

1574

**AGNEW AND SWEET**  
 24 HOUR PHONE 805-327-2267  
 3914 GILMORE AVENUE  
 BAKERSFIELD, CALIFORNIA  
 93308

**SUBSURFACE SURVEY**  
 TEMPERATURE

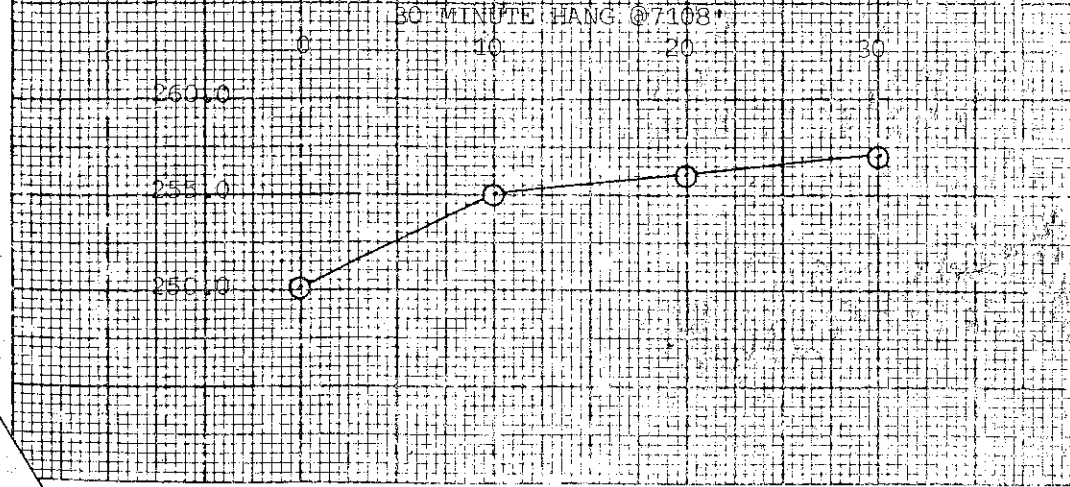
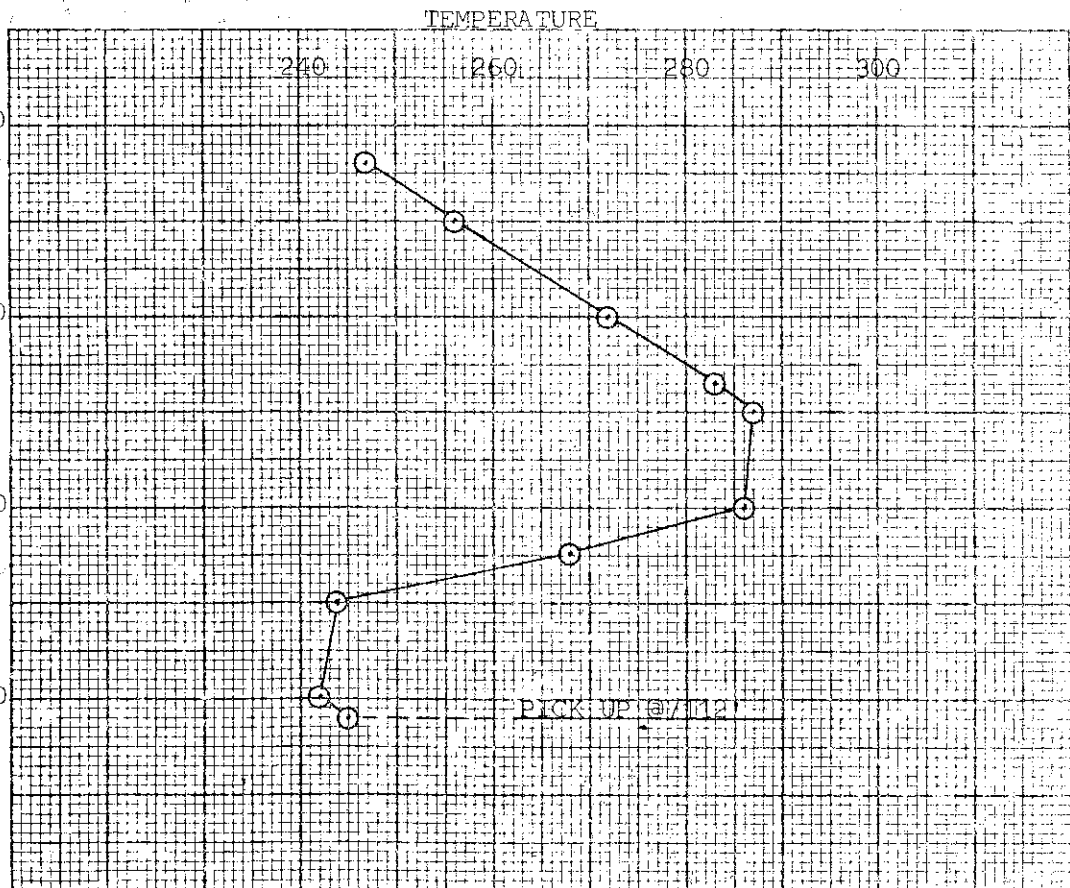
Run #1

OWNER	THERMOGENICS, INC.	FIELD	CLEAR LAKE	WELL NAME	Klaum Mines K-1A
CASING	13" to 2852'	ELEV.		DATE:	March 23, 1978
LINER DESCRIPTION:	9-5/8" 2852' to 4188'			ZERO POINT	D.F.
PERFORATIONS:				MPP	
TUBING DETAIL:				DEPTH	7106' ZONE
				PUMP SHOE	
WELL STATUS	Static	SHUT IN		ON PRODUCTION	
SURVEYED	TUB. <input type="checkbox"/> ANN. <input type="checkbox"/>	ENGAGE STYLUS	5:08 pm	DISENGAGE STYLUS	7:52 pm
PICK UP @	7112'	TIME ON BOTTOM	6:43 pm	TIME OFF BOTTOM	7:13 pm
ELEMENT RANGE	123-698	SERIAL NO.	10030	CLOCK	3 hour TURN 15
PURPOSE	STATIC TEMPERATURE GRADIENT SURVEY W/HANG			MAX. °F	287.0 @ 5500'
REMARKS:	30 MINUTE HANG @ 7108'. Rig on hole			STABILIZATION PERIOD	

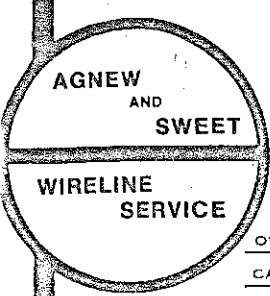
PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS	Shut in	
INSTRUMENT HUNG @	7108'	

DEPTH	TEMP.
4200	247.1
4500	256.6
5000	272.7
5360	283.0
5500	287.0
6000	286.1
6230	268.5
6500	244.3
7000	242.5
7108	250.1

30 MINUTE HANG @ 7108'	
MINUTES	TEMP.
0	250.1
10	255.7
20	256.9
30	257.8



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**SUBSURFACE SURVEY**  
 PRESSURE

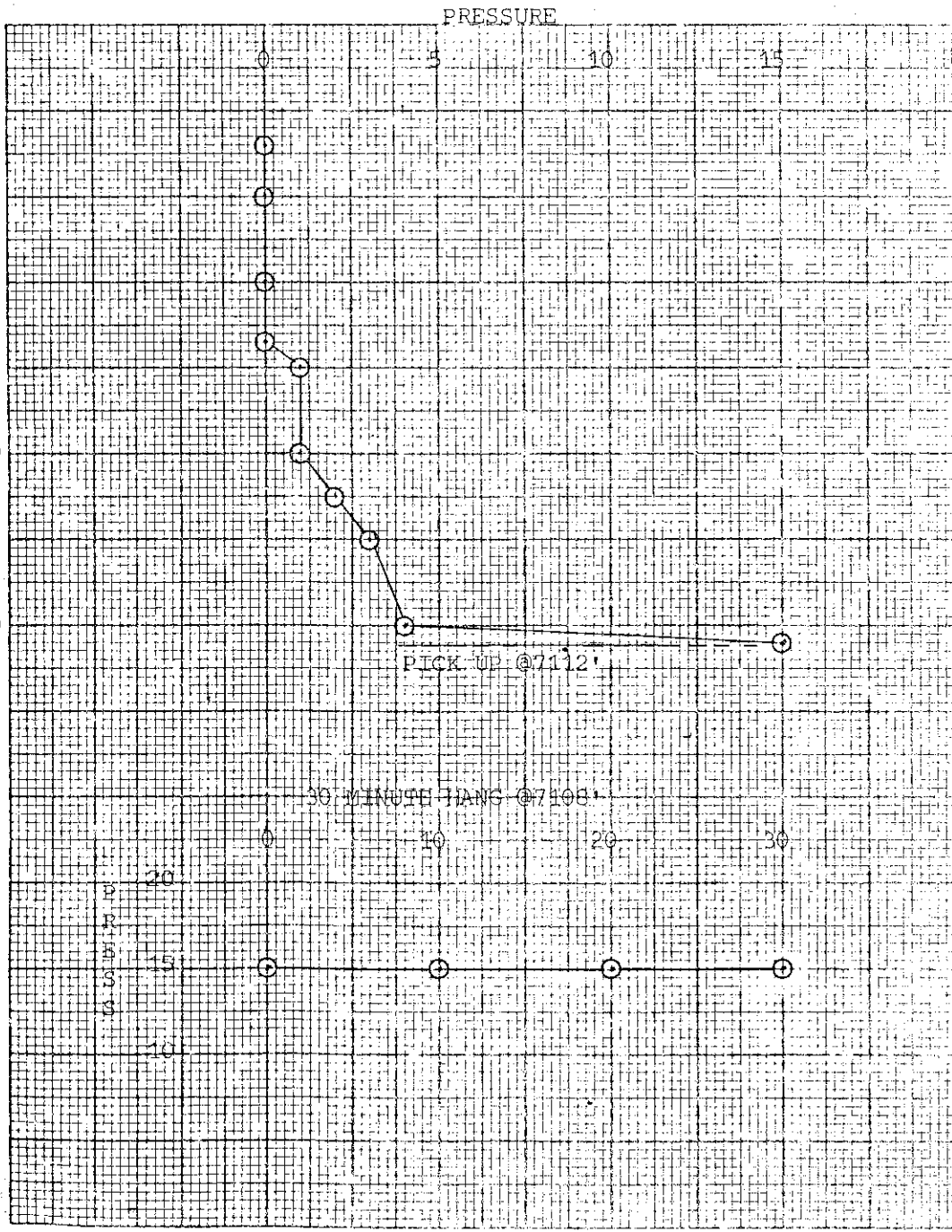
Run #1

OWNER	THERMOGENICS, INC.	FIELD	CLEAR LAKE	WELL NAME	Klaum Mines K-1A
CASING	13" to 2852'	ELEV.		DATE	March 23, 1978
LINER DESCRIPTION:	9-5/8" 2852' to 4188'			ZERO POINT	D.F.
PERFORATIONS:				MPP	
TUBING DETAIL:				DEPTH	7106' ZONE
	PUMP SHOE				
WELL STATUS	Static		SHUT IN	ON PRODUCTION	
SURVEYED	TUB. <input type="checkbox"/>	ANN. <input type="checkbox"/>	ENGAGE STYLUS	5:08 pm	DISENGAGE STYLUS 7:52 pm
PICK UP @	7112'		TIME ON BOTTOM	6:43 pm	TIME OFF BOTTOM 7:13 pm
ELEMENT RANGE	1000		SERIAL NO.	39880	CLOCK 3 hour TURN 15
PURPOSE	STATIC PRESSURE GRADIENT SURVEY W/HANG			MAX. °F	287.0 @ 5500'
REMARKS:	30 MINUTE HANG @ 7108'. Rig on hole.			STABILIZATION PERIOD	

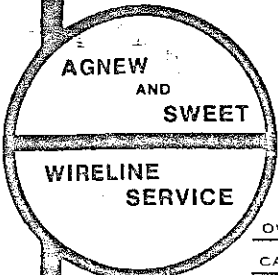
PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS	Shut in	
INSTRUMENT HUNG @	7108'	

DEPTH	PRESS.	GRAD.
4200	0	
4500		
5000		
5360	0	
5500	1	
6000	1	
6230	2	.004
6500	3	.010
7000	4	.002
7108	15	.102

30 MINUTE HANG @ 7108'	
MINUTES	PRESS.
0	15
10	15
20	15
30	15



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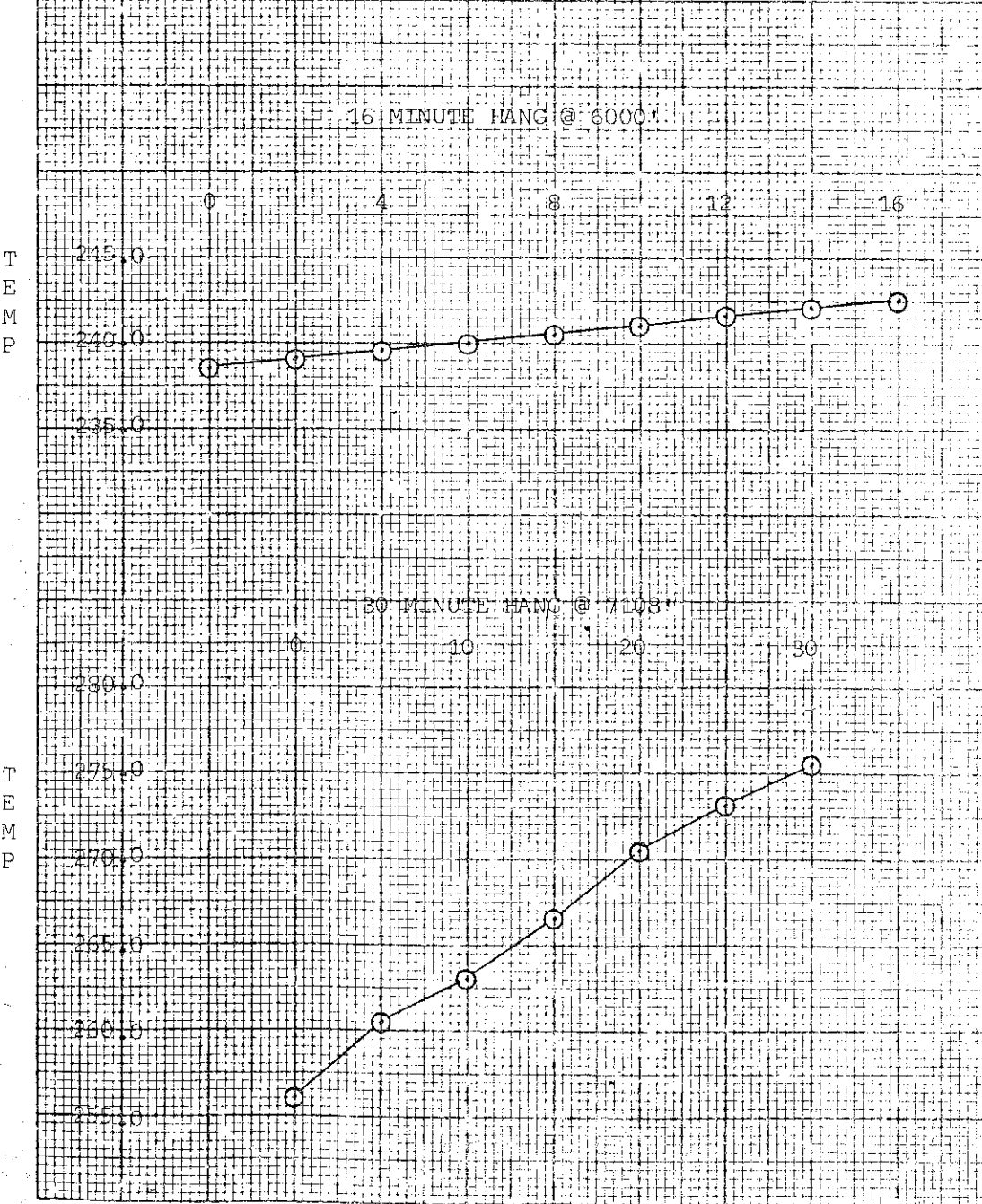
**SUBSURFACE SURVEY**  
 TEMPERATURE

OWNER	THERMOGENICS, INC.	FIELD	CLEAR LAKE	WELL NAME	Run #2 Klaum Mines K-1A
CASING	13" to 2852'	ELEV.		DATE:	March 23, 1978
LINER DESCRIPTION:	9-5/8" 2852' to 4188'		ZERO POINT	D.F.	
PERFORATIONS:			MPP		
TUBING DETAIL:			DEPTH	7106' ZONE	
		PUMP SHOE			
WELL STATUS	Static		SHUT IN	ON PRODUCTION	
SURVEYED	TUB. <input type="checkbox"/>	ANN. <input type="checkbox"/>	ENGAGE STYLUS	8:44 pm	DISENGAGE STYLUS 11:24 pm
PICK UP @	7112'		TIME ON BOTTOM	9:55 pm	TIME OFF BOTTOM 10:25 pm
ELEMENT RANGE	123-698		SERIAL NO.	10030	CLOCK 3 hour TURN 15
PURPOSE	STATIC TEMPERATURE BUILD UP SURVEY			MAX. °F	275.4 @ 7108'
REMARKS:	16 Minute Hang @ 6000'. 30 Minute Hang @ 7108'. Rig on hole.			STABILIZATION PERIOD	

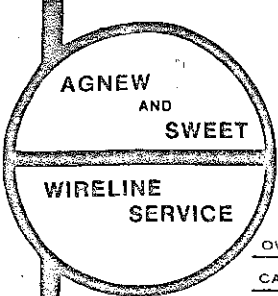
PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS	shut in	
INSTRUMENT HUNG	@6000' & 7108'	

TIME	TEMP.
16 MINUTE HANG @ 6000'	
0	238.5
2 min.	239.0
4	239.5
6	240.1
8	240.6
10	241.1
12	241.7
14	242.2
16	242.7

30 MINUTE HANG @ 7108'	
0	256.1
5 min.	260.4
10	263.1
15	266.8
20	270.5
25	273.2
30	275.4



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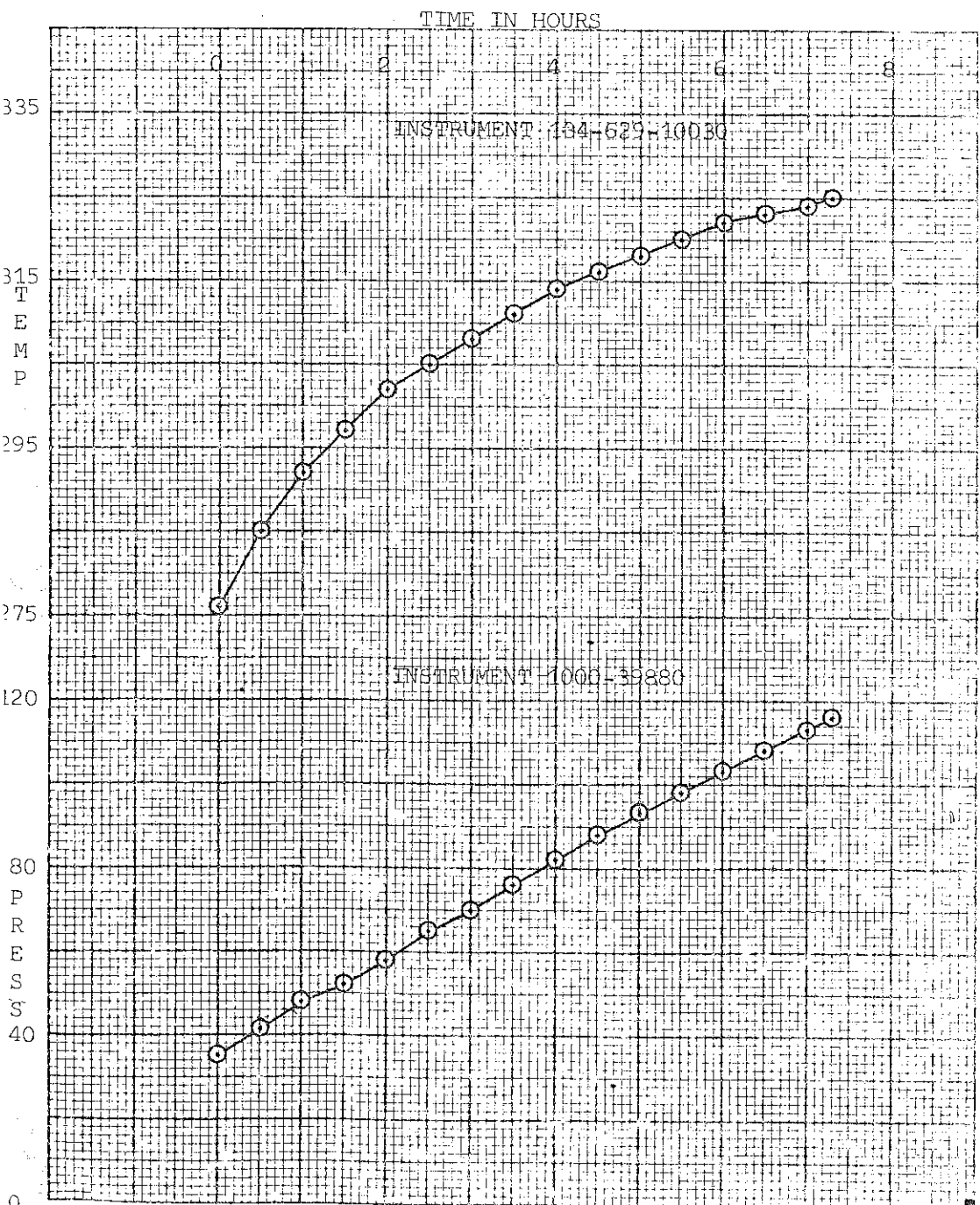
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## SUBSURFACE SURVEY

Run #3

OWNER	THERMOGENICS, INC.	FIELD	CLEAR LAKE	WELL NAME	KLAUM MINES K-1A	
CASING	13" to 2852'	ELEV.		DATE:	March 23, 24, 1978	
LINER DESCRIPTION:	9-5/8" 2852' to 4188'		ZERO POINT	D.F.		
PERFORATIONS:			MPP			
TUBING DETAIL:			DEPTH	7106'	ZONE	
PUMP SHOE						
WELL STATUS	Static		SHUT IN	11:30 pm 3-23	ON PRODUCTION	7:45 am 3-24
SURVEYED	TUB. <input type="checkbox"/>	ANN. <input type="checkbox"/>	ENGAGE STYLUS	11:45 pm 3-23	DIS-ENGAGE STYLUS	7:02 pm 3-24
PICK UP @	6000'		TIME ON BOTTOM	12:16 am 3-23	TIME OFF BOTTOM	7:33 am 3-24
ELEMENT RANGE	1000 & 134-629		SERIAL NO.	39880 & 10030	CLOCK	12 hour TURN 15
PURPOSE	STATIC TEMPERATURE & PRESSURE BUILD-UP SURVEY		MAX. °F	325.0	@	6000'
REMARKS:			STABILIZATION PERIOD			

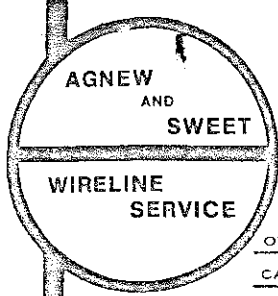


PRESSURES:	START	FINISH
DATE		
CASING PSI OBS	0	
CASING PSI COR	0	
TUBING PSI OBS	0	
TUBING PSI COR	0	
PRESS. STATUS		
INSTRUMENT HUNG @ 6000'		

TIME	TEMP.
0	276.7
1/2 hr.	285.2
1	292.4
1 1/2	297.6
2	302.2
2 1/2	305.5
3	308.5
3 1/2	311.6
4	314.3
4 1/2	316.4
5	320.3
5 1/2	320.3
6	322.1
6 1/2	323.2
7	324.4
7 hr. 17 min.	325.0

TIME	PRESS.
0	35
1/2 hr.	41
1	48
1 1/2	52
2	58
2 1/2	65
3	70
3 1/2	76
4	82
4 1/2	88
5	93
5 1/2	98
6	103
6 1/2	108
7	113
7 hr. 17 min.	116

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 Run #4

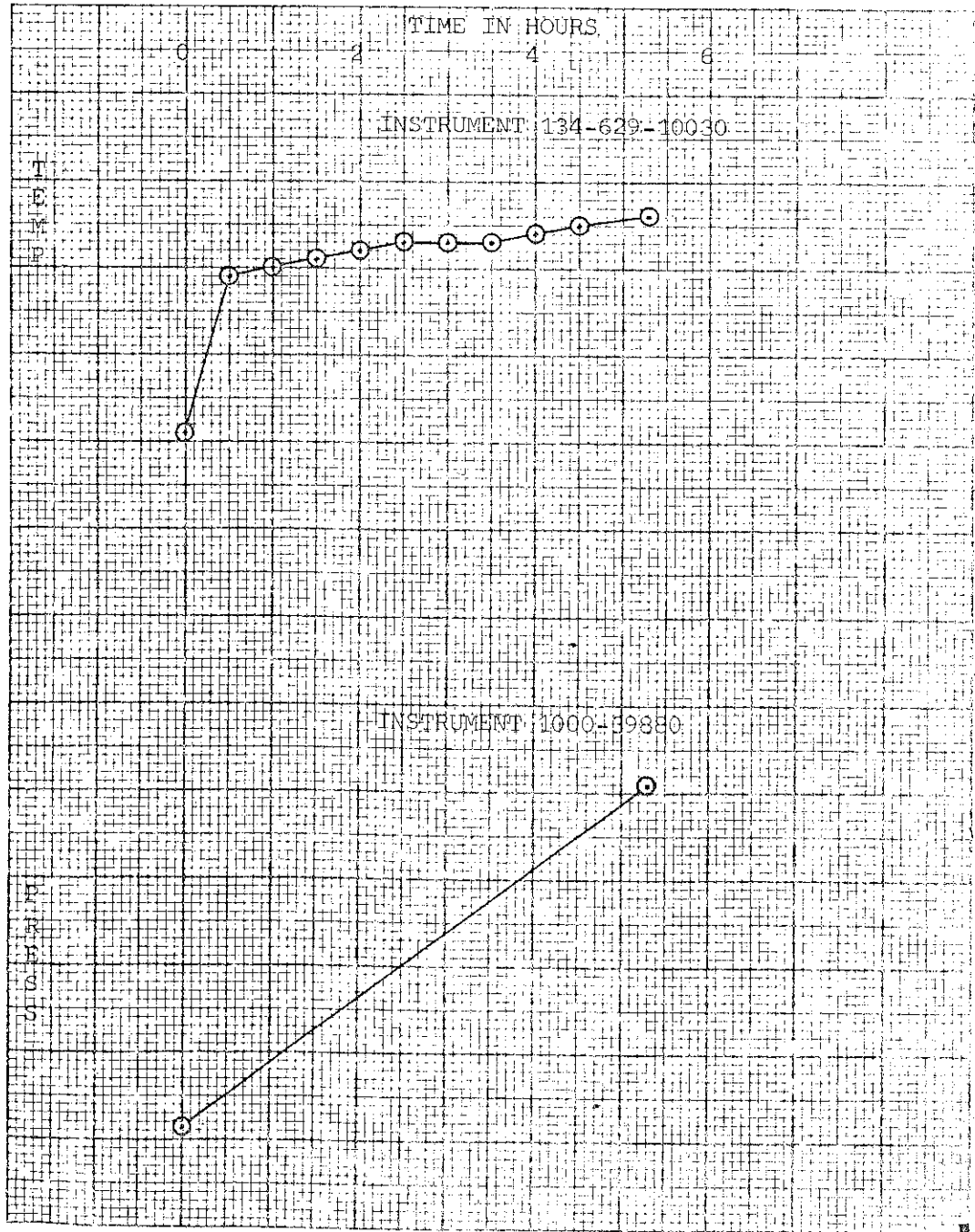
**SUBSURFACE SURVEY**

OWNER	THERMOGENICS, INC.	FIELD	CLEAR LAKE	WELL NAME	KLAUM MINES K-1A
CASING	13" to 2852'	ELEV.		DATE:	March 24, 1978
LINER DESCRIPTION:	9-5/8" 2852' to 4188'		ZERO POINT	D.F.	
PERFORATIONS:					
TUBING DETAIL:					
		PUMP SHOE		DEPTH	7106' ZONE
WELL STATUS	Static		SHUT IN	8:30 am ON PRODUCTION	
SURVEYED	TUB. <input type="checkbox"/>	ANN. <input type="checkbox"/>	ENGAGE STYLUS	8:55 am DISENGAGE STYLUS 3:37 pm	
PICK UP @	7112'		TIME ON BOTTOM	9:42 am TIME OFF BOTTOM 3:00 pm	
ELEMENT RANGE	1000 & 134-629		SERIAL NO.	39880 & 10030 CLOCK 12 hour TURN 15	
PURPOSE	STATIC PRESSURE & TEMPERATURE BUILD-UP SURVEY				MAX. °F 361.3 @ 7108'
REMARKS:	Clock stopped on pressure element, just able to obtain first and last pressures.				

PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS	Static	
INSTRUMENT HUNG @	7108'	

TIME	TEMP.
0	336.0
1/2 hr.	354.4
1	355.2
1 1/2	356.4
2	357.0
2 1/2	358.1
3	358.1
3 1/2	358.4
4	359.0
4 1/2	360.5
5 hr. 18 min.	361.3

TIME	PRESS.
0	225
5 hr. 18 min.	383



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