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GL03880

Open-File Report # NM/Baca- 19 j

BACA PROJECT
DATA AND REPORTS

WELLS

<u>No.</u>	<u>Transfer Date</u>	<u>Release Date</u>	<u>Title</u>
1.	A	A	Summary sheet for Baca Wells No's 1-3.
2.	A	A	Baca Wells No's 4-16 summary sheet.
3.	A	A	Well summary reports and Drilling Histories-- Baca Wells No's 4-16.
4.	B	B	Lithology logs--Baca Wells No's 4-16.
5.	A	A	Temperature and Pressure Surveys--Baca Wells No's 4-8 and 10-16.
6.	B	B	Electric logs for Baca Wells No's 10-14.

7/6



GEOHERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

BRCA#14-S3-P/T

OWNER UNION OIL OF CALIF FIELD VALLE GRANDE WELL NAME BRCA#14
 CASING 20" @ 193'; 13 3/8" @ 1452 ELEV. 8604.9' DATE: 2/19/75
 LINER DESCRIPTION: 9 5/8" HUNG - 1452' - 3074', OPEN HOLE - 3074' - 6824' ZERO POINT R.T.
 DEPTH 6824'

TUBING DETAIL:

PURPOSE RIG SURVEY

REMARKS:

P-0-4250RSIG - 7198 12HR - 13375L 15
 ELEMENT T-89F-693°F SERIAL NO. 10055 CLOCK 12HR - 13790L TURN 15 STABILIZATION PERIOD
 ENGAGE STYLUS P-2024HS T-2024HS DISENGAGE STYLUS P-0101 T-0103
 WELL HEAD -0-
 PICKUP @ 6824' TIME ON BOTTOM 0024hrs-0036 MAX. °F 529.6
 WELL STATUS STATIC
 SHUT IN: 16.45 hrs 2/19/75 ON PRODUCTION:
 RATE QUIT DRILLING @ 1400hrs 2/19/75

PRESSURE

TEMPERATURE

TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
37	1000	0	0	0	0	"	"	.351	209.3								
51	2000	.147	331	0	0	"	"	.605	291.6								
04-2114	3000	.317	701.3	.370	-0.003	"	"	.813	358.0								
16-2126	3250	.359	790.3	.356	-0.001	"	"	.875	377.2								
27-2147	3500	.402	881.4	.364	0.000	"	"	.935	395.8								
48-2158	3750	.442	966.1	.339	+0.001	"	"	1.021	422.1								
59-2209	4000	.492	1050.4	.337	+0.002	"	"	1.033	425.6								
10-2220	4250	.525	1140.8	.362	+0.003	"	"	1.017	420.9								
22-2232	4500	.567	1222.0	.353	+0.004	"	"	1.015	420.3								
32-2243	4750	.609	1315.0	.344	+0.005	"	"	1.040	427.6								
45-2205	5000	.649	1399.2	.337	+0.005	"	"	1.069	436								
06-2216	5250	.687	1481.1	.327	+0.006	"	"	1.094	443.3								
15-2228	5500	.729	1570.0	.356	+0.007	"	"	1.110	447.9								
29-2239	5750	.768	1652.5	.330	+0.007	"	"	1.160	462.4								
40-2250	6000	.812	1746.0	.374	+0.007	"	"	1.158	470.5								
51-0001	6250	.849	1824.2	.313	+0.007	"	"	1.230	482.5								
02-0012	6500	.890	1911.0	.347	+0.006	"	"	1.295	506.1								
03-0023	6750	.933	2002.0	.364	+0.006	"	"	1.370	522.4								
24-0036	6824	.946	2030.0	.378	+0.006	"	"	1.396	529.6								

COMMENTS:

GEO THERMAL DIVISION

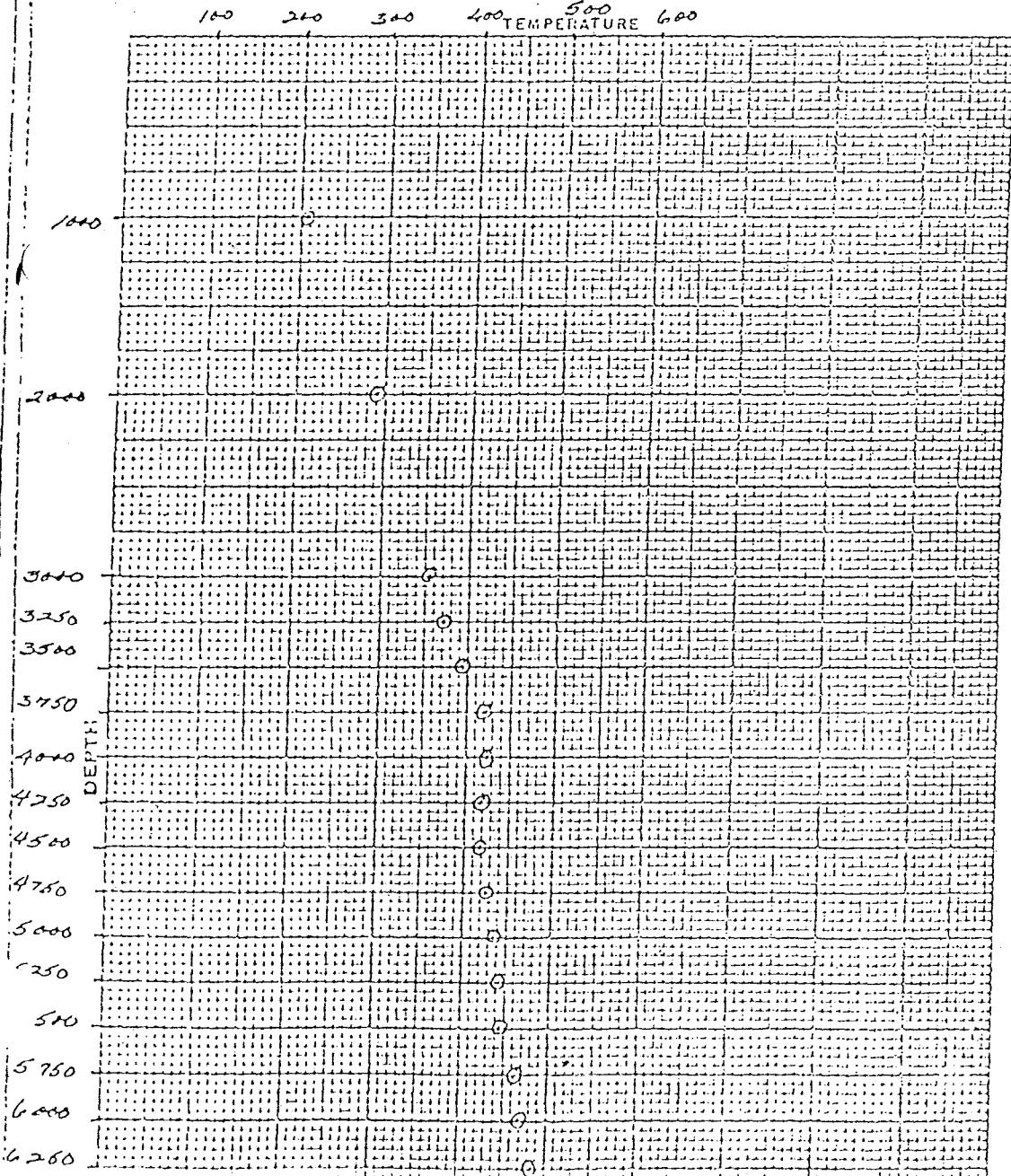
SUBSURFACE TEMPERATURE SURVEY

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OWNER UNION OIL COMPANY FIELD VALLE GRANDE WELL NAME BACA #14
 CASING 22" @ 193'; 13 3/8" @ 1452' ELEV. 8604.8' DATE: 2/19/75
 LINER DESCRIPTION: 9 5/8" HUNG 1452'-5074'; OPEN HOLE 5074'-TD ZERO POINT ROTARY TABLE
 DEPTH 6824'

HOLE DESCRIPTION: _____
 INSTRUMENT 88-692° FA: _____
 SERIAL NO 10055

PURPOSE _____ MAX. TEMP. 529.6 °F @ 6824'
 REMARKS: _____



STABILIZATION PERIOD _____

PRESSURES	GAUGE	COND
CASING, PSI		

DEPTH	TEMP.	DEPTH	TEMP.
1000	209.3		
2000	291.6		
3000	358.0		
3250	377.2		
5000	395.8		
3750	422.1		
4000	425.6		
4250	420.9		
4500	420.3		
4750	427.6		
5000	436.0		
5250	445.3		
5500	447.9		
5750	462.4		
6000	470.5		
6250	482.5		
6500	501.1		
6750	522.4		
6824	529.6		

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GEO THERMAL DIVISION

SUBSURFACE PRESSURE SURVEY

B14-53-P17

OWNER UNION OIL CO. OF CALIF FIELD VALLE GRANDE WELL NAME BACKWIL
 CASING 20" @ 193', 13 1/2" @ 1452' ELEV. 8604.8' DATE: 2/9/75
 LINER DESCRIPTION: 9 5/8" HUNG - 1452' - 3074' OPEN HOLE - 3074' - 6824' ZERO POINT R.T.
 DEPTH 6824'

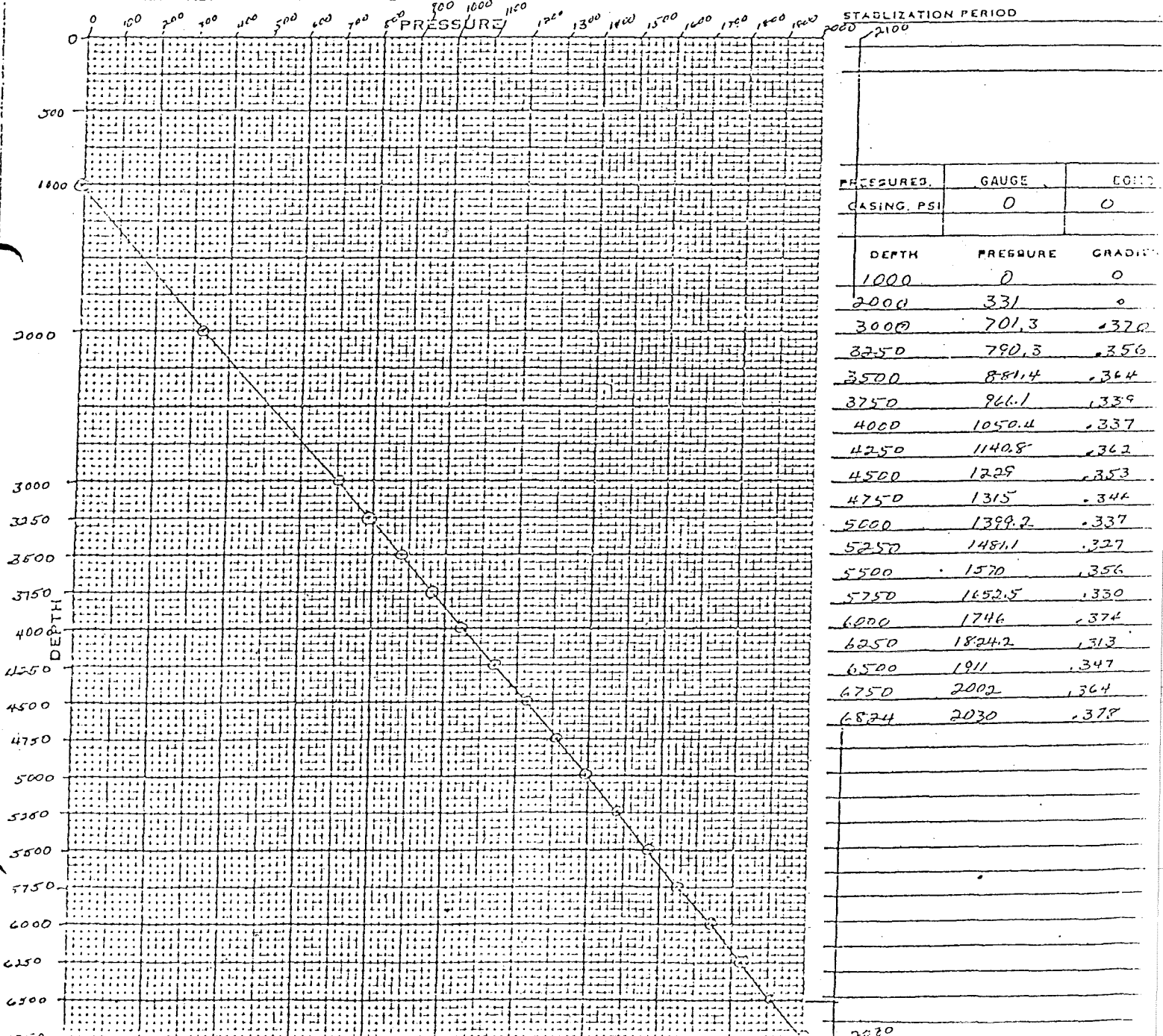
HOLE DESCRIPTION:

INSTRUMENT 0-4250 P.S.
 SERIAL NO. 7198

PURPOSE RIG SURVEY.

MAX TEMP 529.6 °F @ 6524'

REMARKS:



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UNION

GEO THERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

B14510 T

OWNER UNION OIL COMPANY FIELD VALLE GRANDE WELL NAME BACA #14
CASING 20" AT 190'; 13 3/8" AT 1452 ELEV. 3605 DATE: 8/13/76
LINER DESCRIPTION: 9 5/8" AT 3074 ZERO POINT GL + 2'
3074 - TD = OPEN HOLE DEPTH 3600'

TUBING DETAIL:

PURPOSE TEMP SURVEY FOR DIA-LOG

REMARKS:

ELEMENT 80'-641' of SERIAL NO. 10052 CLOCK 1246 15 TURN STABILIZATION PERIOD
ENGAGE STYLUS T- 1036 DISENGAGE STYLUS T- 1245
WELL HEAD 0
PICKUP @ 3000 TIME ON BOTTOM 1214-1229 MAX. °F 361 of
WELL STATUS
SHUT IN: ON PRODUCTION:
RATE

TEMP

TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
12	3600	.425	361														

COMMENTS: BEGAN H₂O INJECTION AT 0.845 hrs; APPROX 1 BBL/min.

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GEO THERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

B14 S9 P1T

OWNER UNION OIL COMPANY FIELD VALLE CLAUDE WELL NAME BACA #14
 CASING 20" AT 193', 13 3/8" AT 1452' ELEV. 8605' DATE: 8/12/76
 LINER DESCRIPTION: 9 5/8" AT 3074' ZERO POINT G.L. + 6'
3074' - TD = OPEN HOLE DEPTH 5780'

TUBING DETAIL:

PURPOSE

REMARKS:

ELEMENT - 0-4750 PSI SN 15012 CL-12 HE 15 TURN

ELEMENT 30°-646° SERIAL NO. 10052 CLOCK 12 HE 15 TURN STABILIZATION PERIOD

ENGAGE SYLUS D1425T 1420 DISENGAGE SYLUS D1645T 1645

WELL HEAD 0

PICKUP 0 3958' TIME ON BOTTOM 1405-25 MAX. T 412 OF

WELL STATUS

SHUT IN:

ON PRODUCTION:

RATE

PSI

TEMP

TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
	100	0	0		0		110	.049	96								
1505	1000	0	0		0		1000	.346	188								
1518	1200	.147	368		-002		2000	.930	365								
1530	3600	.301	732	30"	+001		3000	1.102	412								
1541	3250	.539	822		+002		3250	1.037	394								
1552	3500	.376	910		+005		3500	1.018	358								
1603	3750	.415	1002		0		3750	1.025	273								
1625	3958	.453	1092		+002		3958	1.336	185								

COMMENTS:

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GEO THERMAL DIVISION

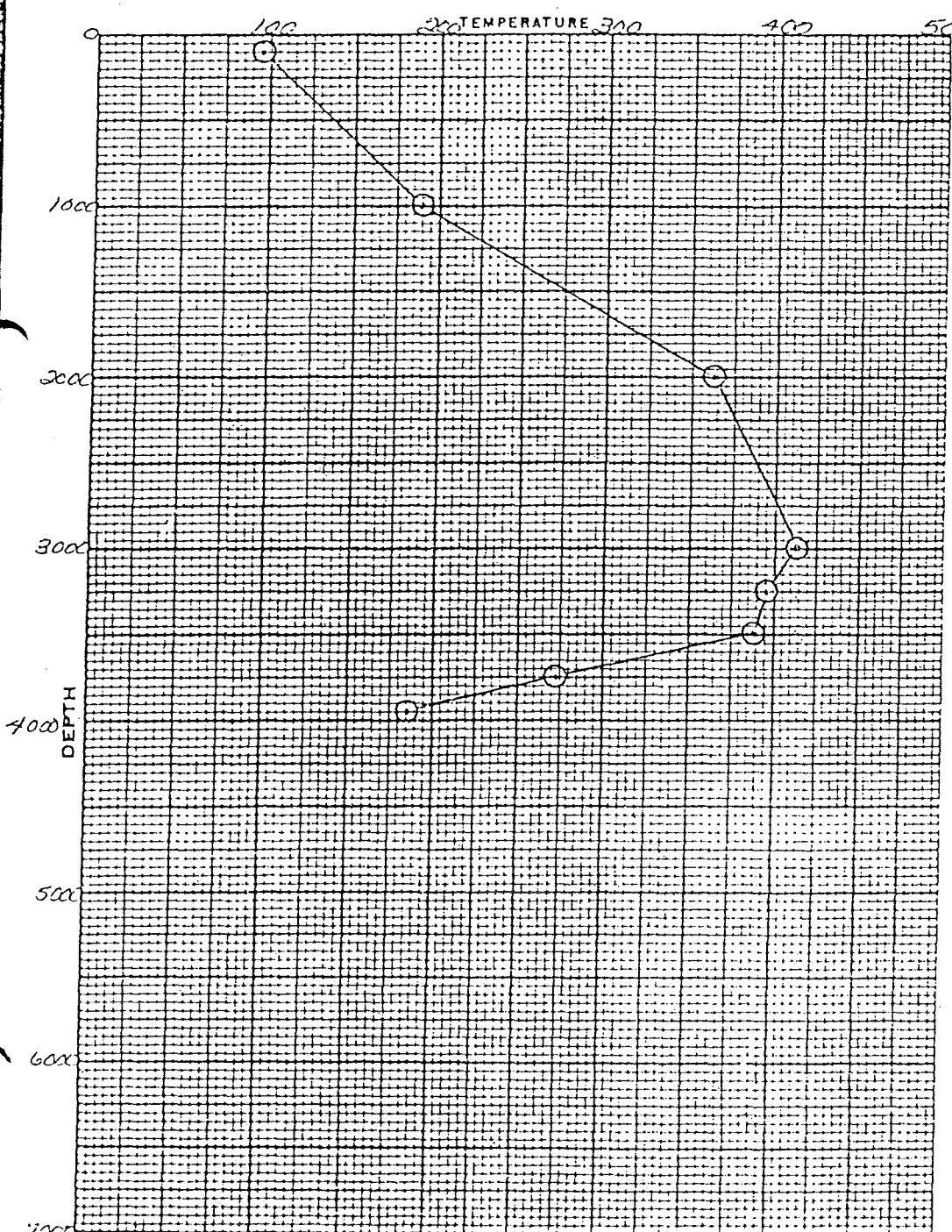
SUBSURFACE TEMPERATURE SURVEY

B14-S9-PT

OWNER Union Oil Company FIELD Valle Grande WELL NAME BACA #14
 CASING _____ ELEV 8605' DATE 8/12/76
 LINER DESCRIPTION: _____ ZERO POINT GL +6
 _____ DEPTH 5780'

HOLE DESCRIPTION: _____ INSTRUMENT _____ FAHR
 _____ SERIAL NO 10052

PURPOSE _____ MAX TEMP 412 °F @ 3000'
 REMARKS: _____



STABILIZATION PERIOD _____

PRESSURES	GAUGE	BOMB
CASING, PSI		

DEPTH	TEMP.	DEPTH	TEMP.
100	96		
1000	188		
2000	363		
3000	412		
3250	394		
3500	388		
3750	273		
3958	185		

BY: _____

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GEO THERMAL DIVISION

SUBSURFACE PRESSURE SURVEY

B14-59-PT

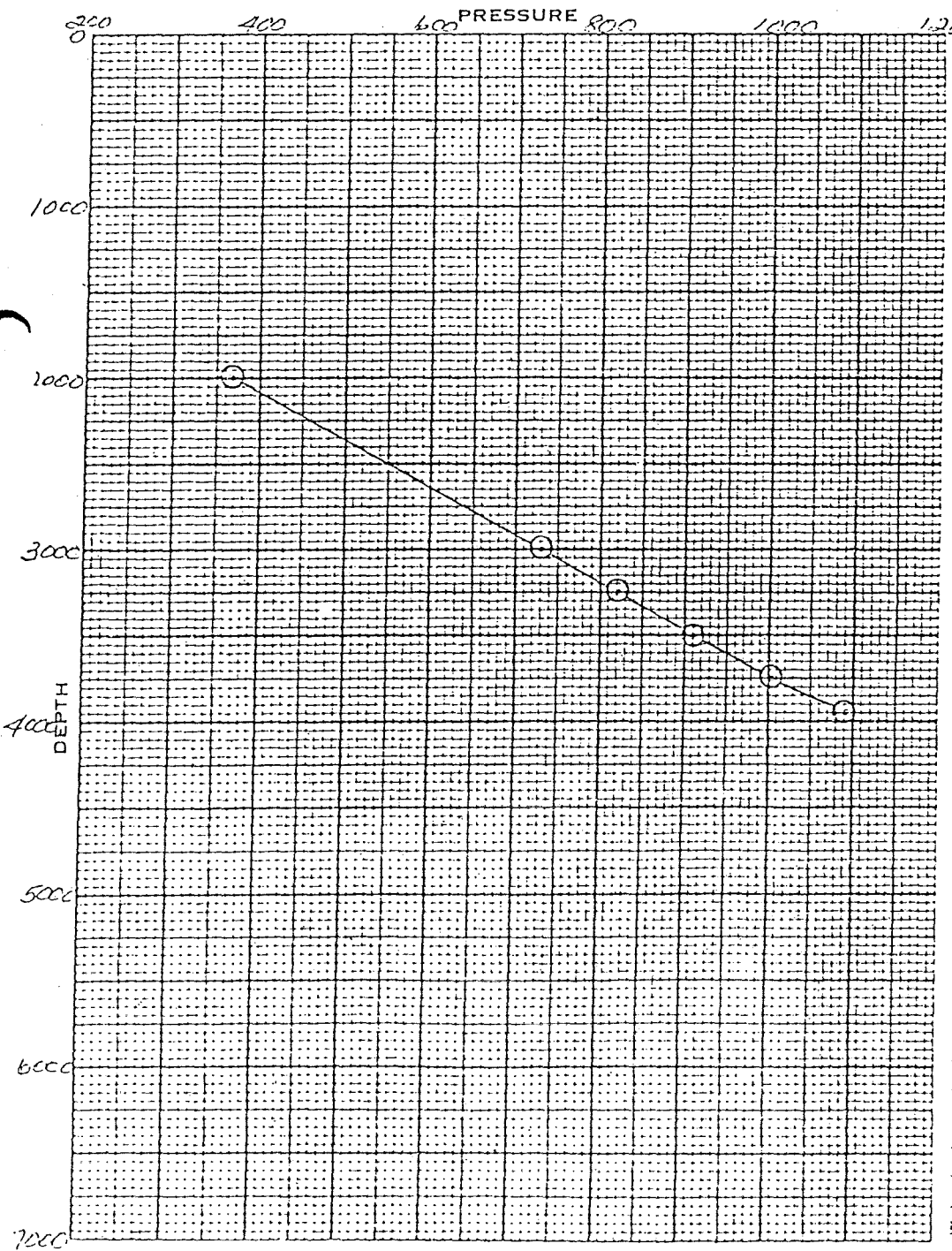
OWNER _____ FIELD Walle Granite WELL NAME BACA #14
 CASING _____ ELEV 8605' DATE 8/12/76
 LINER DESCRIPTION: _____ ZERO POINT GL +6'
 _____ DEPTH 5780'

HOLE DESCRIPTION: _____

 INSTRUMENT _____ PSIG
 SERIAL NO 13012

PURPOSE _____ MAX TEMP 412 °F @ 3000'
 REMARKS: _____

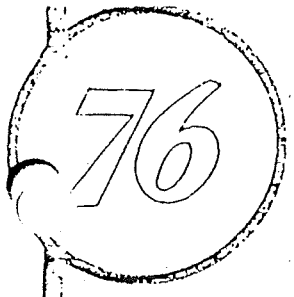
STABILIZATION PERIOD



PRESSURES.	GAUGE	BOMB
CASING, PSI		

DEPTH	PRESSURE	GRADIENT
100	0	
1000	0	
2000	368	
3000	732	
3250	822	
3500	910	
3750	1002	
3958	1092	

BY:



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GEOHERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

B-14 5-7 PIT

OWNER Union Oil Co of Calif FIELD Valle Grande WELL NAME BACA #14
 CASING 20" @ 193'; 13 3/4" @ 1452' ELEV. 8609.8' DATE: 2/21/75
 LINER DESCRIPTION: 9 3/4" hung 1452'-3074' ZERO POINT R.T
Open hole 3074'-6100' DEPTH 6100'

TUBING DETAIL:

PURPOSE:

REMARKS:

R- 0-4250 R518 719X 12 hr. 133.75 L 15
 ELEMENT 88°-69.8°F SERIAL NO. 10055 CLOCK 12 Hr. 13790 L 15 BURN STABILIZATION PERIOD
 ENGAGE STYLUS P-1247; T-1243 DISENGAGE STYLUS P-1706; T-1707
 WELL HEAD
 PICKUP @ 6100' TIME ON BOTTOM 16.22-16.32 MAX. °F 499.6°F
 WELL STATUS Static
 SHUT IN: Static since 0300 2/21/75 ON PRODUCTION:
 RATE

TEMP

PRESSURE COR.

TIME	DEPTH	DEFL.	R-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	GRAD.	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
10	1000	.312	196.1				1000	-	-	-	-						
31	2000	.448	241.4				2000	.142	319.8	-	0						
120	3000	.568	279.8				3000	.315	677.0	-008	.377						
537	3250	.586	285.5				3250	.357	786.0	-008	.356						
348	3500	.631	289.9				3500	.400	877.1	-007	.364						
359	3750	.624	297.7				3750	.442	966.1	-006	.356						
410	3900	.561	277.5				3900	.470	1025.2	-006	.394						
422	4000	.531	267.9				4000	.490	1067.2	-005	.420						
433	4250	.489	234.3				4250	.535	1161.8	-005	.378						
444	4500	.528	267.0				4500	.579	1254.2	-004	.370						
455	4750	.527	266.6				4750	.624	1348.7	-002	.378						
506	5000	.626	314.3				5000	.669	1443.5	+001	.378						
517	5250	.791	351.1				5250	.711	1531.8	+006	.354						
528	5500	.783	348.6				5500	.755	1625.0	+005	.373						
549	5750	.873	376.6				5750	.797	1714.0	+005	.356						
600	5900	1.123	462.2				5900	.827	1725	+008	.423						
611	6000	1.211	477.1				6000	.846	1817.8	+007	.403						
622	6100	1.280	499.6				6100	.863	1853.8	+007	.360						

COMMENTS:

BY:

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UNION

GEO THERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

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BACA #14-S7-P17

OWNER UNION OIL CO. OF CALIF. FIELD VALLE GRANDE WELL NAME BACA #14
 CASING 20" @ 193'; 13 3/8" @ 1452' ELEV. 8604.8' DATE: 2/21/75
 LINER DESCRIPTION: 9 5/8" HVN9-1452'-3074' ZERO POINT R.T.
 OPEN HOLE - 3074' - 6100' DEPTH 6100'

TUBING DETAIL:

PURPOSE

REMARKS:

P-O-4250.BS16 7198 12/1R 133752 15
 ELEMENT T-88-698°F SERIAL NO. 10055 CLOCK 12:12:132902 15TURN STABILIZATION PERIOD
 ENGAGE STYLUS P-0416 T-0419 DISENGAGE STYLUS P-0549, T-0852
 WELL HEAD -
 PICKUP @ 6100' TIME ON BOTTOM 0800-0810 MAX. °F 490°F
 WELL STATUS STATIC
 SHUT IN: STATIC SINCE () ON PRODUCTION:
 RATE 2/20/75

PRESSURE TEMPERATURE

TIME	DEPTH	DEFL.	P. °F	GRAD.	COEFF	TIME	DEPTH	DEFL.	° T	GRAD.	TIME	DEPTH	DEFL.	° T	GRAD.
00	1000	0	0	0	G.C.C.	0440	1000	1107	125.4		0732	5750	1740	334.8	
02	2000	.117	331	.331	G.C.C.	0452	2000	1160	144.0		0737	5750	1744	332.1	X-
04-0525	3000	.327	723.5	.391	-0.005	0500	3000	.218	168.1		0743	5900	11048	429.9	
06-0517	3250	.372	818	.382	-0.007	0505	3000	.223	165.8		0745	5900	1.054	431.7	X-
08-0528	3500	.414	907	.356	-0.007	0511	3250	.258	177.7		0754	6000	1.144	457.8	
10-0539	3750	.457	998	.364	-0.006	0517	3250	.264	179.8		0759	6000	1.150	459.5	X-
12-0551	3900	.484	1054.6	.377	-0.006	0523	3500	.312	196.1		0805	6100	1.250	488.2	
14-0604	4000	.503	1094.5	.399	-0.005	0528	3500	.318	198.1		0810	6100	1.256	490.0	X-
16-0616	4250	.548	1189.1	.378	-0.005	0534	3750	.297	191.0						
18-0627	4500	.592	1281.1	.370	-0.004	0539	3750	.297	191.0						
20-0639	4750	.636	1374	.370	-0.003	0546	3900	.282	185.9						
22-0652	4900	.663	1430.7	.378	-0.002	0551	3900	.282	185.9						
24-0703	5000	.680	1466.4	.357	-0.001	0559	4000	.276	184.0						
26-0715	5250	.723	1557.2	.363	0.000	0604	4000	.276	184.0						
28-0726	5500	.766	1648.3	.364	+0.001	0611	4250	.253	176.0						
30-0737	5750	.808	1737.3	.356	+0.004	0616	4250	.253	176.0						
32-0748	5900	.839	1803	.438	+0.008	0622	4500	.333	203.2						
34-0759	6000	.856	1834	.310	+0.008	0627	4500	.338	204.9						
36-0810	6100	.873	1875	.410	+0.007	0634	4750	.338	204.9						
						0639	4750	.339	205.3						
						0646	4900	.513	262.2						
						0652	4900	.519	264.1						
						0655	5000	.538	270.2						
						0703	5000	.544	272.1						
						0710	5250	.537	269.8						
						0715	5250	.537	269.8						
						0721	5500	.592	287.4						
						0726	5500	.595	288.4						

COMMENTS:

NOTE - WHEN EXAMINING THE TEMP. TIME SECTION, REFER BACK TO THE PRESSURE TIME SECTION FOR THE FULL TIME SPAN AT THE RESPECTIVE DEPTH.

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UNION

GEO THERMAL DIVISION

SUBSURFACE SURVEY

Field Work Sheet

B#114-S5-PIT
INS-SURVEY

OWNER UNION OIL CO. OF CALIF FIELD VALLE GRANDE WELL NAME BACR#14
 CASING 20" @ 193' 13 7/8" @ 1452 ELEV. 8604.8' DATE: 2/20/75
 LINER DESCRIPTION: 9 5/8" ANNQ-1452'-3074' - OPEN HOLE-3074'-6227' ZERO POINT R.T.
 DEPTH 6100'

TUBING DETAIL:

PURPOSE INJECTIVITY SURVEY, FROM RIG

REMARKS:

P-0-42.50 PSIG - 7198- 12HR 13375L 15
 ELEMENT T-88-698°F SERIAL NO. 10055 CLOCK 12HR-13790L TURN STABILIZATION PERIOD
 ENGAGE SYLUS P-2249hrs T-2245hrs DISENGAGE SYLUS P-0255 T-0257
 WELL HEAD -0-
 PICKUP @ 6100' TIME ON BOTTOM 0214-0224 MAX. °F 419.8
 WELL STATUS ON INJECTION
 SHUT IN: 1445 HRS - 2/19/75 ON PRODUCTION:
 RATE

PRESSURE

TEMPERATURE

TIME	DEPTH	DEFL.	P-ψ	GRAD.	COEFF	TIME	DEPTH	DEFL.	°-T	GRAD.	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
0214	1000	.189	425.7	-	0	"	1000	.004	89							
0215	2000	.382	839	.113	-0.007	"	2000	.015	92.9							
0219-0239	3000	.575	1245.5	.167	-0.004	"	3000	.047	104.0							
0240-0250	3250	.619	1338.2	.370	-0.003	"	3250	.056	107.2							
0252-0012	3500	.662	1428.6	.362	-0.002	"	3500	.065	110.4							
013-0023	3750	.706	1521.2	.370	-0.001	"	3750	.073	113.3							
024-0034	4000	.745	1603.5	.330	-0.001	"	4000	.078	115.1							
036-0046	4250	.789	1697	.373	-0.001	"	4250	.085	117.6							
047-0057	4500	.835	1794.5	.390	-0.001	"	4500	.100	123							
058-0109	4750	.878	1885.6	.364	0	"	4750	.114	127.9							
109-0129	5000	.919	1972.7	.348	0	"	5000	.161	144.3							
150-0140	5250	.961	2061.7	.357	0	"	5250	.209	161.4							
141-0151	5500	1.004	2153.2	.366	+0.001	"	5500	.263	179.4							
152-0202	5750	1.046	2247.6	.358	+0.002	"	5750	.376	217.8							
203-0213	6000	1.086	2327.7	.340	+0.011	"	6000	.843	367.3							
214-0224	6100	1.106	2370.2	.425	+0.012	"	6100	1.013	419.8							

COMMENTS:

TIME STARTED INJECTION-1800HRS 2/20/75
 TIME FINISHED INJECTION-03:00HRS 2/21/75
 AVERAGE GPM = 496 GPM FOR ENTIRE INJECTIVITY TEST
 TOTAL BARRELS INS = 6376 bbls

BY:

L.M.A.D.

(IP Unit)

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GEO THERMAL DIVISION

SUBSURFACE TEMPERATURE SURVEY

BRAWN-55-P1T
INJ - SURVEY.

OWNER UNION OIL CO. OF CALIF FIELD VALLE GRANDE WELL NAME BRAWN-55
 CASING 30" @ 193', 13 3/8" @ 1452' ELEV. 8604.8' DATE: 2/20/75
 LINER DESCRIPTION: 9 5/8" LHM 1452' - 3074' - OPEN HOLE - 3074' - 6837' ZERO POINT R.T.
 DEPTH 6100'

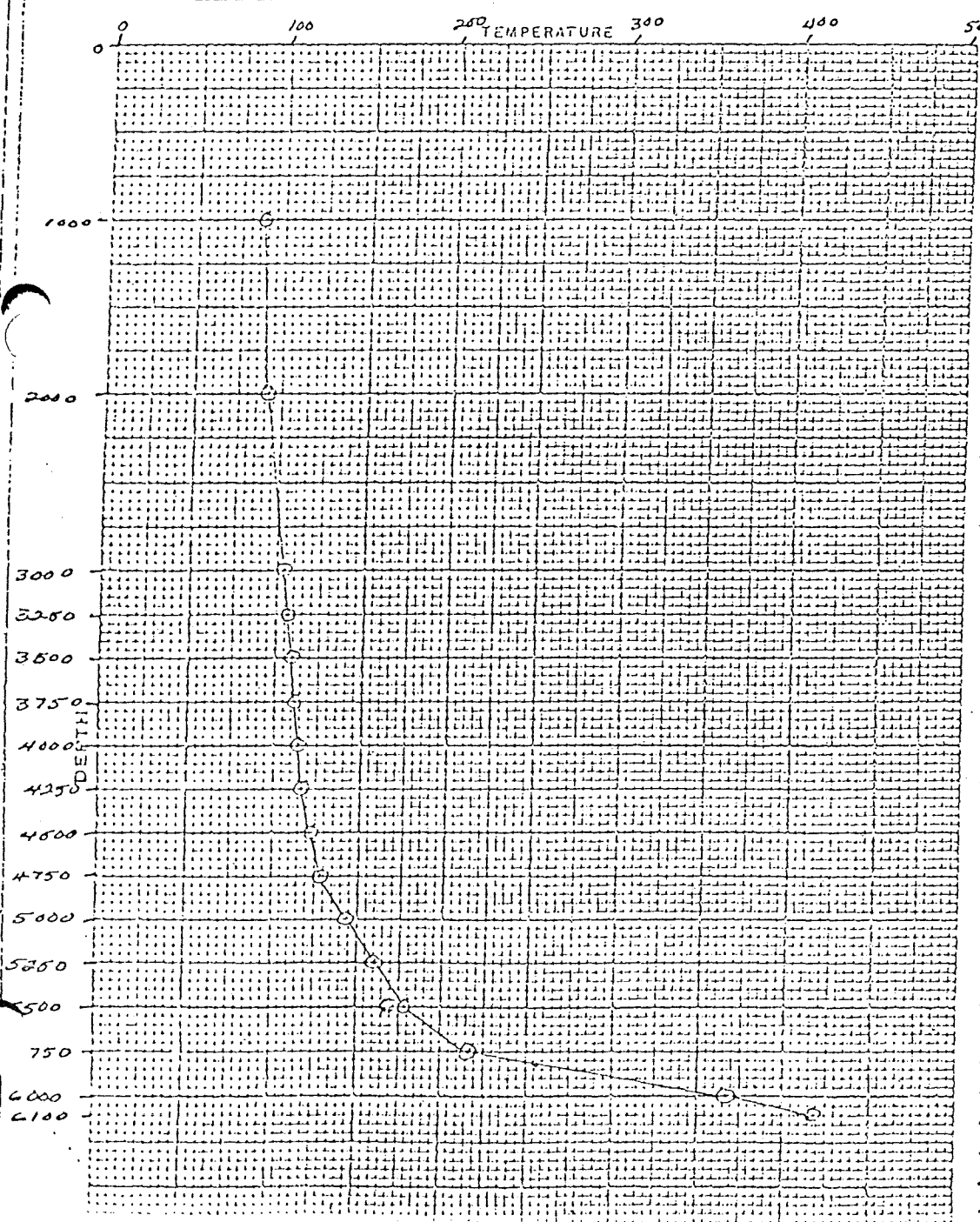
HOLE DESCRIPTION:

INSTRUMENT 88-698
 SERIAL NO 10055

PURPOSE RIG SURVEY / INJECTION

MAX TEMP. 419.8 °F @ 6100'

REMARKS:



PRESSURES		GAUGE	CORR.	
CASING, PSI		<u>UAC</u>	<u>UAC</u>	
DEPTH	TEMP.	DEPTH	TC	
<u>1000</u>	<u>89</u>			
<u>2000</u>	<u>92.9</u>			
<u>3000</u>	<u>104</u>			
<u>3250</u>	<u>107.2</u>			
<u>3500</u>	<u>110.4</u>			
<u>3750</u>	<u>113.3</u>			
<u>4000</u>	<u>115.1</u>			
<u>4250</u>	<u>117.6</u>			
<u>4500</u>	<u>123</u>			
<u>4750</u>	<u>127.9</u>			
<u>5000</u>	<u>144.3</u>			
<u>5250</u>	<u>161.4</u>			
<u>5500</u>	<u>179.4</u>			
<u>5750</u>	<u>217.8</u>			
<u>6000</u>	<u>367.3</u>			
<u>6100</u>	<u>419.8</u>			

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GEO THERMAL DIVISION

SUBSURFACE PRESSURE SURVEY

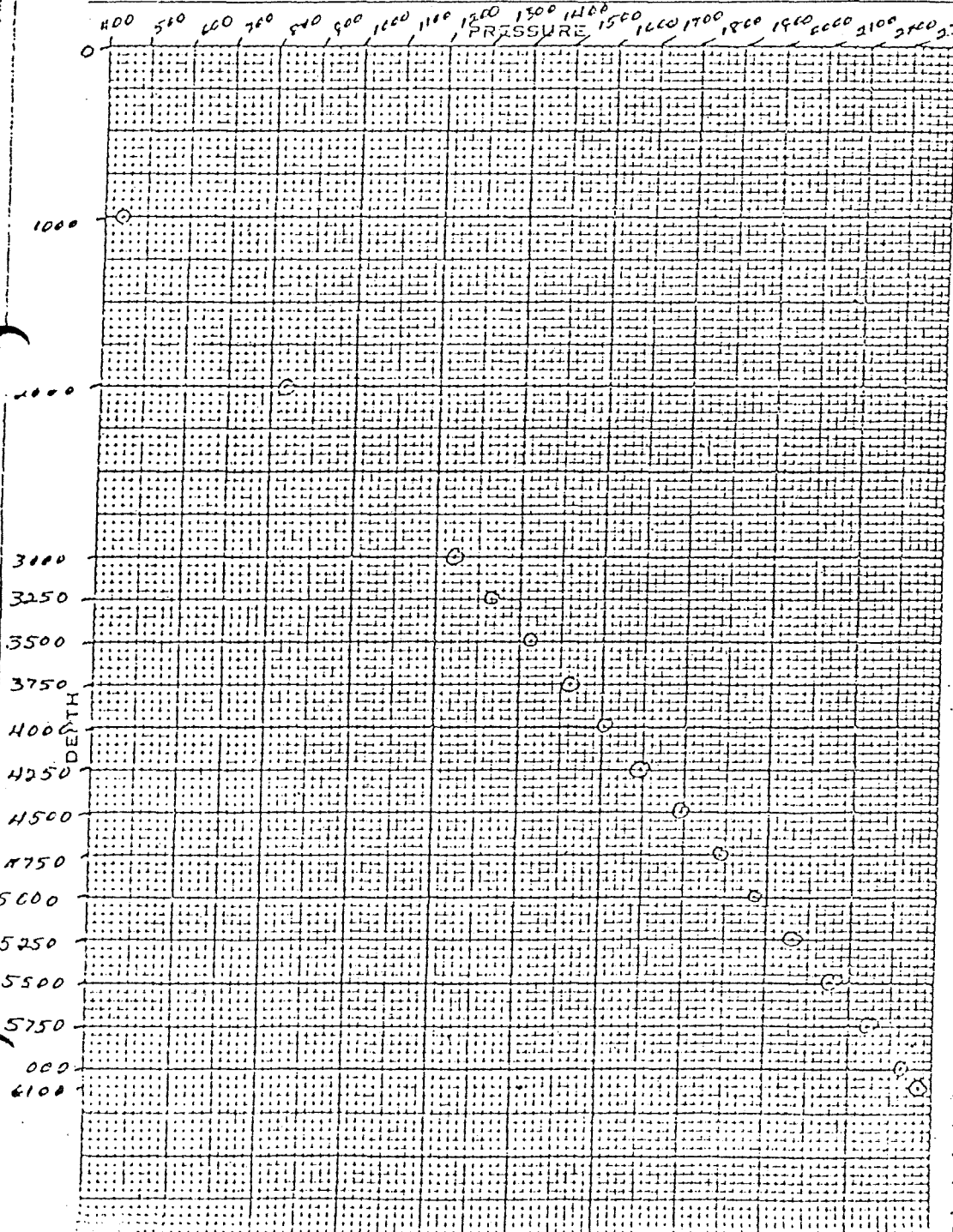
B#14-55-P17
INS. SURVEY

OWNER UCCO. FIELD U. G. WELL NAME B#14
 CASING 20" @ 193', 13 3/8" 1452' ELEV. 8661.5' DATE: 2/20/75
 LINER DESCRIPTION: 9 5/8" - 1452' - 3074' - OPEN HOLE - 3074' - 6100' ZERO POINT P.T.
 DEPTH 6100'

HOLE DESCRIPTION: _____ INSTRUMENT 0 - 4250
 SERIAL NO. 7198

PURPOSE _____ MAX. TEMP 419.8° F @ 6100'

REMARKS: _____ STABILIZATION PERIOD _____



PRESSURE	GAUGE	CORR.
CASING, PSI	—	—

DEPTH	PRESSURE	GRADIENT
1000	1425.7	—
2000	839	.413
3000	1245.8	.2107
3250	1338.2	.370
3500	1428.6	.367
3750	1521.2	.370
4000	1603.8	.350
4250	1697	.373
4500	1794.5	.390
4750	1885.6	.364
5000	1972.5	.348
5250	2061.7	.357
5500	2153.2	.366
5750	2242.6	.358
6000	2327.7	.340
6100	2370.2	.425

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UNION GEOHERMAL DIVISION

SUBSURFACE SURVEY Field Work Sheet

BRCA-14-S4-F1*

OWNER UNION OIL CO. OF CALIF FIELD VALLE GRANDE WELL NAME BASF#14
 CASING 20" @ 193'; 13 7/8" @ 1452' ELEV. 8604.8' DATE: 2/20/75
 LINER DESCRIPTION: 9 7/8" HUNG - 1452' - 3074' OPEN HOLE - 3074' - 6837' ZERO POINT R.T.
 DEPTH 6180' + or - 6'

TUBING DETAIL:

PURPOSE RIG SURVEY

REMARKS:

P-0-4250 PSIG - 7198 12HR - 13375L 15
 ELEMENT T-98°F-698°F SERIAL NO. 10055 CLOCK 12hr-13796L TURN STABILIZATION PERIOD
 ENGAGE STYLUS P-0240 T-0242 DISENGAGE STYLUS P-1437 T-1421
 WELL HEAD -0-
 PICKUP @ 6180' TIME ON BOTTOM 0607-0617 MAX. F 483.7
 WELL STATUS STATIC
 SHUT IN: 1645 hrs - 2/19/75 ON PRODUCTION:
 RATE

PRESSURE

TEMPERATURE

TIME	DEPTH	DEFL.	P-O	GRAD.	ID	TIME	DEPTH	DEFL.	O-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
0-0000	1000	0	0	0	0	"	1000	.352	210								
0-0000	2000	.150	338	.339	0	"	2000	.650	306								
0-0000	3000	.319	706	.368	-0.03	"	3000	.848	369								
1-0341	3250	.361	795	.356	-0.01	"	3250	.895	383								
1-0402	3500	.402	881	.348	0.00	"	3500	.941	398								
1-0413	3750	.442	966	.339	+0.01	"	3750	1.031	425								
1-0434	4000	.483	1053	.346	+0.02	"	4000	1.035	426								
1-0455	4250	.523	1137	.336	+0.03	"	4250	1.023	423								
1-0446	4500	.564	1223	.344	+0.04	"	4500	1.036	426								
1-0457	4750	.606	1311	.353	+0.05	"	4750	1.055	432								
1-0520	5000	.647	1397	.345	+0.05	"	5000	1.090	442								
1-0531	5250	.686	1479	.327	+0.06	"	5250	1.121	451								
1-0544	5500	.720	1551	.288	+0.07	"	5500	1.138	456								
1-0555	5750	.771	1629	.432	+0.07	"	5750	1.192	472								
1-0606	6000	.811	1744	.339	+0.07	"	6000	1.224	481								
1-0617	6180	.837	1799	.306	+0.07	"	6180	1.234	484								

COMMENTS:

T.D. 6180' + or - 6'

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GEOTHERMAL DIVISION

SUBSURFACE PRESSURE SURVEY

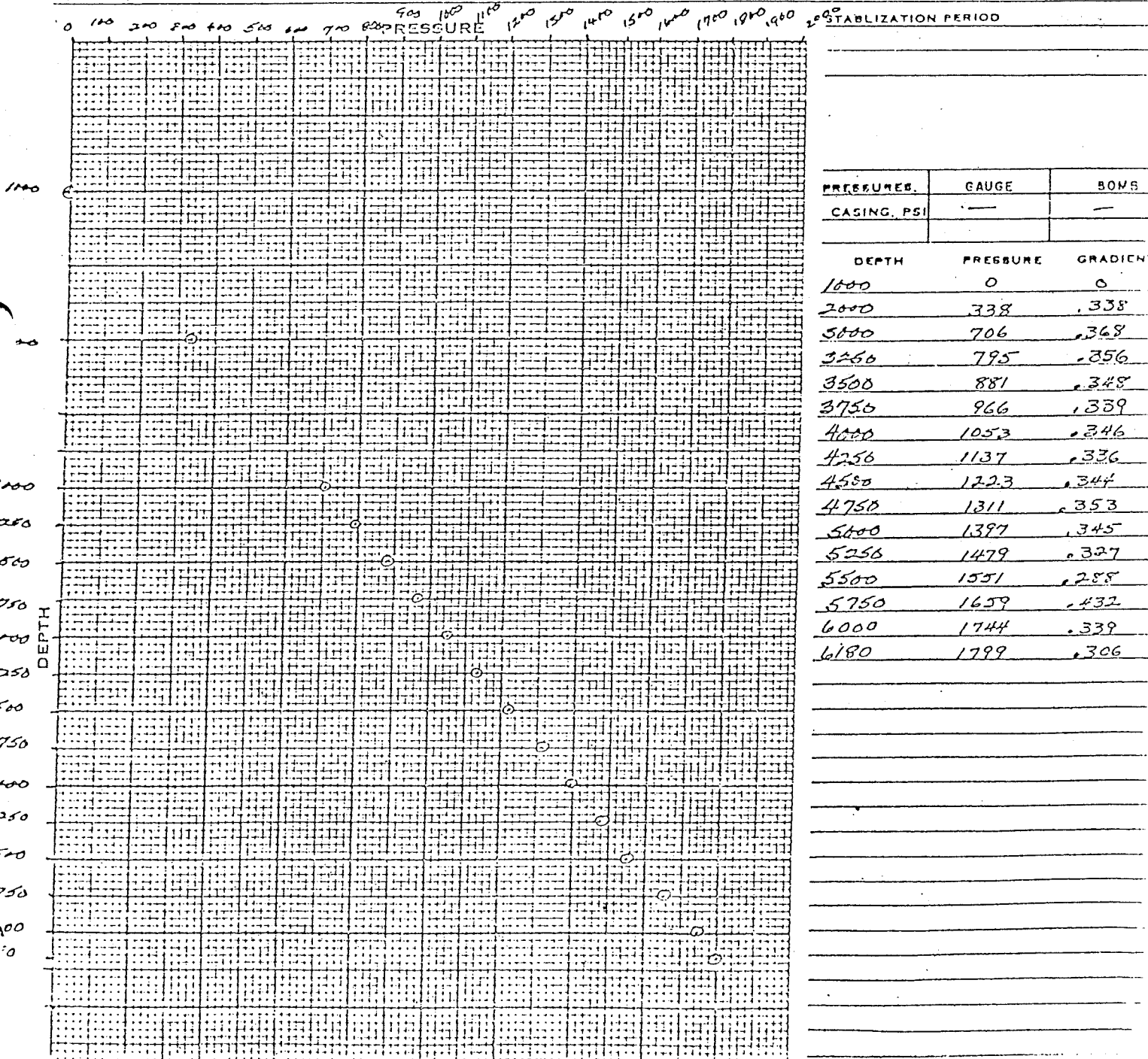
SACA 145-4 P

OWNER UNION OIL COMPANY FIELD VALLE GRANDE WELL NAME BACA #14
 CASING 20" @ 193' ; 15 3/8" @ 1452' ELEV. 8604.8' DATE 2-20-75
 LINER DESCRIPTION: 9 5/8" HUNG 1452' - 3074' OPEN HOLE 3074' - 6824' ZERO POINT ROTARY TABLE
 DEPTH 6824'

HOLE DESCRIPTION: _____ INSTRUMENT D-4750 PSI
 SERIAL NO 7198

PURPOSE RIG SURVEY MAX TEMP 484 °F @ 6180

REMARKS:



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UNION

GEO THERMAL DIVISION

SUBSURFACE SURVEY
Field Work Sheet

BACD#14-S-2-T1

OWNER UNION OIL OF CALIF FIELD WALLS GRANDE WELL NAME BACD#14
 CASING 20" @ 193'; 13 1/2" @ 1452' ELEV. DATE: 2/7/75
 LINER DESCRIPTION: 9 5/8" HUNG-1452'-3074', OPEN HOLE-3074'-6837' ZERO POINT RT.
 DEPTH 6837'

TUBING DETAIL:

PURPOSE RIG SURVEY

REMARKS:

T1-82°E-693°E 10055 1242-13375 15'
 ELEMENT T1-82°E-646°E SERIAL NO. 10052 CLOCK 1242-13790 15 TURN STABILIZATION PERIOD
 ENGAGE STYLUS T1-1211 T2-1207 DISENGAGE STYLUS T1-1357 T2-1358
 WELL HEAD —
 PICKUP @ 6837' TIME ON BOTTOM 1316-1326 MAX. F 552.0
 WELL STATUS STATIC
 SHUT IN: — ON PRODUCTION:
 RATE

T1-10055

T2-10052

TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID	TIME	DEPTH	DEFL.	P-T	GRAD.	ID
1316	3000	.278	184.5	0	—	"	3000	.272	165.0	0	—						
1320	4000	.482	254.0	5.235	—	"	4000	.505	232.0	.073	—						
1324	5000	.969	406.4	.152	—	"	5000	1.027	391.0	.153	—						
	6000	1.422	480.3	.074	—	"	6000	1.301	467.0	.076	—						
1326	6837	1.475	552.0	.085	—	"	6837	1.577	540.0	.037	—						

COMMENTS:

BY: S.M.

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GEO THERMAL DIVISION

SUBSURFACE TEMPERATURE SURVEY

Well #14 S-2 T7

OWNER Union Oil Company of Calif. FIELD Valle Grande WELL NAME Well #14
 CASING 20" x 19.5' 13 3/4" x 10.5' ELEV. _____ DATE: _____
 LINER DESCRIPTION: 1 1/2" hole 1437' - 5074, special hole 5074' - 6937 ZERO POINT Reference table
 DEPTH _____

HOLE DESCRIPTION: _____

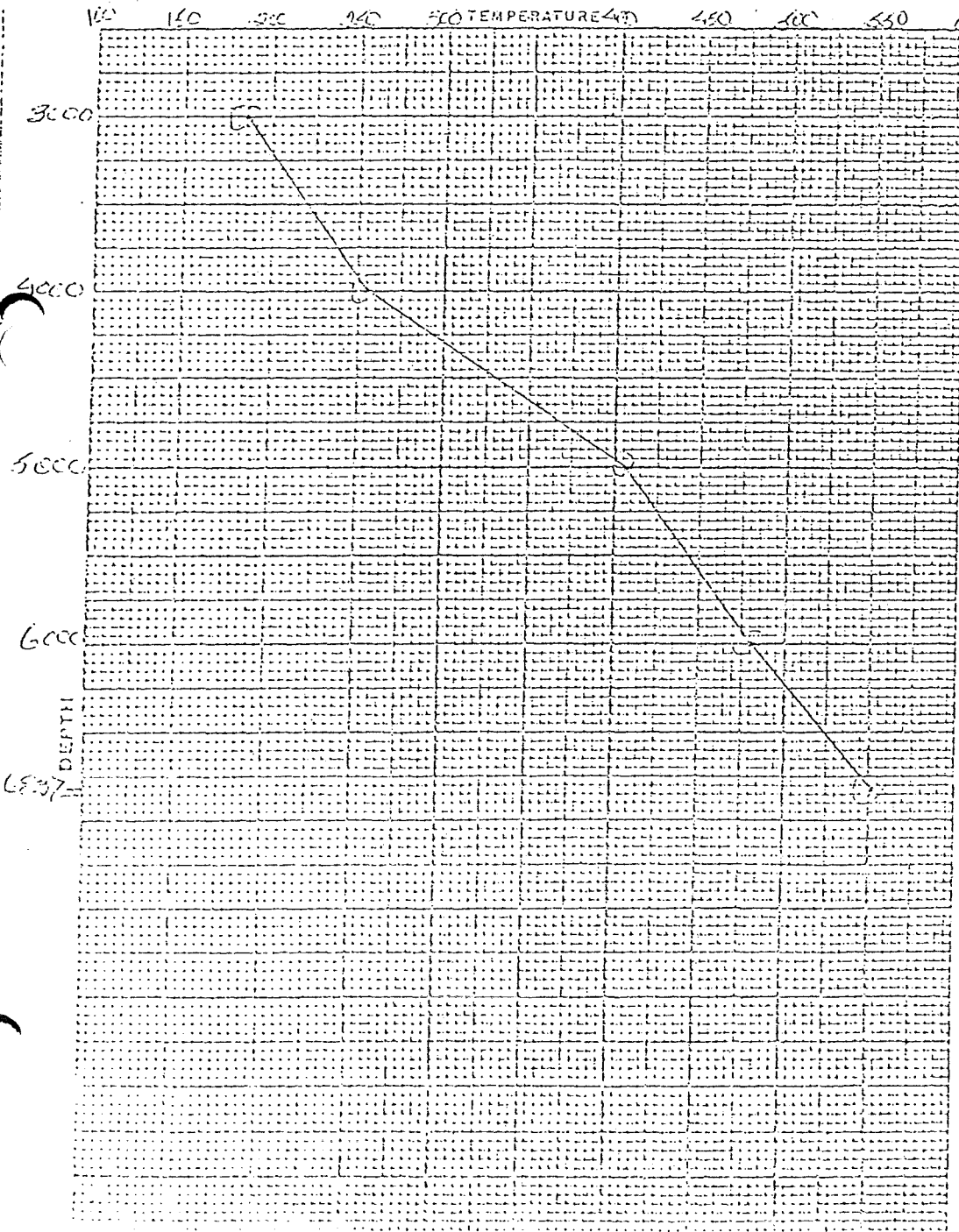
INSTRUMENT RS-692° F PAR.
 SERIAL NO KTR-10055

PURPOSE _____

MAX TEMP. 55.2 °F @ 6937

REMARKS: _____

STABILIZATION PERIOD _____



PRESSURE	GAUGE	COIN	
CASING, PSI			
DEPTH	TEMP.	DEPTH	TEMP.
3000	184.5		
4000	234.0		
5000	406.4		
6000	487.3		
6937	55.2.0		

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GEO THERMAL DIVISION

SUBSURFACE TEMPERATURE SURVEY

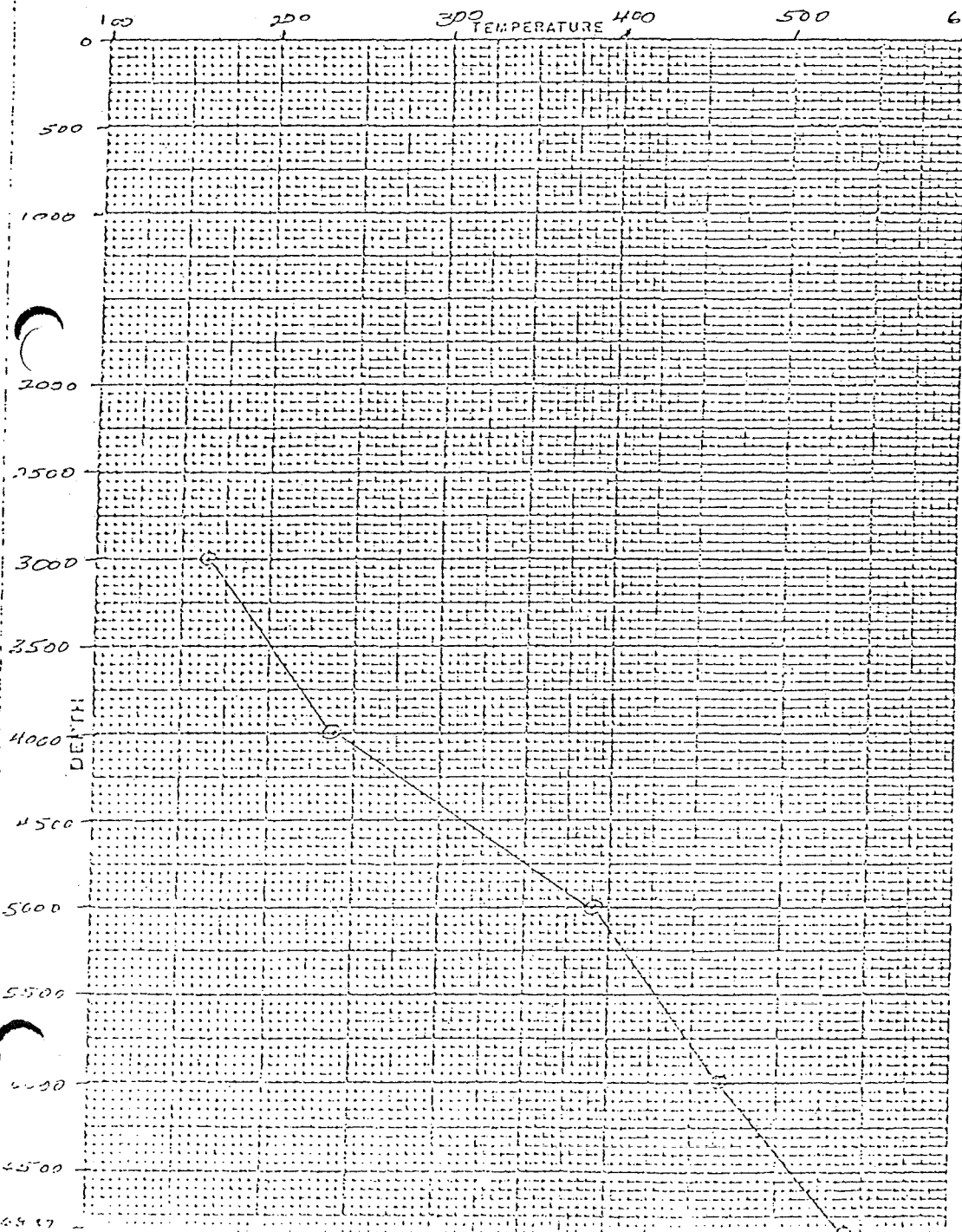
B#14-S2-T1r

OWNER UNION OIL CO. OF CALIF. FIELD VALLE GRANDE WELL NAME B#14
 CASING 20" @ 193'; 13 3/8" @ 1152' ELZV. _____ DATE: 2/7/75
 LINER DESCRIPTION: 9 5/8" HUNG - 1432' - 3074' OPEN HOLE 3074' - 6837' ZERO POINT R.T.
 DEPTH 6837

SOLE DESCRIPTION:

INSTRUMENT 89-195°F FAHR
 SERIAL NO 10052

PURPOSE _____ MAX TEMP. 540 °F @ 6837
 REMARKS: _____



STABILIZATION PERIOD _____

PRESSURE	GAUGE	BORE
CASING, PSI		

DEPTH	TEMP.	DEPTH	TEMP.
3000	165		
4000	238		
5000	391		
6000	467		
6837	540		