SX'S.

ESTIMATED CEMENT TOP @ 3333'

TO @ 9730

STANOLIND OIL CO.

MEYERS B. FEO. NO. 7

ULL, SEC. 4-T24S-R37E

P+A 11/44

12 SX CEMENT PLUG SURFACE = 66'

13" CSG. SET @ 253' CEMENTED W/ 300 SX'S.

CALCULATED CEMENT TOP @ SURFACE

10 SX CEMENT PLUG 1120'-1156'

8 1/2" CSG. SET @ 1156' CEMENTED W/ 450 SX'S.

CALCULATED CEMENT TOP @ SURFACE

15 SX. CEMENT PLUG 2440'-2500'

5 1/2" CSG. SHOT OFF @ 2500'

5 1/2" CSG. SET @ 3415'

CEMENTED W/ 275 SX'S.

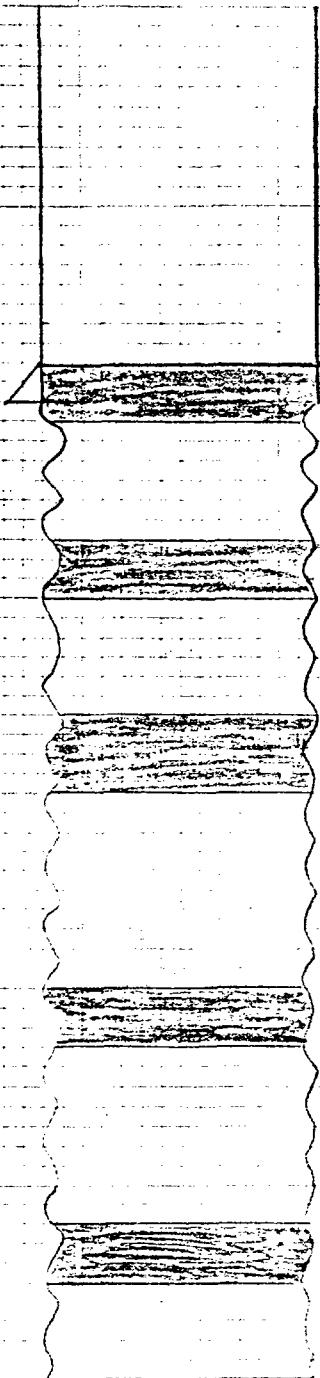
ESTIMATED CEMENT TOP @ 2500'

TD @ 3615'

RESLER & SHELDON

BLINERRY NO. 1

ULD, sec. 34-T23S-R37E  
P+A 1/14/71



25 SX. CEMENT PLUG 850'-950'

8 1/2 CSG. SET @ 922'

Cemented W/450 SX's. Cement TOP @ SURFACE

25 SX cement Plug 2350'-2450'

25 SX cement Plug 3300'-3400'

25 SX cement Plug 3900'-4000'

25 SX. CEMENT PLUG 5200'-5300'

TD @ 5621'

RESLER + SHELDON

FANNING NO. 2

UL B, SEC. 33-T23S-R37E  
P+A 7/48

15 SX CEMENT PLUG SURFACE - 20'

13 3/8 CSG. SET @ 318' CEMENTED W/ 300 SX'S.

CALCULATED CEMENT TOP @ SURFACE

15 SX CEMENT PLUG 1035'-1075'

9 5/8 CSG. SHOT OFF @ 1500'

9 5/8 CSG. SET @ 2950' CEMENTED W/ 1300 SX'S. - EST. CEMENT TOP @ 1500'

15 SX CEMENT PLUG 2850'-2900'

7" CSG - SHOT OFF @ 3360'

5 SX. CEMENT PLUG 6370'-6400'

CEMENT RETAINER SET @ 6400'

45 SX CEMENT SQUEEZED BELOW RETAINER

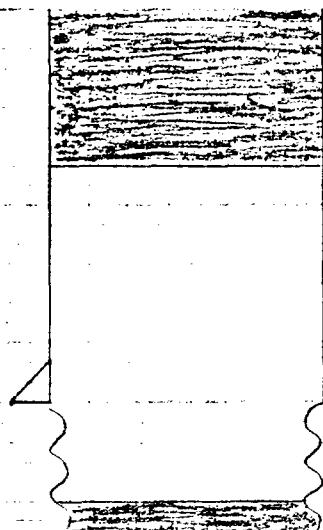
7" CSG. SET @ 6852' CEMENTED W/ 700 SX'S.

ESTIMATED CEMENT TOP @ 3360'

TD @ 9928'

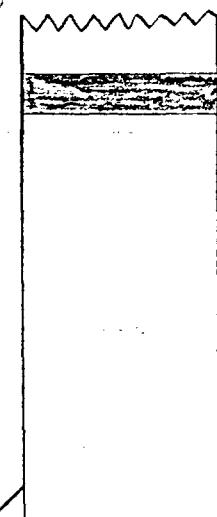
R. OLSEN OIL CO.

STEELER NO. 1  
ULM, SEC. 20-T23S-R37E  
P+A 13/70



95/8 CSG. @ 694' Cemented w/ 250 SX's.  
Cement Top @ SURFACE

5 SX CEMENT PLUG @ 1200'



7" CSG @ 3465' Cemented w/ 250 SX's.  
ESTIMATED Cement Top @ 2499'

TD @ 3710'

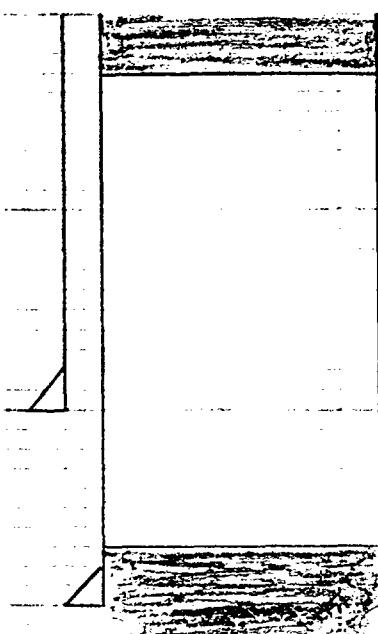
SINCLAIR OIL + GAS CO.

FOWLER HAIR NO. 1

ULD, SEC. 9-T24S-R37E

P+A 7/59

25 SX Cement Plug SURFACE - 90'



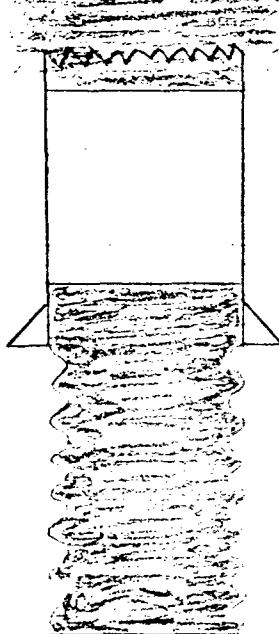
12 1/2" CSG. @ 225' Cemented w/ 150 SXs.  
CALC. Cement TOP @ SURFACE

50 SX Cement Plug 1250'-1350'

8 5/8 CSG. @ 1300' Cemented w/ 200 SXs.  
CALC. Cement TOP @ SURFACE

50 SX Cement Plug 1912'-2250'

CUT 7" CSG. @ 2000' & pulled



200 SX. Cement Plug 3050'-3575'

7" CSG. @ 3084 Cemented w/ 250 SXs.  
ESTIMATED Cement TOP @ 2000'

TD @ 3575'

SINCLAIR OIL & GAS CO.

P. CARTER NO. 1

UL G, SEC. 9-T24S-R37E

P+A 7/59

15 SX Cement Plug SURFACE - 44'

25 SX Cement Plug 235'-291'

9 5/8 CSG @ 270' Cemented w/ 25 SXs.  
Cement Top @ SURFACE

25 SX Cement Plug 428'-493'

SHOT 7" CSG. OFF @ 500' & PULLED

200 SX Cement Plug 3115'-3705'

7" CSG @ 3149' Cemented w/ 200 SXs.  
CALC. Cement Top @ 1400'

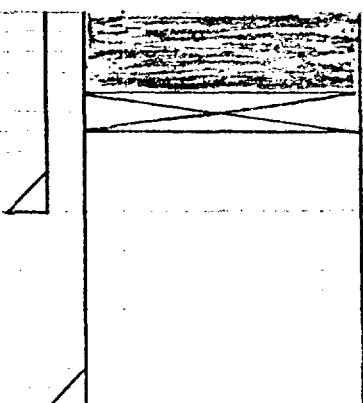
TD @ 3705'

# GULF OIL CORP.

S.J.CARR NO. 1

ULL, SEC. 3-T24S-R37E

P+A 4/52

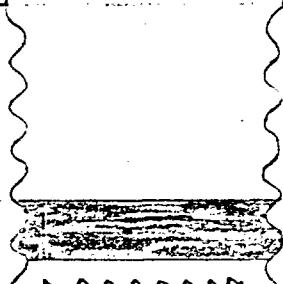


13 SX Cement Plug SURFACE - 25'

Bridge Plug @ 25'

15½ CSG. @ 148' NOT Cemented

10¾ CSG @ 1237' Cemented w/250 SXs  
Cement TOP @ SURFACE



34 SX Cement Plug 2445'-2520'

Shot 7" CSG. OFF @ 2554' + PULLED

15' OF Cement ON TOP OF Retainer  
Cement Retainer @ 3466' Squeezed 20 SXs below Retainer

7" CSG. @ 3484' Cemented w/100 SXs.  
CALC. Cement TOP @ 2600'

PBTG @ 3625'

TD @ 3886'

WESTERN EQUIP. CO.

DALPORT-HAIR NO. 1

ULL, Sec. 11-T24S-R37E

P+A 9/72

10 SX CEMENT PLUG SURFACE-60'

45 SX CEMENT PLUG 990'-1100'

8 1/2 CSG @ 1068' CEMENTED W/500 SX'S.  
Cement top @ SURFACE

45 SX CEMENT PLUG 2680'-2800'

45 SX CEMENT PLUG 3920'-4100'

CUT 5 1/2" CSG @ 4088' + PULLED

35 SX CEMENT PLUG 5110-5460'

C1BP @ 5460'

5469'

Fowler U. YESO

Perf's

5928'

5 1/2 CSG. @ 6100' CEMENTED W/300 SX'S.  
ESTIMATED CEMENT TOP @ 4088'

McCULLOCH OIL CORP.

SUN-HAIR NO. 1

ULD, Sec. II-T24S-R37E

20 SX Cement Plug SURFACE - 60'

50 SX Cement Plug 994'-1167'

858 @ 1117' Cemented w/ 250 SX's,  
TOP CEM. @ SURFACE

50 SX Cement Plug 2087'-2260'

50 SX Cement Plug 3399'-3572'

50 SX Cement Plug 4204'-4377'

50 SX Cement Plug 4972'-5155'

50 SX Cement Plug 5352'-5525'

50 SX. Cement Plug 5937'-6110'

TD @ 6110'

MCCULLOCH OIL CORP.  
DALPORT-HAIR NO. 1

UL M, SEC. 11-T24S-R37E

P&A 4/76

20 SX. CEMENT PLUG SURFACE - 60'

50 SX Cement Plug 1027'-1200'

8 1/2 CSG. @ 1145' Cemented w/ 500 SX's.  
Cem. Top @ SURFACE

50 SX CEMENT PLUG 2341'-2515'

CUT 5 1/2 CSG. @ 2500' + Pulled

10 SX. CEMENT PLUG 5212'-5300'

CIBP @ 5300'

5778

U. yeso  
Perfs

5918

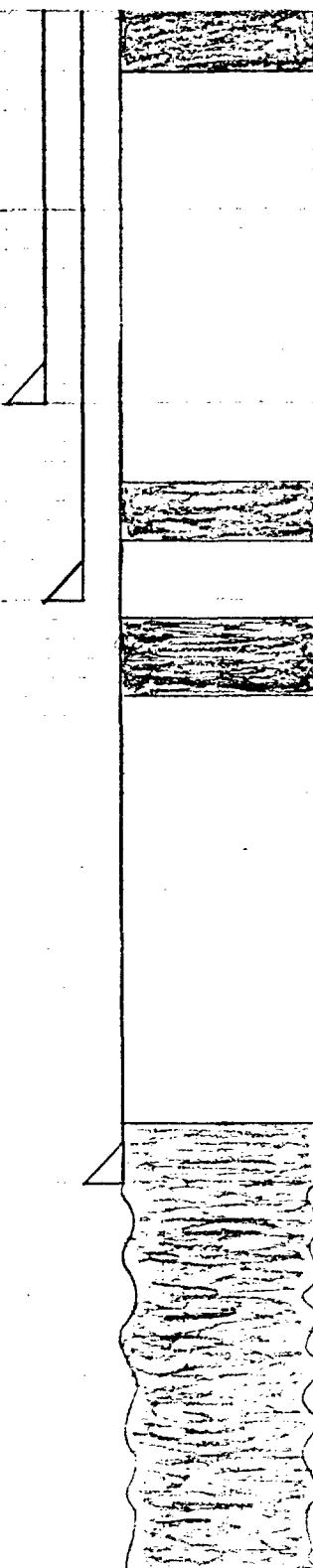
5 1/2 CSG. @ 6956' Cemented w/ 500 SX's.  
CALC. CEMENT TOP @ 3148'

# CITIES SERVICE OIL CO.

HODGES NO. 1

UL A, SEC. 8-T24S-R37E

P+A 4/49



10 SX cement plug SURFACE - 100'

12 1/2 CSG. @ 40' cemented w/ 50 SXs.

TOP cem. @ SURFACE

30 SX cement plug 900'-1200'

7 1/2 CSG. @ 1300' Cemented w/ 307 SXs.

40 SX cement plug

1350'-1750'

TOP cement @ SURFACE

40 SX cement plug 3400'-3575'

5 1/2 CSG. @ 3420' cemented w/ 160 SXs.

CALC. cement top @ 2200'

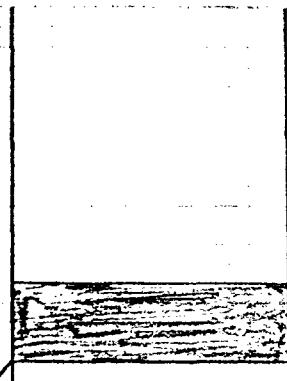
TD @ 3575'

GEORGE P. LIVERMORE, INC.

R.W. COWDEN NO. 2

UL 0, SEC. 30-T23S-R37E

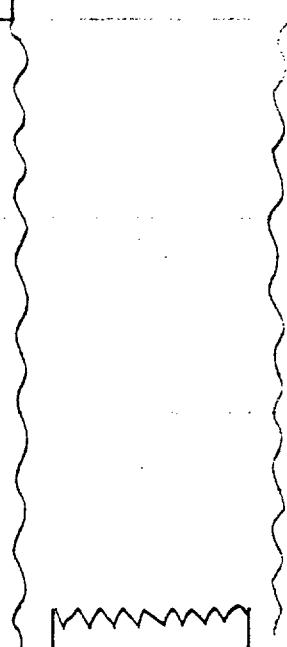
P+A 7/50



10 SX Cement Plug 1175'-1200'

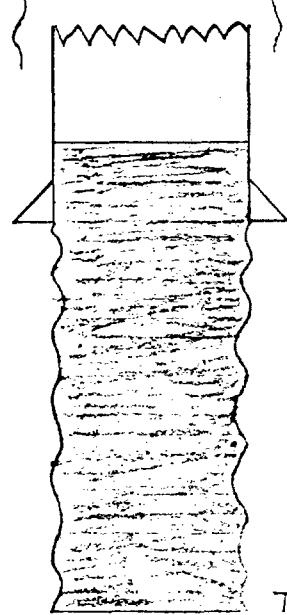
8 1/2 CSG. @ 1216' Cemented w/ 5 1/2 SXs.

TOP cem. @ SURFACE



25 SX Cement Plug 3430'-3655'

5 1/2 CSG. @ 3447' Cemented w/ 5 1/2 SXs.  
Estimated cement top @ 3000'



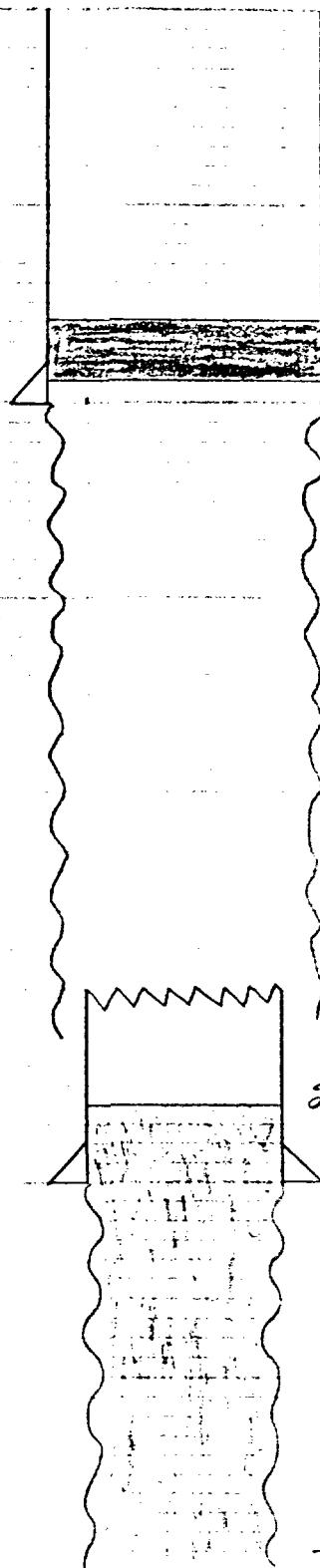
TD @ 3665'

GEORGE P. LIVERMORE, INC.

R.W. COWDEN NO. 4

ULN, SEC. 30-T23S-R37E

P+A 7/50



10 SX cement plug 1185'-1208'

8 1/2 CSG. @ 1217' cemented w/500 SXS.  
TOP cem. @ SURFACE

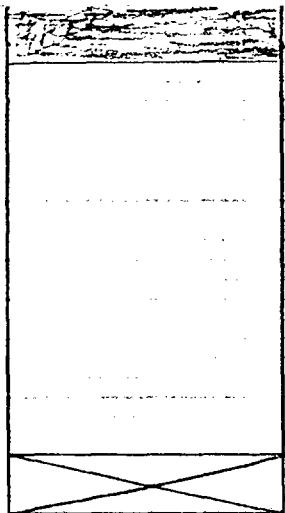
CUT 5 1/2" CSG. @ 3000' + pulled

2 1/2 SX cement plug 3470'-3696'

5 1/2 CSG. @ 3498' Cemented w/525 SXS  
Estimated cement top @ 3000'

TD @ 3696'

ATLANTIC RICHFIELD CO.  
E.L. STEELER WN NO. 2  
UL N, Sec. 19-T23S-R37E  
P+A 11/77



10 SX Cement Plug @ SURFACE

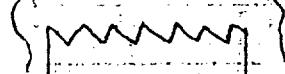
12 3/4 CSG @ 30' Cemented w/25 SXs.-Top Cem. @ SURFACE

Retainer @ 1150'-30SX Squeezed Below Retainer  
+ 5 SX on Top Retainer

8 5/8" CSG @ 1210' Cemented w/400 SXs.-CALC. Cem. Top-SURFACE

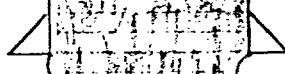
35 SX Cement Plug 1479-1612'

CUT 5 1/2 CSG @ 1559' + Pulled



Hydromite Plug 3542'-3587'

5 1/2 CSG @ 3560 Cemented w/500 SXs.-Cem. Top @ 1559'



4 3/4 Open Hole BP @ 3587'



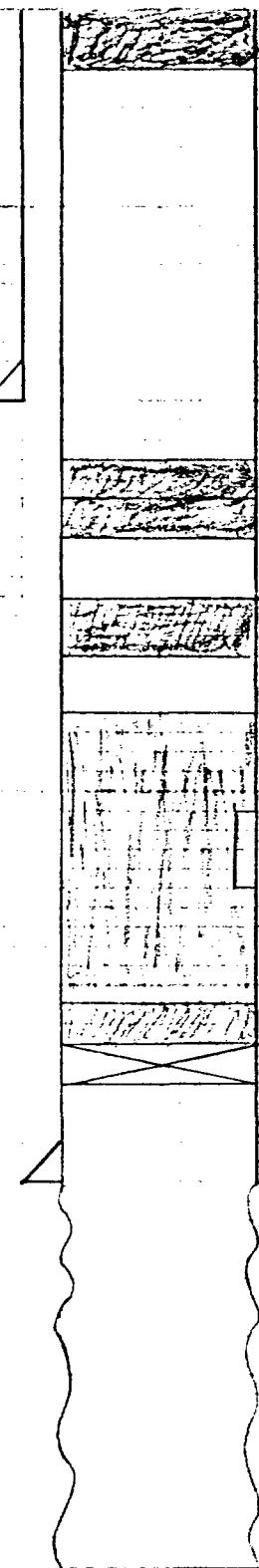
TD @ 3720'

GULF OIL CO.

M. K. STEWART NO. 1

UL J, Sec. 29 - T23S - R37E

P+A 5/60



CEMENT PLUG SURFACE - 25'

△ 958 @ 301' cemented w/ 225 SX - TOP CEM. @ SURFACE

40 SX PLUG 2197'-2497'

25 SX PLUG 2667'-2867'

100 SX CEMENT PLUG 2772'-3442'

2704  
Perfs

3310

cement on TO BP to 3442'  
CIBP @ 3450'

△ 5 1/2 @ 3502' Cemented w/ 750 SXs - CALC. Cem. TOP @ SURFACE

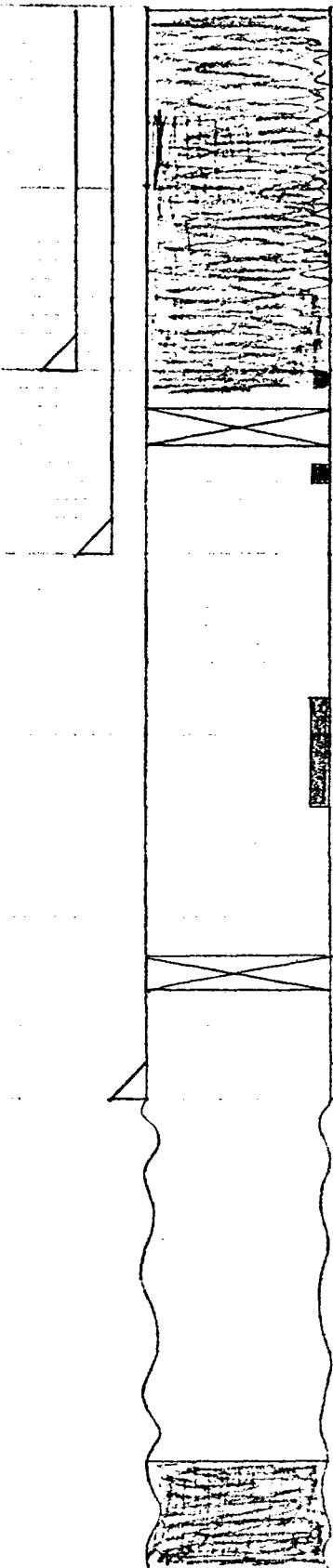
TD @ 3620'

ATLANTIC RICHFIELD CO.

E.L. STEELER WVN #1

UL P, SEC. 19-T23S-R37E

P+A 11/77



PBTD @ 3634'

TD @ 3822'

WESTERN GAS COMPANY

COWDEN NO. 1

ULA, SEC. 31-T23S-R37E

P+A 9/40

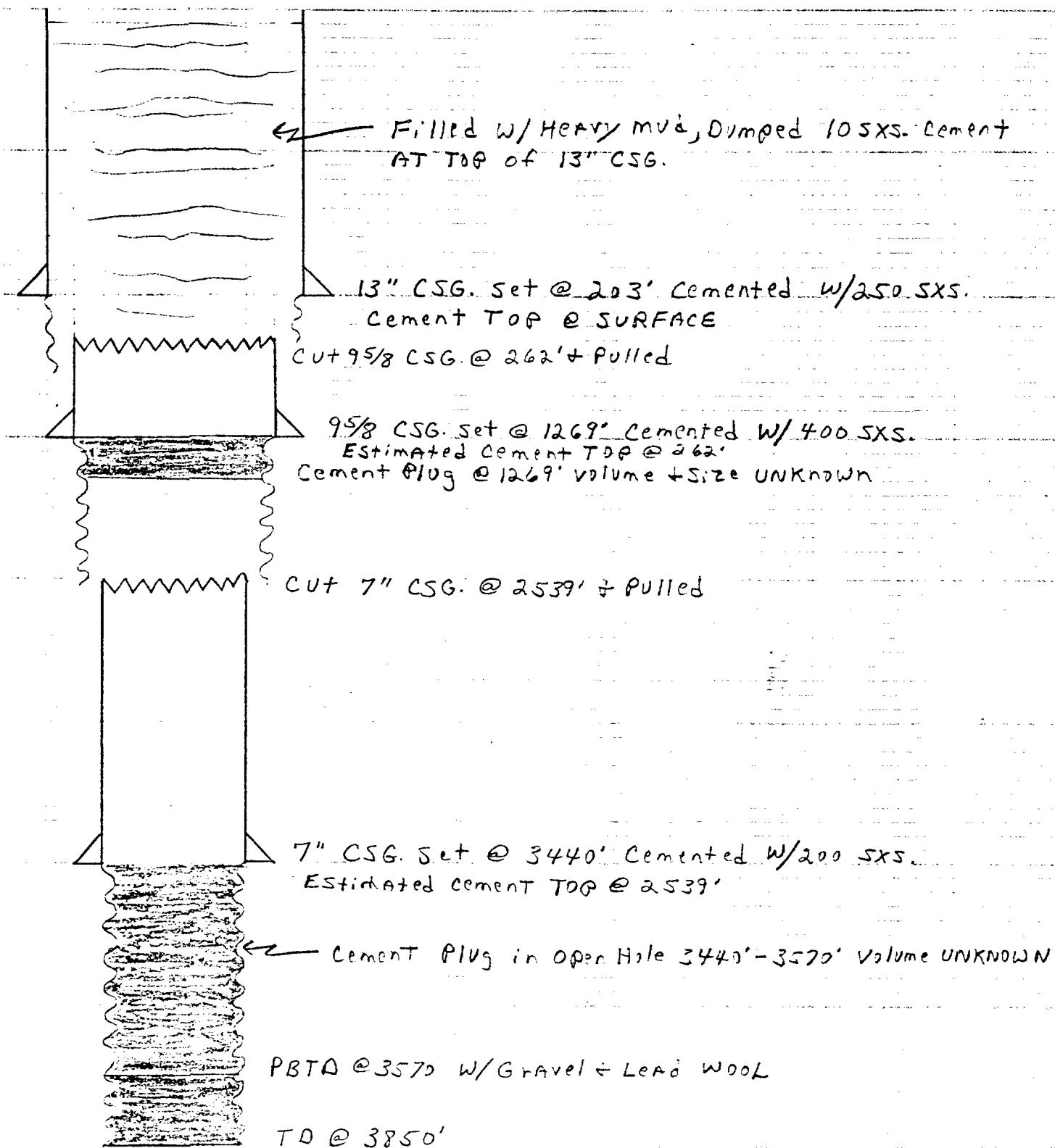


Exhibit VI  
Analysis Of Injection Water

P. O. BOX 1468  
MONAHANS, TEXAS 79756  
PHONE 943-3234 OR 563-1040

Martin Water Laboratories, Inc.  
RESULT OF WATER ANALYSES

67810112  
731 W. INDIANA  
MIDLAND, TEXAS 79701  
PHONE 883-4521

TO: Mr. Dale Crockett  
P.O. Box 730, Hobbs, New Mexico

LABORATORY NO. 27833  
SAMPLE RECEIVED 2-6-78  
RESULT REPORTED 2-13-78

COMPANY Getty Oil Company  
LEASE Myers Langlie Mattix Unit  
FIELD OR POOL Langlie Mattix  
SECTION BLOCK SURVEY COUNTY Lea STATE New Mexico

SOURCE OF SAMPLE AND DATE TAKEN:

- NO. 1 Reef water - taken from raw water line. 2-6-78  
NO. 2 Composite produced water - taken from transfer pump. 2-6-78  
NO. 3 Injection water - taken from input #144 (near injection pump discharge). 2-6-78  
NO. 4 Injection water - taken from input #171. 2-6-78

REMARKS:

	CHEMICAL AND PHYSICAL PROPERTIES			
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0095	1.0184	1.0104	1.0093
pH When Sampled	6.5	8.1	6.6	6.6
pH When Received	6.56	7.91	6.67	6.60
Bicarbonate as $\text{HCO}_3$	1,141	1,220	1,159	1,171
Supersaturation as $\text{CaCO}_3$	5	120	30	0
Undersaturation as $\text{CaCO}_3$	--	--	--	--
Total Hardness as $\text{CaCO}_3$	3,200	6,400	3,500	3,400
Calcium as Ca	620	640	640	600
Magnesium as Mg	401	1,166	462	452
Sodium and/or Potassium	3,202	6,499	3,597	3,177
Sulfate as $\text{SO}_4$	1,456	1,927	1,497	1,476
Chloride as Cl	5,468	12,428	6,250	5,539
Iron as Fe	0.26	9.6	1.9	0.85
Barium as Ba	0	0	0	0
Turbidity, Electric	8	214	85	25
Color as Pt	20	376	156	53
Total Solids, Calculated	12,288	23,880	13,605	12,425
Temperature °F.	82	54	75	74
Carbon Dioxide, Calculated	593	10	475	480
Dissolved Oxygen, Winkler	0.0	0.0	0.0	0.0
Hydrogen Sulfide	900	325	850	900
Resistivity, ohms/m at 77° F.	0.550	0.310	0.530	0.550
Suspended Oil	5	355	45	11
Filtrable Solids as mg/l	1.5	79.4	29.3	9.4
Volume Filtered, ml	10,000	340	800	2,000

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks In regard to matters brought up in our letter of November 10, 1977, these results are significant in that they show the Reef water to be back to normal; no calcium carbonate scaling tendencies indicated; and no sand identified in the filtrable solids. We are continuing to show a prominent excess of suspended oil and accompanying filtrable solids at the transfer pump, thereby indicating a continuation of interface material in the composite produced water. This is the only condition that has again appeared; therefore, we would suggest only to concentrate efforts on flushing off interface material at all points prior to the transfer pump.

Exhibit VII  
List Of Available Instantaneous  
Shut-In Pressures After Fracture  
Treating Myers Langlie Mattix Unit Wells

## PRESSURE INFORMATION

### Myers Langlie Mattix Unit

#### Well No.

	<u>Instantaneous Shut-In Pressure</u>	<u>PSIG</u>
9		1000 —
10		1000 —
13		1800 —
14		1500 —
32		1250 X
33	1225	1300 ✓
35	1225	1150 ✓
47	1225	1200 X
50	13475	1200 X
55		1150 ✓
56		2000 —
58		1100 ✓
65		900 —
74		1150 ✓
77		700 —
78	9900	1200 X
83	225	2400 —
84		1500 —
86		1200 X
87		1000 —
88		1200 X
89		1200 X
93		900 —
110	8-1000	1000 —
111		800 —
119	9-1125	1000 —
121		1600 —
133	11-1225	1200 X
134		1150 ✓
141	4-1300	1000 —
142		1300 ✓
152		1150 ✓
156	2-1500	1100 ✓
159		1200 X
169		1100 ✓
170		1300 ✓
171		1000 —
177		1300 ✓
178		1250 X
191		1900 —
194		1100 ✓
199		1200 X
201		1000 —
		1200 PSIG Average
	34	1170
		39800
		34
		98
		34
		2400
		238

JOHN WEST ENGINEERING CO.  
Step Rate Injection Test

Well Name M L M U No: 165  
CO. Name TEXACO PRODUCING CO.

Date 9-29-88

Remarks	Time	Tbg. Press.	Rate BPD	Total	B H P	Tbg. Press.	Rate GPM	HEAD LOSS
Begin Pumping	9:20							
	9:25	636.7	63.3	.80	2203.2			
	9:30	643.3	60.48	1.01	2204			
RATE I	9:35	649.8	46.08	1.17	2212.9	649.66	1.65	.14
			56.64					
	9:40	721.5	144.0	1.67	2268.6			
	9:45	734.5	120.96	2.09	2281.2			
RATE II	9:50	730.9	118.08	2.50	2286.4	730.26	3.72	.64
			127.68					
	9:55	801.3	175.68	3.11	2330.9			
	10:00	774.5	178.56	3.73	2342.8			
RATE III	10:05	800.3	172.80	4.33	2357.6	799.15	5.12	1.15
			175.68					
	10:10	863	216.00	5.08	2410.40			
	10:15	882.3	213.12	5.82	2427.50			
RATE IV	10:20	900.2	204.48	6.53	2444.50	898.58	6.16	1.62
			211.20					
	10:25	951.4	282.24	7.51	2494.50			
	10:30	960.3	270.72	8.45	2512.40			
RATE V	10:35	983.3	276.48	9.41	2521	980.63	8.06	2.67
			276.48					
	10:40	1040.9	334.08	10.57	2587.6			
	10:45	1069.1	325.44	11.70	2599.60			
RATE VI	10:50	1074.3	325.44	12.83	2613.9	1070.63	9.58	3.67
			328.32					
	10:55	1107.6	383.04	14.16	265.20			
	11:00	1123.0	380.16	15.48	2667.0			
RATE VII	11:05	1138.4	385.92	16.82	2679.10	1133.52	11.17	4.88
			383.00					
	11:10	1176.8	455.04	18.40	2725.3			
	11:15	1216.5	429.12	19.89	2738.10			
RATE VIII	11:20	1206.2	423.36	21.36	2747.20	1200.00	12.71	6.20
			435.84					
	11:25	1245.9	512.64	23.14	2782.40			
	11:30	1254.9	501.12	24.88	2789.20			
RATE IX	11:35	1254.9	498.24	26.61	2799.1	1246.71	14.70	8.11
			504.0					

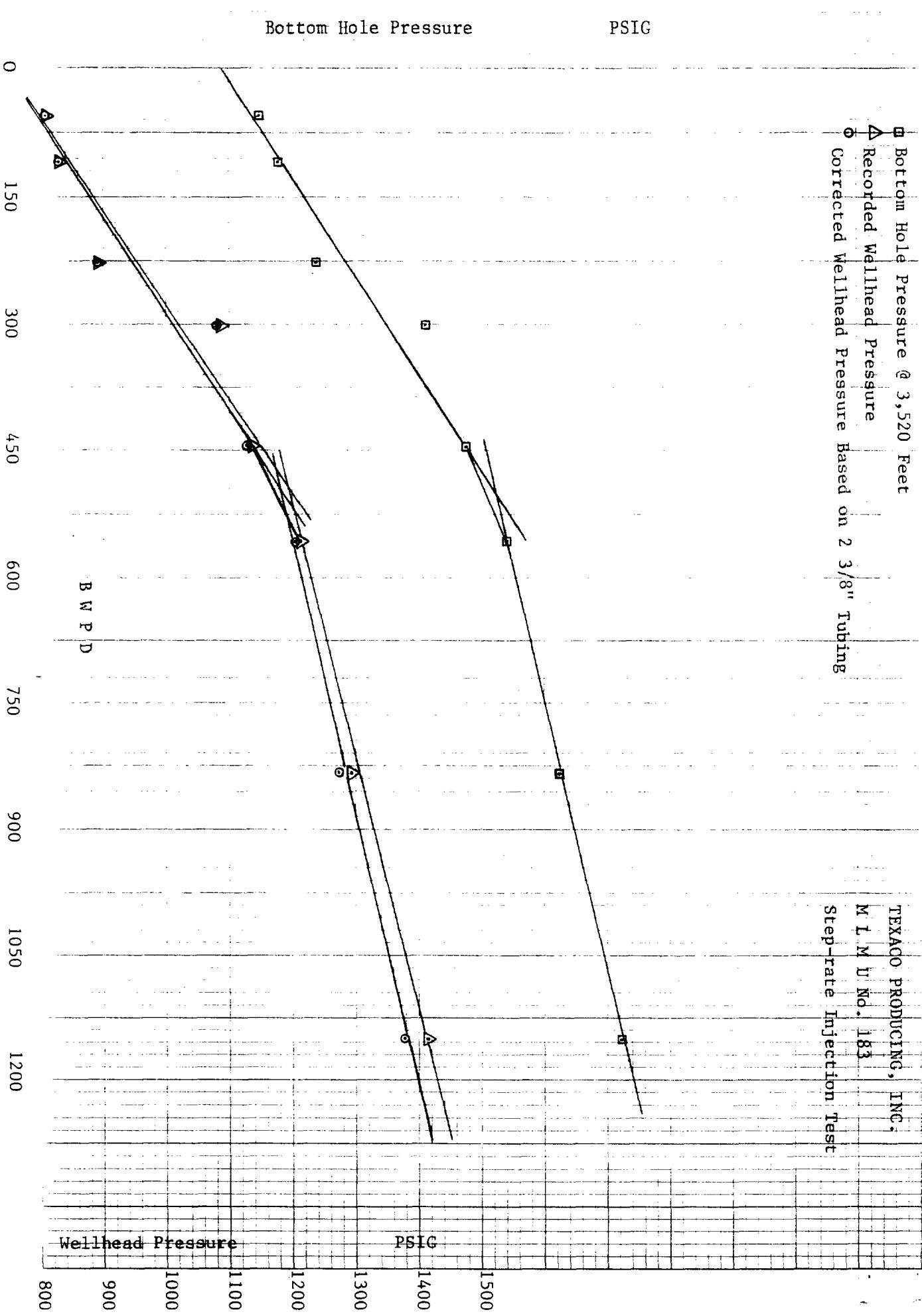
**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well Name M L M U No: 165  
CO. Name TEXACO PRODUCING CO.

Date 9-29-88

TEXACO PRODUCING, INC.  
M.L.M.U. No. 183  
Step-rate Injection Test

Bottom Hole Pressure @ 3,520 Feet  
Recorded Wellhead Pressure  
Corrected Wellhead Pressure Based on 2 3/8" Tubing



**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well Name M L M U No. 183  
CO. Name Texaco Producing, Inc.

Date October 3, 1988

Remarks	Time	Tbg. Press.	Rate BPD	Total	B H P	Tbg. Press.	Rate GPM	HEAD LOSS
	11:35 AM	760.5		0	2310.2			
	11:40	792.3	54.72	.19	2327.3			
	11:45	790.8	60.48	.40	2336.9			
Rate I	11:50	806.0	54.72	.59	2345.0	805.86	1.65	.14
			56.64					
	11:55 AM	813.5	112.32	.98	2359.9			
	12:00 noon	821.1	109.44	1.36	2370.4			
Rate II	12:05 PM	828.9	100.80	1.71	2378.6	828.43	3.14	.47
			107.52					
	12:10	853.1	230.40	2.51	2407.5			
	12:15	878.6	224.64	3.29	2425.3			
Rate III	12:20	890.0	221.76	4.06	2439.8	888.13	6.58	1.87
			225.60					
	12:25	1046.6	293.76	2.98	2585.3			
	12:30	1059.4	302.40	4.03	2602.3			
Rate IV	12:35	1085.0	308.16	5.10	2614.2	1081.80	8.79	3.20
			301.44					
	12:40	1120.9	460.80	6.70	2644.0			
	12:45	1134.8	443.52	8.24	2662.0			
Rate V	12:50	1137.3	440.64	9.77	2676.4	1130.64	13.08	6.66
			448.32					
	12:55	1159.1	483.84	11.45	2698.1			
	1:00	1185.1	584.64	13.48	2720.6			
Rate VI	1:05	1213.5	607.68	15.58	2740.2	1203.49	16.30	10.01
			558.72	Changed Pumps				
	1:10	1213.4	829.12	1.49	2749.4			
	1:15	1267.0	832.32	4.38	2794.2			
Rate VII	1:20	1293.8	838.08	7.29	2820.7	1272.84	24.30	20.96
			833.17					
	1:25	1366.9	1157.76	11.31	2870.3			
	1:30	1397.7	1160.64	15.34	2899.2			
Rate VIII	1:35	1416.8	1143.36	19.31	2922.5	1378.52	33.66	38.28
			1153.92					
Fall-off	1:40	1311.8			2861.1			
	1:45	1291.4			2839.5			