

SUMMARY OF PROPOSED INJECTORS
NORTH VACUUM ABO UNIT

<u>OPERATOR</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>SECTION</u>	<u>LOCATION</u>
Mobil	Bridges State	172	3	P
Mobil	"	166	10	H
Shell	State "VH"	1	10	P
Mobil	Bridges State	130	15	H
Mobil	"	144	15	P
Mobil	State "J"	9	22	H
Shell	Location	Location	22	P
Mobil	Bridges State	157	27	H
Mobil	"	145	27	P
Mobil	"	148	11	N
Mobil	"	173	14	F
Mobil	"	171	14	N
Mobil	"	151	23	F
Mobil	State "KK"	1	23	N
Mobil	Bridges State	118	26	F
Mobil	"	153	26	N
Mobil	"	140	11	P
Mobil	"	125	14	H
Mobil	"	124	14	P
Mobil	"	128	23	H
Mobil	"	117	23	P
Mobil	"	96	26	H
Mobil	"	95	26	P
Mobil	"	150	12	N
Mobil	"	147	13	F
Mobil	"	120	13	N
Mobil	"	119	24	F
Mobil	"	109	24	N
Mobil	"	108	25	F
Mobil	"	161	12	H
Mobil	"	159	12	P
Mobil	"	169	13	H
Pennzoil	Mobil State	1	24	H
Shell	State "C"	2	24	P

PRODUCTION HISTORY
NO. VACUUM ABO UNIT

BEZELT OIL FIELD UTZ
OIL CONCENTRATION PERCENTAGE
LABOR NO. 6
CASE NO. 4831
Cement 6
Measuring Date
GAS

DATE	OIL			GAS		
	DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	GOR
1966						
June	21	640	640	2,685	2,685	1260
July	94	2,921	3,561	6,340	9,025	1163
Aug.	101	3,122	6,683	5,658	14,683	975
Sept.	229	6,880	13,563	13,463	28,146	1334
Oct.	268	8,316	21,879	10,921	39,067	953
Nov.	286	8,582	30,461	10,234	49,301	882
Dec.	544	16,866	47,327	10,082	59,383	548

Annual Production

47,327

59,383

1967						
Jan.	555	17,215	64,542	24,156	83,539	1403
Feb.	881	24,660	89,202	22,612	106,151	916
Mar.	851	26,366	115,568	25,945	132,096	984
Apr.	937	28,098	143,666	29,455	161,551	1048
May	1,082	33,549	177,215	42,695	204,246	1272
June	1,052	31,550	208,765	32,044	236,290	1015
July	1,122	34,779	243,544	29,260	265,550	841
Aug.	1,191	36,921	280,465	29,637	295,187	802
Sept.	1,478	44,337	324,802	42,858	338,045	966
Oct.	1,354	41,971	366,773	46,375	384,420	1104
Nov.	1,461	43,836	410,609	44,791	429,211	1021
Dec.	1,369	42,431	453,040	50,001	479,212	1178

Annual Production

405,713

419,829

1968						
Jan.	1,417	43,916	496,956	50,722	529,934	1154
Feb.	1,396	39,079	536,035	47,366	577,300	1212
Mar.	1,297	40,197	576,232	48,644	625,944	1210
Apr.	1,417	42,513	618,745	49,526	675,470	1164
May	1,388	43,017	661,762	52,284	727,754	1215
June	1,188	35,654	697,416	35,802	763,556	1004
July	1,318	40,849	738,265	45,535	809,091	1114
Aug.	1,354	41,964	780,229	57,349	866,440	1366
Sept.	1,132	33,975	814,204	66,956	933,396	1970
Oct.	1,084	33,594	847,798	58,077	991,473	1728
Nov.	1,151	34,524	882,322	45,093	1,036,566	1306
Dec.	1,168	36,208	918,530	46,011	1,082,577	1270

Annual Production

465,490

603,365

PRODUCTION HISTORY
NO. VACUUM ABO UNIT

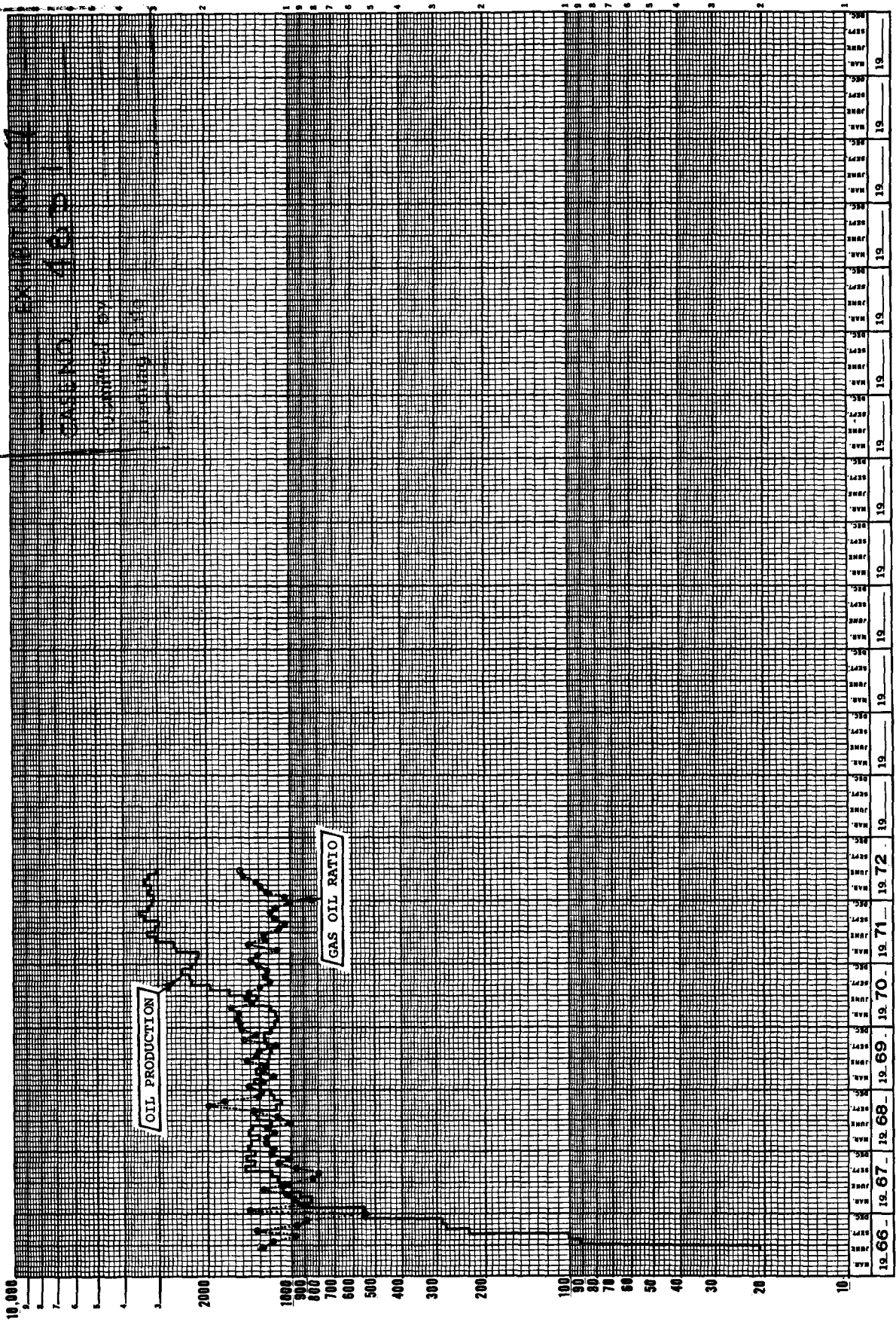
DATE	OIL			GAS		
	DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	GOR
<u>1969</u>						
Jan.	1,287	39,886	958,416	56,986	1,139,563	1428
Feb.	1,370	38,355	996,771	48,510	1,188,073	1264
Mar.	1,297	40,209	1,036,980	46,860	1,234,933	1165
Apr.	1,334	40,024	1,077,004	50,799	1,285,732	1269
May	1,300	40,286	1,117,290	50,180	1,335,912	1245
June	1,210	36,297	1,153,587	52,866	1,388,778	1456
July	1,201	37,233	1,190,820	49,163	1,437,941	1320
Aug.	1,186	36,782	1,227,602	48,037	1,485,978	1306
Sept.	1,208	36,247	1,263,849	41,250	1,527,228	1138
Oct.	1,230	38,130	1,301,979	56,414	1,583,642	1479
Nov.	1,229	36,878	1,338,857	50,062	1,633,704	1357
Dec.	1,193	36,978	1,375,835	55,692	1,689,396	1506
Annual Production		457,305		606,819		
<u>1970</u>						
Jan.	1,142	35,414	1,411,249	53,544	1,742,940	1511
Feb.	1,119	31,330	1,442,579	49,019	1,791,959	1564
Mar.	1,137	35,260	1,477,839	54,062	1,846,021	1533
Apr.	1,192	35,760	1,513,599	58,151	1,904,172	1626
May	1,344	41,667	1,555,266	57,574	1,961,746	1381
June	1,332	39,973	1,595,239	56,793	2,018,539	1420
July	1,683	52,183	1,647,422	73,570	2,092,109	1409
Aug.	1,974	61,203	1,708,625	79,139	2,171,248	1293
Sept.	2,296	68,878	1,777,503	82,104	2,253,352	1192
Oct.	2,327	72,138	1,849,641	89,666	2,343,018	1242
Nov.	2,446	73,379	1,923,020	89,171	2,432,189	1215
Dec.	2,274	70,485	1,993,505	91,874	2,524,063	1303
Annual Production		617,670		834,667		
<u>1971</u>						
Jan.	2,198	68,138	2,061,643	94,897	2,618,960	1392
Feb.	2,156	60,366	2,122,009	79,529	2,698,489	1317
Mar.	2,597	80,497	2,202,506	89,380	2,787,869	1110
Apr.	2,625	78,751	2,281,257	111,161	2,899,030	1411
May	3,026	93,799	2,375,056	114,224	3,013,254	1217
June	3,264	97,913	2,472,969	121,304	3,134,558	1238
July	3,087	95,706	2,568,675	105,299	3,239,857	1100
Aug.	2,980	92,386	2,661,061	97,244	3,337,101	1052
Sept.	3,373	101,186	2,762,247	116,977	3,454,078	1156
Oct.	3,463	107,353	2,869,600	125,672	3,579,750	1170
Nov.	3,259	97,785	2,967,385	111,357	3,691,107	1138
Dec.	3,179	98,563	3,065,948	98,916	3,790,023	1003
Annual Production		1,072,443		1,265,960		

PRODUCTION HISTORY
NO. VACUUM ABO UNIT

<u>DATE</u>	<u>OIL</u>			<u>GAS</u>		
	<u>DAILY</u>	<u>MONTHLY</u>	<u>CUMULATIVE</u>	<u>MONTHLY</u>	<u>CUMULATIVE</u>	<u>GOR</u>
<u>1972</u>						
Jan.	3,116	96,589	3,162,537	102,285	3,892,308	1058
Feb.	3,286	92,001	3,254,538	112,348	4,004,656	1221
Mar.	3,181	98,607	3,353,145	127,910	4,132,566	1297
Apr.	3,372	101,157	3,454,302	134,542	4,267,108	1330
May	3,253	100,830	3,555,132	150,509	4,417,617	1492
June	3,051	<u>91,528</u>	3,646,660	<u>138,286</u>	4,555,903	1511
Production To Date		580,712		765,880		

BEFORE EXAMINER USE

OIL CONSERVATION COMMISSION



TIME - YEARS

Mobil Oil Corporation
EXPLORATION AND PRODUCING DEPARTMENT
INLAND DIVISION

PRODUCTION HISTORY
PROPOSED NORTH VACUUM ABO UNIT

LEA COUNTY, NEW MEXICO

DATE
BY
CHECKED BY
APPROVED
REVIEWED

BEFORE EXAMINER USE
OIL CONSERVATION COMMISSION

8 WELL TEST SUMMARY
PROPOSED NORTH VACUUM ABO UNIT

P. Jones

CASE NO. 4831

Operator	Lease	Well No.	Date of Test	Test Results			Zone
				Oil	Wtr	GOR	
Mobil	Bridges State	172	7- 9-72	122	0	918	Abo
	"	166	8- 8-72	73	28	1753	Abo
Shell	State "VH"	1	6- 72	130	0	704	Abo
Mobil	Bridges State	130	7- 8-72	9	(1731 MCF)		Morrow Gas
	"	144	6-19-72	66	1	1666	Abo
	State "J"	9	7- 9-72	37	0	81	Abo
Shell	Location	Location		-	-	-	-
Mobil	Bridges State	157	5- 6-72	108	3	1611	Abo
	"	145	7-17-72	30	1	4933	Abo
	"	148	7-16-72	53	13	1566	Abo
	"	173	7- 9-72	55	1	1672	Abo
	"	171	7-16-72	69	1	1550	Abo
	"	151	7-15-72	1	(270 MCF)		Morrow Gas
	State "KK"	1	7-12-72	64	0	1453	Abo
	Bridges State	118	5- 7-72	104	0	2471	Abo
	"	153	6-23-72	38	0	2157	Abo
	"	140	7-18-72	95	1	1242	Abo
	"	125	7- 9-72	88	(4996 MCF)		Morrow Gas
	"	124	6- 1-72	33	9	1030	Abo
	"	128	7-14-72	26	3	4576	Upper Penn
	"	117	6-19-72	42	4	119	Abo
	"	117	6-14-72	82	0	1878	Abo
	"		7-11-72	23	13	4000	Wolfcamp
	"	96	7-18-72	62	7	1967	Abo
	"	95	7-19-72	13	1	1307	Abo
	"		7-19-72	30	0	1433	Wolfcamp
	"	150	7-17-72	73	12	1739	Abo
	"	147	7- 8-72	32	1	2125	Abo
	"		7-15-72	44	8	3409	Middle Penn
	"	120	7-19-72	21	1	2857	Abo
	"		7-10-72	131	63	1068	Upper Penn
	"	119	7- 4-72	85	0	3705	Abo
	"		7-16-72	50	0	2840	Upper Penn
	"		7-16-72	26	0	2692	Wolfcamp
	"	109	7-15-72	56	1	2910	Abo
	"		7-19-72	35	23	2000	Upper Penn
	"		7-19-72	37	25	2540	Wolfcamp
	"	108	7- 7-72	21	5	1428	Abo
	"		7-15-72	101	30	1405	Upper Penn
	"		7- 8-72	24	7	750	Wolfcamp
	"	161	6-10-72	62	15	1402	Abo
	"	159	7-14-72	60	8	1250	Abo
	"	169	7-15-72	78	11	1500	Abo
Pennzoil	Mobil State	1	6 -72	94	0	1396	Abo
Shell	State "C"	2	6 -72	79	3	1760	Abo
Mobil	Bridges State	122	7-16-72	35	0	2000	Abo
	"	131	7-15-72	85	1	141	Abo
Shell	State "VH"	2	6 -72	65	28	1159	Abo

WELL TEST SUMMARY
 PROPOSED NORTH VACUUM ABO UNIT
 Page 2

Operator	Lease	Well No.	Date of Test	Test Results			Zone
				Oil	Wtr	GOR	
Mobil	Bridges State	164	7-11-72	37	0	2108	Abo
	"	163	7-12-72	37	1	351	Abo
	State "J"	5	7-17-72	23	0	2521	Abo
	"	7	7-18-72	26	0	230	Abo
	Bridges State	143	5-24-72	23	0	1869	Abo
Pennzoil	"	149	5-22-72	79	2	1835	Abo
	Marathon State	1	6- 72	27	0	983	Abo
Mobil	Bridges State	135	7-18-72	51	0	1117	Abo
	"	170	7-10-72	47	1	148	Abo
	"	139	7-18-72	18	0	4111	Abo
	"	155	7-19-72	23	0	3782	Abo
	State "KK"	2	7-13-72	12	1	1166	Abo
	Bridges State	136	5-10-72	114	0	1219	Abo
	"	138	5- 9-72	60	0	1533	Abo
	"	162	7-17-72	42	0	547	Abo
	"	146	5- 6-72	32	1	156	Abo
	"	142	7-13-72	26	2	1692	Abo
	"	129	6-20-72	22	2	6272	Abo
	"	156	5-21-72	59	0	2830	Abo
	"	137	5-23-72	89	0	2505	Abo
	"	98	5- 2-72	19	0	1157	Abo
	"		7- 6-72	11	1	90	Lower Penn
	"		7-17-72	28	9	5250	Wolfcamp
	"	134	7-18-72	86	11	918	Abo
	"	165	7-14-72	76	1	2013	Abo
	"		7-17-72	113	1	1097	Middle Penn
	"	121	7-12-72	41	0	3536	Abo
	"		7-13-72	11	10	3000	Middle Penn
	"		7-13-72	2	1	6000	Upper Penn
	Bridges Santa Fe	1	7-15-72	26	1	38	Abo
	"		7-15-72	10	0	100	Upper Penn
	Bridges State	116	6-17-72	113	0	3168	Abo
	"		7- 1-72	27	1	5185	Wolfcamp
	"	112	7-14-72	40	13	1600	Abo
	"		7-10-72	54	55	18	Glorieta
	"		7-16-72	17	63	1882	Upper Penn
	"	160	7-19-72	40	5	1500	Abo
	"	158	8-13-72	164	2	870	Abo
	"		8-14-72	16	(1200 MCF)		Morrow Gas
	"	152	7-16-72	78	8	1846	Abo
	State "G"	4	7-15-72	30	0	1933	Abo
Mallard	State "A"	1	6- 72	33	0	2029	Abo
	Bridges State	104	7-18-72	62	8	1225	Abo
Mobil	"		7-11-72	107	45	710	Upper Penn
	State "N" Com.	1	6-23-72	88	1	1079	Abo
Pennzoil	Bridges State	1	6- 72	32	1	762	Abo
Marathon	Location	1	Drilling				

Martin Water Laboratories

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

408 W. ILLINOIS PHONE 663-4521
MIDLAND, TEXAS 79701

RESULT OF WATER ANALYSES

TO:	Mr. I. S. Reavis	LABORATORY NO.	469224
	P. O. Box 633, Midland, Texas	SAMPLE RECEIVED	4-29-69
		RESULTS REPORTED	5-14-69

COMPANY Mobil Oil Corporation LEASE Bridges State Vacuum
FIELD OR POOL Vacuum
SECTION BLOCK SURVEY COUNTY Lea STATE New Mexico

SOURCE OF SAMPLE AND DATE TAKEN:

No. 1 Supply water - taken from water supply well @ plant (make-up for produced water). 4-29

NO. 2 Supply water - taken from WSW #100 & 101 @ common header @ plant. 4-29-69

NO. 3

NO. 4-

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0002	1.0003		
pH When Sampled	7.3	6.7		
pH When Received	7.6	7.1		
Bicarbonate as HCO ₃	200	171		
Supersaturation as CaCO ₃	0	--		
Undersaturation as CaCO ₃	-	28		
Total Hardness as CaCO ₃	198	191		
Calcium as Ca	61	60		
Magnesium as Mg	11	10		
Sodium and/or Potassium	26	26		
Sulfate as SO ₄	26	30		
Chloride as Cl	42	42		
Iron as Fe	0.0	0.0		
Barium as Ba	0	0		
Turbidity, Electric	1.9	1.3		
Color as Pt	4	6		
Total Solids, Calculated	366	339		
Temperature °F.	65	65		
Carbon Dioxide, Calculated	16	56		
Dissolved Oxygen, Winkler	2.5	0.0		
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 60° F.	17.24	19.61		
Suspended Oil				
Filtrable Solids as mg/l	0.20	0.33		
Volume Filtered, ml	3,000	4,000		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

CIL COMMISSIONER GENERAL COMMISSION

406 W. ILLINOIS PHONE 683-4521
MIDLAND, TEXAS 79701

MIDLAND, TEXAS 79701

LABORATORY NO. 871132 4831
SAMPLE RECEIVED 8-25-71
RESULTS REPORTED 8-27-71

COMPANY Mobil Oil Corporation LEASE Bringing State
FIELD OR POOL Vacuum
SECTION BLOCK SURVEY COUNTY Lea STATE N. M.

Produced (Abo) water - taken from Bridges State #166. 8-23-71

NO. 2

NO. 3

NO. 4

REMARKS: Work ordered by Mr. N. E. Bourland

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1417			
pH When Sampled				
pH When Received	5.7			
Bicarbonate as HCO_3	151			
Supersaturation as CaCO_3				
Undersaturation as CaCO_3				
Total Hardness as CaCO_3	36,750			
Calcium as Ca	10,240			
Magnesium as Mg	2,709			
Sodium and/or Potassium	87,157			
Sulfate as SO_4	758			
Chloride as Cl	159,793			
Iron as Fe	14.5			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	260,303			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	0.043			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks In comparing the above with analysis #27154 (2-5-71) on well #147, we interpret these results as being typical Abo water. The water shows no calcium sulfate scaling tendency.

cc: Mr. H. R. Elledge, Hobbs
Mr. A. - Hobbs, Hobbs

W. Reagan White, B. S.

(7) That special rules and regulations for the operation of the Mobil North Vacuum-Abo Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project area in any proportion, provided that no well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the North Vacuum-Abo Pool until such time as the well has experienced a substantial response to water injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the North Vacuum-Abo Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant, Mobil Oil Corporation, is hereby authorized to institute a pressure maintenance project in the North Vacuum-Abo Pool ~~on~~ its North Vacuum-Abo Unit Area ~~Lease~~, Lea County, New Mexico, to be designated the Mobil North Vacuum Abo Pressure Maintenance Project, by the injection of water ^{gas and oil} into the Abco formation, through the following-described wells:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM

<u>OPERATOR</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>SECTION</u>	<u>LOCATION</u>
Mobil	Bridges State	172	3 ✓	P
Mobil	"	166	10 ✓	H
Mobil	"	1	10 ✓	P
Shell	State "VH"	130 (a dual completion)	15 ✓	H
Mobil	Bridges State	144	15 ✓	P
Mobil	"	9	22 ✓	H
Mobil	State "J"	to be drilled	22 ✓	P
Shell	Location	157	27 ✓	H
Mobil	Bridges State	145	27 ✓	P
Mobil	"	148	11 ✓	N
Mobil	"	173	14	F
Mobil	"	171	14	N
Mobil	"	151 (a dual completion)	23	F
Mobil	"	1	23	N
Mobil	State "KK"	118	26	F
Mobil	Bridges State	153	26	N
Mobil	"	140	11 ✓	P
Mobil	"	125 (a dual completion)	14	H
Mobil	"	124 (a dual completion)	14	P
Mobil	"	128	23	H
Mobil	"	117 (a dual completion)	23	P
Mobil	"	96	26	H
Mobil	"	95 (a dual completion)	26	P
Mobil	"	150	12	N
Mobil	"	147 (a dual completion)	13	F
Mobil	"	120 (a dual completion)	13	N
Mobil	"	119 (a triple completion)	24	F
Mobil	"	109 (a triple completion)	24	N
Mobil	"	108 (a triple completion)	25	F
Mobil	"	161	12	H
Mobil	"	159	12	P
Mobil	"	169	13	H
Mobil	"	1	24	H
Pennzoil	Mobil State	2	24	P
Shell	State "C"			

DIAGRAMMATIC WELL SKETCH

TYPICAL SINGLE WELL

NORTH VACUUM ABO UNIT

NORTH VACUUM (ABO) FIELD

LEA COUNTY, NEW MEXICO

912045 1-1-100 5-10TZ

OIL COMMISSION

PERMIT NO. 12

CASE NO. 4831

Submitted by

Gauging Date

3,000 Psi Pop off valve

Gauge

G.L. Elev. = 4,000'

Annulus Filled With
Water Containing A
Corrosion Inhibitor

3-5/8" - 23 lb/ft-J-55 set w/900 sks.
Min. Burst Press. = 2,950 Psi

1,700'

2" Plastic Lined Tubing

Top of Cement

2,600'

Injection Packer

To be set 50' Above
The Abo Perforations

Abo Perforations
8,500'

8,600'

P.B.T.D.

8,750'

5-1/2"-15.50 & 17.00 lb/ft-J-55 set
w/2900 sks Min. Burst Press = 4,810 Psi

8,800'

John E. Smith

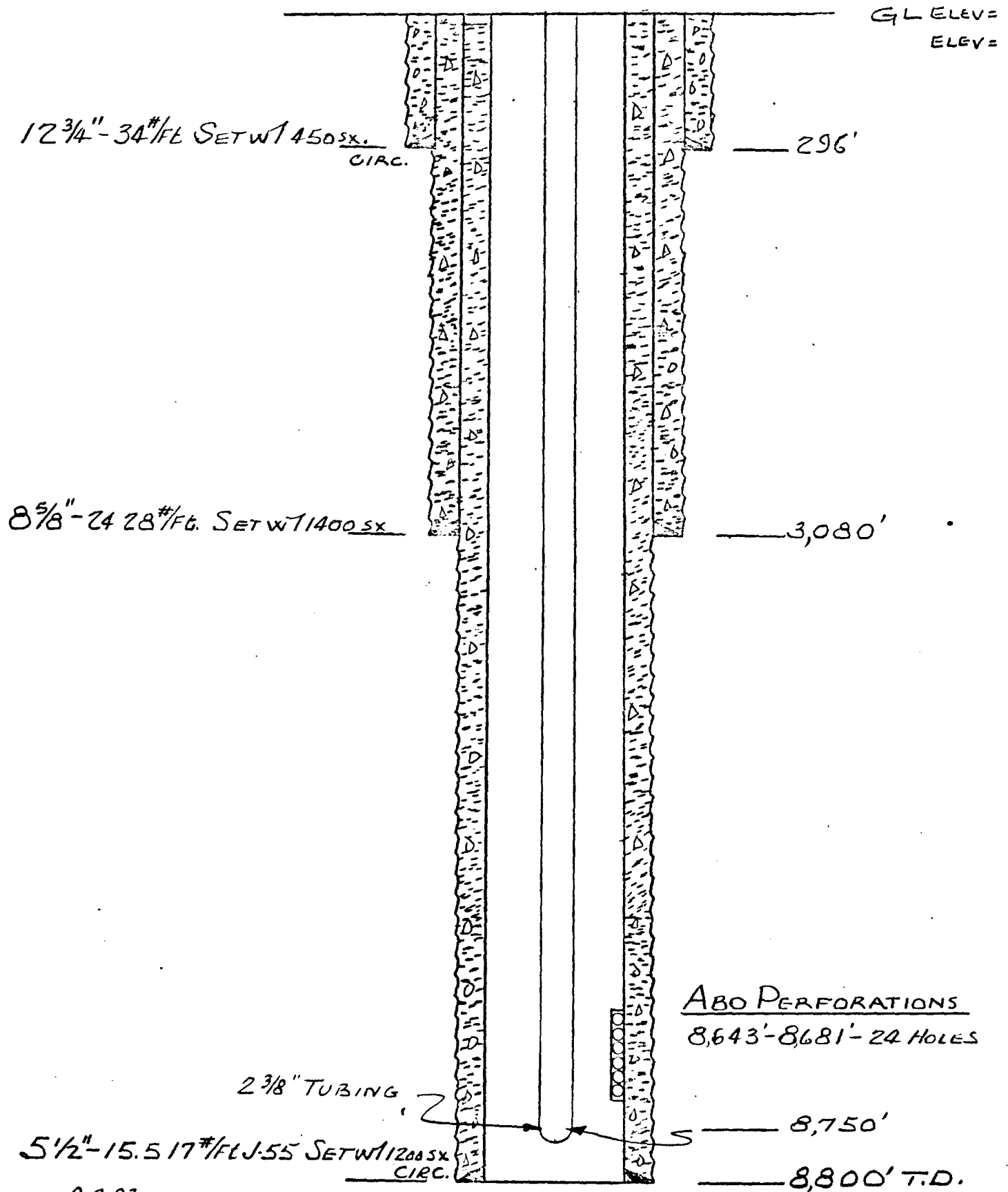
9-10-70

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 172

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO



DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 166
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO

G.L. Elev. =
K.B. Elev. =

8 7/8" - 28 #/FT. H40 SET WT 2200 SX.
CIRC.

3,075'

2 3/8" TUBING

5 1/2" - 15.517 #/FT. SET WT 2900 SX.
CIRC.

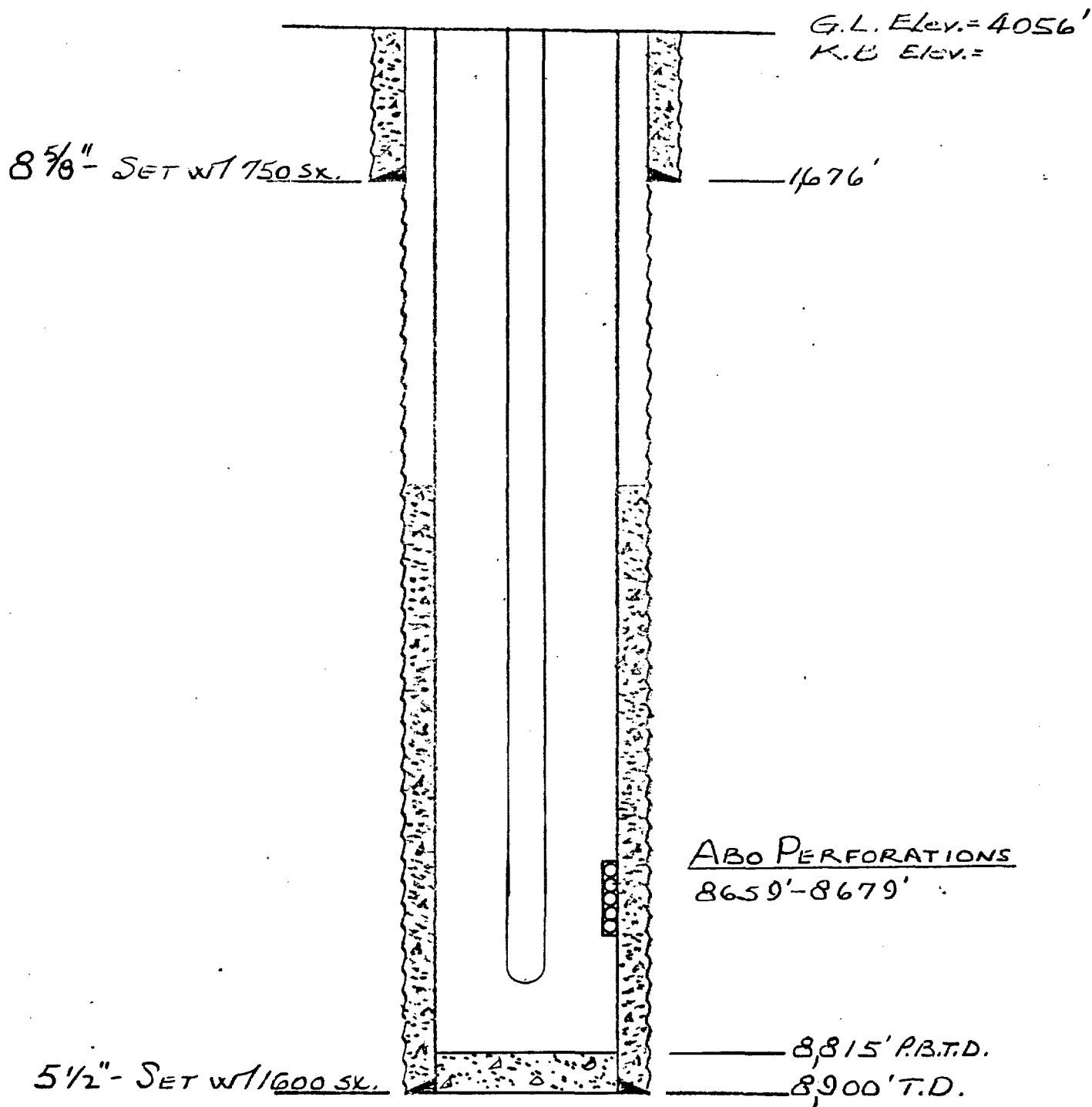
ABO PERFORATIONS
8628' - 8781' - 28 HOLES

8802' PBTD

8850' T.D.

9-6-72
lew

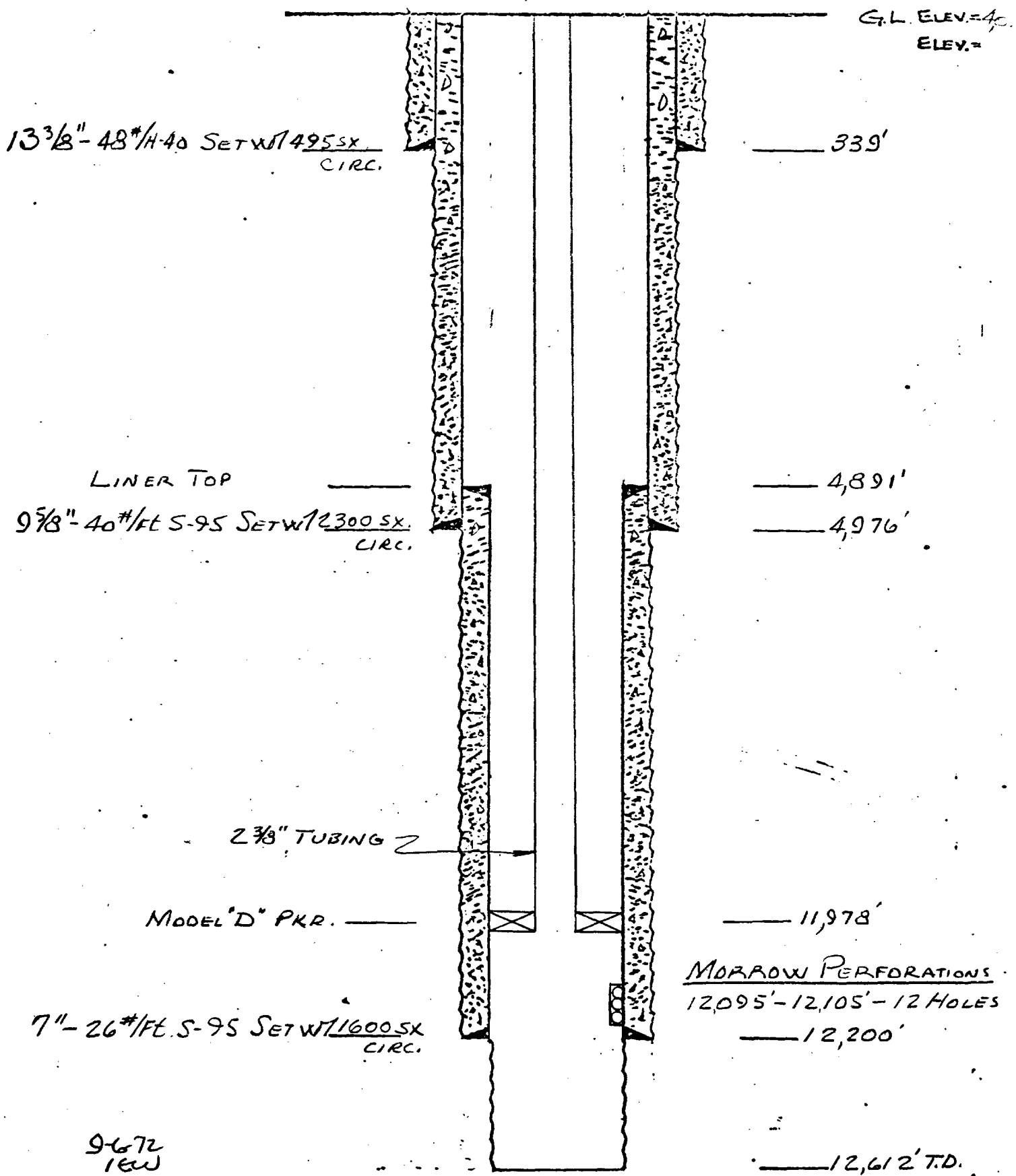
DIAGRAMMATIC WELL SKETCH
STATE "VH" WELL No. 1
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



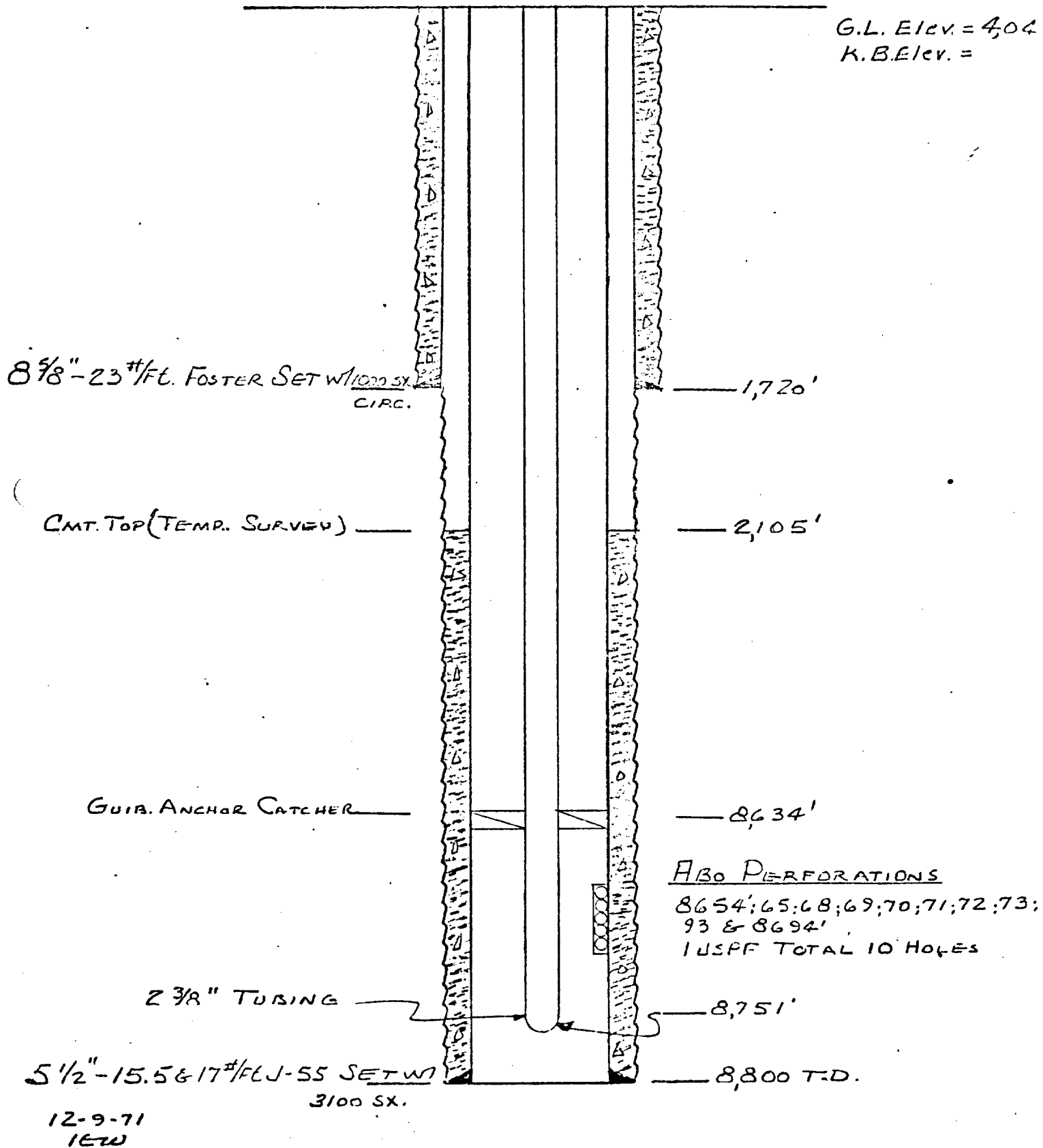
9-8-72
IEW

(SHELL OIL CO. WELL)

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL No. 130
NORTH VACUUM (MORROW) POOL
LEA COUNTY, NEW MEXICO



DIAGRAMMATIC WELL SKETCH
BRIDGE STATE WELL NO. 144
VACUUM (ARO) NORTH FIELD
LEA COUNTY, NEW MEXICO



DIAGRAMMATIC WELL SKETCH

STATE "J" WELL NO. 9

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO

GL ELEV = 4035
ELEV =

12 3/4" - 38 #/FT. SET WT 1450 SX. CIRC.

268'

8 3/8" - 24 28 #/FT. J-55 SET WT 1400 SX. CIRC.

3065'

ABO PERFORATIONS

8642' - 8704' - 28 HOLES

2 3/8" TUBING

8752'

5 1/2" - 15.517 #/FT. J-55 SET WT 1200 SX. CIRC.

9-7-72
LEW

8800' T.D.

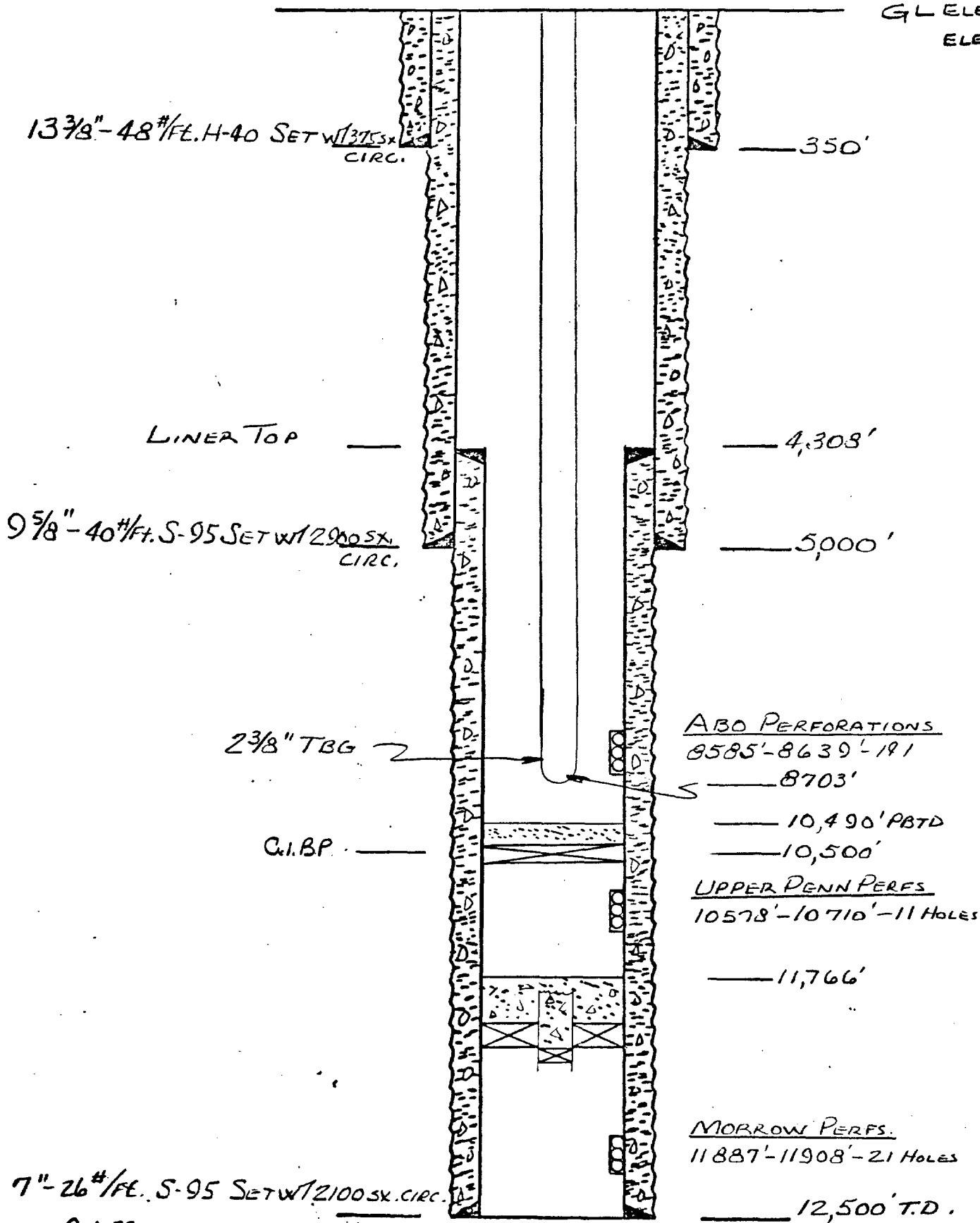
DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 157

NORTH VACUUM (ARO) POOL

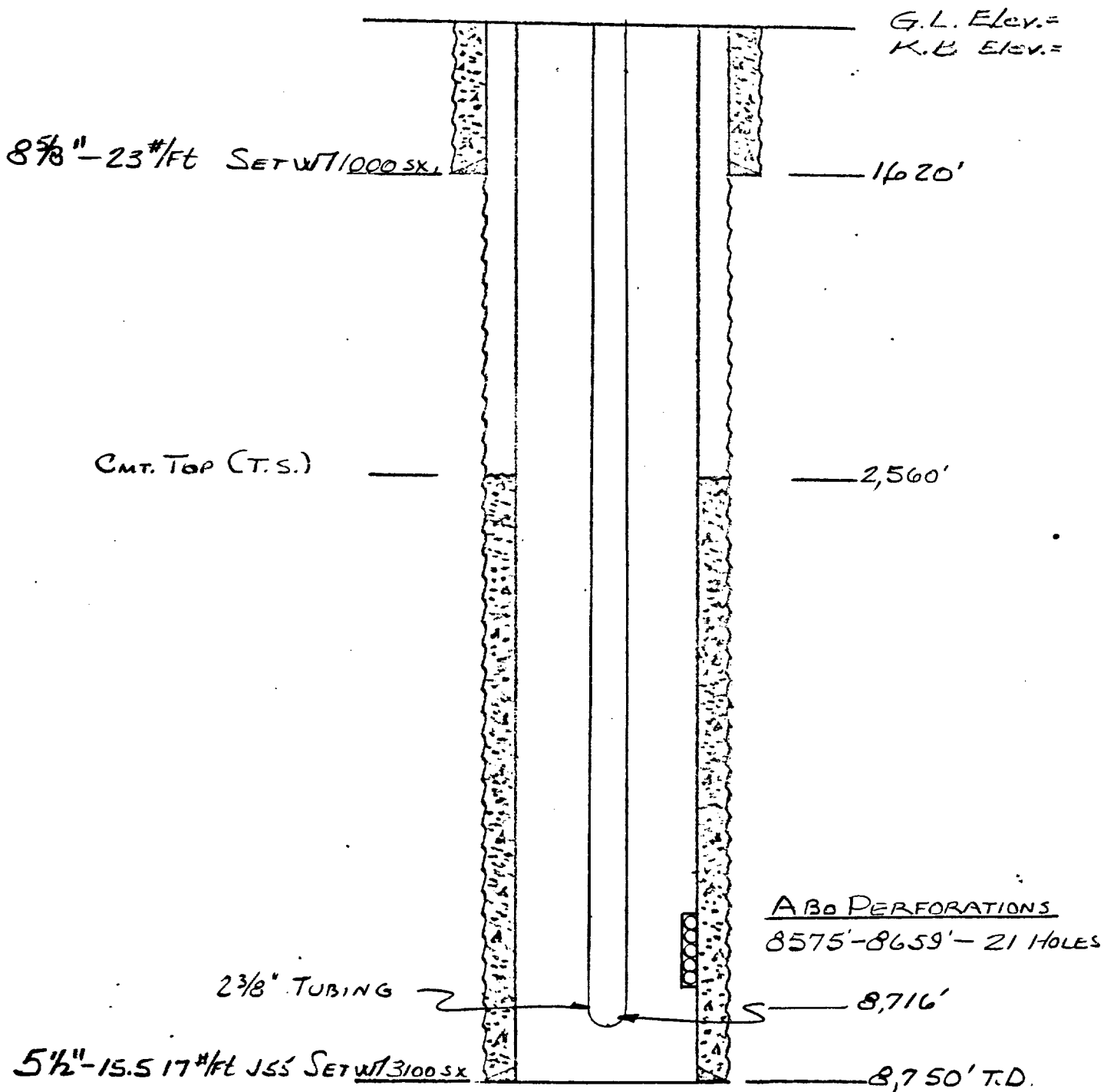
LEA COUNTY, NEW MEXICO

GL ELEV =
ELEV =



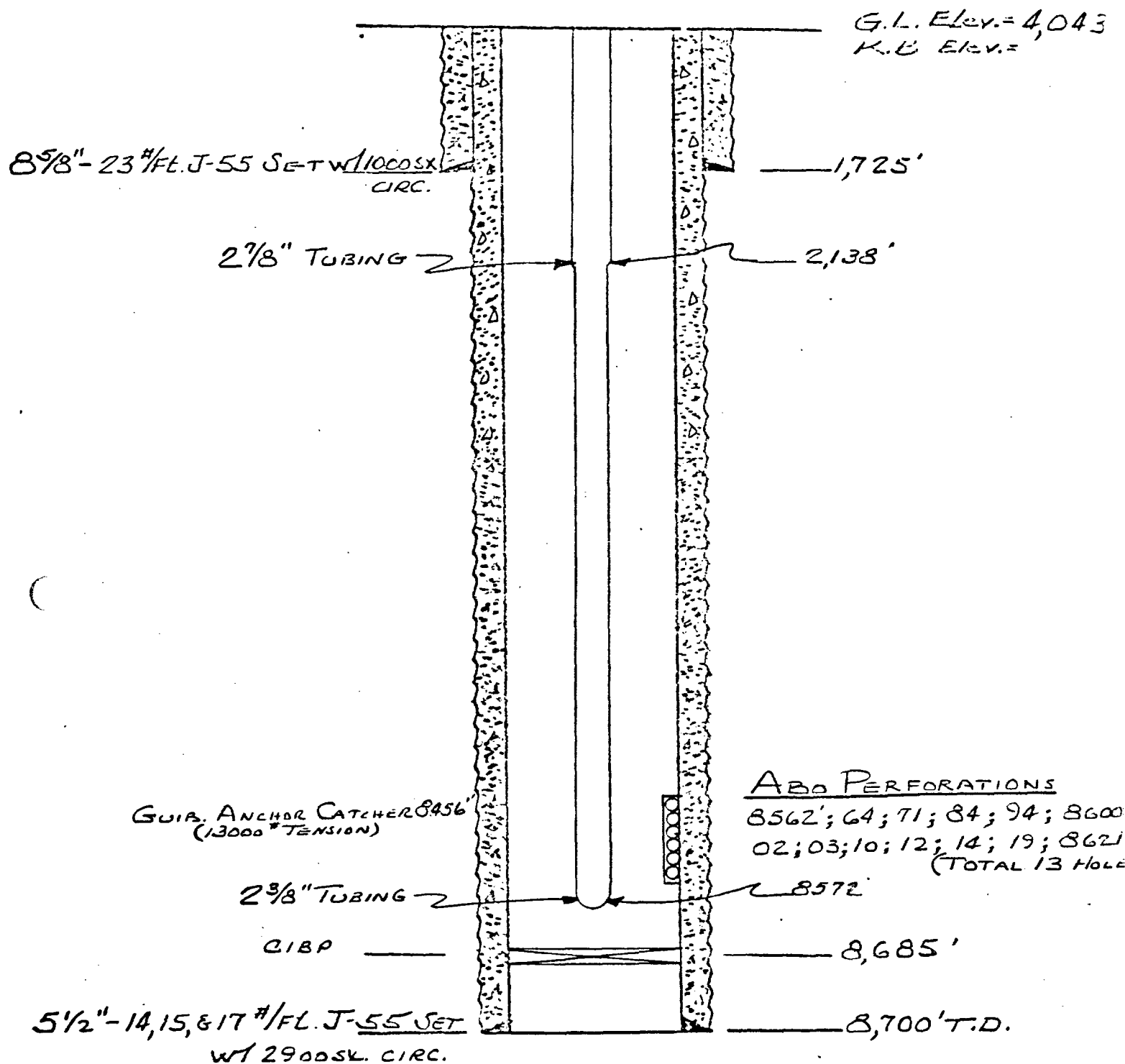
9-6-72

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 145
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



9-6-72
1EW

DIAGRAMMATIC WELL SKETCH
 BRIDGES STATE WELL No. 148
 NORTH VACUUM ABO. FIELD
 LEA COUNTY, NEW MEXICO



3-22-72
 LEW

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 173

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO

GL ELEV =

ELEV =

12 3/4" - 34 #/FT. SETW 1450 SY. CIRC.

270'

8 7/8" - 24 28 #/FT. SETW 11400 SY. CIRC.

3,075'

ABO PERFORATIONS

8572' - 8629' - 27 HOLES

2 3/8" TUBING

8,707'

5 1/2" - 15.5 17 #/FT. N-80 J-55 SETW 1200 SY. CIRC.

9-7-72
1EW

8,750' T.D.

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 171

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO

GL ELEV =
ELEV =

12 3/4" - 33 #/ft. SET WT 1450 SX.
CIRC.

280'

8 5/8" - 28 #/ft. SET WT 1400 SX.
CIRC.

3070'

ABO PERFORATIONS
8,584' - 8,639' - 15 HOLES

2 3/8" TRG

8,682'

5 1/2" - 15.5 17 #/ft N-80J55 SET WT 1200 SX.
CIRC.

9-672
IEW

8,700' T.D.

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 151

VACUUM (MORROW NO.) FIELD

LEA COUNTY NEW MEXICO

G.L. ELEV. = 4030

K.B. ELEV. =

13 7/8" - 4854 & 61 #/FT. J-55H-40
SET W/ 475 SX. CIRC.

CMT. TOP
(TEMP SURVEY)

350'

780'

LINER TOP

4,259'

9 7/8" - 40 #/FT. S-95 SET W/ 2900 SX

5,050'

BAKER MODEL "D" PKR

11,765'

2 3/8" - N-80 TUBING TO 11,811'

MORROW PERFORATIONS

11853; 55; 57; 59; 61; 63; 65; 67; 69; 71;
73; 75; 77; 79; 11881' TOTAL 15 HOLES

2" - 26 #/FT. S-95 SET W/ 1700 SX

12,178'
12,180' T.D.

DIAGRAMMATIC WELL SKETCH

STATE "KK" WELL NO. 1

NORTH VACUUM (A30) POOL

LEA COUNTY, NEW MEXICO

GL ELEV = 4013'
ELEV =

12 3/4" - 34 #/ft. SET WT 1450 SX. CIRC.

278'

8 5/8" - 28 #/ft. SET WT 1400 SX. CIRC.

3035'

A30 PERFORATIONS

8509' - 8564' - 30 HOLES

2 3/8" TUBING

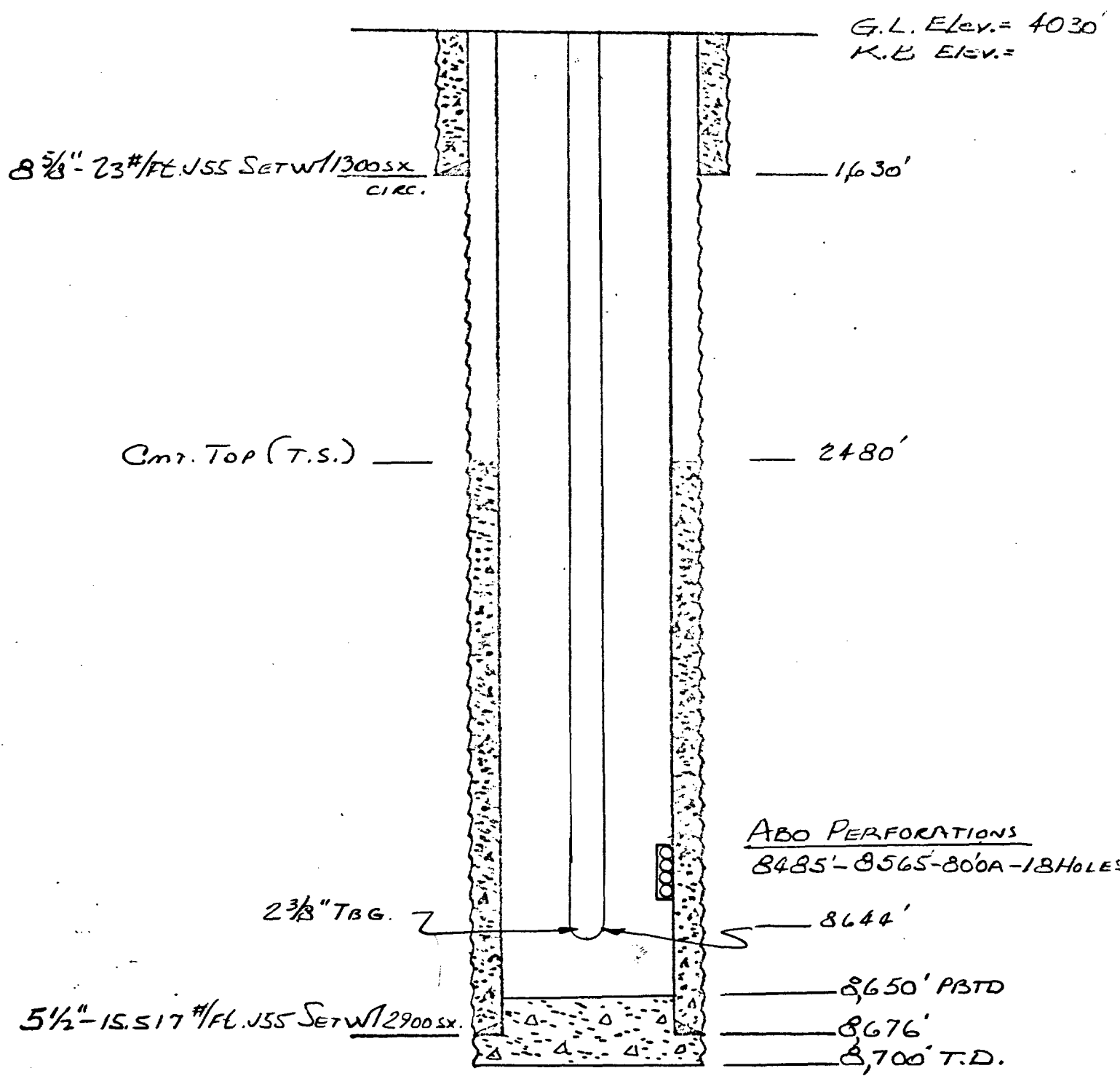
8742'

5 1/2" - 17 #/ft. J-55 SET WT 2100 SX. CIRC.

8800' T.D.

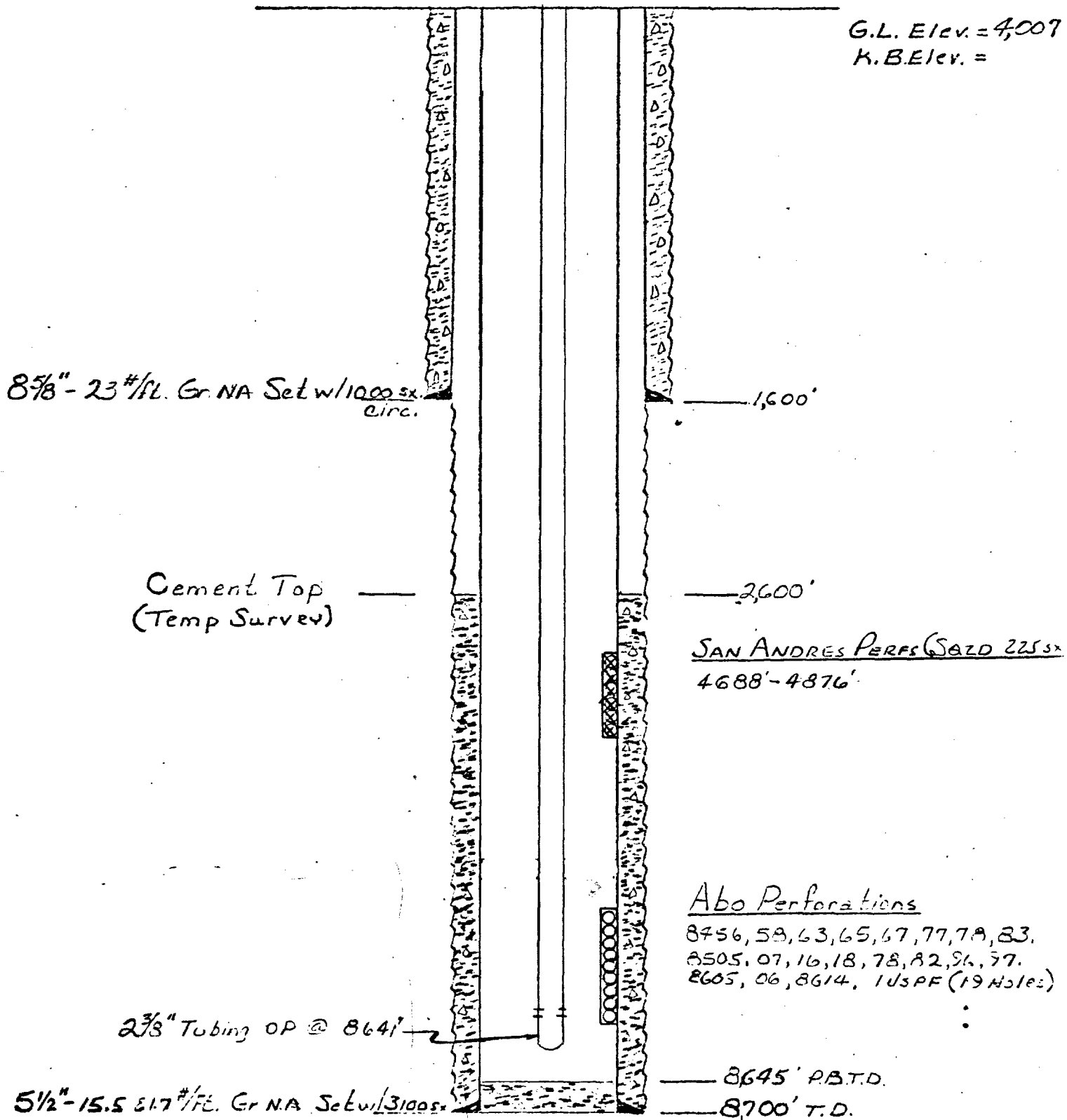
9-7-72
1EW

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL No. 118
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



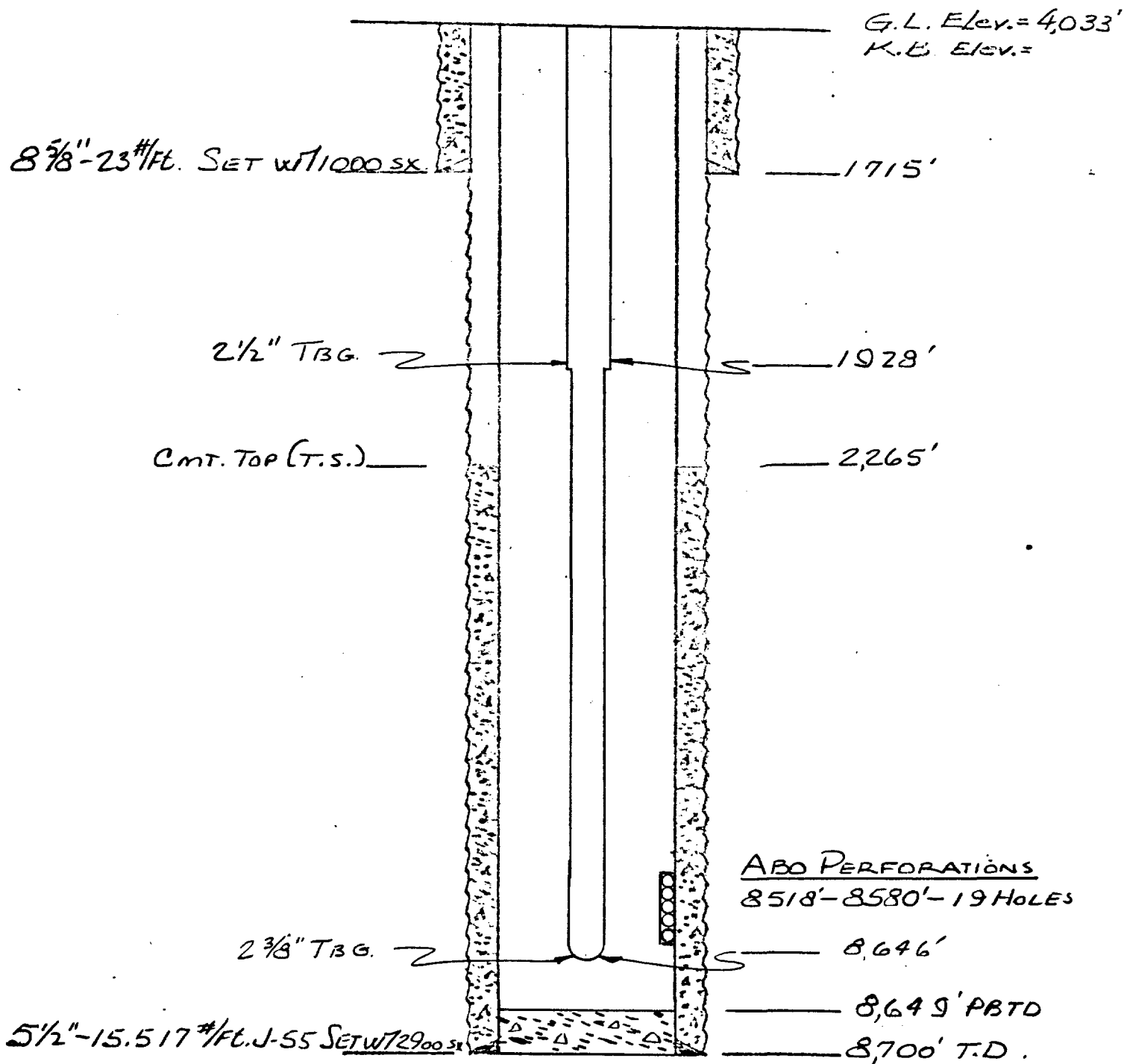
9-6-72
 16W

Diagrammatic Well Sketch
Bridges State Well No. 153
Vacuum (Abo, North) Field
Lea County, New Mexico



5-4-71
 I.E.W.

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL No. 140
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



9-6-72
 IEW

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 125

NORTH VACUUM (MORROW) POOL

LEA COUNTY, NEW MEXICO

GL ELEV=4,016
ELEV=

13³/₈" - 48#/FL. H-40 SET WT 1325 SX
CIRC.

365'

LINER TOP

4,801'

9⁵/₈" - 36 40#/FL. J55 N80 SET WT 2500 SX
CIRC.

4,975'

ABO PERFS (SQZD.)

8492'-8528'

WOLF CAMP PERFS (SQZD.)

9710'-9765'

UPPER PENN PERFS (SQZD.)

10,161'-10,186'

MIDDLE PENN PERFS (SQZD.)

10,445'-10,503'

LINER TOP

10,385'

7" 23³/₈" FL. S-95 N-80 SET WT 1050 SX

10,600'

MODEL "F" P.K.R.

11,415'

MORROW PERFS

11,498'-11,500' - 5 HOLES

4 1/2" - 13.5#/FL. LINER SET WT 1450 SX

11,827' A.B.T.D.

11,889'
11,890' T.D.

9-7-72
IEW

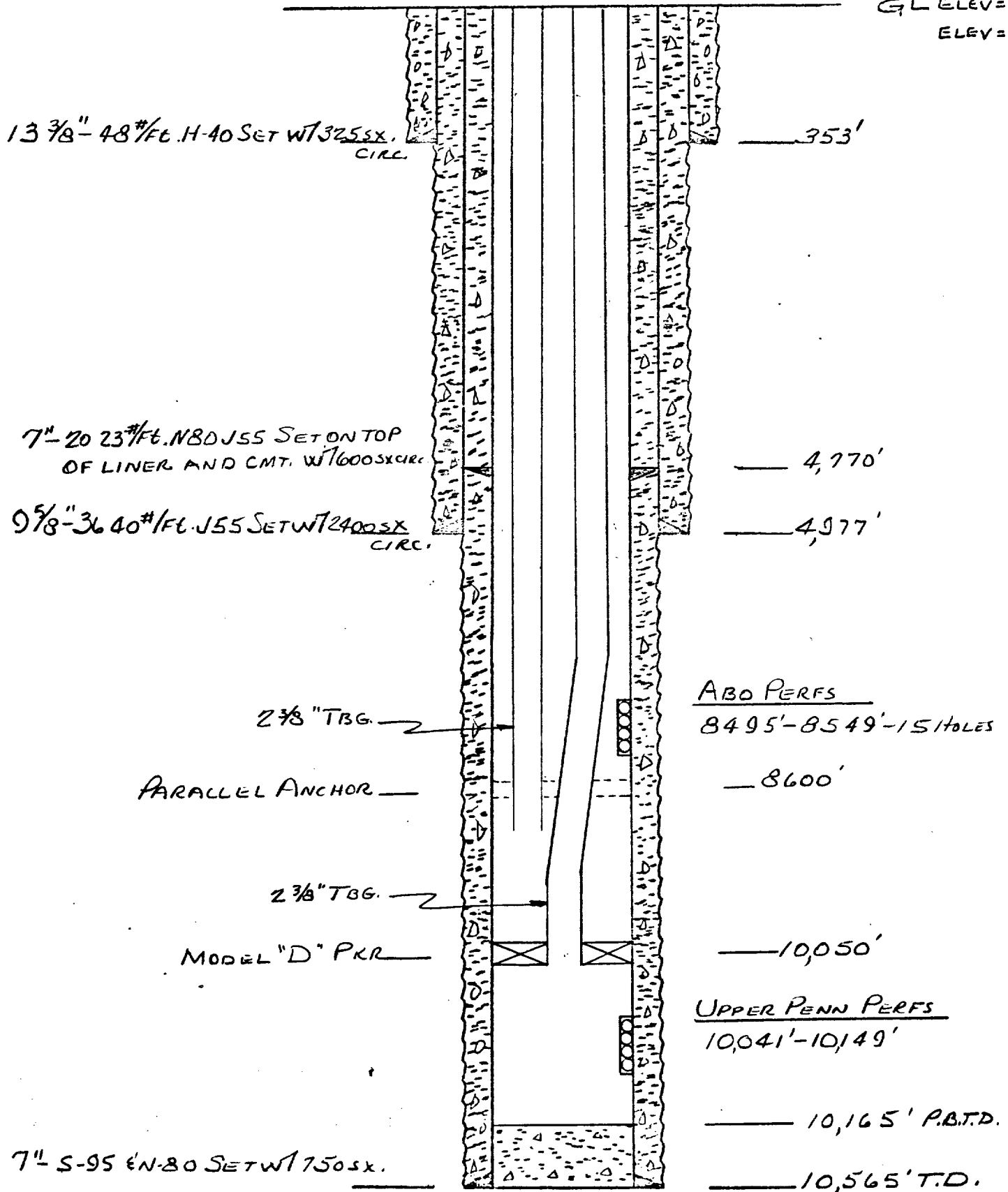
DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 124

NORTH VACUUM (ABO) POOL

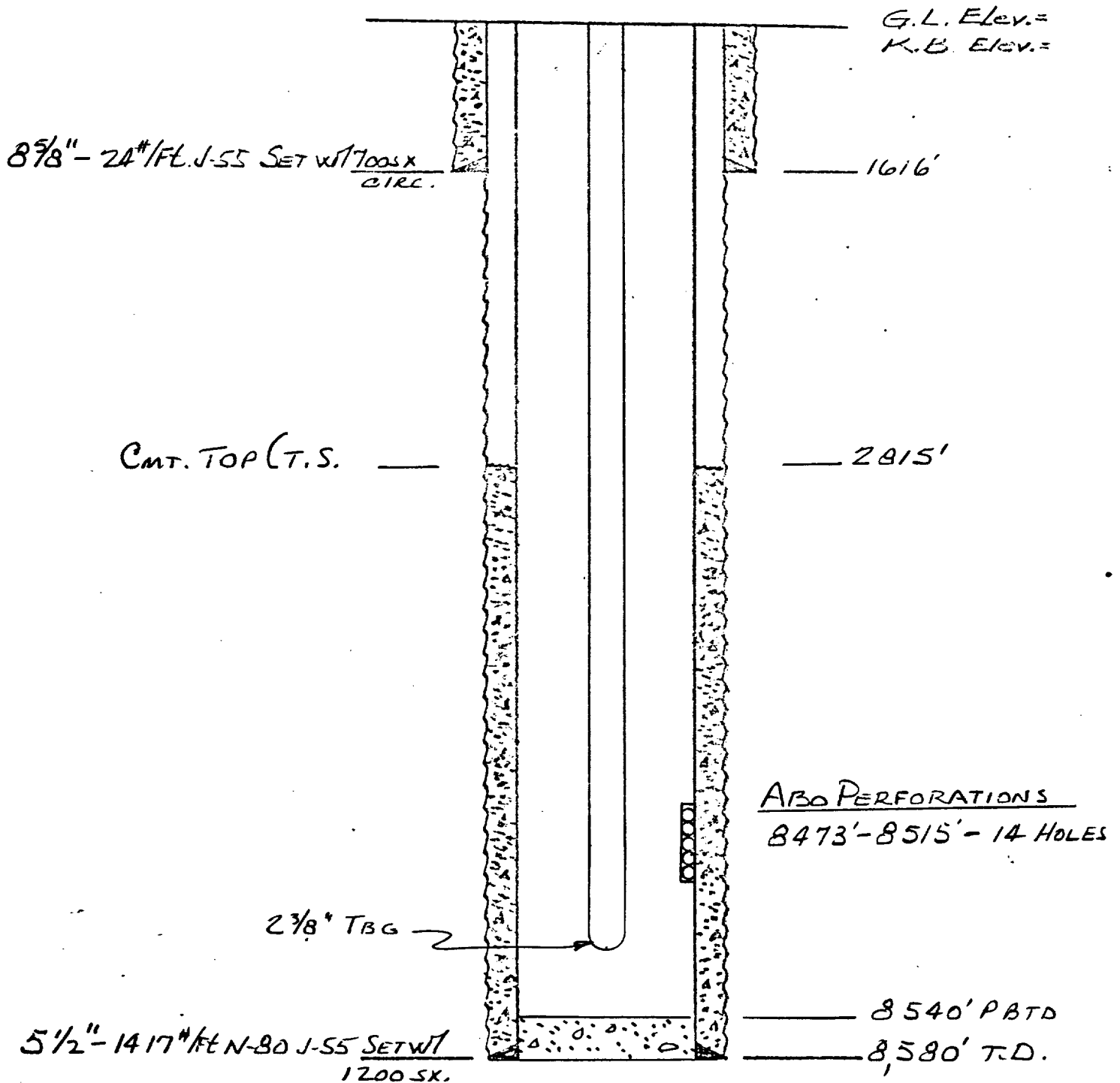
LEA COUNTY, NEW MEXICO

GL ELEV = 4,016'
ELEV =



9-7-72
1 (L.A.)

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 128
NORTH VACCUM (ABO) POOL
LEA COUNTY, NEW MEXICO



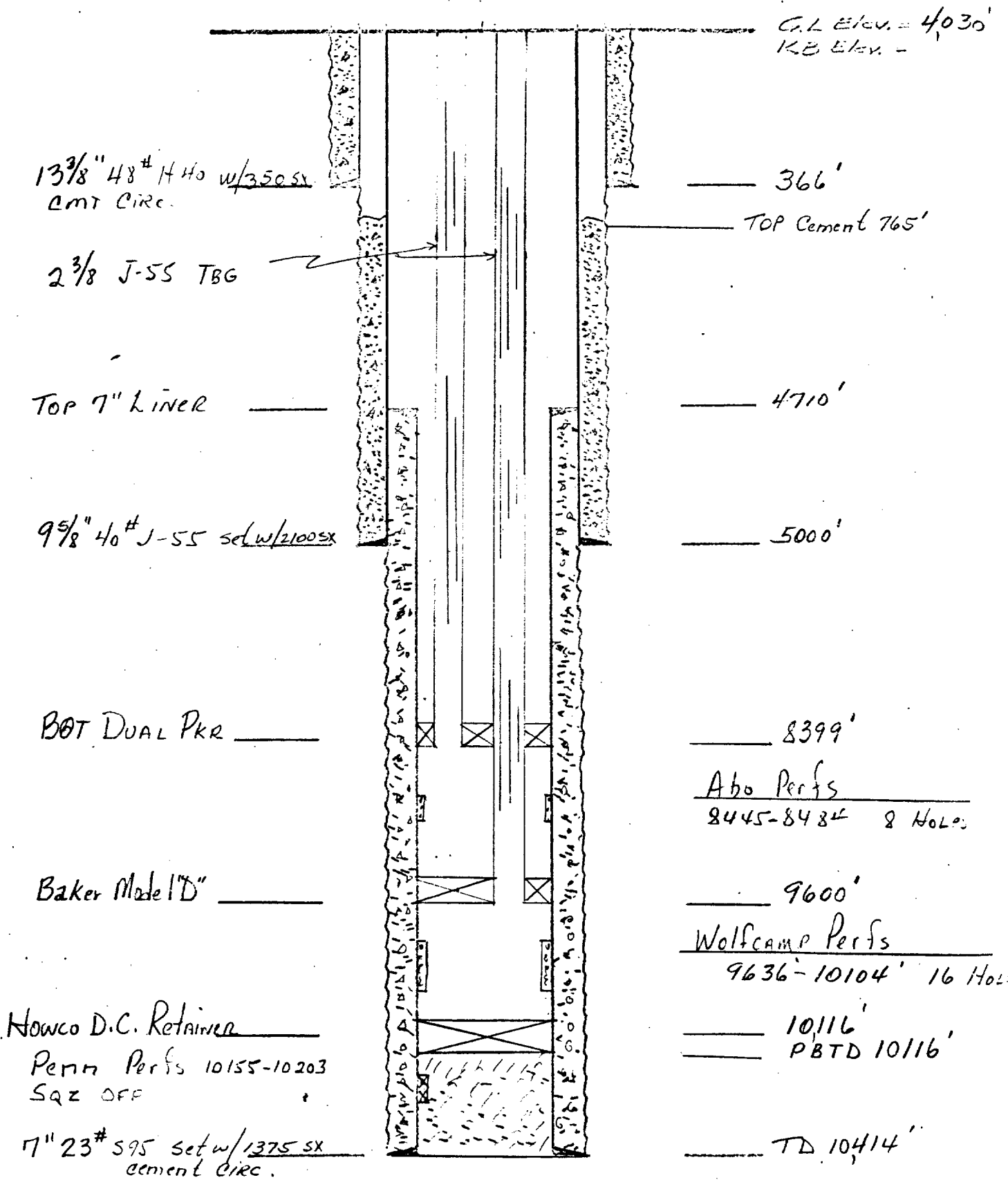
9-6-72
16W

Diagrammatic Well Sketch

Bridges State Well # 117

Valuero (Wolfcamp) Field

Lea County, New Mexico

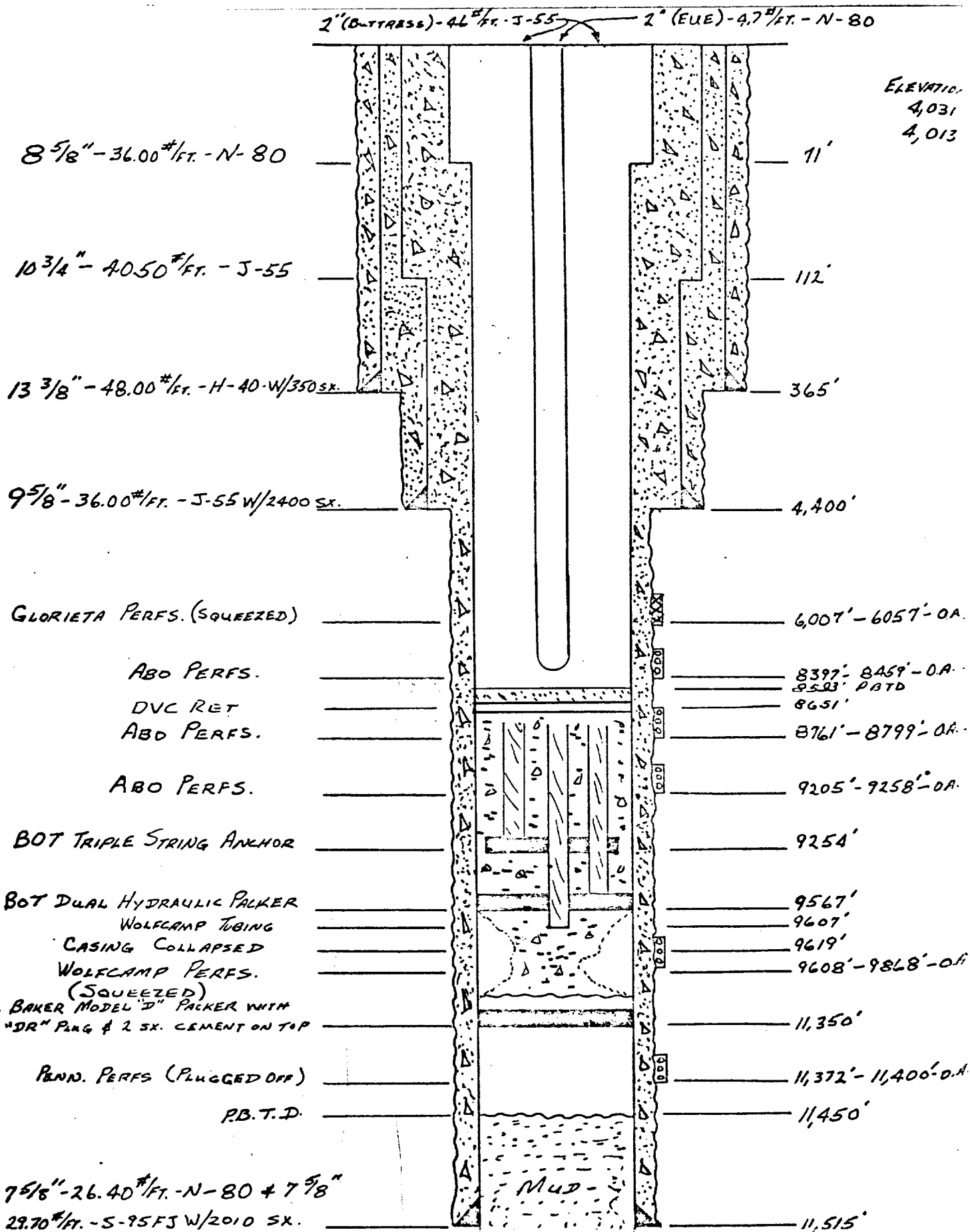


DIAGRAMMATIC WELL SKETCH

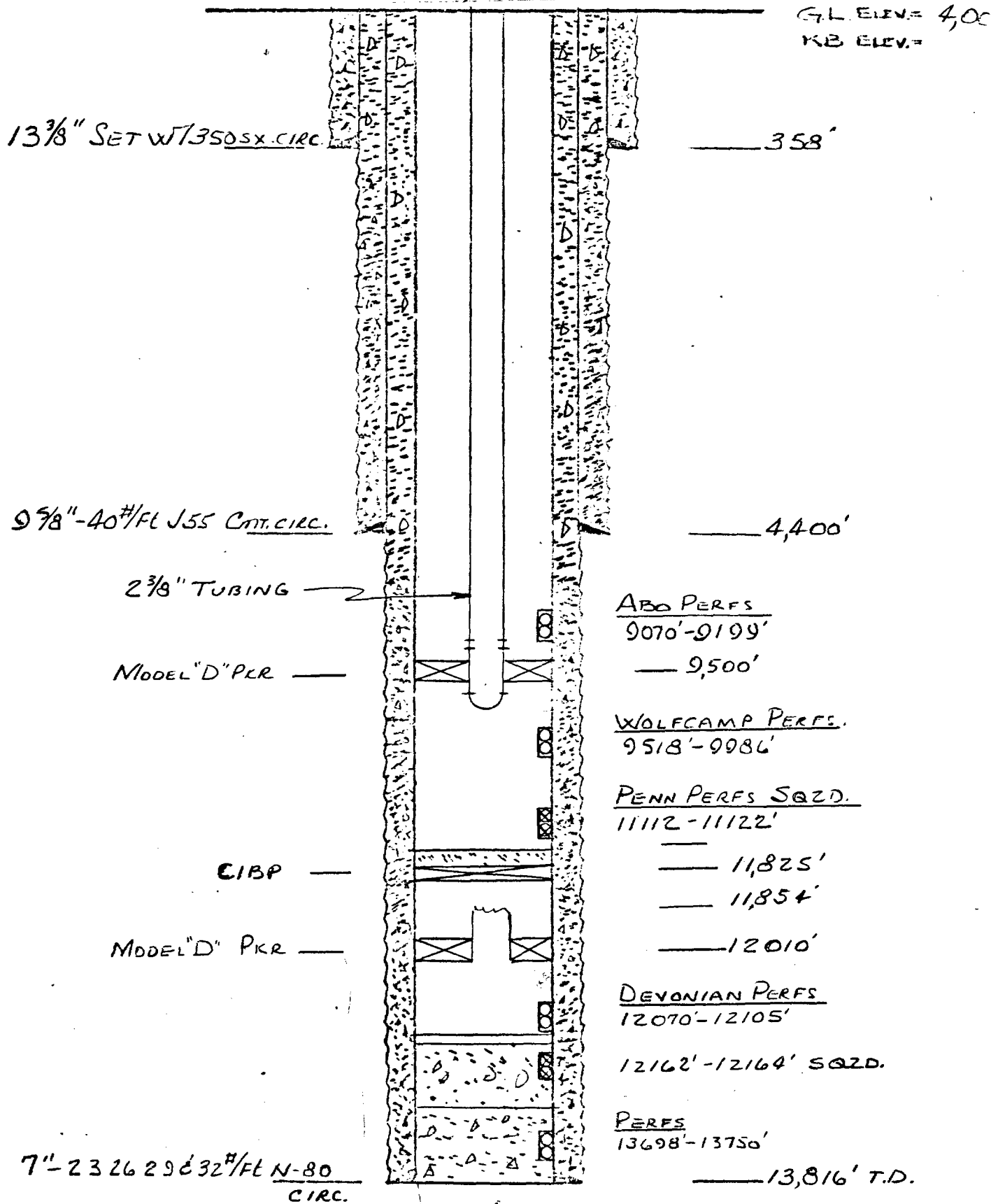
STATE BRIDGES WELL No. 96

VACUUM, (NORTH ABO) AND VACUUM (WOLF CAMP) FIELDS

LEA COUNTY, NEW MEXICO

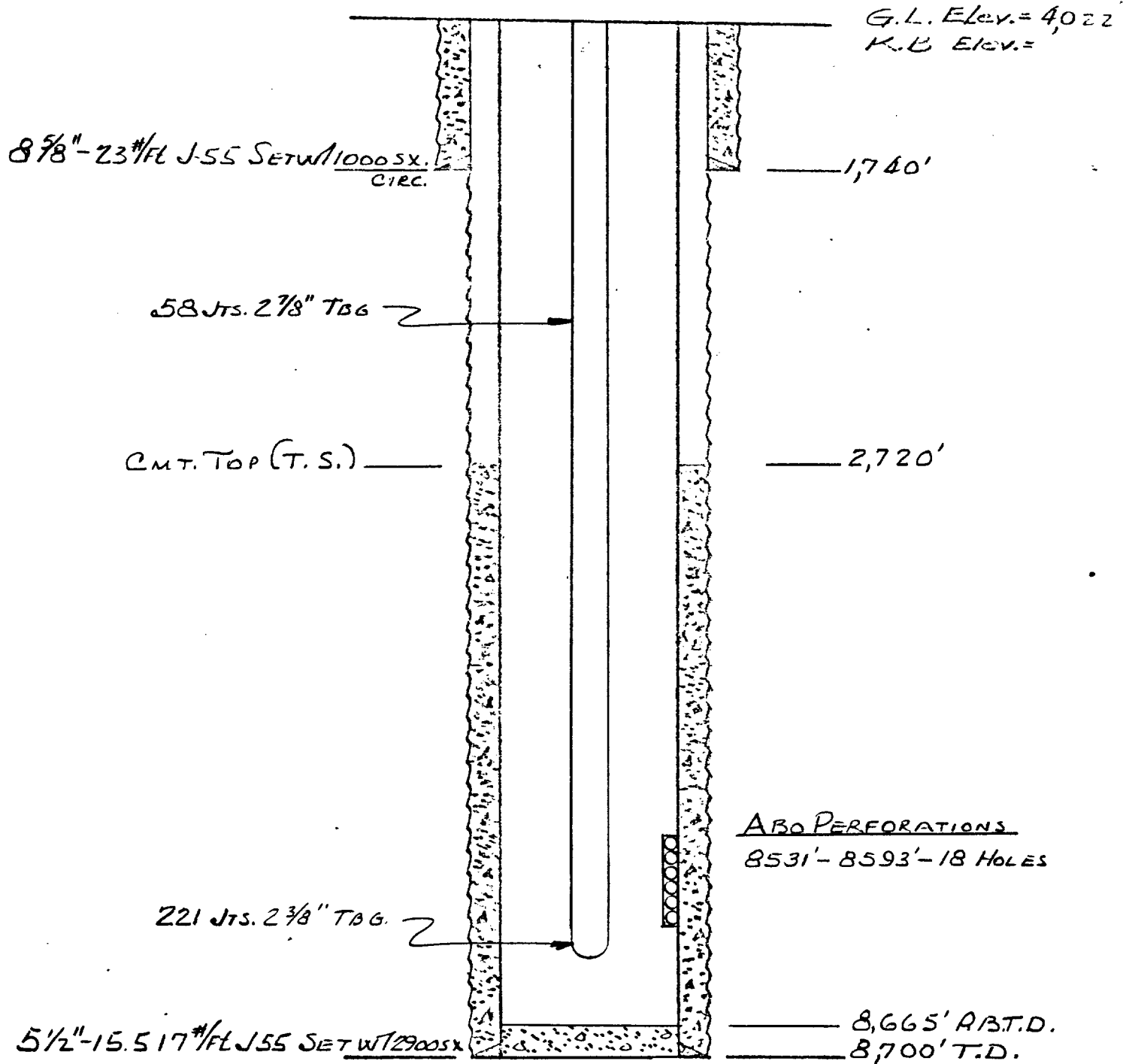


DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL No. 95
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



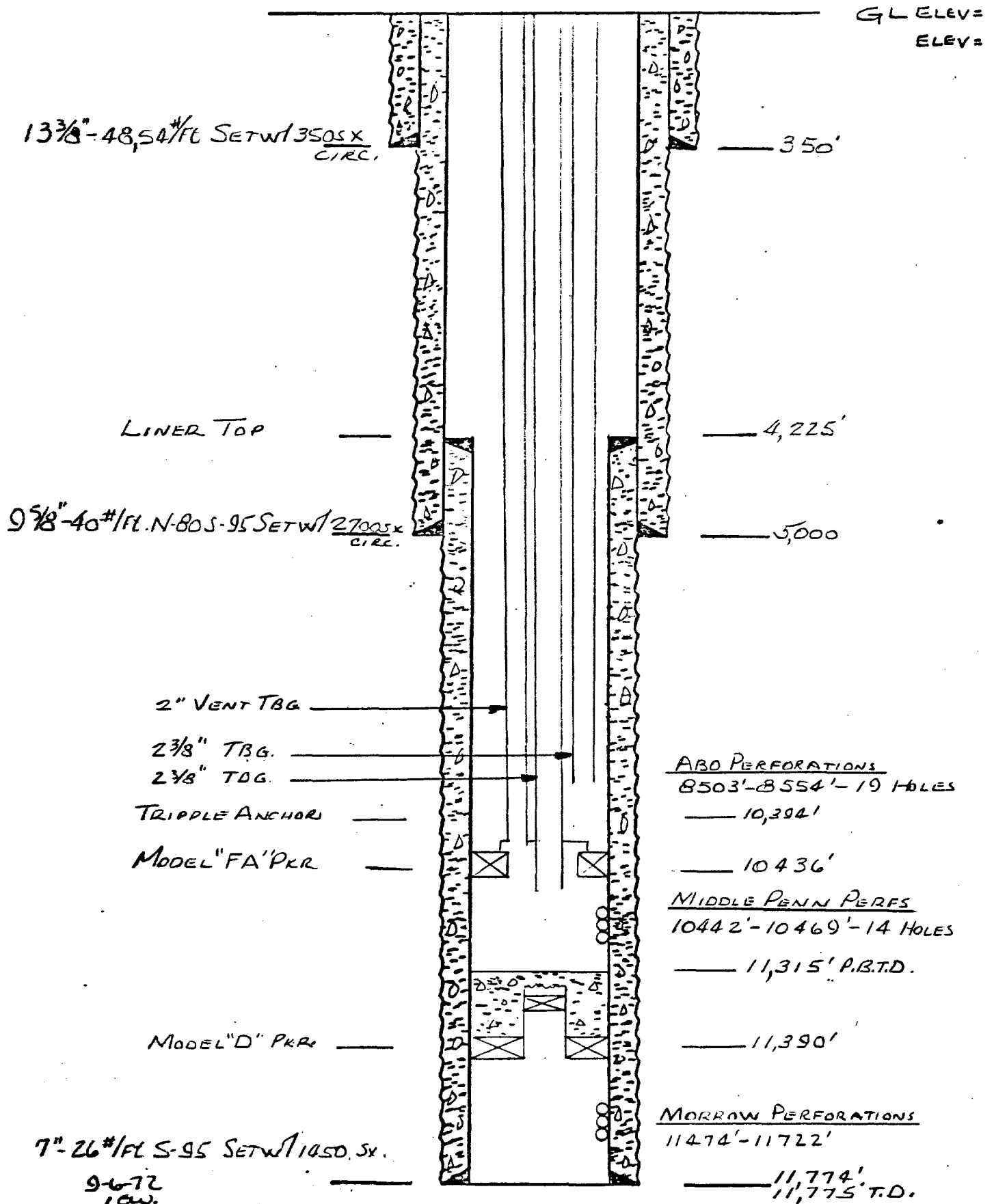
9-7-72
16

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 150
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO

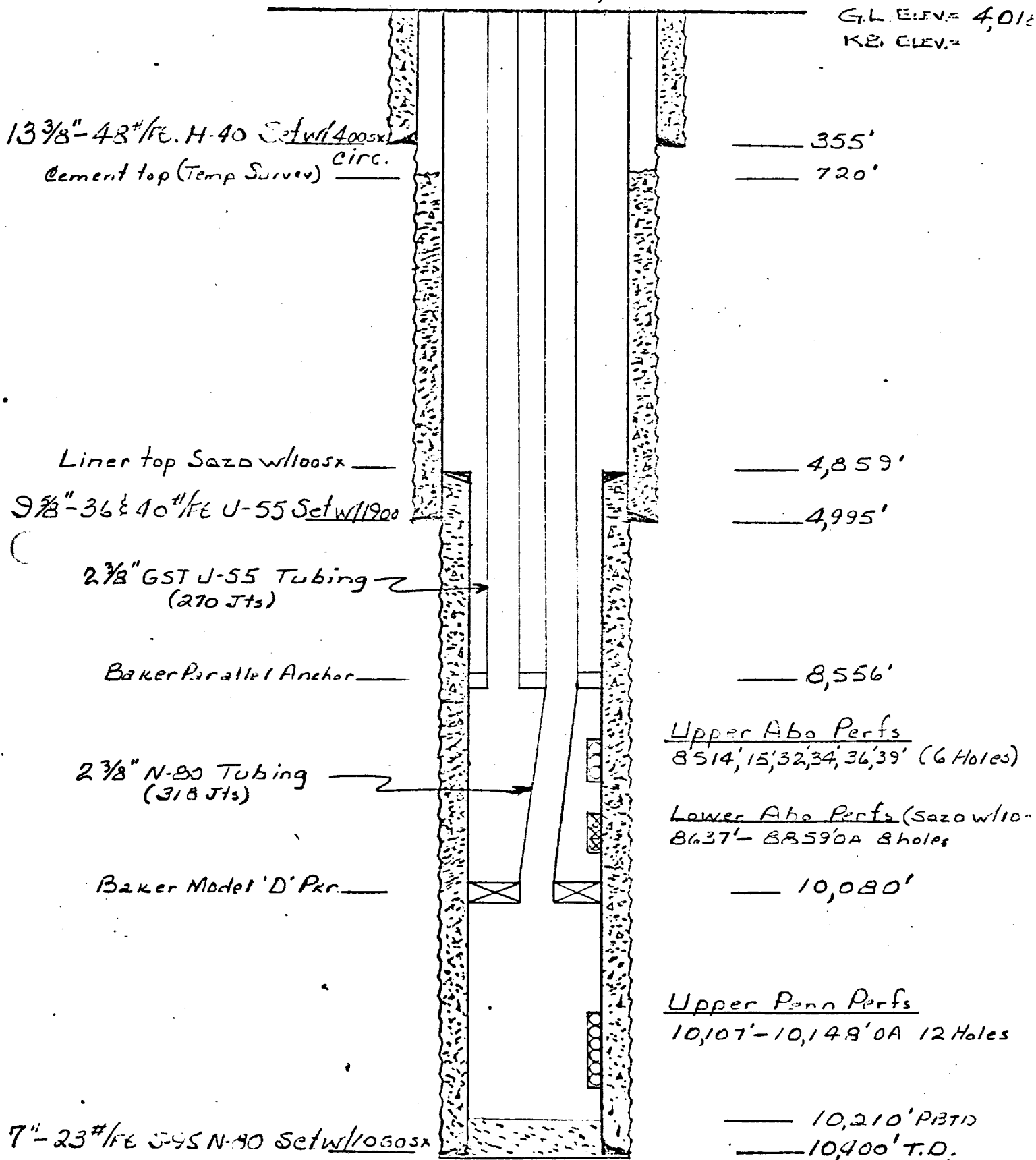


9-6-72
1EW

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 147
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 120
VACUUM NORTH ABO FIELD
LEA COUNTY, NEW MEXICO



9-10-71

Diagrammatic Well Sketch
Bridges State Well #119
N. Vasconcelos (Abn) (Wolfcamp) Pool
Lea County, New Mexico

G.L. Elev. = 4,024'
 K.B. Elev. =

13 3/8" 48# Set w/ 375 SX Circ

360'

3 Strings tubing 2 3/8"

Top 7" Liner Sqzd w/ 50 SX.

4,768'

9 5/8" 40# J-55 Set w/ 2,200 SX.

5,000'

Abn Perforations

8,486' - 8,507' (10 Holes)

BOT Triple Anchor 8,533'

BOT Husky Dual Zone Pkr

Wolfcamp Perforations

9,593' - 9,890' (15 Holes)

9,546'

BOT DBL. Pkr. 10,030

Olis SN 9997 w/ collar Stop

2 3/8" Penn. tubing Perforated

10,027' - 26' - 25' - 24'

4-1/2" Holes

Non equalizing S.V. in situ at 10,025'

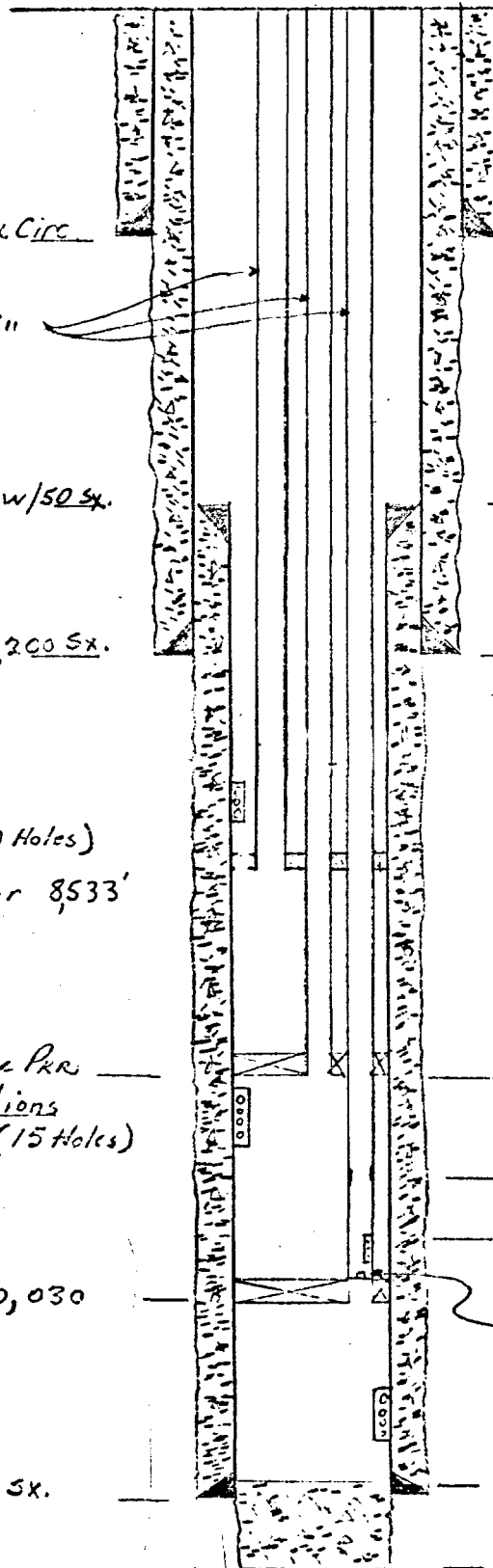
Penn Perforations

10,069' - 10,114' (8 Holes)

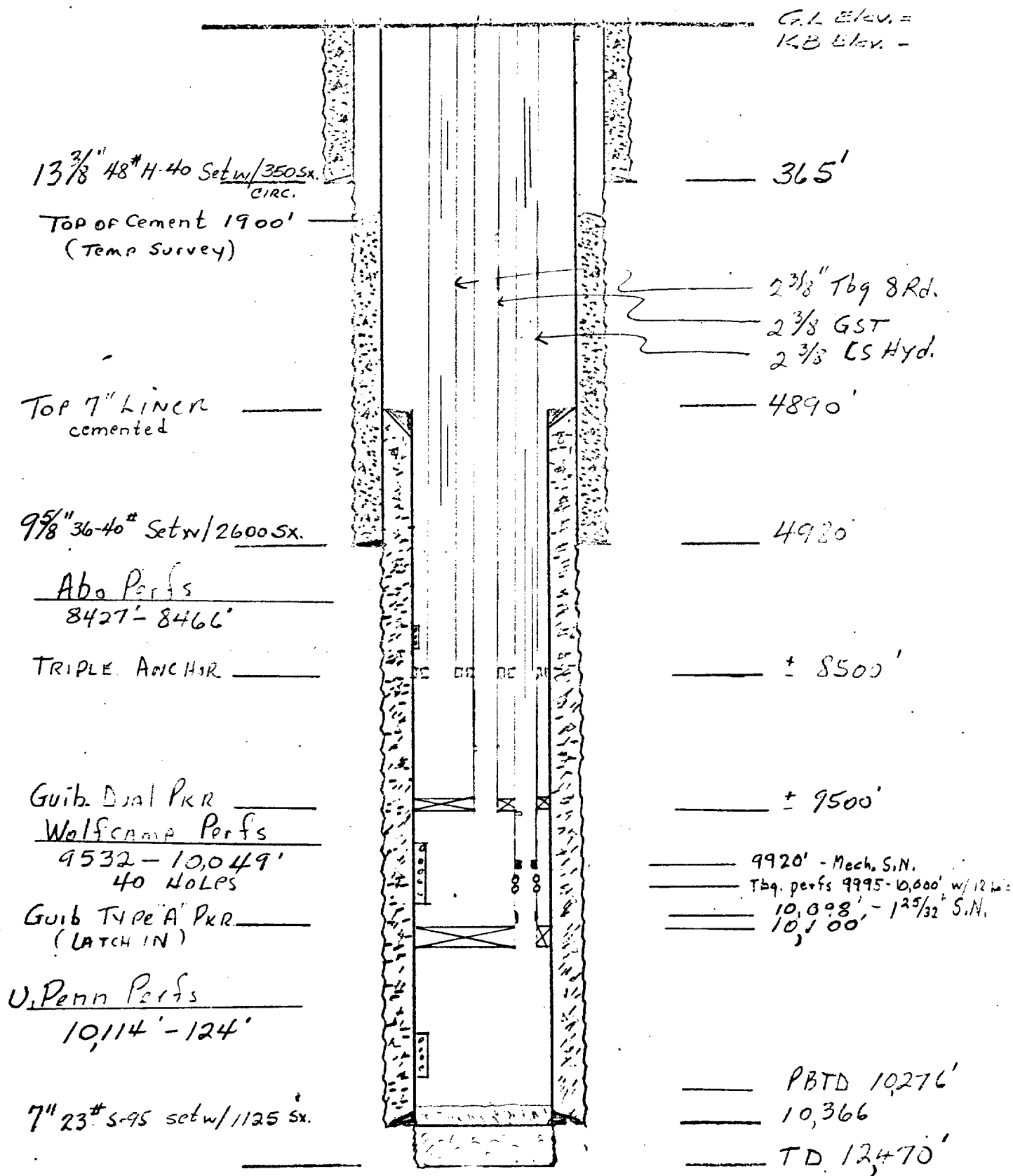
7" 23# Set w/ 1000 SX.
 10,425'

10,358' PSTD

12,391 TD



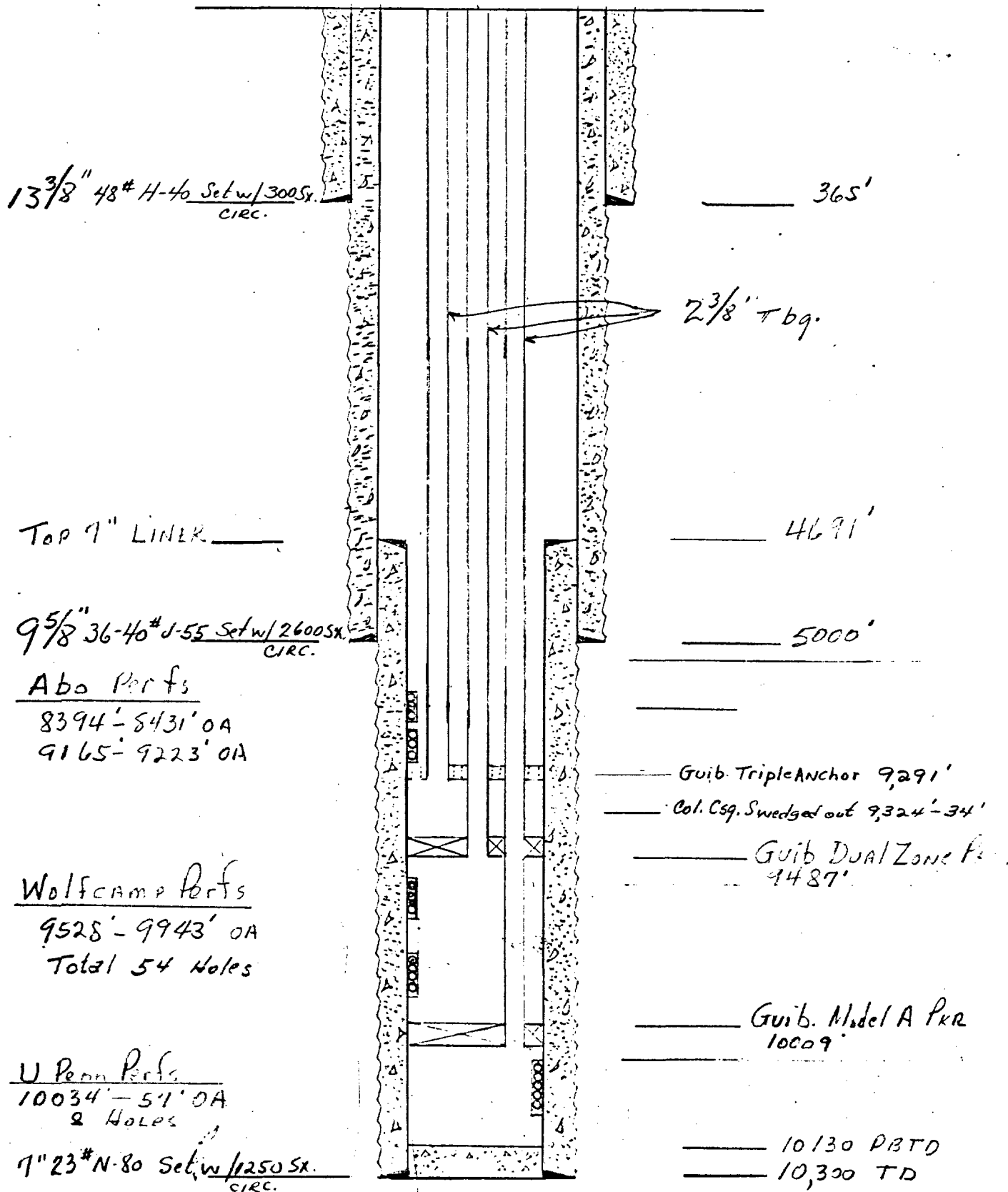
DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL # 109
VACUUM (WOLF CAMP) FIELD
LEA COUNTY, NEW MEXICO



Revised to reflect commingling down-hole of Wolf. & U. Penn.

JCB/1-11-71

Diagrammatic Well Sketch
BRIDGES DUNE Well #108
NORTH VACUUM (ABO) Pool
Lea County, New Mexico



DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL No. 161

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO

G.L. Elev. = 4020
K.B. Elev. =

8 $\frac{5}{8}$ " - 23 #/FL. SET WT 900 SK. CIRC.

1,775'

CMT. TOP (T.S.)

2,660'

ABO PERFORATIONS
8584' - 8641' - 20 HOLES

2 $\frac{3}{8}$ " TBG.

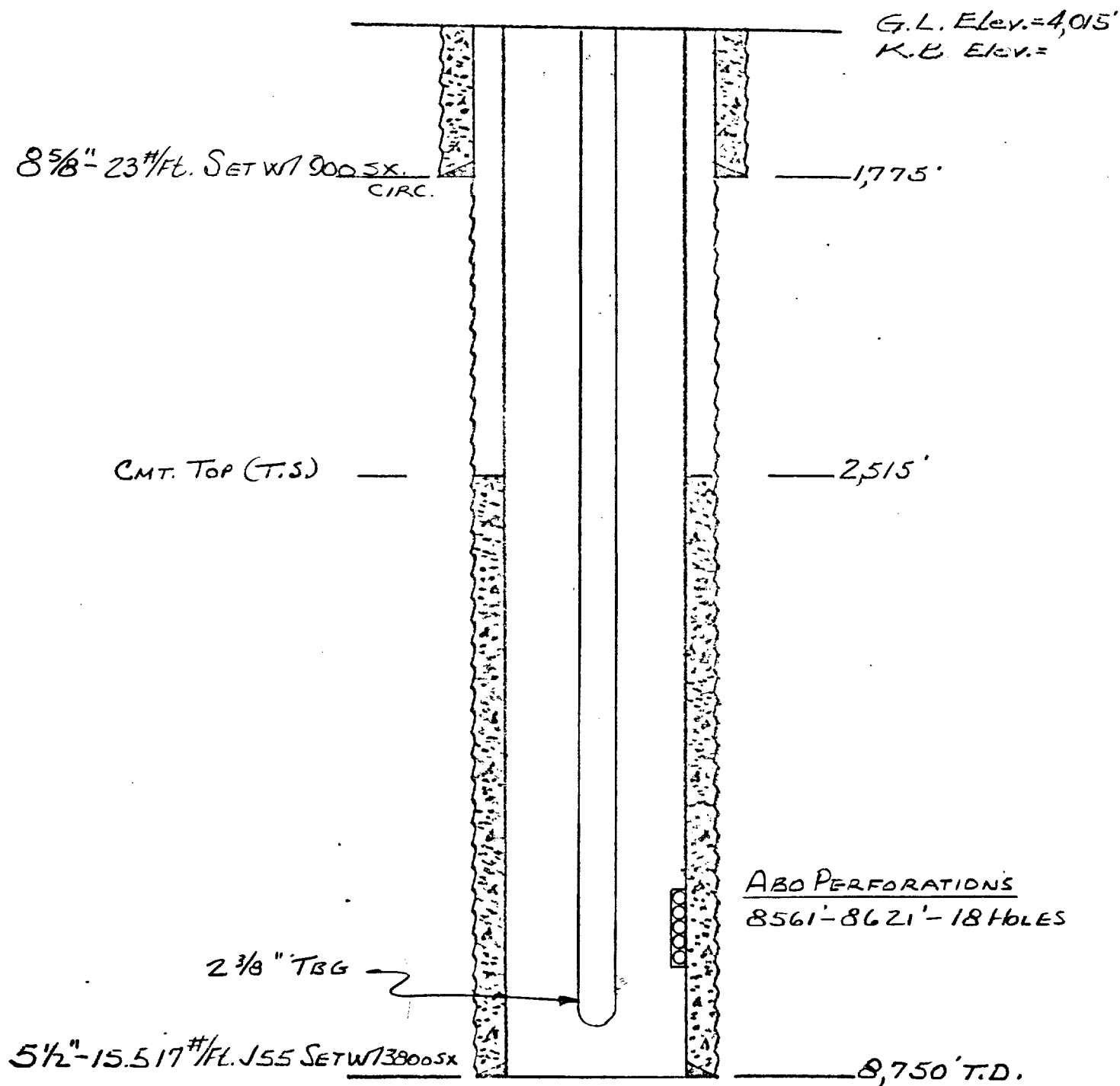
8,743'

5 $\frac{1}{2}$ " - 15.517 #/FL N80J55 SET WT 12900 SK.

8800' T.D.

9-6-72
IEW

DIAGRAMMATIC WELL SKETCH
BRIDGES STATE WELL NO. 159
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



9-6-72
ICW

DIAGRAMMATIC WELL SKETCH

BRIDGES STATE WELL NO. 169

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO

GL ELEV = 40

ELEV =

12 3/4" - 34 #/ft. SET WT 450 SX
CIRC.

270'

8 5/8" - 24, 28 #/ft. J55 SET WT 1400 SX
CIRC.

3,160'

2 3/8" TUBING

5 1/2" - 15, 17 #/ft. J55 SET WT 2200 SX.
CIRC.

9-6-72
IEW

ABO PERFORATIONS

8607' - 8666' - 30 HOLES

8713'

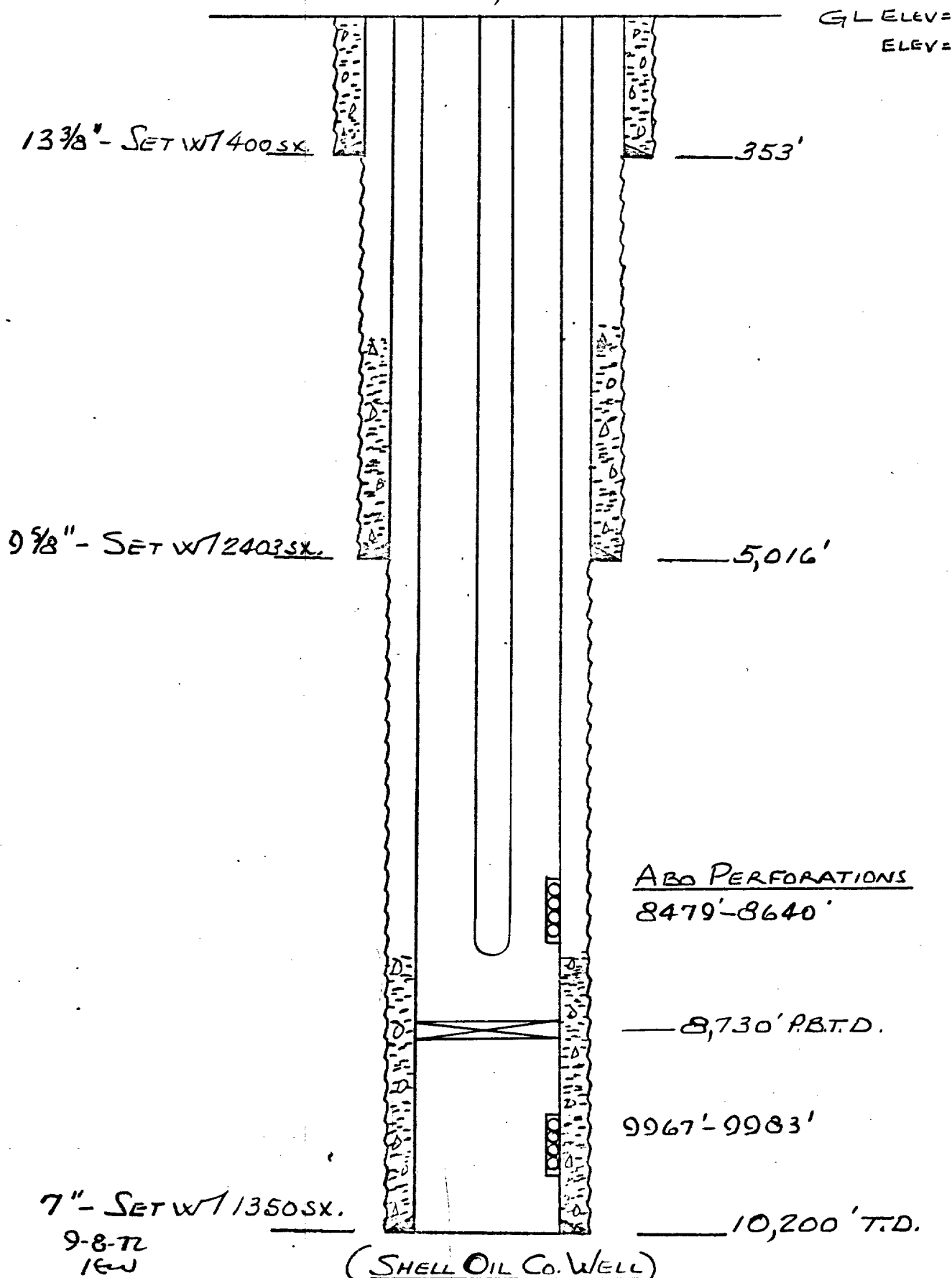
8,800' T.D.

DIAGRAMMATIC WELL SKETCH

STATE "C" WELL No. 2

NORTH VACUUM (ABO) POOL

LEA COUNTY, NEW MEXICO



DIAGRAMMATIC WELL SKETCH

TYPICAL SINGLE WELL

NORTH VACUUM ABO UNIT

NORTH VACUUM (ABO) FIELD

LEA COUNTY, NEW MEXICO

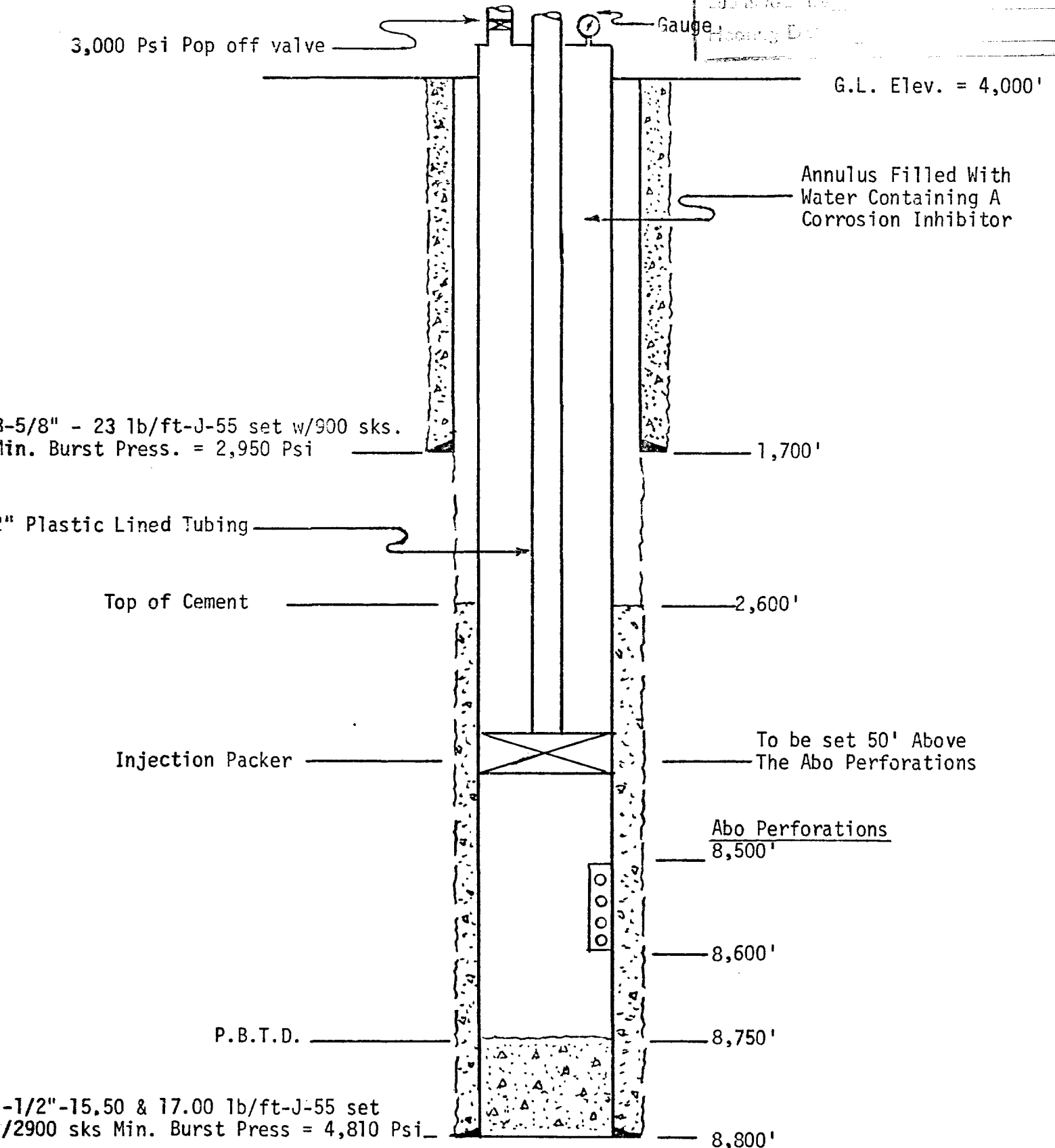
BEFORE TO THE STATE
OIL COMMISSION FOR COMPLETION

UNIT NO. 12

CASE NO.

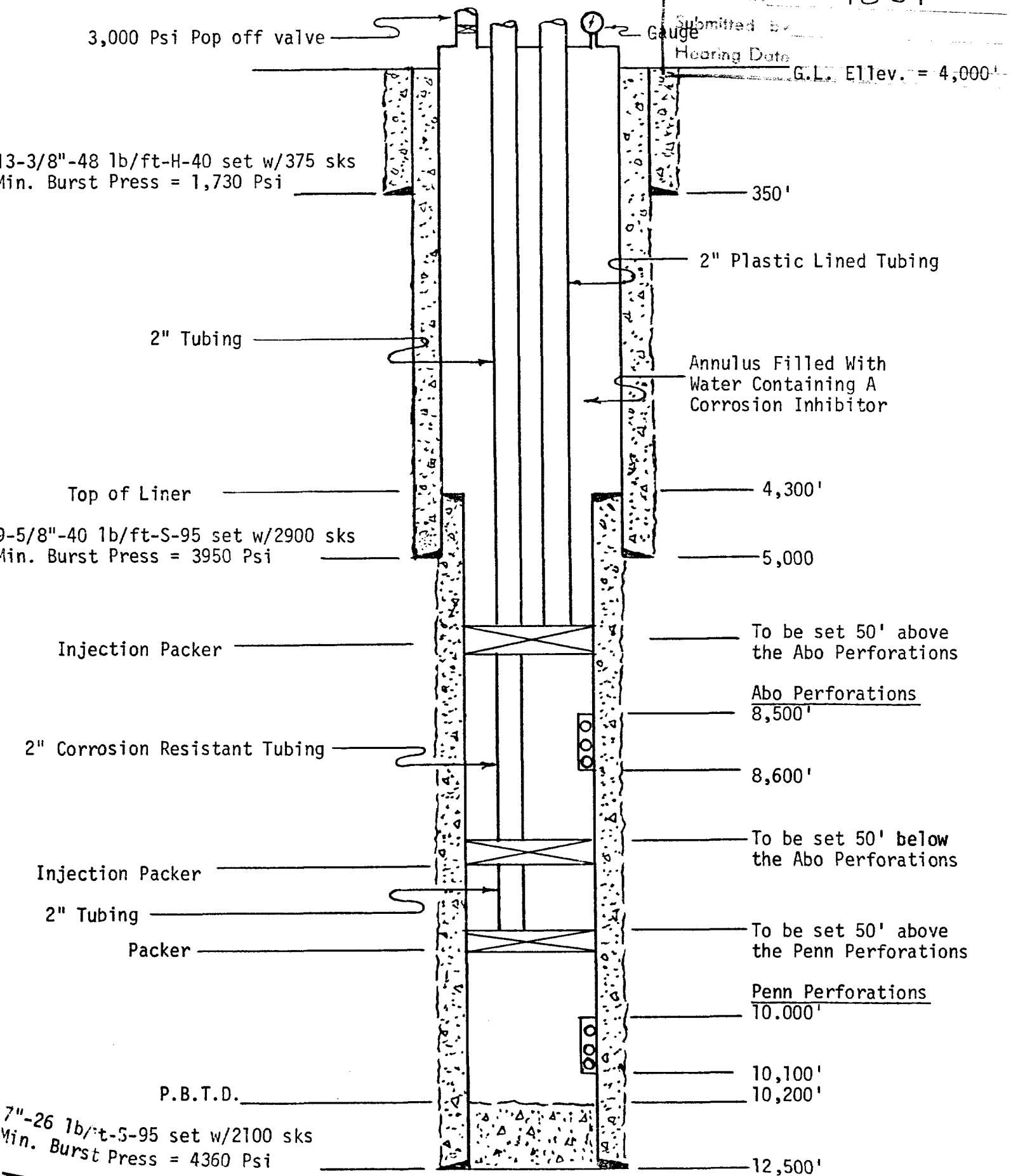
DATE OF SUBMITTAL

HOODING DEPT.



DIAGRAMMATIC WELL SKETCH
 TYPICAL DUAL WELL
 NORTH VACUUM ABO UNIT
 NORTH VACUUM (ABO) FIELD
 LEA COUNTY, NEW MEXICO

BEFORE BY OWNER 312
 OIL CONSERVATION COMMISSION
 FIELD NO. 13
 CASE NO. 4831



PROPOSED
NORTH VACUUM ABO UNIT
PRESSURE MAINTENANCE PROJECT

GENERAL DATA

Name of Formation: North Vacuum Abo
Depth of Formation: 8557'-8606' (Bridges-State Well #126)

PROPOSED INJECTION PROGRAM

<u>Type of Injection</u>	<u>Total No. Inj. Wells</u>	<u>Total Volume Injected</u>	<u>Rate Per Well</u>	<u>Est. Pressure</u>	<u>Source of Injection Fluid</u>
<u>First 3 to 6 Months</u>					
Fresh Water	<u>34</u>	14,000 BPD	400 BPD	3500 psi	Existing Vacuum water rights on Bridges-State in T17S, R34E
<u>Second 3 to 6 Months</u>					
1/2 Fresh Water	17	7,000 BPD	400 BPD	4000 psi	(Same as above)
1/2 Flue Gas	17	5,000,000 CFPD	295,000 CFPD	5000 psi	Flue gas from drivers on proposed Unit's compressors
<u>Third 3 to 6 Months</u>					
1/2 Flue Gas*		(S A M E A S A B O V E)			
1/2 Fresh Water*					

* Rotate injection wells of previous period.

Fourth 3 to 6 Months

1/2 Fresh Water* (S A M E A S A B O V E)
1/2 Flue Gas*

* Rotate injection wells of previous period.

EXHIBIT 'C'

Case 4831

PROPOSED INJECTION PROGRAM (Continued)

Page No. 2

<u>Type of Injection</u>	<u>Total No. Inj. Wells</u>	<u>Total Volume Injected</u>	<u>Rate Per Well</u>	<u>Est. Pressure</u>	<u>Source of Injection Fluid</u>
<u>Within First 2 Years</u>					
1/2 Fresh Water	17	7,000 BOPD	400 BPD	5000 psi	Existing Vacuum water rights on Bridges-State in T-17S, R-34E
1/2 Flue Gas*	17	5,000,000 CFPD	295,000 CFPD	6000 psi	Flue gas from drivers on proposed Unit's compressors
<u>Later in Project Life</u>					
Mixed Fresh and Produced Water	34	14,000 BPD	400 BPD	5000 psi	Fresh water same as above. Abo produced water when, and if, i exists.

*Plus propane or other gas slug.
Estimated 5-10M barrels per injection well.

JHSeerey/eg
9/7/72

Case 4821

REPOSE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	11
CASE NO.	4831
Submitted by	
Hearing Date	

PROPOSED NORTH VACUUM ABO UNIT
LEA COUNTY, NEW MEXICO

DIAGRAMMATIC WELLBORE SKETCHES
OF
EXISTING WELLS PROPOSED
FOR
CONVERSION TO W.I.W.
IN THE
NORTH VACUUM ABO POOL