

PRUETT INDUSTRIES INC  
8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
(805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL.ENERGY	RUN 02 FIELD COSO	WELL 86-30 TCH
EFF DEPTH 2795'	WELL STAT STATIC	TOOL HUNG
CASING	CASING PRESS	ON BOTTOM 12:49PMS/30
LINER	TUBING PRESS	OFF BOTTOM 12:52PMS/30
DATE 053084	ELEMENT RANGE 65 - 519	ZERO POINT MAT
ELEVATION	ZONE	SHUT-IN
MAX TEMP	PICK-UP 2785'	ON-PROD
PERF	CAL SER NO. 118	MPP
TUBING 1 1/2"		
UNITS ENGLISH	PURPOSE	TEMPERATURE TRAVERSE 5/30/84

SURVEY DATA

CO. CAL.ENERGY	RUN 02 FIELD COSO			WELL 86-30 TCH			
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
11:45	1500	91.3	0.000	12:15	2100	103.8	0.000
11:46	1520	91.5	0.000	12:16	2120	104.2	0.000
11:47	1540	91.7	0.000	12:17	2140	104.6	0.000
11:48	1560	92.2	0.000	12:18	2160	105.0	0.000
11:49	1580	93.0	0.000	12:19	2180	105.3	0.000
11:50	1600	93.8	0.000	12:20	2200	105.7	0.000
11:51	1620	94.3	0.000	12:21	2220	106.1	0.000
11:52	1640	94.7	0.000	12:22	2240	106.3	0.000
11:53	1660	95.1	0.000	12:23	2260	106.9	0.000
11:54	1680	95.5	0.000	12:24	2280	107.2	0.000
11:55	1700	95.7	0.000	12:25	2300	107.6	0.000
11:56	1720	96.2	0.000	12:26	2320	108.2	0.000
11:57	1740	97.0	0.000	12:27	2340	108.7	0.000
11:58	1760	97.4	0.000	12:28	2360	108.9	0.000
11:59	1780	97.6	0.000	12:29	2380	109.3	0.000
12:00	1800	97.8	0.000	12:30	2400	109.7	0.000
12:01	1820	98.3	0.000	12:31	2420	110.3	0.000
12:02	1840	98.5	0.000	12:32	2440	111.0	0.000
12:03	1860	98.7	0.000	12:33	2460	111.4	0.000
12:04	1880	99.1	0.000	12:34	2480	111.6	0.000
12:05	1900	99.3	0.000	12:35	2500	111.8	0.000
12:06	1920	99.7	0.000	12:36	2520	112.1	0.000
12:07	1940	100.4	0.000	12:37	2540	112.5	0.000
12:08	1960	100.8	0.000	12:38	2560	112.9	0.000
12:09	1980	101.2	0.000	12:39	2580	113.3	0.000
12:10	2000	101.4	0.000	12:40	2600	113.8	0.000
12:11	2020	101.9	0.000	12:41	2620	114.2	0.000
12:12	2040	102.3	0.000	12:42	2640	114.6	0.000
12:13	2060	102.9	0.000	12:43	2660	114.8	0.000
12:14	2080	103.3	0.000	12:44	2680	115.2	0.000

SURVEY DATA

CAL. ENERGY			RUN 02 FIELD COSO			WELL 86-30 TCH		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
12:45	2700	115.7	0.000	12:48	2760	117.4	0.000	
12:46	2720	116.1	0.000	12:49	2780	117.6	0.000	
12:47	2740	116.5	0.000	12:52	2785	117.8	0.000	

BY E. MARQUEZ/R. MARQUEZ

PRUETT INDUSTRIES INC  
8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
(805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL ENERGY		RUN 01 FIELD COSO		WELL 86-30
EFF DEPTH		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 1:29
LINER	-	TUBING PRESS		OFF BOTTOM 1:34
DATE	032684	ELEMENT RANGE	57 - 313	ZERO POINT 0
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2786'	ON-PROD
PERF	-	CAL SER NO.	39573	MPP
TUBING	-			
UNITS	ENGLISH	PURPOSE	TEMPERATURE TRAVERSE 3/26/84	

SURVEY DATA

CO. CAL ENERGY			RUN 01 FIELD COSO			WELL 86-30		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
11:11	21	67.1	0.000	12:08	1153	88.8	0.000	
11:12	45	71.1	0.000	12:10	1193	89.5	0.000	
11:13	67	72.2	0.000	12:11	1229	90.3	0.000	
11:15	98	72.4	0.000	12:14	1278	91.2	0.000	
11:17	133	72.7	0.000	12:16	1325	91.4	0.000	
11:19	168	73.7	0.000	12:18	1361	91.8	0.000	
11:22	232	73.6	0.000	12:20	1397	92.8	0.000	
11:24	281	74.3	0.000	12:22	1428	93.9	0.000	
11:26	332	74.7	0.000	12:23	1460	94.7	0.000	
11:29	373	76.3	0.000	12:25	1496	95.3	0.000	
11:31	417	76.9	0.000	12:27	1545	96.0	0.000	
11:33	459	77.2	0.000	12:29	1591	96.8	0.000	
11:35	502	78.2	0.000	12:32	1640	97.7	0.000	
11:37	550	79.3	0.000	12:34	1682	98.8	0.000	
11:40	589	79.7	0.000	12:36	1724	99.3	0.000	
11:43	649	81.3	0.000	12:38	1769	100.4	0.000	
11:44	692	81.2	0.000	12:41	1822	101.1	0.000	
11:47	734	81.1	0.000	12:43	1870	102.3	0.000	
11:49	781	81.6	0.000	12:46	1915	102.7	0.000	
11:51	816	82.4	0.000	12:48	1964	103.7	0.000	
11:53	853	83.7	0.000	12:51	2015	104.6	0.000	
11:54	876	83.2	0.000	12:53	2058	105.6	0.000	
11:55	893	81.3	0.000	12:55	2110	106.5	0.000	
11:56	911	82.3	0.000	12:58	2150	106.5	0.000	
11:56	933	84.2	0.000	12:59	2192	107.0	0.000	
11:58	962	85.3	0.000	13:02	2236	108.2	0.000	
12:00	998	86.3	0.000	13:04	2290	109.3	0.000	
12:02	1042	87.4	0.000	13:07	2336	110.0	0.000	
12:04	1081	87.6	0.000	13:09	2386	111.8	0.000	
12:05	1112	88.0	0.000	13:11	2421	112.1	0.000	

SURVEY\_DATA

CAL ENERGY				RUN 01 FIELD COSO		WELL 86-30		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
13:13	2463	113.2	0.000	13:24	2679	117.1	0.000	
13:16	2521	114.2	0.000	13:26	2728	118.1	0.000	
13:19	2574	115.0	0.000	13:34	2786	118.7	0.000	
13:21	2618	115.7	0.000	0:00	0	0.0	0.000	

BY T. DRIVER/T. DRIVER

PRUETT INDUSTRIES INC  
 8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
 (805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CALIF ENERGY		RUN 1A FIELD COSO		<b>WELL 57-18</b>
EFF DEPTH 2825		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 11:05
LINER	-	TUBING PRESS		OFF BOTTOM 11:09
DATE 032884		ELEMENT RANGE		ZERO POINT
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2799'	ON-PROD
PERF	-	CAL SER NO.	P300	MPP
TUBING 7 1/2 TO	-2823			
UNITS ENGLISH		PURPOSE	TEMPERATURE TRAVERSE 3/28/84	

SURVEY DATA

CO. CALIF ENERGY			RUN 1A FIELD COSO			WELL 57-18		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
1:00	1100	223.4	0.000	1:00	2000	346.7	0.000	
1:00	1200	234.9	0.000	1:00	2100	358.3	0.000	
1:00	1300	246.1	0.000	1:00	2200	369.6	0.000	
1:00	1400	262.4	0.000	1:00	2300	381.1	0.000	
1:00	1500	274.9	0.000	1:00	2400	393.1	0.000	
1:00	1600	292.9	0.000	1:00	2500	408.8	0.000	
1:00	1700	307.5	0.000	1:00	2600	423.2	0.000	
1:00	1800	322.3	0.000	1:00	2760	446.8	0.000	
1:00	1900	335.4	0.000	0:00	0	0.0	0.000	

TEMPERATURE FROM 2600' TO 2760' WAS EXTRAPOLATED.  
 SURVEY RAN OVER TOP OF CHART.

BY C SKENFIELD

PRUETT INDUSTRIES INC  
 8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
 (805) 589-2768

SUB-SURFACE PRESSURE SURVEY

CO. CALIF ENERGY		RUN 01 FIELD COSO		WELL 57-18
EFF DEPTH 2825		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 11:05
LINER	-	TUBING PRESS		OFF BOTTOM 11:09
DATE 032884		ELEMENT RANGE	0 - 1372	ZERO POINT
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2799'	ON-PROD
PERF	-	CAL SER NO.	9836	MPP
TUBING 7 1/2 TO	-2823	PURPOSE		PRESSURE GRADIENT 3/28/84
UNITS ENGLISH				

SURVEY DATA

CO. CALIF ENERGY			RUN 01 FIELD COSO		WELL 57-18		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
1:00	0	316.8	0.000	1:00	2000	644.8	.375
1:00	1000	325.4	.009	1:00	2500	837.3	.385
1:00	1500	457.2	.264	1:00	2799	961.1	.414

BY C SKENFIELD

SUB-SURFACE PRESSURE SURVEY

CO. CAL. ENERGY		RUN 2A FIELD COSO		WELL 57-18
EFF DEPTH		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 6:31PM5/24
LINER	-	TUBING PRESS		OFF BOTTOM 6:41PM5/24
DATE	052484	ELEMENT RANGE	0 - 2013	ZERO POINT G.L.
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2722'	ON-PROD
PERF	-	CAL SER NO.	6583	MPP
TUBING	-			
UNITS	ENGLISH	PURPOSE		PRESSURE GRADIENT 5/24/84

SURVEY DATA

CO. CAL. ENERGY		RUN 2A FIELD COSO			WELL 57-18		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
4:50	200	722.7	0.000	6:12	2000	722.7	0.000
5:03	500	722.7	0.000	6:26	2500	722.7	0.000
5:26	1000	722.7	0.000	6:28	2600	722.7	0.000
5:49	1500	722.7	0.000	6:41	2722	759.2	.299

BY S. THOMPSON

PRUETT INDUSTRIES INC  
8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
(805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL. ENERGY		RUN 02 FIELD COSO		WELL 57-18
EFF DEPTH		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 6:31PMS/24
LINER	-	TUBING PRESS		OFF BOTTOM 6:41PMS/24
DATE	052484	ELEMENT RANGE	72 - 540	ZERO POINT G.L.
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2722'	ON-PROD
PERF	-	CAL SER NO.	113	MPP
TUBING	-			
UNITS	ENGLISH	PURPOSE	TEMPERATURE TRAVERSE	5/24/84

SURVEY DATA

CO. CAL. ENERGY			RUN 02 FIELD COSO			WELL 57-18		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
4:50	200	116.2	0.000	5:27	1025	208.4	0.000	
4:55	300	127.5	0.000	5:28	1050	212.7	0.000	
4:56	325	128.6	0.000	5:29	1075	217.2	0.000	
4:57	350	129.2	0.000	5:30	1100	221.8	0.000	
4:58	375	131.1	0.000	5:31	1125	223.6	0.000	
4:59	400	135.0	0.000	5:32	1150	226.7	0.000	
5:00	425	140.1	0.000	5:33	1175	230.0	0.000	
5:01	450	143.0	0.000	5:34	1200	232.0	0.000	
5:02	475	145.8	0.000	5:35	1225	235.1	0.000	
5:03	500	148.2	0.000	5:36	1250	238.2	0.000	
5:04	525	149.5	0.000	5:37	1275	242.1	0.000	
5:05	550	151.2	0.000	5:38	1300	245.6	0.000	
5:06	575	154.1	0.000	5:39	1325	249.1	0.000	
5:07	600	156.5	0.000	5:40	1350	252.2	0.000	
5:08	625	158.7	0.000	5:41	1375	254.2	0.000	
5:09	650	160.2	0.000	5:42	1400	259.6	0.000	
5:10	675	163.1	0.000	5:43	1425	264.6	0.000	
5:11	700	166.4	0.000	5:44	1450	266.5	0.000	
5:12	725	170.4	0.000	5:45	1475	269.5	0.000	
5:13	750	173.4	0.000	5:49	1500	272.8	0.000	
5:14	775	177.4	0.000	5:50	1525	276.1	0.000	
5:15	800	181.2	0.000	5:51	1550	279.2	0.000	
5:16	825	184.6	0.000	5:52	1575	283.3	0.000	
5:17	850	186.4	0.000	5:53	1600	287.2	0.000	
5:18	875	189.2	0.000	5:54	1625	290.3	0.000	
5:19	900	193.3	0.000	5:55	1650	292.9	0.000	
5:20	925	195.3	0.000	5:56	1675	296.3	0.000	
5:21	950	197.3	0.000	5:57	1700	300.3	0.000	
5:22	975	200.6	0.000	5:58	1725	303.9	0.000	
5:26	1000	204.2	0.000	5:59	1750	306.1	0.000	



SURVEY\_DATA

0. CAL. ENERGY

RUN 02 FIELD COSO

WELL 57-18

TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
6:00	1775	310.3	0.000	6:17	2125	364.0	0.000
6:01	1800	314.1	0.000	6:18	2150	368.8	0.000
6:02	1825	318.0	0.000	6:19	2175	372.7	0.000
6:03	1850	320.8	0.000	6:20	2200	376.2	0.000
6:04	1875	324.8	0.000	6:21	2250	379.3	0.000
6:05	1900	328.5	0.000	6:22	2300	384.5	0.000
6:06	1925	333.7	0.000	6:23	2350	391.2	0.000
6:07	1950	336.7	0.000	6:24	2400	399.8	0.000
6:08	1975	340.4	0.000	6:25	2450	406.9	0.000
6:12	2000	344.4	0.000	6:26	2500	416.8	0.000
6:13	2025	348.5	0.000	6:27	2550	430.0	0.000
6:14	2050	352.3	0.000	6:28	2600	437.3	0.000
6:15	2075	356.1	0.000	6:29	2650	450.5	0.000
6:16	2100	360.1	0.000	6:41	2722	468.0	0.000

BY S. THOMPSON

PRUETT INDUSTRIES INC  
 8715 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
 (805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL. ENERGY		RUN 02 FIELD COSO		<b>WELL 74-2</b>
EFF DEPTH		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 1:59PM3/12
LINER	-	TUBING PRESS		OFF BOTTOM 2:04PM3/12
DATE	031284	ELEMENT RANGE	57 - 313	ZERO POINT 0'
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2981'	ON-PROD
PERF	-	CAL SER NO.	39573	MPP
TUBING	-			
UNITS	ENGLISH	PURPOSE	TEMPERATURE TRAVERSE 3/12/84	

SURVEY DATA

CO. CAL. ENERGY				RUN 02 FIELD COSO		WELL 74-Z	
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
13:05	1900	138.1	0.000	13:33	2460	152.2	0.000
13:06	1920	138.7	0.000	13:34	2480	152.6	0.000
13:07	1940	139.0	0.000	13:35	2500	153.2	0.000
13:08	1960	139.4	0.000	13:36	2520	154.1	0.000
13:09	1980	139.9	0.000	13:37	2540	154.6	0.000
13:10	2000	140.4	0.000	13:38	2560	155.2	0.000
13:11	2020	141.0	0.000	13:39	2580	155.9	0.000
13:12	2040	141.5	0.000	13:40	2600	156.5	0.000
13:13	2060	141.8	0.000	13:41	2620	157.0	0.000
13:14	2080	142.1	0.000	13:42	2640	158.0	0.000
13:15	2100	142.7	0.000	13:43	2660	158.7	0.000
13:16	2120	143.2	0.000	13:44	2680	159.4	0.000
13:17	2140	143.7	0.000	13:45	2700	160.0	0.000
13:18	2160	144.3	0.000	13:46	2720	160.7	0.000
13:19	2180	144.6	0.000	13:47	2740	161.3	0.000
13:20	2200	145.4	0.000	13:48	2760	162.1	0.000
13:21	2220	145.9	0.000	13:49	2780	162.9	0.000
13:22	2240	146.4	0.000	13:50	2800	163.7	0.000
13:23	2260	146.9	0.000	13:51	2820	164.3	0.000
13:24	2280	147.3	0.000	13:52	2840	165.1	0.000
13:25	2300	147.9	0.000	13:53	2860	165.7	0.000
13:26	2320	148.3	0.000	13:54	2880	166.3	0.000
13:27	2340	148.9	0.000	13:55	2900	167.1	0.000
13:28	2360	149.4	0.000	13:56	2920	167.9	0.000
13:29	2380	150.0	0.000	13:57	2940	168.9	0.000
13:30	2400	150.5	0.000	13:58	2960	169.7	0.000
13:31	2420	151.1	0.000	14:04	2981	170.0	0.000
13:32	2440	151.8	0.000	0:00	0	0.0	0.000

BY J. HANEY

NWC #2

PROPRIETARY

file #010087-1

CALIFORNIA ENERGY

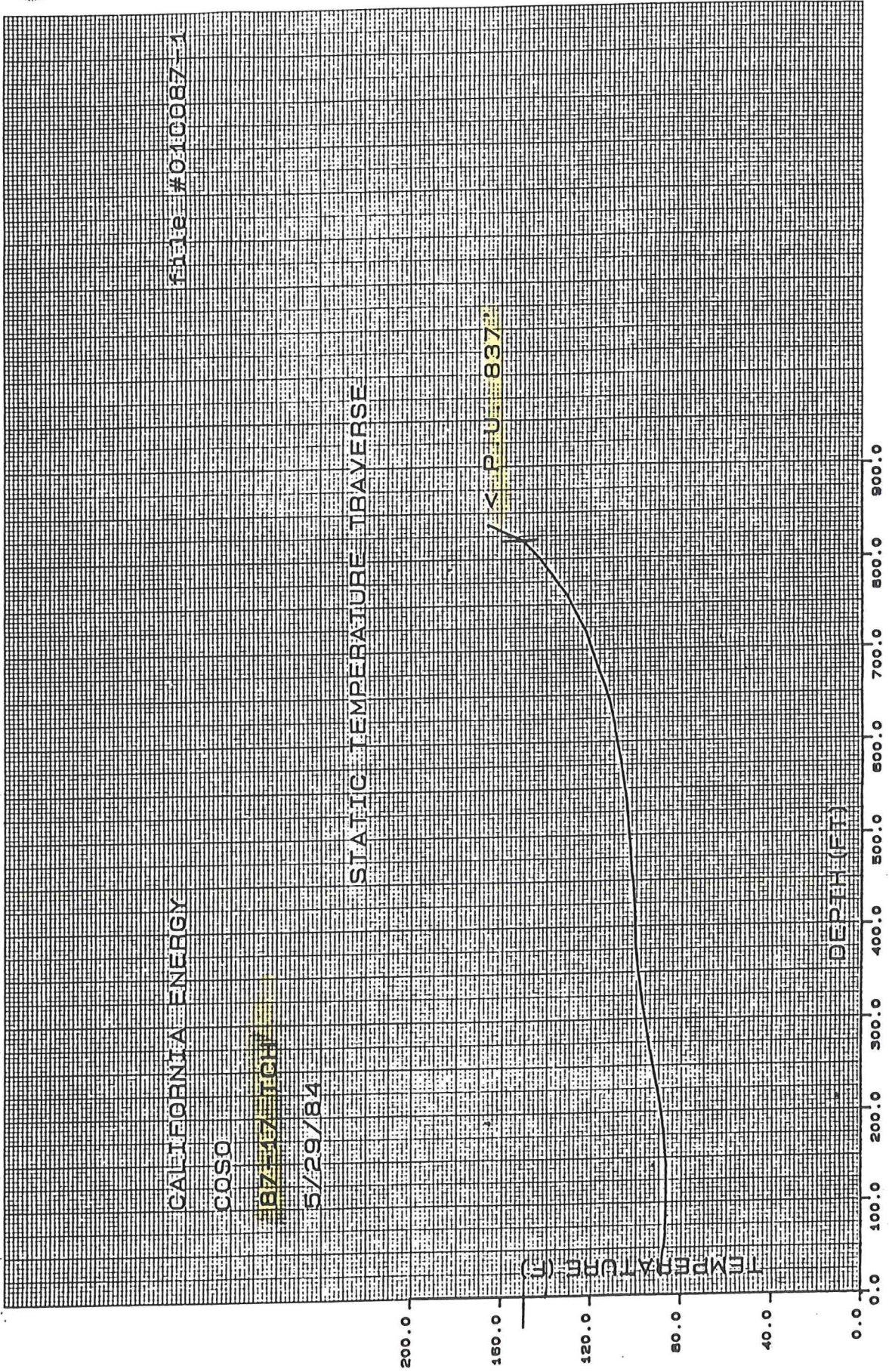
COSO

87-17 TCH

5/29/84

STATIC TEMPERATURE TRAVERSE

K.P.U. 837



Well 87-17 TCH

PRUETT INDUSTRIES INC  
8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
(805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL. ENERGY		RUN 02 FIELD COSO		WELL 87-25 TCH
EFF DEPTH		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 10:53AM5/30
LINER	-	TUBING PRESS		OFF BOTTOM 10:56AM5/30
DATE	053084	ELEMENT RANGE	65 - 519	ZERO POINT MAT
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP	2970'	ON-PROD
PERF	-	CAL SER NO.	118	MPP
TUBING 1 1/2"	-			
UNITS	ENGLISH	PURPOSE	TEMPERATURE TRAVERSE	5/30/84

SURVEY DATA

CO. CAL. ENERGY		RUN 02 FIELD COSO			WELL 87-25 TCH		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
9:40	1500	91.7	0.000	10:10	2100	102.5	0.000
9:41	1520	92.2	0.000	10:11	2120	102.9	0.000
9:42	1540	92.6	0.000	10:12	2140	103.1	0.000
9:43	1560	93.0	0.000	10:13	2160	103.6	0.000
9:44	1580	93.2	0.000	10:14	2180	103.8	0.000
9:45	1600	93.6	0.000	10:15	2200	104.2	0.000
9:46	1620	94.1	0.000	10:16	2220	104.6	0.000
9:47	1640	94.3	0.000	10:17	2240	104.8	0.000
9:48	1660	94.7	0.000	10:18	2260	105.3	0.000
9:49	1680	95.1	0.000	10:19	2280	105.7	0.000
9:50	1700	95.5	0.000	10:20	2300	105.9	0.000
9:51	1720	95.7	0.000	10:21	2320	106.5	0.000
9:52	1740	95.9	0.000	10:22	2340	106.7	0.000
9:53	1760	96.4	0.000	10:23	2360	106.9	0.000
9:54	1780	97.0	0.000	10:24	2380	107.4	0.000
9:55	1800	97.2	0.000	10:25	2400	107.8	0.000
9:56	1820	97.4	0.000	10:26	2420	108.4	0.000
9:57	1840	97.8	0.000	10:27	2440	108.7	0.000
9:58	1860	98.1	0.000	10:28	2460	109.1	0.000
9:59	1880	98.5	0.000	10:29	2480	109.5	0.000
10:00	1900	99.1	0.000	10:30	2500	109.9	0.000
10:01	1920	99.3	0.000	10:31	2520	110.3	0.000
10:02	1940	99.5	0.000	10:32	2540	110.6	0.000
10:03	1960	100.0	0.000	10:33	2560	111.0	0.000
10:04	1980	100.4	0.000	10:34	2580	111.4	0.000
10:05	2000	100.6	0.000	10:35	2600	111.6	0.000
10:06	2020	100.8	0.000	10:36	2620	111.8	0.000
10:07	2040	101.2	0.000	10:37	2640	112.3	0.000
10:08	2060	101.7	0.000	10:38	2660	112.5	0.000
10:09	2080	102.1	0.000	10:39	2680	112.7	0.000

SURVEY DATA

CAL. ENERGY			RUN 02 FIELD COSO			WELL 87-25 TCH		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	
10:40	2700	112.9	0.000	10:48	2860	116.7	0.000	
10:41	2720	113.3	0.000	10:49	2880	117.2	0.000	
10:42	2740	114.0	0.000	10:50	2900	117.6	0.000	
10:43	2760	114.6	0.000	10:51	2920	118.0	0.000	
10:44	2780	115.0	0.000	10:52	2940	118.9	0.000	
10:45	2800	115.5	0.000	10:53	2960	119.3	0.000	
10:46	2820	115.7	0.000	10:56	2970	119.7	0.000	
10:47	2840	116.3	0.000	0:00	0	0.0	0.000	

BY E. MARQUEZ/R. MARQUEZ

PRUETT INDUSTRIES INC  
8915 ROSEDALE HWY, BAKERSFIELD, CA. 93308  
(805) 589-2768

SUB-SURFACE TEMPERATURE SURVEY

CO. CAL.ENERGY		RUN 02 FIELD COSO		WELL 18-27
EFF DEPTH 2980'		WELL STAT	STATIC	TOOL HUNG
CASING	-	CASING PRESS		ON BOTTOM 5:44PM3/12
LINER	-	TUBING PRESS		OFF BOTTOM 5:54PM3/12
DATE 031284		ELEMENT RANGE 57 - 313		ZERO POINT 0'
ELEVATION		ZONE		SHUT-IN
MAX TEMP		PICK-UP 2279'		ON-PROD
PERF	-	CAL SER NO. 39573		MPP
TUBING	-			
UNITS ENGLISH		PURPOSE	TEMPERATURE TRAVERSE	3/12/84

SURVEY DATA

CO. CAL.ENERGY				RUN 02 FIELD COSO				WELL 18-27			
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
3:55	100	81.5	0.000	4:25	700	121.7	0.000				
3:56	120	83.4	0.000	4:26	720	122.9	0.000				
3:57	140	84.4	0.000	4:27	740	124.2	0.000				
3:58	160	86.1	0.000	4:28	760	125.6	0.000				
3:59	180	87.6	0.000	4:29	780	127.1	0.000				
4:00	200	89.1	0.000	4:30	800	128.7	0.000				
4:01	220	90.3	0.000	4:31	820	130.0	0.000				
4:02	240	91.7	0.000	4:32	840	131.6	0.000				
4:03	260	93.3	0.000	4:33	860	132.6	0.000				
4:04	280	94.6	0.000	4:34	880	134.0	0.000				
4:05	300	95.8	0.000	4:35	900	135.6	0.000				
4:06	320	96.7	0.000	4:36	920	136.6	0.000				
4:07	340	97.9	0.000	4:37	940	138.1	0.000				
4:08	360	98.7	0.000	4:38	960	139.4	0.000				
4:09	380	100.0	0.000	4:39	980	140.6	0.000				
4:10	400	101.0	0.000	4:40	1000	142.0	0.000				
4:11	420	102.3	0.000	4:41	1020	143.2	0.000				
4:12	440	103.6	0.000	4:42	1040	144.9	0.000				
4:13	460	104.7	0.000	4:43	1060	146.3	0.000				
4:14	480	106.2	0.000	4:44	1080	147.2	0.000				
4:15	500	107.7	0.000	4:45	1100	148.4	0.000				
4:16	520	109.0	0.000	4:46	1120	149.9	0.000				
4:17	540	110.5	0.000	4:47	1140	150.8	0.000				
4:18	560	111.7	0.000	4:48	1160	152.0	0.000				
4:19	580	113.2	0.000	4:49	1180	153.3	0.000				
4:20	600	114.5	0.000	4:50	1200	154.6	0.000				
4:21	620	116.2	0.000	4:51	1220	155.7	0.000				
4:22	640	117.4	0.000	4:52	1240	157.3	0.000				
4:23	660	118.4	0.000	4:53	1260	158.6	0.000				
4:24	680	120.2	0.000	4:54	1280	159.9	0.000				

## SURVEY DATA

CAL. ENERGY				RUN 02 FIELD COSO				WELL 10-27			
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
4:55	1300	161.6	0.000	5:20	1800	200.3	0.000				
4:56	1320	162.9	0.000	5:21	1820	201.9	0.000				
4:57	1340	164.4	0.000	5:22	1840	203.8	0.000				
4:58	1360	165.8	0.000	5:23	1860	205.6	0.000				
4:59	1380	167.4	0.000	5:24	1880	207.2	0.000				
5:00	1400	168.8	0.000	5:25	1900	209.0	0.000				
5:01	1420	170.0	0.000	5:26	1920	210.7	0.000				
5:02	1440	171.8	0.000	5:27	1940	212.5	0.000				
5:03	1460	173.2	0.000	5:28	1960	214.2	0.000				
5:04	1480	174.9	0.000	5:29	1980	216.1	0.000				
5:05	1500	176.6	0.000	5:30	2000	218.2	0.000				
5:06	1520	178.1	0.000	5:31	2020	219.9	0.000				
5:07	1540	179.5	0.000	5:32	2040	221.6	0.000				
5:08	1560	180.9	0.000	5:33	2060	223.6	0.000				
5:09	1580	182.2	0.000	5:34	2080	225.8	0.000				
5:10	1600	184.1	0.000	5:35	2100	228.1	0.000				
5:11	1620	185.9	0.000	5:36	2120	229.9	0.000				
5:12	1640	187.3	0.000	5:37	2140	231.9	0.000				
5:13	1660	188.6	0.000	5:38	2160	233.7	0.000				
5:14	1680	190.5	0.000	5:39	2180	235.6	0.000				
5:15	1700	192.1	0.000	5:40	2200	237.4	0.000				
5:16	1720	193.6	0.000	5:41	2220	239.1	0.000				
5:17	1740	195.2	0.000	5:42	2240	240.9	0.000				
5:18	1760	196.8	0.000	5:43	2260	241.9	0.000				
5:19	1780	198.5	0.000	5:54	2279	243.1	0.000				

BY J. HANEY

# COSO 86-30 FRACTURES

302 1 Broken, fractured (302'-316')

2 " "

3 " "

4 " "

5 " "

6 " "

7 " "

8 " "

9 " "

10 " "

348'-408') 11 " "

12 " "

13 " "

14 " "

15 " "

16 " "

17 " "

18 " "

19 " "

20 " "

21 " "

22 V. Broken

23 " "

24 " "

25 " "

26 " "

539'-48' 27 " "

28 " "

29 " "

593'-600' (33) V. Broken

34 V. Broken / Fractured



COSO 86-30 FRACTURES

V. Broken and Fractured,

- 54 229-758 V. Broken
- 63 857-865 V. Broken
- 64 " "
- 65 " "
- 68 902-12' "
- ~~74 964' "~~
- 78 990'-999 FRACTURED & Broken
- 89 1085'-93' " "
- 92 1118-18' V. " "
- 93 - - - " "
- 94 - - - " "
- 95 - - - " "
- 103 1201-10' " "
- 104
- 105
- 106 1224-30 V. Fractured & Broken
- 117 1317-25 " "
- 118 1325-33 " "
- 121 1350-57' FRACTURED
- 1538' vein
- ~~1538' vein~~
- 163 1717'-1726 FRACTURED / BROKEN
- 164 - - - " "
- 165 - - - " "
- 166 - - - " "
- 167 - - - " "
- 168 - - - " "
- 169 - - - " "

ANY

COSO 86-30 FRACTURES

- 171 1755-95 FRACTURED/BROKEN
- 172 - - FRACTURES
- 173 - - "
- 174 - - "
- 175 - - "
- 177 " "
- 178 " "
- 179 " "
- 180 " "
- 181 " "
  
- 209 2123'-2132 v. Broken & Fractured
- 2291'-99' v. " "
- 232 2324-2333' " "
- 2413'-2422' Very Broken & FRACTURED
- (244) 2431-39' " " "
- 2444-55' " " "
- 247 2455-64 " " "
- 2464-72 " " "
- 251 2497-2511 " " "
- 256 2544-52" " " "
- 257 2552'-59' " "
- 258 2559-69' "
- 259 2569-78 "
- 260 2578-86 "
- 261 " "
- 262 " "
- 266-2628-37 "
- 280 2753-64 "

COSO 86-30 - REPRESENTATIVE SAMPLE

	<u>Box</u>	
310' Box 1		
404'	253	2522'
583'	265	2626'
624'	2	2687'
660'		
710'		
817'		
847'		
855'		
918'6"		
1089'		
1153'		
1214'		
1271'		
1343'		
1440'		
1527'		
1572'		
1676'6"		
1727		
1749		
1785'		
1956'		
2040'		
2103'		
2139		
2258'		
2419'		
2443'6"		

Box 30 571'

591'

642' vein

796 vein

964' 6" vein

987' vein

81 - 1020 vein

8 1048 ~~1048~~ vein

1055' vein

1248' vein

1313' vein

1332 vein

1398' veg / veinlets

1430' vein

1440' vein

1449' vein

1454' vein

1462 vein

\*137 1498' vein -

1572' vein

1608' vein

1628 vein crystals

1641' vein

\* 1659 vein

157-\* 1672' vein

1674' vein

# COSO - 86 - 30 CRYSTALS/VEINS

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- Box  
161 - 1785' vein  
1805' vein  
2044 vein
- 208 2117' vein  
2139 vein  
2114 vein  
2187 vein  
2240' vein
- 229 2305' vein/dike  
2385' crystals/vein  
2687' DIKE (Felsic)  
2691' vein
- 275 2714' vein
- 278 2738' vein
- 281 2771' vein  
2772' vein  
2786' vein

# Representative

# 87-25

# CO50

- 316'
- 339' (DIKE)
- 399'
- 453'
- 548'
- ~~574'~~
- 635'
- 714'
- 732'
- 735'
- 756'
- 810'
- 835'
- 862'
- 885.6"
- 904'**
- 917
- 964'
- 970
- 1001.5
- 1022' - Fractured. v. sm. veinlets
- 1047
- 1138'
- 1221'
- 1231 DIKE / DARK F. GRAIN (2')
- 1247
- 1308
- 1368' (4') DIKE
- 1382'

- 1385'
- 1436'
- 1445.6"
- 1474
- 1501'
- 1546
- 1551' (v. Fractured)
- 1581'
- 1614
- 1659'
- 1698'
- 1717'
- 1738 (DIKE ?)
- 1779
- 1826'
- 1845.6"
- 1883'
- 1903'
- 1909'
- 1916'
- 1925'
- 1946.6"
- 1971'
- 2018'
- 2037'
- 2048'
- 2095
- 2140'
- 2177'
- 2198'
- 2274'
- 2313
- 2341'

- 2352'
- 2389'
- 2418'-
- 2431
- 2521'
- 2532'
- 2544'
- 2627'
- 2680'
- 2704'
- 2761'
- 2782
- 2795'
- 2827'
- 2848'
- 2855'
- 2920'
- 2942'
- 2960'
- 2970' END

# VEINS, Crystals, Minerals

- 402' - vein
- 487' vein
- 509' vein
- 574' vein - Fractured, v. broken <sup>section</sup> ~~area~~
- 600' vein
- 614 vein
- 651 vein
- 660.5 vein
- 777 vein
- 787 vein
- 800 vein
- 917 vein
- 978 veins, Fractured
- 1054 vein ~~fractured~~
- 1073' vein / Fracture filling
- 1089'
- 1262' vein
- 1354' vein, qtz.
- 1546 qtz vein (sm)
- 1560 vein
- 1571' 6" vein
- 1614' qtz. vein (~~broken~~, v. broken, fractured)
- 1717'
- 1759' vein - qtz vein coating
- 1783 qtz vein
- 1845' 6" vein -
- 1883 vein
- 1916' vein
- 1946' 6" vein
- 1971 -

- 1976' - vein - qtz
- 1998 vein
- 2018' vein qtz
- 2109' vein qtz
- 2203' vein qtz.
- 2243' vein qtz.
- 2270' 6" qtz. flooding, sulfides
- 2274 qtz - vein coating
- 2313 qtz - vein
- 2346' qtz vein
- 2352' qtz vein
- 2389' ~~at~~ altered vein material (clay)
- 2402' vein - calcite
- 2418' vein - calcite
- 2487 - vein - calcite
- 2521' vein - calcite
- 2704' vein
- 2782 vein - calcite
- 2795 veins qtz.
- 2827 vein qtz.
- 2839 vein qtz.
- 2855 veins qtz
- 2920 vein - epidote? chlorite?
- 2942 vein calcite
- 2960 vein calcite