NWC TP 6988

Coso Monitoring Program

October 1987 Through September 1988

by
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and
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for the
Geothermal Program Office
Public Works Department

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NAVAL WEAPONS CENTER
CHINA LAKE, CA 93555-6001

Naval Weapons Center

FOREWORD

This report presents the status of the Coso Monitoring Program conducted for the period October 1987 through September 1988 by the Naval Weapons Center (NWC), China Lake, Calif. The investigation funded under the NWC Coso Geothermal Development Program, is being conducted to provide baseline information on hydrology and surface geothermal activity in the Coso Hot Springs area.

The Coso Monitoring Program was carried out under Comarco contract N60530-83-D-0024 for the Public Works Department, NWC.

This report was reviewed for technical accuracy by Steven C. Bjornstad.

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19 ABSTRACT (Continue on reverse side if necessary and identify by block number)

(U) The Coso Monitoring Program is a continuing effort in support of the development of the Navy's geothermal resources within the Coso Known Geothermal Resource Area (KGRA). Data are presented on the monitoring of steam flow rates and temperatures, water levels in ponds and wells, water chemistry, and rainfall in the Coso Hot Springs Resort Area. A monthly photographic essay of the mud pots and pools shows the variation of surface water levels throughout the year.

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INTRODUCTION

The Coso Monitoring Program was initiated in 1978 to gather baseline data on the surface and near surface geothermal activity at Devils Kitchen and Coso Hot Springs, the main thermal sites within the Coso Known Geothermal Resource Area (Coso KGRA).

This report represents the eleventh year of continual baseline data collection. The authors collected data and photographs and reduced data. Personnel in the Geothermal Program Office have helped on the monitoring Program.

Monitored sites of the Coso Hot Springs area are referred to in Table 1 and Figure 1 of this report. Monitoring functions for each site are also listed. Individual sites are described only if new to the program or if a significant change to a site was made.

	Continuous Steam Flow	Continuous Water Level	Periodic Water Level	Continuous Temperature	Water Level Photography	Water Chemistry
Schober's Resort	X			X		
Eight-Inch Steam Well	X					
Coso Well #1			X			X
Coso Corrosion Array	X					
Coso Mud Pots			X	X	X	X
South Pool		X	X		X	X
Well 4P-1						X
Two-Inch Steam Well	X			X		
Devils Kitchen Corrosion Array	X					X
Coso Well #2			X			X
Observation Well #2			X			X

TABLE 1. Monitoring Functions and Locations.

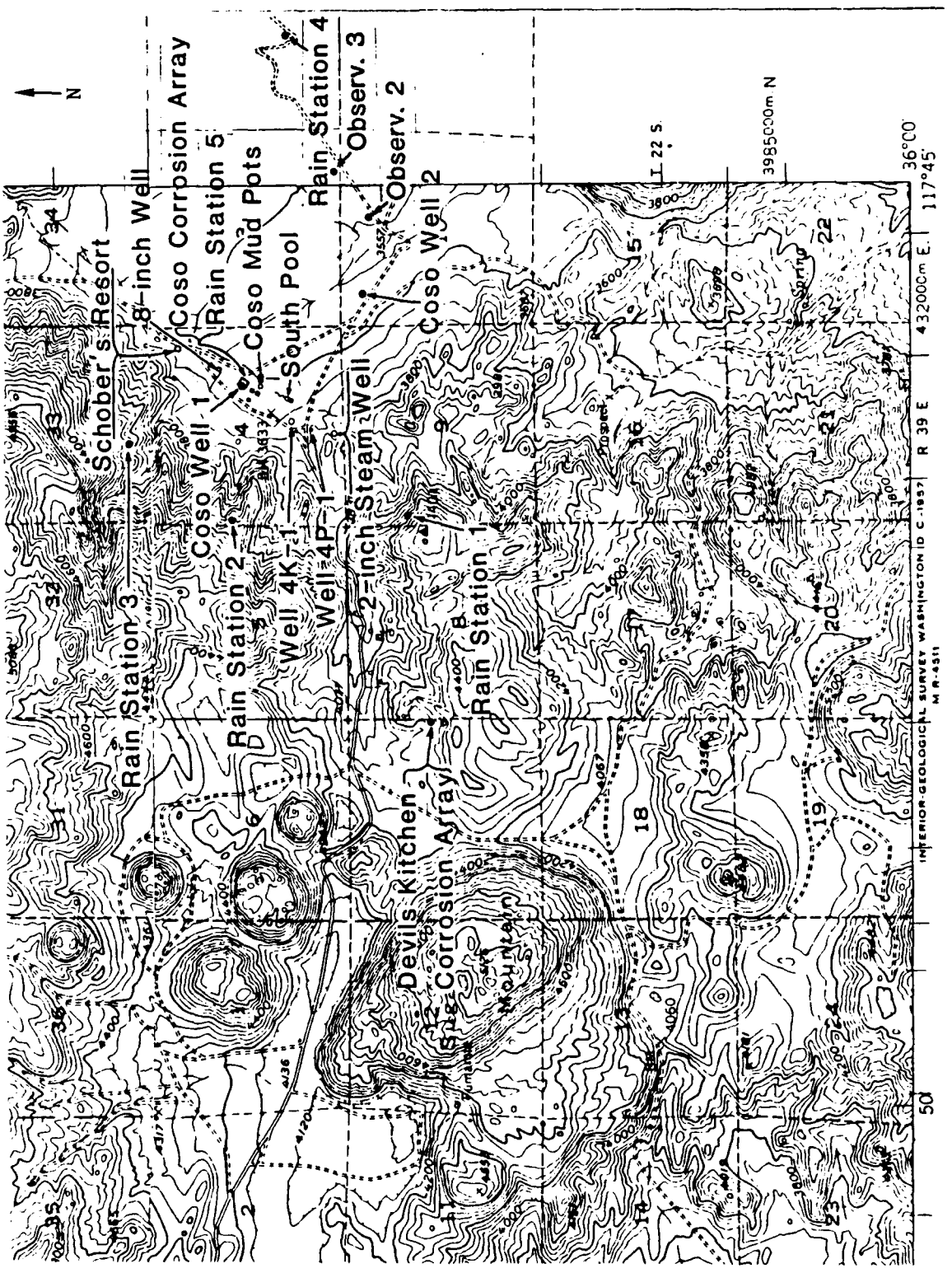


FIGURE 1. Monitoring Sites.

TEMPERATURE AND STEAM FLOW MONITORING

Steam flow and temperature are measured at several sites in the Coso Hot Springs Area. One monitoring station is located within Devils Kitchen, the other stations are located along the Airport Lake-Coso Hot Springs fault. Temperature data is used as collected while the steam flow data is converted from graph units to pounds per hour (pph). The conversion factors for the steam data are calculated using the standard orifice equation with the variables being the size of the orifice and the meter. The conversion factors are as follows: Devils Kitchen, 40.23; Coso Corrosion Array, 82.99, changed in September to 120; Two-Inch Steam Well, 15.7; Eight-Inch Steam Well, 20.56; and Schober's Resort, 0.5265 changed in July to 11.72.

DEVILS KITCHEN

Daily steam flows at Devils Kitchen for this reporting period are given in Table A-1 (Appendix A). These data are shown graphically in Figure 2. Yearly mean data and standard deviation for the high and low daily steam flows are given in Table 2.

The graph in Figure 2 stops at June 6. From this date the meter was pin wheeling, giving incorrect data. Manometer readings were taken each week during this period from June 6 to September 19. These readings have been calculated with the conversion factor and plotted in Figure 3. The readings will be shown in Table 3 with the factor calculation.

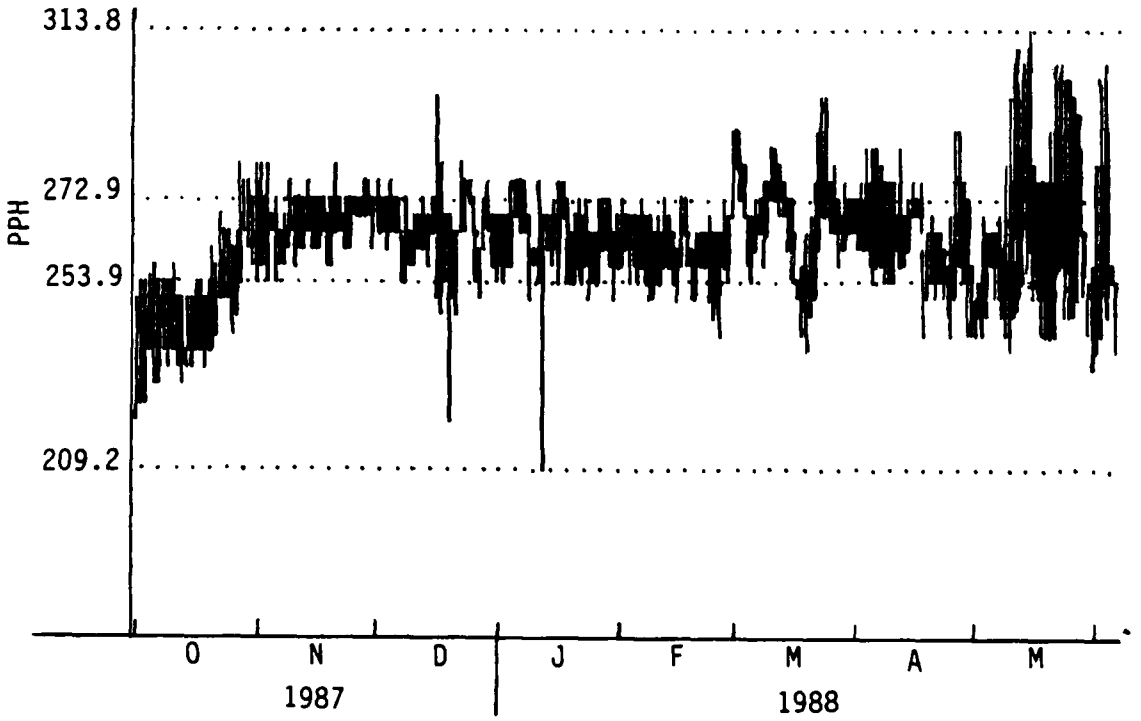


FIGURE 2. Devils Kitchen Steam Flow.

TABLE 2. Devils Kitchen Statistical Steam Flow Data, Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	272.9	12.2	253.9	11.0

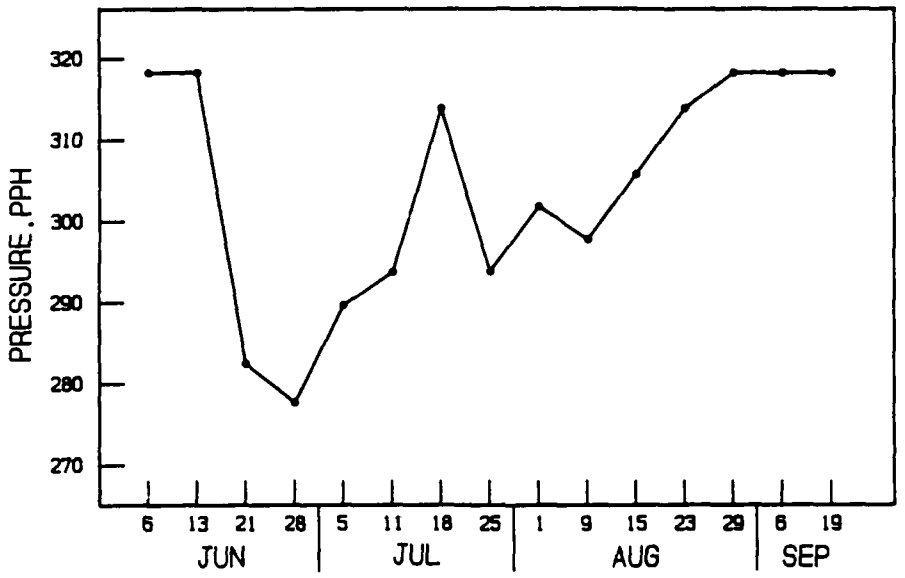


FIGURE 3. Devils Kitchen Steam Flow Manometer Readings.

TABLE 3. Devils Kitchen Steam Flow Manometer Data.

Date	Chart	PPH	Date	Chart	PPH
06/06/88	7.9	317.8	08/01/88	7.5	301.7
06/13/88	7.9	317.8	08/09/88	7.4	297.7
06/21/88	7.02	282.4	08/15/88	7.6	305.7
06/28/88	6.9	277.6	08/23/88	7.8	313.8
07/05/88	7.2	289.7	08/29/88	7.9	317.8
07/11/88	7.3	293.7	09/06/88	7.9	317.8
07/18/88	7.8	313.8	09/19/88	7.9	317.8
07/25/88	7.3	293.7			

COSO RESORT CORROSION ARRAY

Daily steam flows at the Coso Resort Corrosion Array for this reporting period are given in Table A-2 (Appendix A). These data are shown graphically in Figures 4 and 5. Yearly mean data and standard deviation for the high and low daily steam flows at this site are given in Tables 4 and 5.

As can be noted from the graph, the steam flow at this site steadily increased throughout the year. On April 24, the 25 inch meter was taken off and replaced on June 28 with a 50 inch meter, which operated within the chart until August 1 and was taken off. This accounts for the two periods of May and June, and August and September when no data from this site were collected.

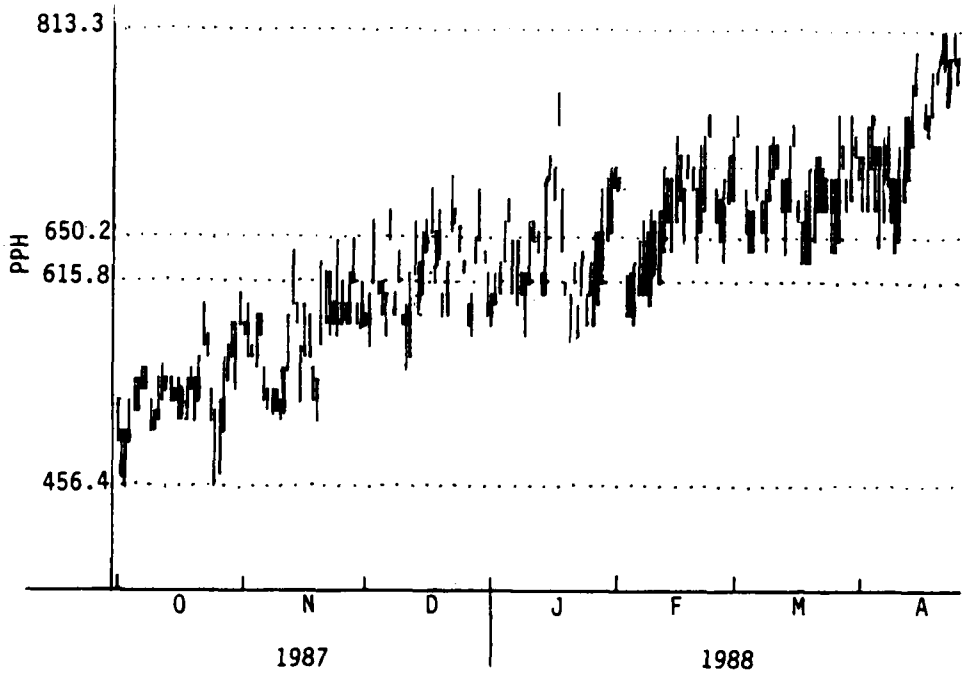


FIGURE 4. Coso Resort Corrosion Array.

TABLE 4 Coso Resort Corrosion Array Statistical Steam Flow Data, Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	650.2	73.3	615.8	71.3

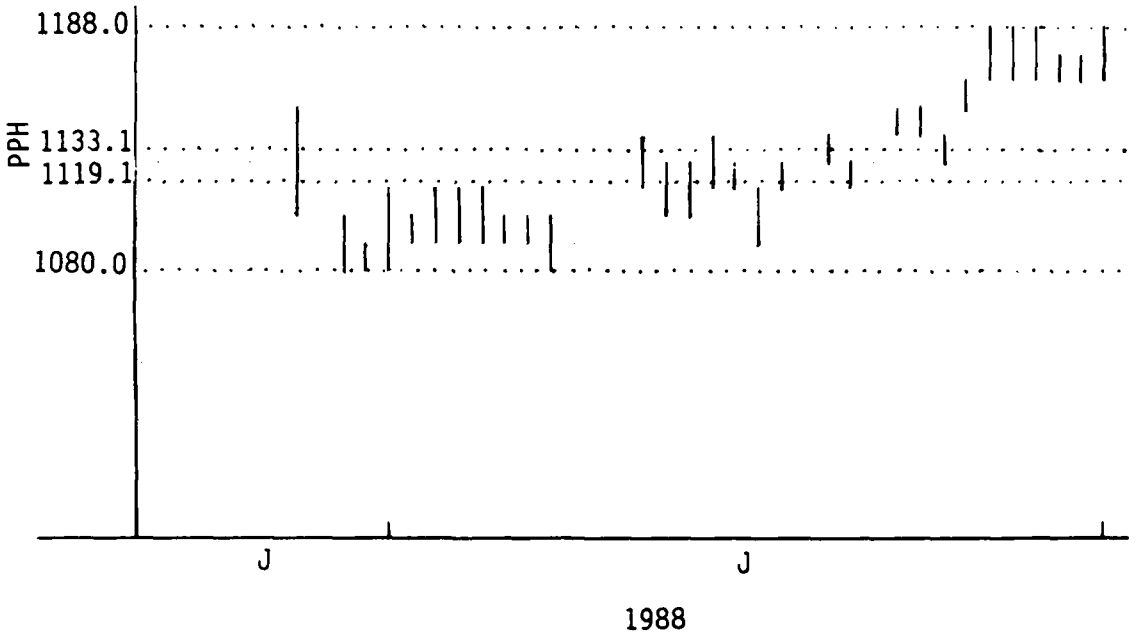


FIGURE 5. Coso Resort Corrosion Array.

TABLE 5. Coso Resort Corrosion Array Statistical Steam Flow Data, Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1988	1133.1	26.4	1119.1	26.2

TWO-INCH STEAM WELL

Tables A-3 (Appendix A) and B-1 (Appendix B) give the daily steam flow and temperature data, respectively, for the Two-Inch Steam Well. These data are shown graphically in Figures 6 and 7. Yearly mean data and standard deviations are given for the high and low daily steam flows (Table 6), and for the high and low daily steam temperatures (Table 7).

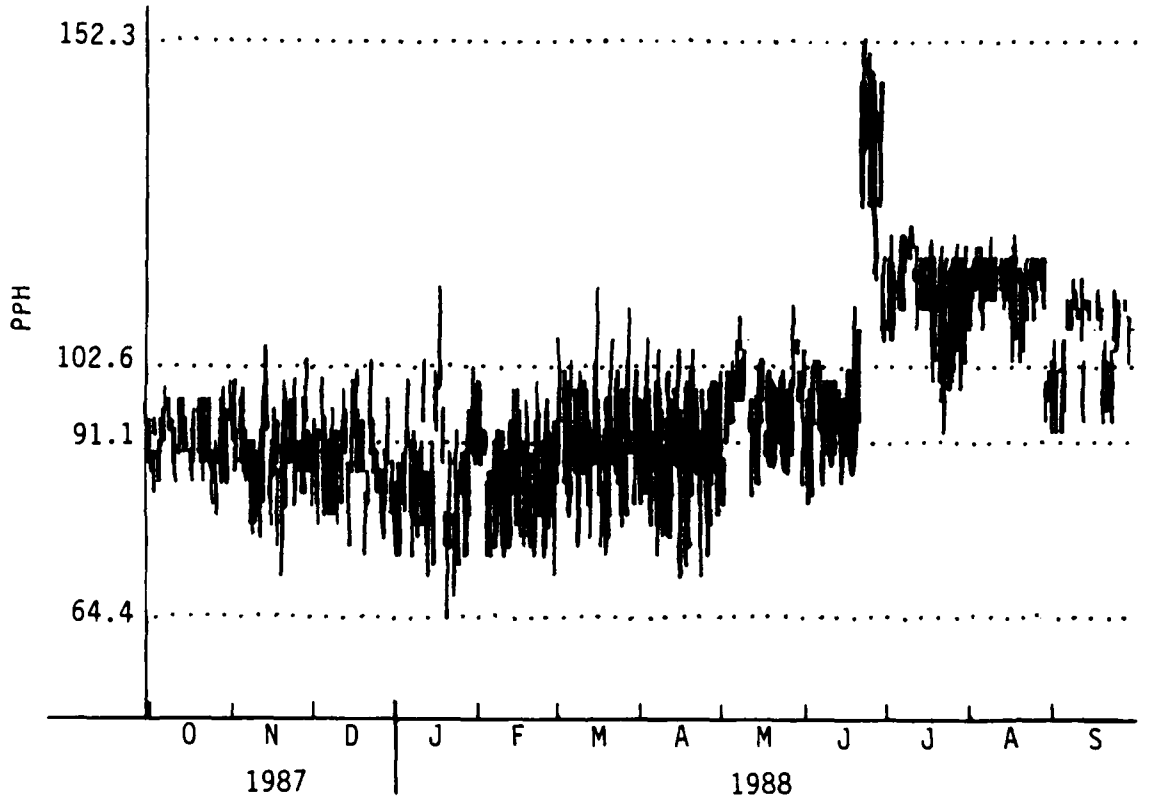


FIGURE 6. Two-Inch Steam Well Flow.

TABLE 6. Two-Inch Steam Well Statistical Steam Flow Data, Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	102.6	12.3	91.1	13.4

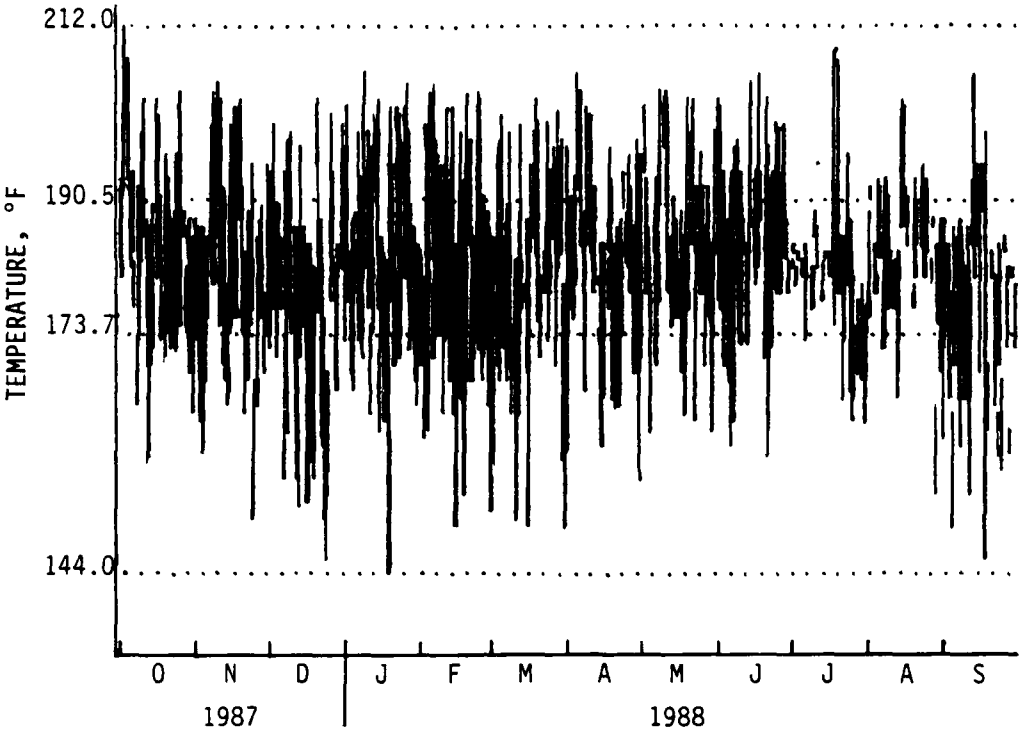


FIGURE 7. Two-Inch Steam Well Temperature.

TABLE 7. Two-Inch Steam Well Statistical Steam Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	190.5	9.0	173.7	9.7

EIGHT-INCH "STOVE-PIPE" WELL

The data taken from the meter at this site was so erratic for the whole year that a graph of the data is meaningless. The manometer readings taken throughout the year are presented instead. The raw meter data are listed in Table A-4 (Appendix A).

Figure 8 shows graphically the manometer readings and Table 8 lists these readings. The calculations are made with a factor of 20.56 to convert to pounds per hour.

FIGURE 8. Graph of Eight-Inch "Stove Pipe" Well Manometer Readings.

TABLE 8. Eight-Inch "Stove Pipe" Well Manometer Data.

Date	Chart	PPH	Date	Chart	PPH
10/05/87	9.0	185.0	05/31/88	7.8	160.4
10/20/87	8.8	180.9	06/06/88	9.4	193.3
11/10/87	9.1	187.1	06/13/88	8.6	176.8
12/07/87	8.7	178.9	06/28/88	7.6	156.3
12/21/87	9.0	185.0	07/05/88	6.8	139.8
01/04/88	9.2	189.2	07/11/88	6.8	139.8
01/23/88	8.6	176.8	07/18/88	7.4	152.1
02/01/88	9.2	189.2	07/25/88	7.4	152.1
02/16/88	9.0	185.0	08/09/88	7.9	162.4
03/07/88	9.0	185.0	08/23/88	8.1	166.5
03/21/88	8.6	176.8	08/29/88	8.3	170.7
04/04/88	9.0	185.0	09/06/88	8.2	168.6
04/18/88	7.4	152.1	09/19/88	8.7	178.9
05/16/88	8.7	178.9			

SCHOBER'S RESORT

Tables A-5 (Appendix A), B-2, and B-3 (Appendix B) give the daily steam flow, steam temperature, and ambient temperature data, respectively, for the Schober's Resort site. The steam flow and temperature data are shown graphically in Figures 9 and 10. The graph in Figure 9 ends on April 10th because the meter was recording off the chart. A replacement meter was ordered but was not received during this reporting period. Yearly mean data and standard deviations are given for the high and low daily steam flows (Table 9), and for the high and low daily steam temperature (Table 10). Fluctuation and range in the daily ambient temperature and for the high and low daily ambient temperatures (Table 11) in the Coso Hot Springs area are shown graphically as the ambient temperature at Schober's Resort in Figure 11.

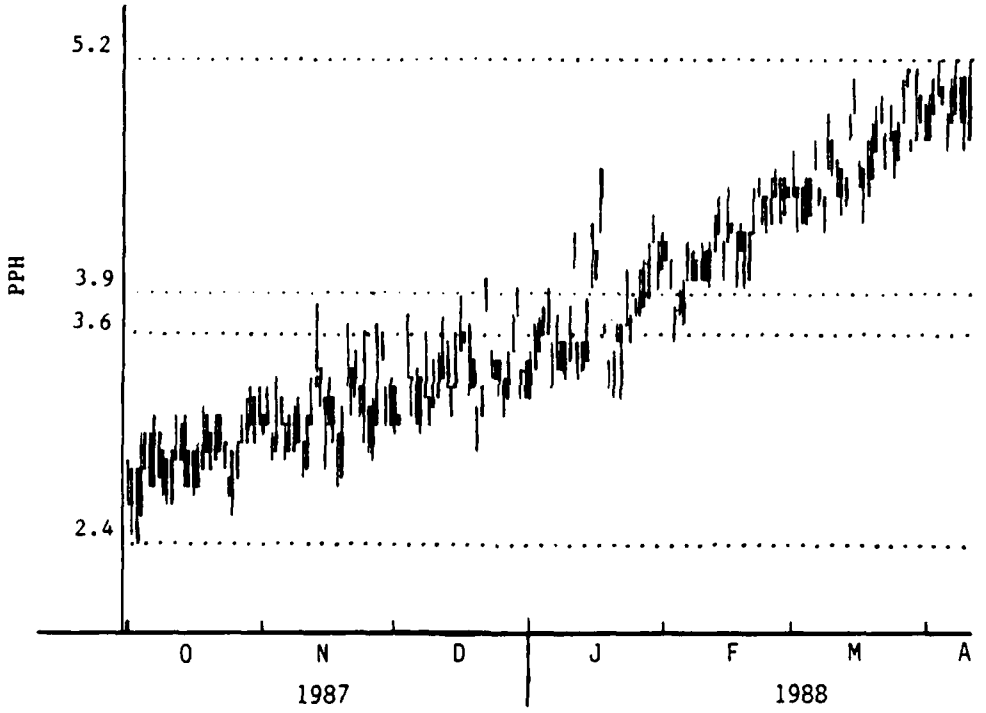


FIGURE 9. Schober's Resort Steam Flow.

TABLE 9. Schober's Resort Statistical Steam Flow Data, Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	3.9	.7	3.6	.7

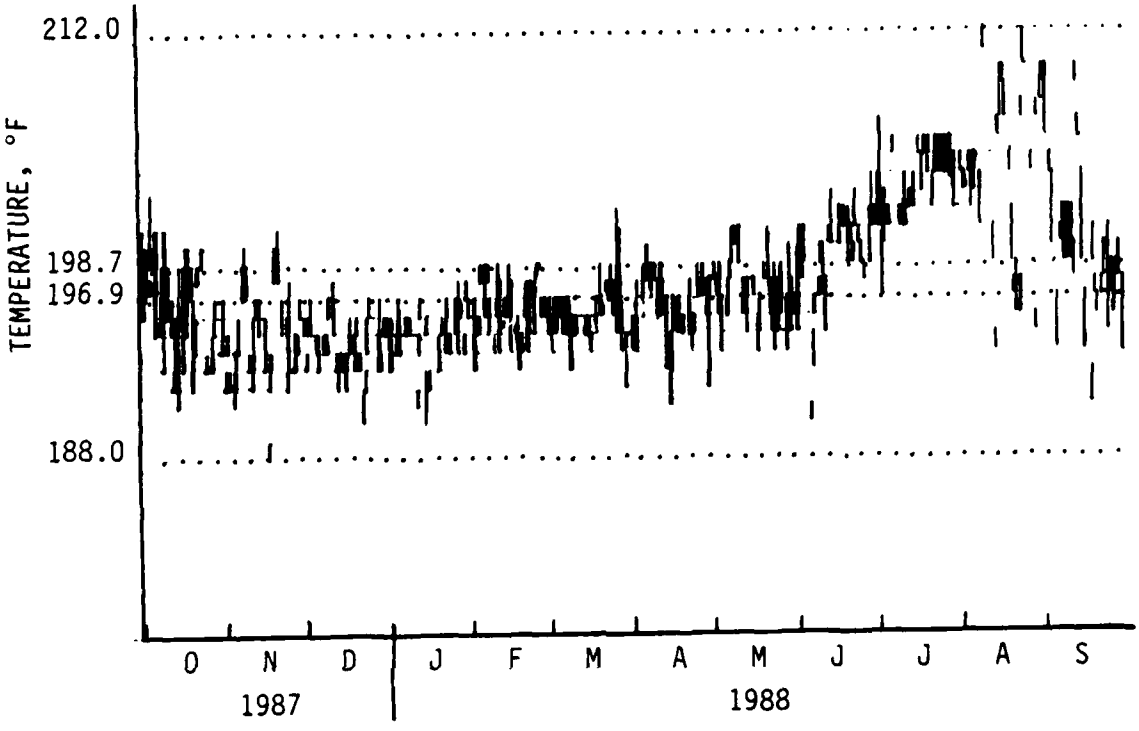


FIGURE 10. Schober's Resort Steam Temperature, °F.

TABLE 10. Schober's Resort Statistical Steam Temperature, Data °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	198.7	4.0	196.9	4.1

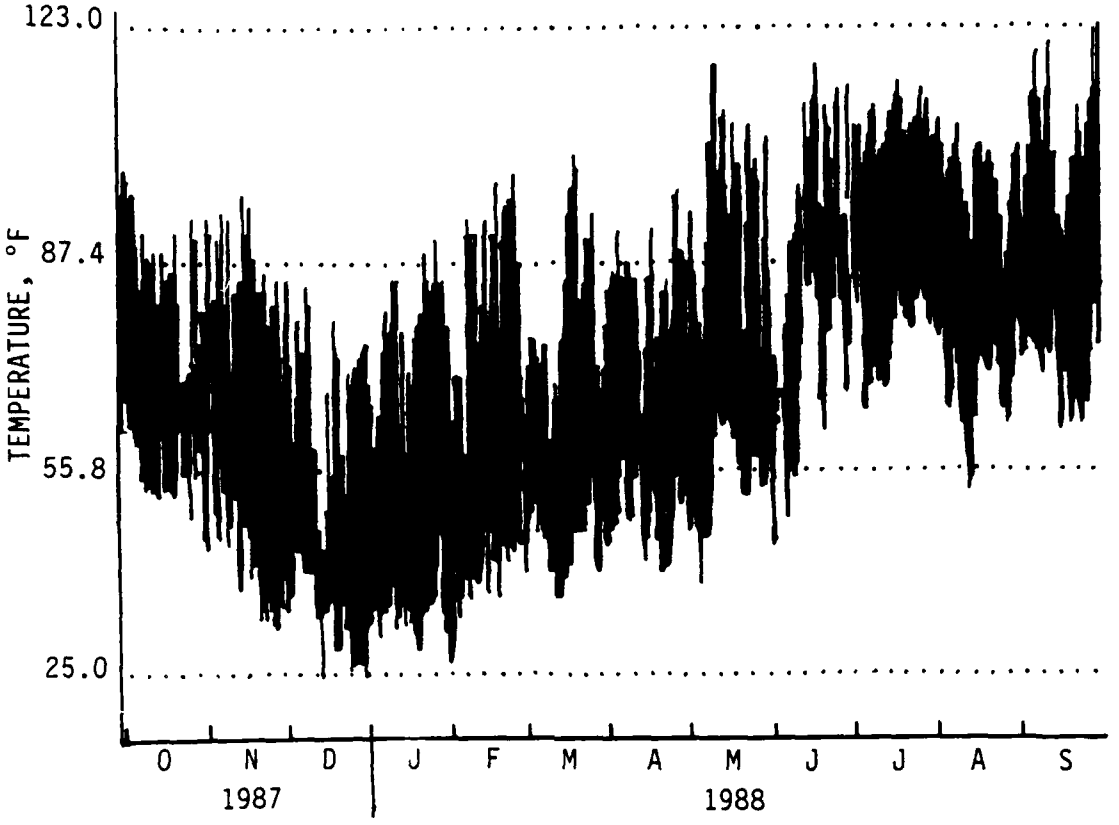


FIGURE 11. Schober's Resort Ambient Temperature, °F.

TABLE 11. Schober's Resort Statistical Ambient Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	87.4	16.5	55.8	16.5

COSO MUD POTS

Tables B-4 and B-5 (Appendix B) give the ambient and mud temperatures at the Coso Resort Mud Pot site. The temperatures are shown graphically in Figures 12 and 13. Yearly mean data and standard deviations are given for the high and low ambient temperature (Table 12) and the mud temperatures (Table 13).

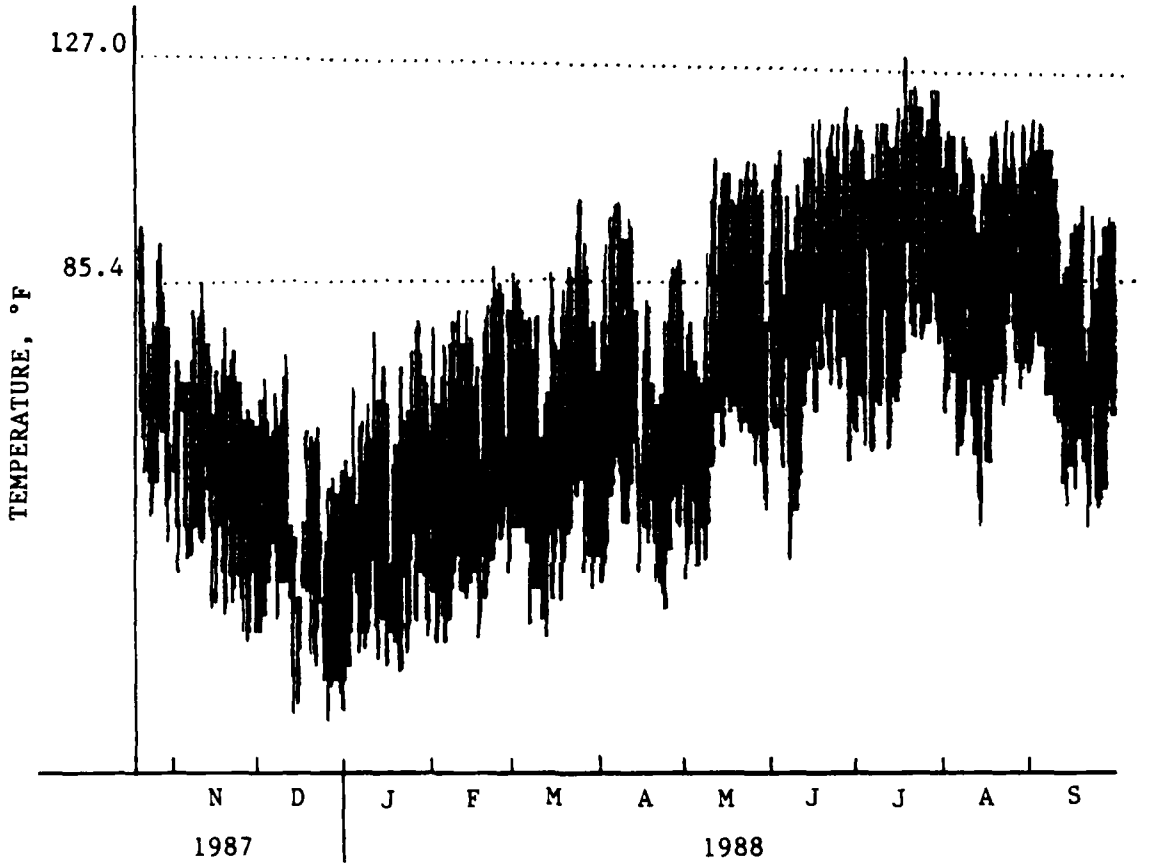


FIGURE 12. Coso Resort Mud Pot Ambient Temperature, °F.

TABLE 12. Coso Resort Mud Pot Statistical Ambient Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	85.4	21.7	47.3	18.9

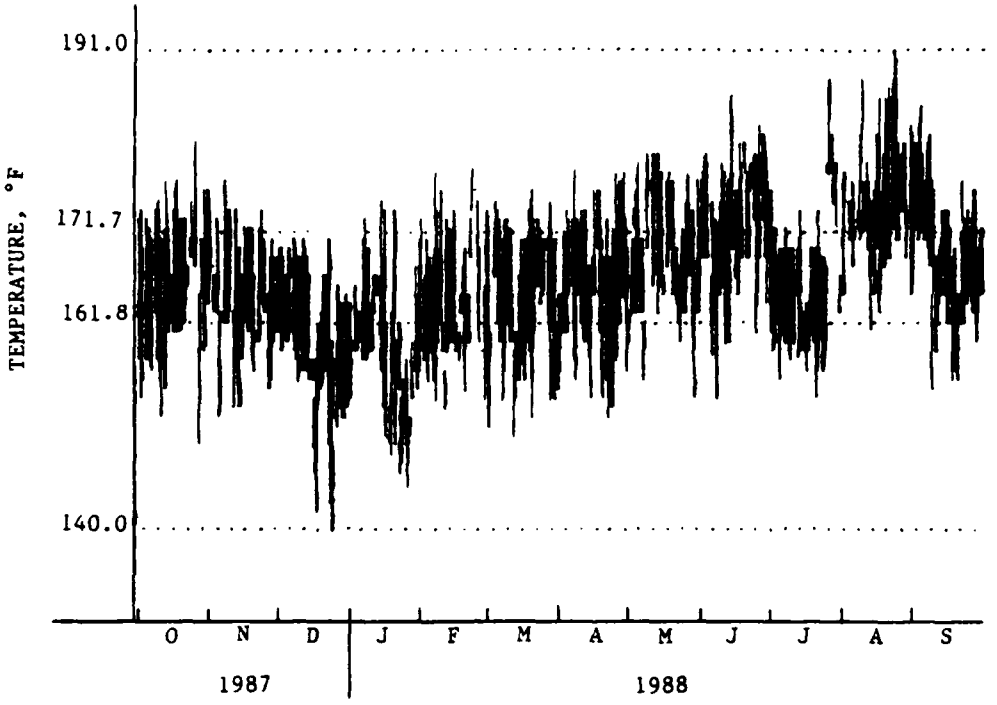


FIGURE 13. Coso Resort Mud Pot Water Temperature, °F.

TABLE 13. Coso Resort Statistical Mud Pot Water Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1987/88	171.7	6.8	161.8	6.7

OTHER GEOTHERMAL ACTIVITY AT COSO

Well 4K1, located near the South end of the Coso Hot Springs Resort Area became very active on September 3rd or 4th 1988. The well geysered gray mud about ten feet into the air, covering the permanent tripod over the well and forming a circle of mud twenty seven feet in diameter around the well. Most of the geothermal activities are located on the east side of the fault, where as 4K1 is located on the west, or upthrown, side of the fault.

A chemical analysis of the mud from 4K1 is on page 38 of this report and it does differ from analysis taken in previous years.

COSO MUD POT PHOTOGRAPHIC INVESTIGATION

A weekly photographic investigation was initiated in January 1978 to document the fluctuation in fluid levels in several of the more prominent mud pots at Coso. This project will continue into the production and power-generation stages of the geothermal development.

Figures 14 through 25 illustrate seasonal variations in the fluid levels of four of the Coso mud pots and pools. The largest pool is the South Pool, which is located inside a circular excavation along the Airport Lake-Coso Hot Springs fault scarp, approximately 1000 feet south of the main resort area. The other three mud pots included in the photographic series are located in the fenced compound adjacent to and south of the main Coso Resort building. A complete weekly photographic series is maintained by the Geothermal Program Office, NWC.

Gray Mud Pots.

Brown Mud Pots.

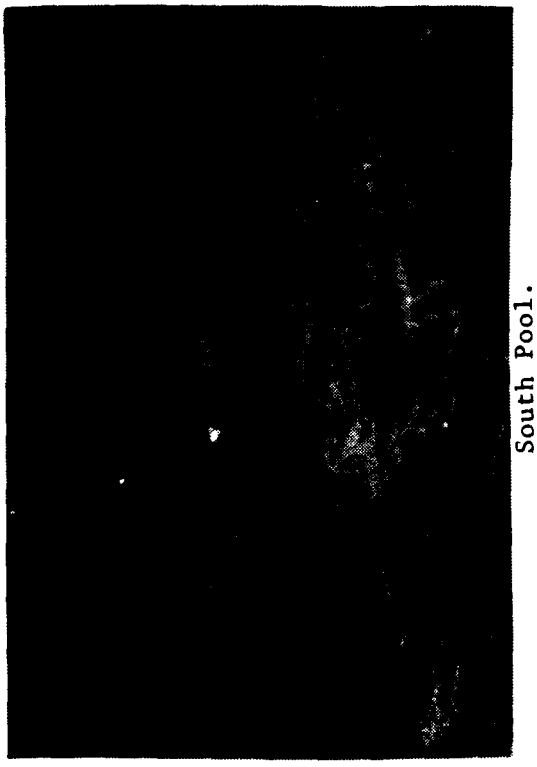
South Pool.

Red Mud Pots.

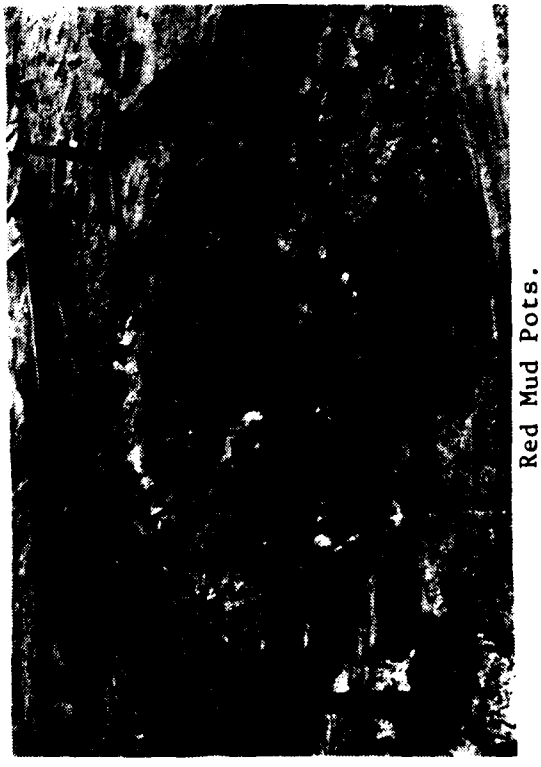
FIGURE 14. Coso Mud Pots, 20 October 1987.

Gray Mud Pots.

Brown Mud Pots.

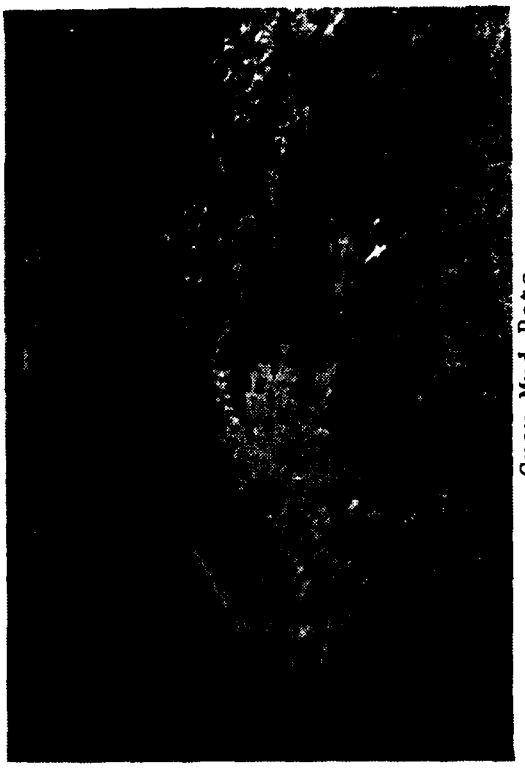


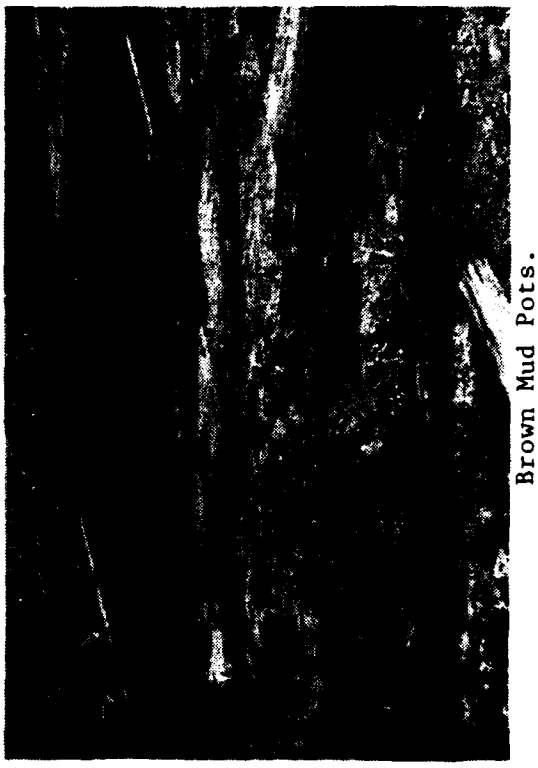
South Pool.

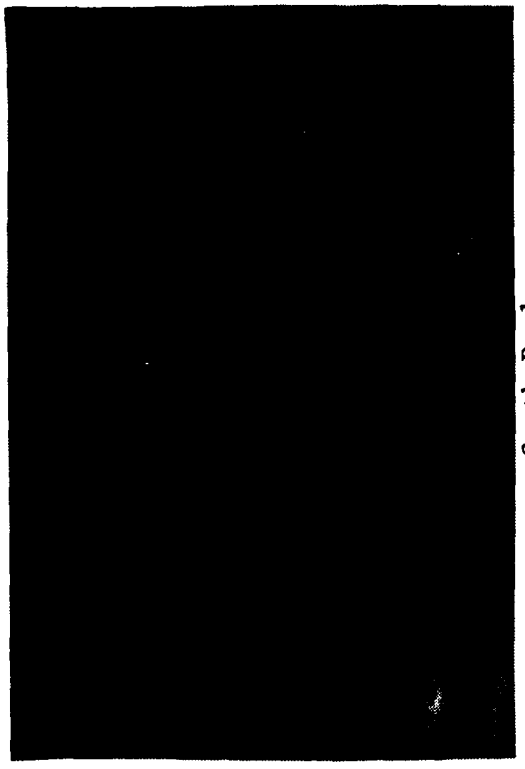


Red Mud Pots.

FIGURE 15. Coso Mud Pots, 24 November 1987.







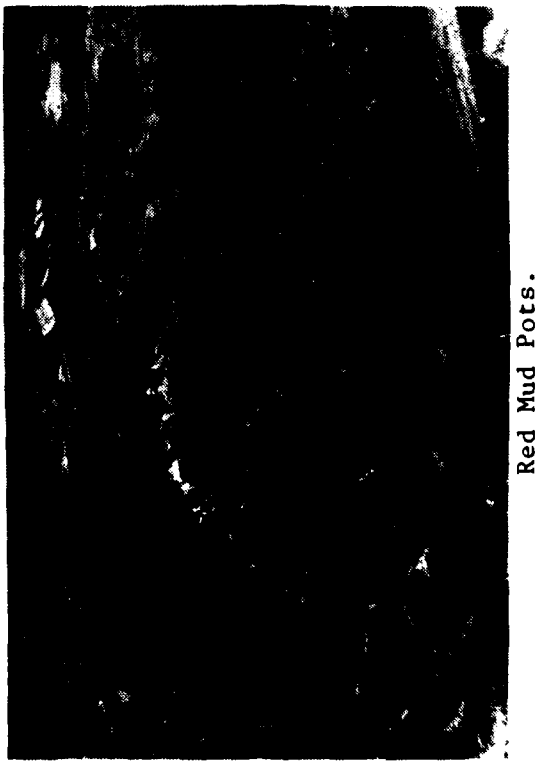
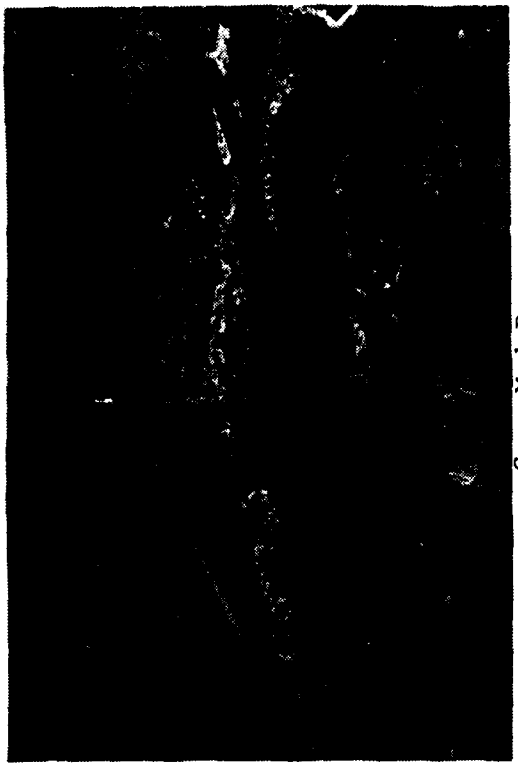
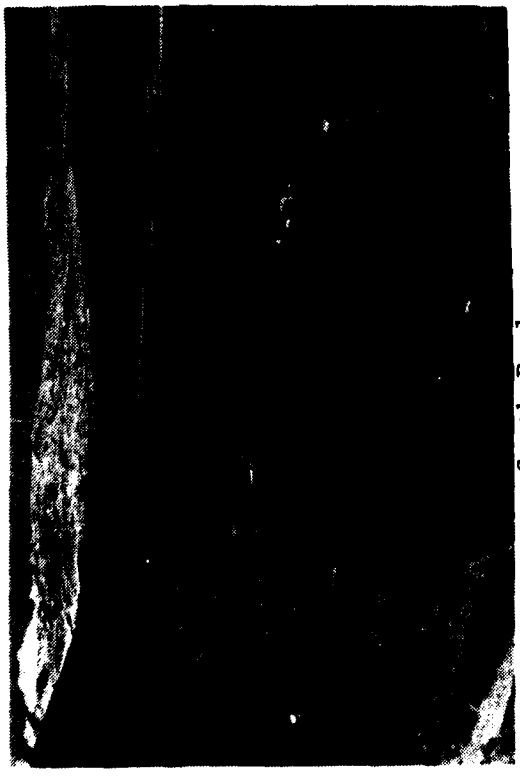


FIGURE 16. Coso Mud Pots, 14 December 1987.



Gray Mud Pots.

Brown Mud Pots.



South Pool.

Red Mud Pots.

FIGURE 17. Coso Mud Pots, 19 January 1988.

Gray Mud Pots.

Brown Mud Pots.

South Pool.

Red Mud Pots.

FIGURE 18. Coso Mud Pots, 16 February 1988.

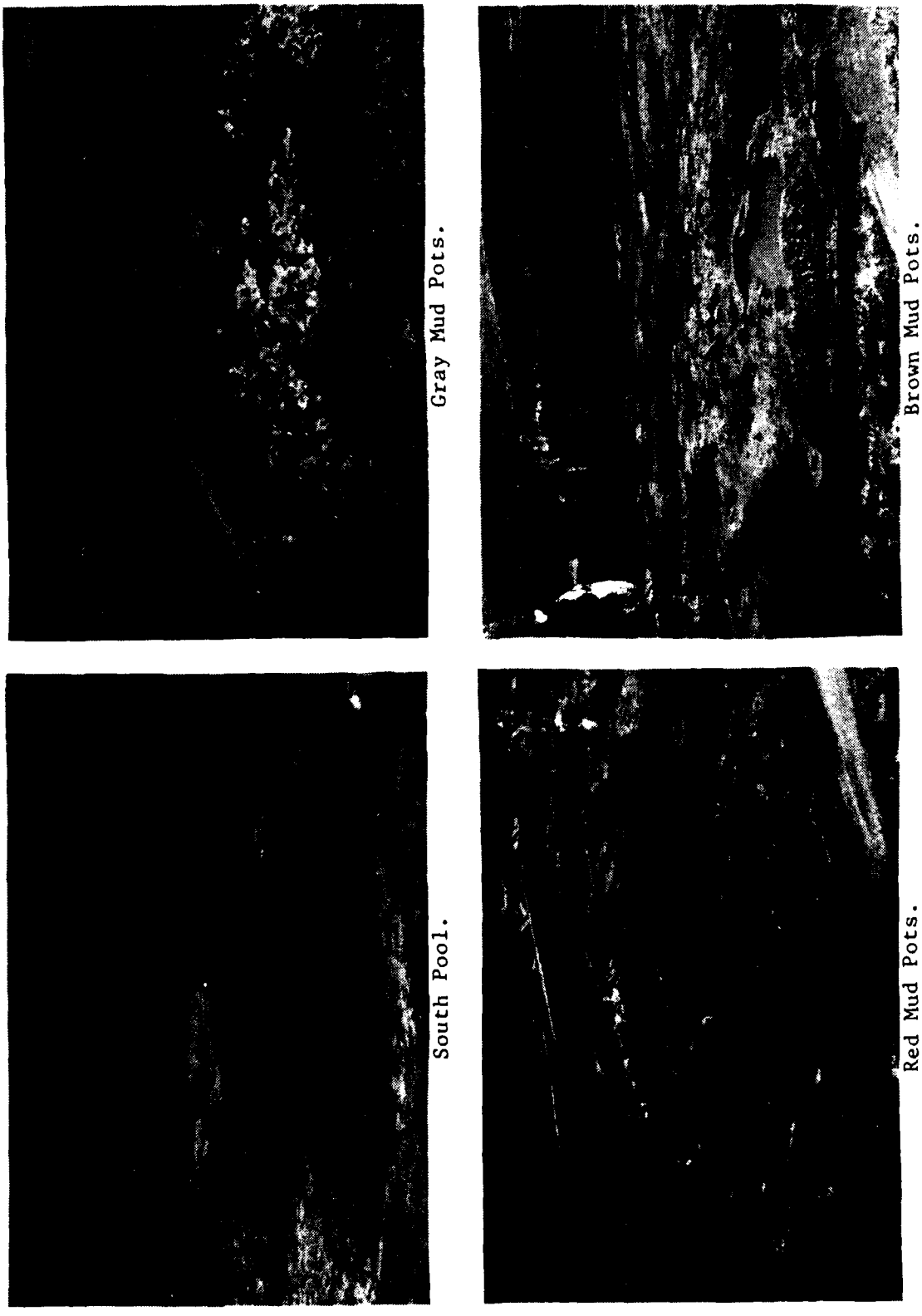
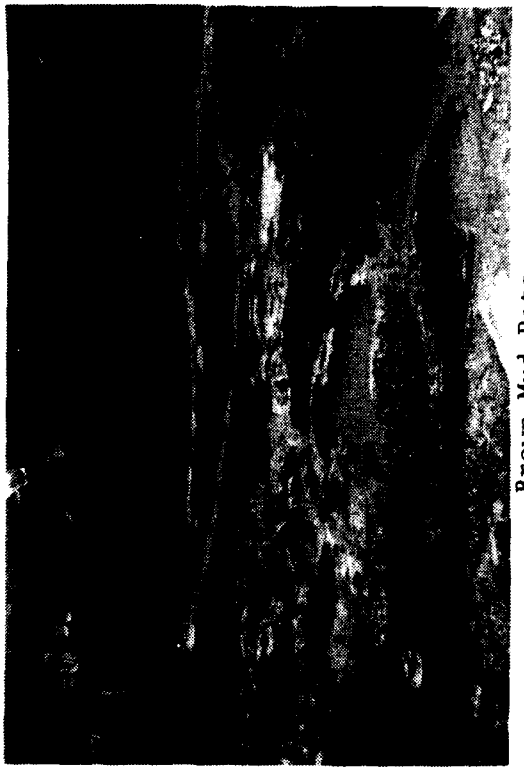
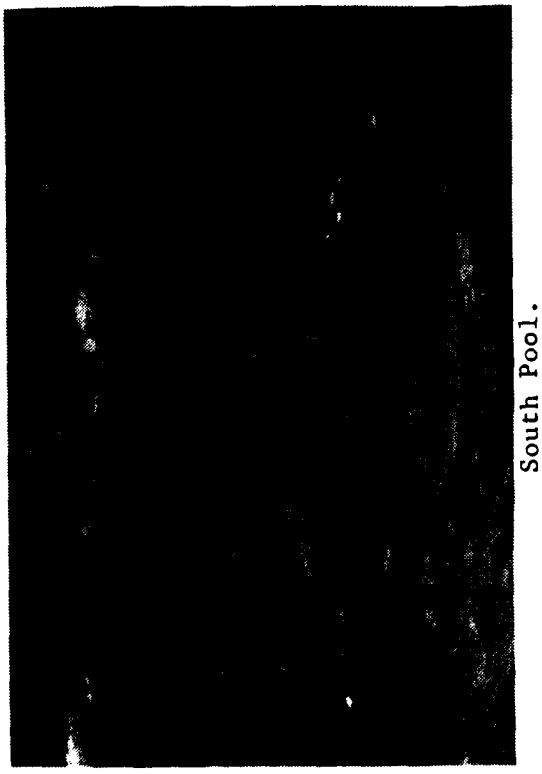


FIGURE 19. Coso Mud Pots, 14 March 1988.

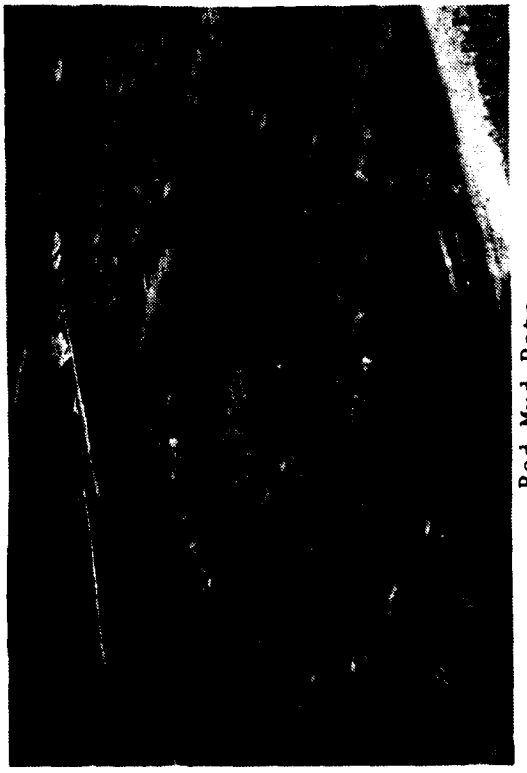
Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 20. Coso Mud Pots, 18 April 1988.

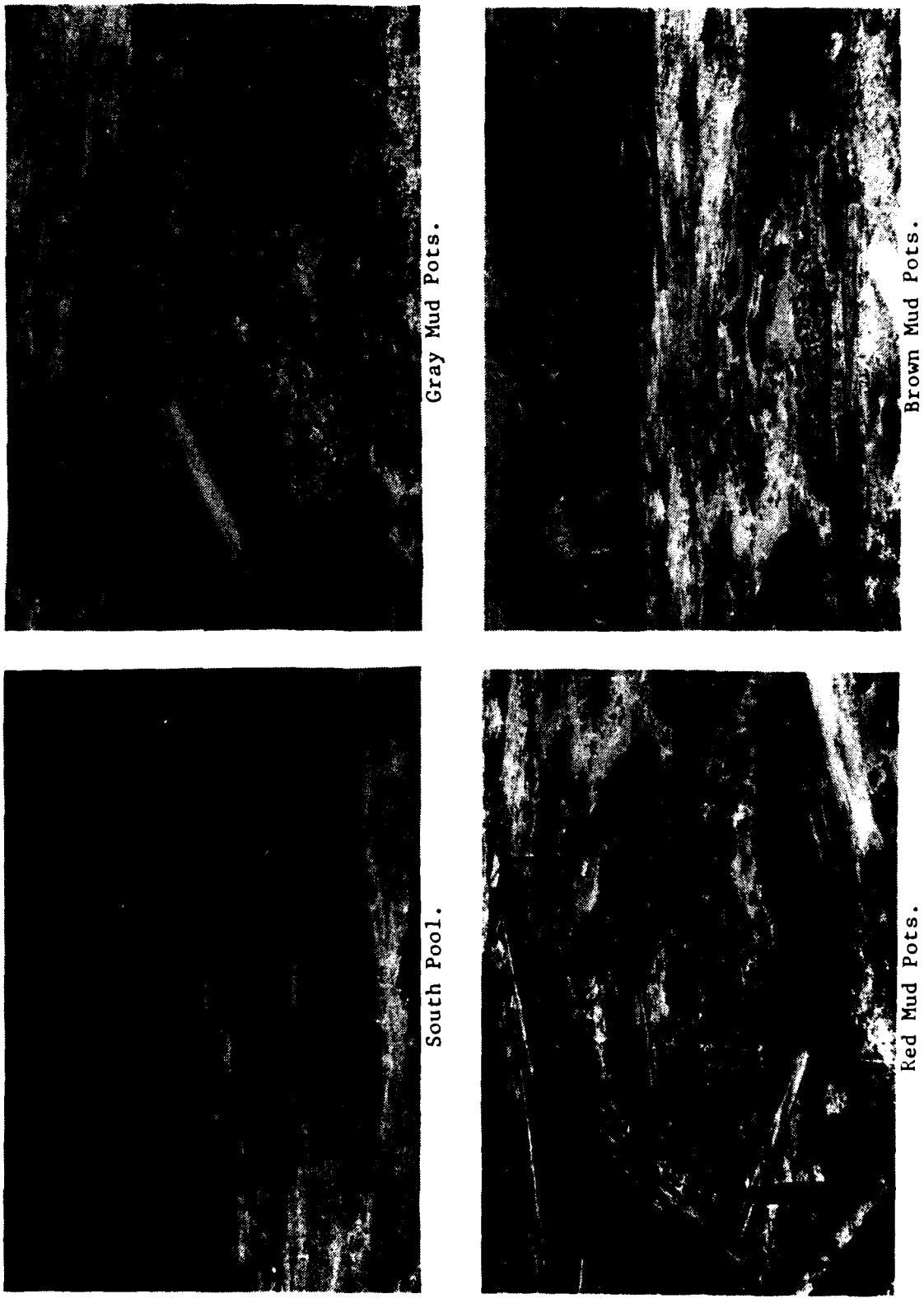


FIGURE 21. Coso Mud Pots, 16 May 1988.

Gray Mud Pots.

Brown Mud Pots.

South Pool.

Red Mud Pots.

FIGURE 22. Coso Mud Pots, 13 June 1988.

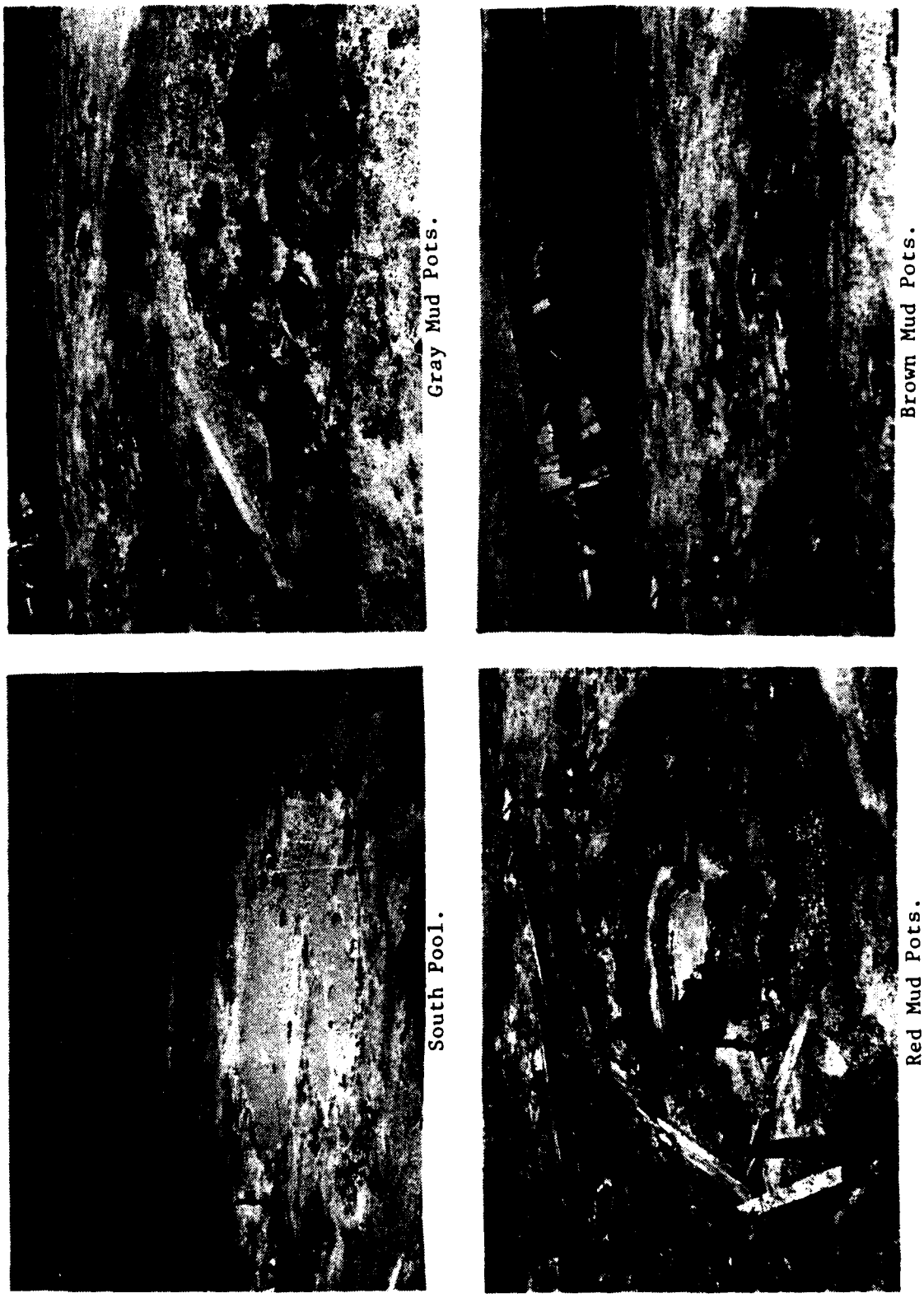


FIGURE 23. Coso Mud Pots, 18 July 1988.

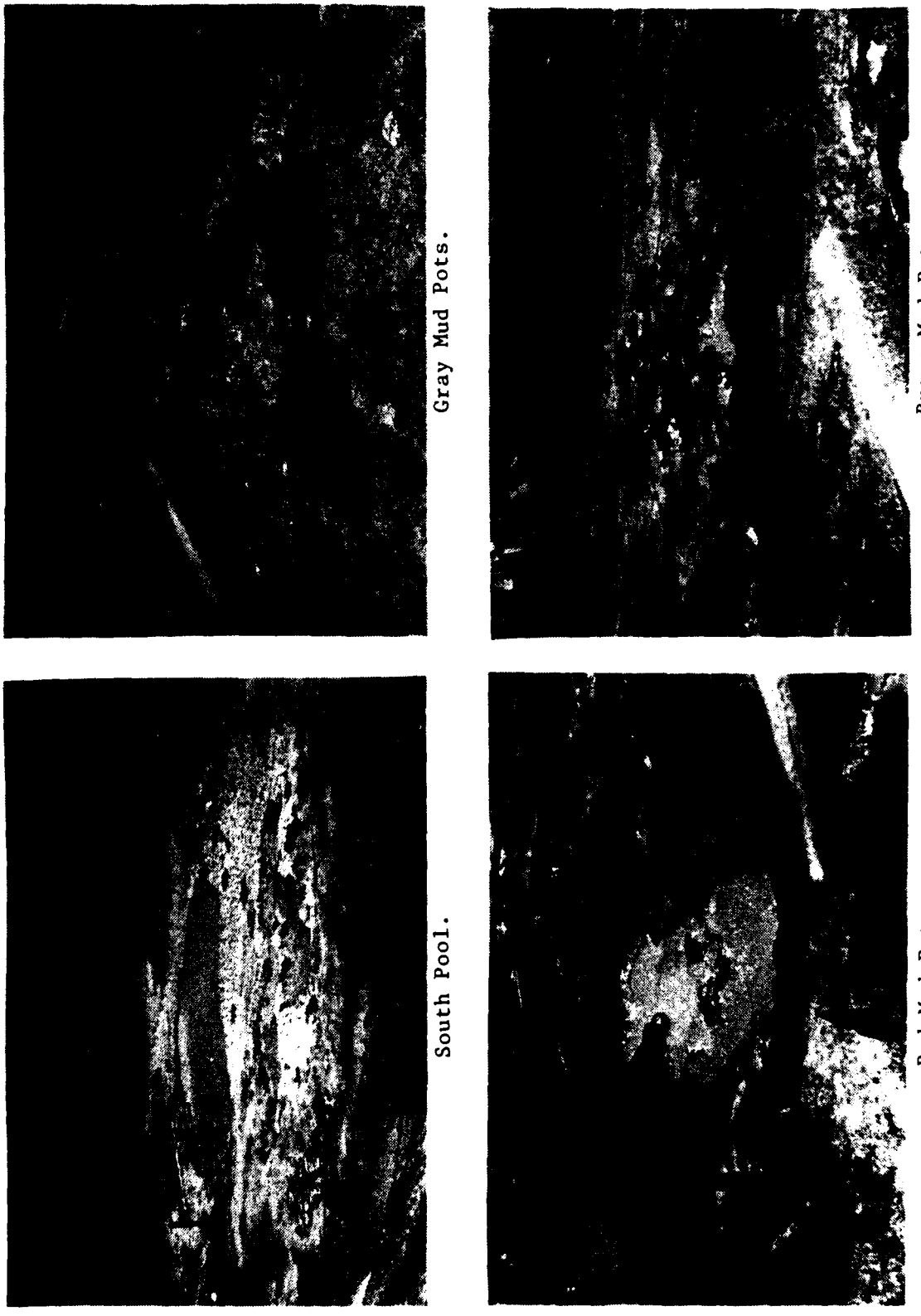


FIGURE 24. Coso Mud Pots, 15 August 1988.

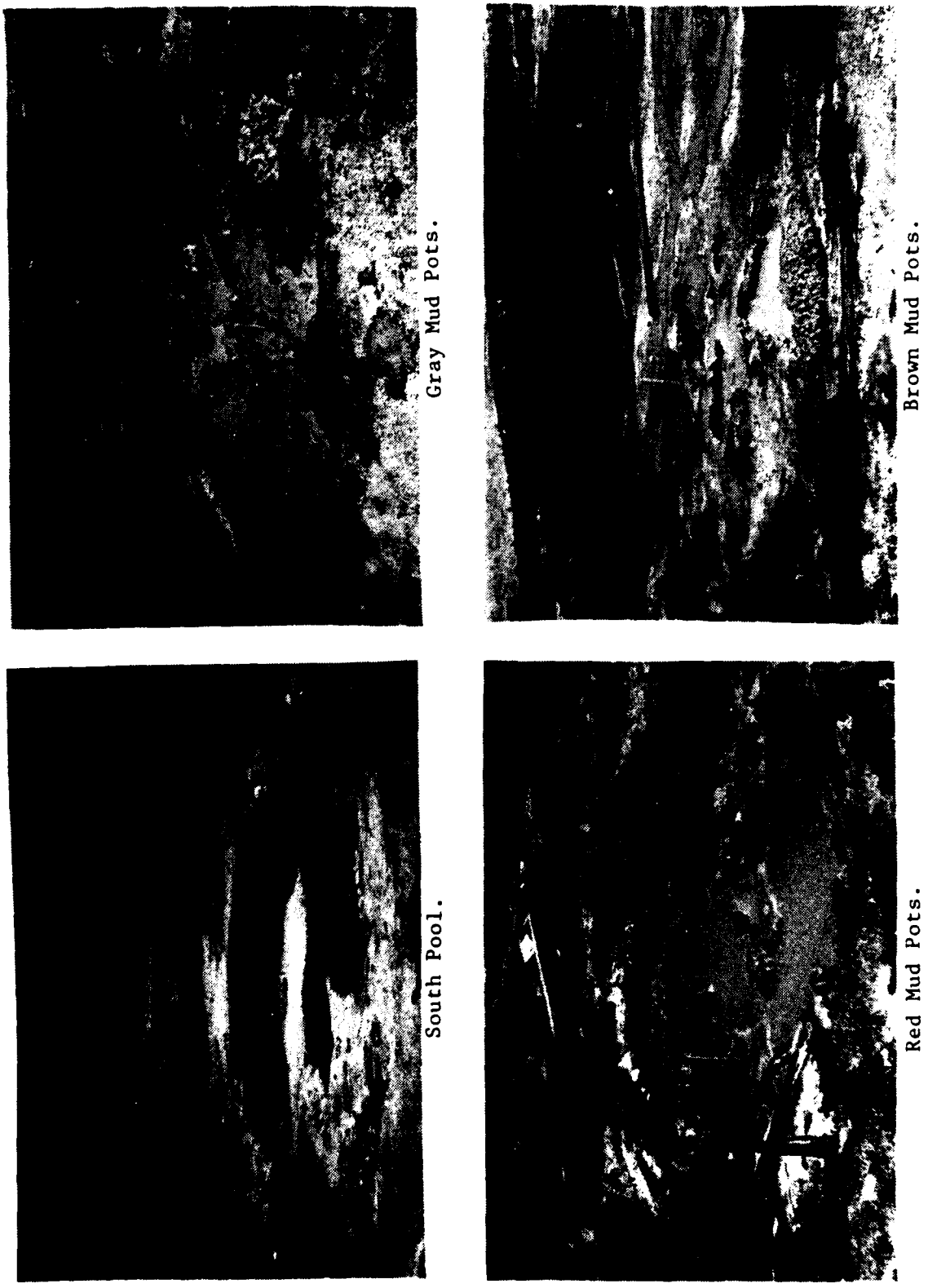


FIGURE 25. Coso Mud Pots, 19 September 1988.

WATER LEVEL MONITORING

Water levels were monitored in fiscal year 1988 at Coso #1, the Red Mud Pot, the South Pool and Observation Wells 1 and 2.

At Coso Well #1 the water level on October 5, 1987 was 149 feet 6 inches and on September 28, 1988 was 205 feet. Table 14 gives the elevations of the two monitored pools, the South Pool and the Red Mud Pot. The ambient temperature and the change in elevation are also given in this table. The water level on September 28, 1988 in Observation Well #1 was 138 feet and Observation Well #2 was 205 feet.

A summary of the yearly water levels for the South Pool are given in Table 15.

TABLE 14. Elevation Data on Coso South Pool and Red Mud Pot, October 1987 Through September 1988.

Date	Ambient temperature, °F	Pool designation	Elevation ft.	Change in elevation since 5 Oct 87, in.
05 Oct 87	100	South Pool	3613.40	0.00
		Red Mud Pot	3605.23	0.00
09 Oct 87	92	South Pool	3613.48	1.00
		Red Mud Pot	3605.31	1.00
20 Oct 87	88	South Pool	3613.57	2.00
		Red Mud Pot	3605.35	1.50
27 Oct 87	78	South Pool	3614.00	7.25
		Red Mud Pot	3605.40	2.00
04 Nov 87	58	South Pool	3614.57	14.00
		Red Mud Pot	3605.42	2.25
10 Nov 87	65	South Pool	3614.92	18.25
		Red Mud Pot	3605.48	3.00
17 Nov 87	52	South Pool	3615.30	22.80
		Red Mud Pot	3605.40	2.06
24 Nov 87	54	South Pool	3615.36	23.50
		Red Mud Pot	3605.44	2.50
02 Dec 87	56	South Pool	3615.57	26.00
		Red Mud Pot	3605.40	2.00
07 Dec 87	58	South Pool	3616.07	32.00
		Red Mud Pot	3605.40	2.00
14 Dec 87	40	South Pool	3616.15	33.00
		Red Mud Pot	3605.44	2.50
21 Dec 87	48	South Pool	3616.82	41.00
		Red Mud Pot	3605.44	2.50
28 Dec 87	37	South Pool	3616.82	41.00
		Red Mud Pot	3605.44	2.50
04 Jan 88	44	South Pool	3616.90	42.00
		Red Mud Pot	3605.44	2.50
11 Jan 88	60	South Pool	3616.98	43.00
		Red Mud Pot	3605.44	2.50
19 Jan 88	38	South Pool	3617.07	44.00
		Red Mud Pot	3605.40	2.00
25 Jan 88	63	South Pool	3617.07	44.00
		Red Mud Pot	3605.40	2.00

TABLE 14. (Contd.)

Date	Ambient temperature, °F	Pool designation	Elevation ft.	Change in elevation since 5 Oct 87, in.
01 Feb 88	43	South Pool	3617.07	44.00
		Red Mud Pot	3605.40	2.00
08 Feb 88	72	South Pool	3617.48	49.00
		Red Mud Pot	3605.40	2.00
16 Feb 88	64	South Pool	3617.44	48.50
		Red Mud Pot	3605.44	2.50
22 Feb 88	78	South Pool	3617.61	50.50
		Red Mud Pot	3605.44	2.50
29 Feb 88	58	South Pool	3617.86	53.50
		Red Mud Pot	3605.44	2.50
07 Mar 88	51	South Pool	3618.03	55.50
		Red Mud Pot	3605.40	2.00
14 Mar 88	65	South Pool	3617.94	54.50
		Red Mud Pot	3605.40	2.00
21 Mar 88	70	South Pool	3617.86	53.50
		Red Mud Pot	3605.40	2.00
28 Mar 88	64	South Pool	3617.80	52.75
		Red Mud Pot	3605.44	2.50
04 Apr 88	65	South Pool	3617.78	52.50
		Red Mud Pot	3605.40	2.00
11 Apr 88	80	South Pool	3617.67	51.25
		Red Mud Pot	3605.40	2.00
18 Apr 88	78	South Pool	3617.90	54.00
		Red Mud Pot	3605.44	2.50
25 Apr 88	81	South Pool	3618.03	55.50
		Red Mud Pot	3605.44	2.50
02 May 88	---	South Pool	3618.03	55.50
		Red Mud Pot	3605.44	2.50
06 May 88	---	South Pool	3618.03	55.50
		Red Mud Pot	3605.44	2.50
16 May 88	84	South Pool	3617.82	53.00
		Red Mud Pot	3605.36	1.50
23 May 88	88	South Pool	3617.71	51.75
		Red Mud Pot	3605.40	2.00

TABLE 14. (Contd.)

Date	Ambient temperature, °F	Pool designation	Elevation ft.	Change in elevation since 5 Oct 87, in.
31 May 88	70	South Pool	3617.63	50.75
		Red Mud Pot	3605.44	2.50
06 Jun 88	70	South Pool	3617.48	49.00
		Red Mud Pot	3605.42	2.25
13 Jun 88	75	South Pool	3617.40	48.00
		Red Mud Pot	3605.40	2.00
21 Jun 88	92	South Pool	3617.36	47.50
		Red Mud Pot	3605.40	2.00
28 Jun 88	92	South Pool	3617.36	47.50
		Red Mud Pot	3605.36	1.50
05 Jul 88	89	South Pool	3617.19	45.50
		Red Mud Pot	3605.27	.50
11 Jul 88	94	South Pool	3617.13	44.75
		Red Mud Pot	3605.19	-.50
18 Jul 88	109	South Pool	3616.98	43.00
		Red Mud Pot	3605.19	-.50
25 Jul 88	100	South Pool	3616.80	40.75
		Red Mud Pot	3605.25	.25
01 Aug 88	---	South Pool	3615.16	0.00
		Red Mud Pot	---	---
09 Aug 88	102	South Pool	3616.82	41.00
		Red Mud Pot	3605.44	2.50
15 Aug 88	88	South Pool	3616.78	40.50
		Red Mud Pot	3605.48	3.00
23 Aug 88	90	South Pool	3616.73	40.00
		Red Mud Pot	3605.48	3.00
29 Aug 88	92	South Pool	3616.65	39.00
		Red Mud Pot	3605.48	3.00
06 Sep 88	98	South Pool	3616.80	40.75
		Red Mud Pot	3605.44	2.50
13 Sep 88	79	South Pool	3616.82	41.00
		Red Mud Pot	3605.48	3.00
19 Sep 88	84	South Pool	3616.82	41.00
		Red Mud Pot	3605.50	3.25

TABLE 15. Summary of Water Levels at South Pool, True Elevation, Referenced USGS Benchmark 3635-1905-13B, January 1980 Through September 1988.

Year	High	Low	Mean	Standard deviation
1980a	3615.55	3610.55	3613.05	1.8
1981[a]	3614.95	3610.55	3612.65	1.4
1982[a]	3615.05	3611.95	3613.75	1.0
1983[a]	3616.65	3613.15	3614.75	1.1
1984[a]	3614.54	3609.84	3612.69	1.1
1985[a]	3614.46	3610.54	3612.89	1.5
1986[a]	3615.52	3611.65	3613.80	1.3
1987[a]	3616.87	3611.64	3615.08	1.4
1988	3618.03	3613.40	3616.78	1.2

[a]Recalculated to true elevations from NWC Coso Monitoring Program, October 1986 Through September 1987, by E. M. Edwards (Reference 1).

RAINFALL AT COSO RESORT AREA AND ROSE VALLEY

Rainfall for the Coso Hot Springs Basin is monitored at five sites, two on the west rim, one on the east rim, one on the south rim and one on the basin floor. These sites are shown in Figure 1. Instrumentation at each site includes a battery operated strip recorder triggered from a tipping bucket. This equipment gives continuous data not affected by evaporation and normally requires quarterly maintenance. During this reporting period the increased battery failure rate resulted in incomplete rainfall data. The first six months or the cooler months provided more data than the last six months or the warmer months which may mean that heat effects the life of the batteries.

Rainfall data collected from the Coso sites are listed in Table 16. The downtime at each site is indicated by an "X".

Rainfall data is also received from the Los Angeles Department of Water and Power Haiwee Power Plant in Rose Valley and is tabulated in Table 17.

TABLE 16. Inches of Rainfall Recorded at Coso Monitoring Stations.

Date	Tipping Bucket Stations				
	1	2	3	4	5
20 Oct 87	---	---	.37	X	---
21 Oct 87	.39	.28	.07	X	.08
22 Oct 87	.03	.06	---	X	.06
24 Oct 87	---	---	---	X	.02
26 Oct 87	---	---	.03	X	---
27 Oct 87	---	.02	.01	X	.03
30 Oct 87	---	---	.49	X	---
31 Oct 87	---	.50	---	X	.31
01 Nov 87	---	---	---	X	.05
04 Nov 87	.13	.21	.18	X	.06
05 Nov 87	.12	---	---	X	.17
24 Nov 87	.01	---	---	---	---
25 Nov 87	.17	---	---	---	---
26 Nov 87	.01	---	---	---	---
03 Dec 87	---	---	.69	---	---
04 Dec 87	.77	.56	---	---	---
05 Dec 87	.01	---	---	---	.48
16 Dec 87	---	---	.10	---	---
17 Dec 87	.03	.01	---	X	---
19 Dec 87	---	.01	---	X	---
20 Dec 87	---	.01	---	X	---
31 Dec 87	.01	---	---	X	.02
03 Jan 88	---	---	.08	X	---
04 Jan 88	---	.04	---	X	---
05 Jan 88	.09	.02	---	X	.06
16 Jan 88	---	---	.19	X	---
17 Jan 88	.14	.09	.17	X	.18
18 Jan 88	.63	.05	---	X	.08
19 Jan 88	.38	.01	---	X	---
23 Jan 88	---	---	.02	X	---

TABLE 16. (Contd.)

Date	Tipping Bucket Stations				
	1	2	3	4	5
26 Feb 88	X	---	.23	X	---
27 Feb 88	X	.15	---	X	---
28 Feb 88	X	.14	.06	X	.12
29 Feb 88	X	---	.24	X	---
01 Mar 88	X	.16	X	X	.04
02 Mar 88	X	.02	X	X	.07
14 Apr 88	X	---	X	.50	.51
15 Apr 88	X	---	X	.13	.15
16 Apr 88	X	---	X	.07	.06
19 Apr 88	X	---	X	.02	.02
20 Apr 88	X	---	X	.13	.13
20 Jun 88	.34	X	X	---	---
23 Jun 88	.02	X	X	---	---
18 Jul 88	---	X	X	.99	---
23 Aug 88	---	X	X	---	.18
24 Aug 88	X	X	X	---	.01
25 Aug 88	X	X	X	---	.10
26 Aug 88	X	X	X	---	.06
TOTAL	3.28	2.34	2.93	1.84	3.05

NOTE: Stations 1, 2, and 3 were read intermittently throughout fiscal year 1988. Stations 4 and 5 were read after each rain.

TABLE 17. Rose Valley Cumulative Rainfall, October 1987 Through September 1988.

Date	Daily, in.	Cumulative, in.
12 Oct 87	.03	.03
22 Oct 87	.16	.19
23 Oct 87	.01	.20
24 Oct 87	T	.20
25 Oct 87	.05	.25
27 Oct 87	.01	.26
28 Oct 87	.03	.29
01 Nov 87	.33	.62
04 Nov 87	.03	.65
05 Nov 87	.28	.93
06 Nov 87	T	.93
05 Dec 87	.58	1.51
07 Dec 87	.06	1.57
17 Dec 87	(Snow 3") .30	1.87
01 Jan 88	(Snow 3") .30	2.17
19 Jan 88	.77	2.94
27 Feb 88	T	2.94
28 Feb 88	.37	3.31
29 Feb 88	.03	3.34
01 Mar 88	.05	3.39
02 Mar 88	.18	3.57
03 Mar 88	.01	3.58
14 Apr 88	.01	3.59
15 Apr 88	.60	4.19
16 Apr 88	.61	4.80
17 Apr 88	.01	4.81
20 Apr 88	.04	4.85
17 May 88	T	4.85
20 Jun 88	.03	4.88
23 Jun 88	.05	4.93
24 Jun 88	.08	5.01
26 Jul 88	.13	5.14
24 Aug 88	1.62	6.76
26 Aug 88	.10	6.86
27 Aug 88	T	6.86
29 Aug 88	.37	7.23

NOTE: "T" stands for trace.

WATER ANALYSIS OF COSO HOT SPRINGS AREA SITES

Water samples were taken from several sites in the Hot Springs area during September 1988. These samples were analyzed for chemical composition by B.C. Laboratories, Inc., Bakersfield, Calif. The results are given in Tables 18 through 22.

In last years report a comparison of these Coso waters was presented using stiff diagrams [1]. A visual comparison of the previous sample analyses and those taken during the current reporting period indicates that the close similarity of the acid sulfate waters of Devils Kitchen, the South Pool, and the Red Mud Pot has been maintained. New diagrams have not been printed in this report.

Stiff diagrams of the September samples of Coso Well #1, Observation Well #1 (formally Coso Well #2) are given as Figures 26 and 27. Coso Well #1 shows a marked increase in constituent concentrations. This increase, combined with the drop in water level noted on page 30, indicates that the amount of water entering the well has not been able to keep up with the evaporation rate, or boiling, in the wellbore. When we attempted to take further water samples, we found a constriction in the wellbore at about 210 feet. We will attempt to rehabilitate this well in 1989.

Observation Well #1 also shows a significant change, a decrease in concentration. As stated in last years report[1] Observation Well #1 waters are a combination of geothermal leakage similar to Coso Well #1 and Haiwee Spring type waters. This well was pumped to provide water for the geothermal production well drilling until April 1988. Since there is no longer pumping stress on the Coso Valley Aquifer at this point what we are seeing is a return to more natural conditions and a larger component of Haiwee Springs type water in the aquifer on the east side of the valley.

A stiff diagram for well 4K-1 is given in Figure 28. This well has not been diagramed before. It shows a mixed water that has predominantly geothermal leakage components but the very low concentrations substantiate our view that this water is primarily a condensate from the geothermal system.

TABLE 18. Chemical Analysis of 4K1.

Constituent	mg/L
Calcium	55.
Magnesium	2.6
Sodium	178.
Potassium	21.
Hydroxide	0.
Carbonate	0.
Bicarbonate	9.5
Chloride	306.
Sulfate	138.
Nitrate	2.2
Fluoride	0.47
Iron	1.9
Manganese	0.69
Arsenic	0.05
Copper	(-) 0.01
Zinc	0.09
Total dissolved solids, by summation	840.
Mercury	(-) 0.002
Aluminum	0.08
Boron	7.9
Silica	71.
Ammonium	7.7
Lithium	1.3
Bromide	0.56
Phosphate	(-) 0.02
Salinity as NaCl	891.
Electrical Conductivity, Micromhos/cm @ 25°C	1525.
pH	5.8

(-) refers to "less than."

TABLE 19. Chemical Analysis of Coso #1.

Constituent	mg/L
Calcium	170.
Magnesium	0.56
Sodium	87500.
Potassium	10760.
Hydroxide	0.
Carbonate	0
Bicarbonate	2826.
Chloride	139122.
Sulfate	3620.
Nitrate	17.7
Fluoride	19.0
Iron	(-) 0.05
Manganese	1.2
Arsenic	372.
Copper	0.27
Zinc	64.7
Total dissolved solids, by summation	301100
Mercury	(-) 0.01
Aluminum	7.6
Boron	3480.
Silica	7.6
Ammonium	0.45
Lithium	850.
Bromide	*.
Phosphate	1.0
Salinity as NaCl	76452.
Electrical Conductivity, Micromhos/cm @ 25°C	130800.
pH	6.6

(-) refers to "less than."
* severe interferences prevent analytical determination.

TABLE 20. Chemical Analysis of Red Mud Pots.

Constituent	mg/L
Acidity as Hydrogen	6.4
Calcium	29.
Magnesium	9.6
Sodium	36.
Potassium	12.
Hydroxide	0.
Carbonate	0.
Bicarbonate	0.
Chloride	(-) 1.8
Sulfate	680.
Nitrate	(-) 0.4
Fluoride	0.19
Iron	0.80
Manganese	0.65
Arsenic	(-) 0.01
Copper	0.15
Zinc	0.43
Total dissolved solids, by summation	1107.
Mercury	(-) 0.002
Aluminum	11.5
Boron	0.13
Silica	221.
Ammonium	41.1
Lithium	0.02
Bromide	(-) 0.10
Phosphate	0.03
Salinity as NaCl	1812.
Electrical Conductivity, Micromhos/cm @ 25°C	3100.
pH	2.4

(-) refers to "less than."

TABLE 21. Chemical Analysis of South Pool West Edge.

Constituent	mg/L
Acidity as Hydrogen	13.0
Calcium	88.
Magnesium	31.
Sodium	64.
Potassium	9.0
Hydroxide	0.
Carbonate	0.
Bicarbonate	0.
Chloride	(-) 1.8
Sulfate	1580.
Nitrate	(-) 0.4
Fluoride	0.36
Iron	17.6
Manganese	2.2
Arsenic	0.02
Copper	0.27
Zinc	1.1
Total dissolved solids, by summation	2580.
Mercury	(-) 0.002
Aluminum	49.4
Boron	0.23
Silica	353.
Ammonium	84.9
Lithium	0.16
Bromide	(-) 0.10
Phosphate	0.06
Salinity as NaCl	3215.
Electrical Conductivity, Micromhos/cm @ 25°C	5500.
pH	2.2

(-) refers to "less than."

TABLE 22. Chemical Analysis of Devils Kitchen Array.

Constituent	mg/L
Acidity as Hydrogen.....	16.6
Calcium	71.
Magnesium	28.
Sodium.....	51.
Potassium.....	35.
Hydroxide	0.
Carbonate.....	0.
Bicarbonate.....	0.
Chloride.....	(-) 1.8
Sulfate.....	1500.
Nitrate.....	(-) 0.4
Fluoride.....	0.62
Iron.....	52.7
Manganese.....	2.0
Arsenic.....	0.03
Copper	0.02
Zinc.....	0.57
Total dissolved solids, by summation	2450.
Mercury	(-) 0.002
Aluminum.....	21.1
Boron.....	4.0
Silica.....	383.
Ammonium.....	16.1
Lithium.....	0.11
Bromide.....	(-) 0.10
Phosphate.....	0.12
Salinity as NaCl	3565.
Electrical Conductivity, Micromhos/cm @ 25°C....	6100.
pH.....	2.0

(-) refers to "less than."

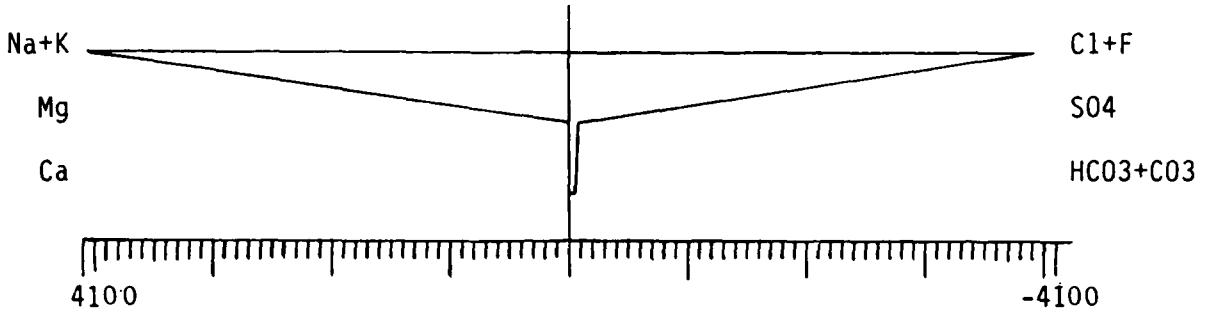


FIGURE 26. Stiff Diagram for Coso Well #1
26 September 1988.

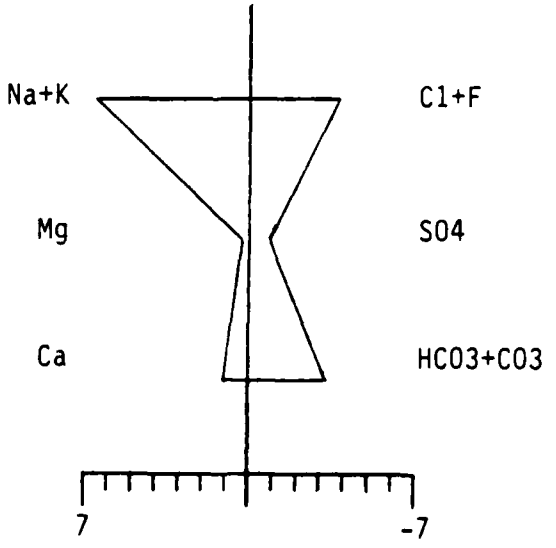


FIGURE 27. Stiff Diagram for Observation Well #1
27 September 1988.

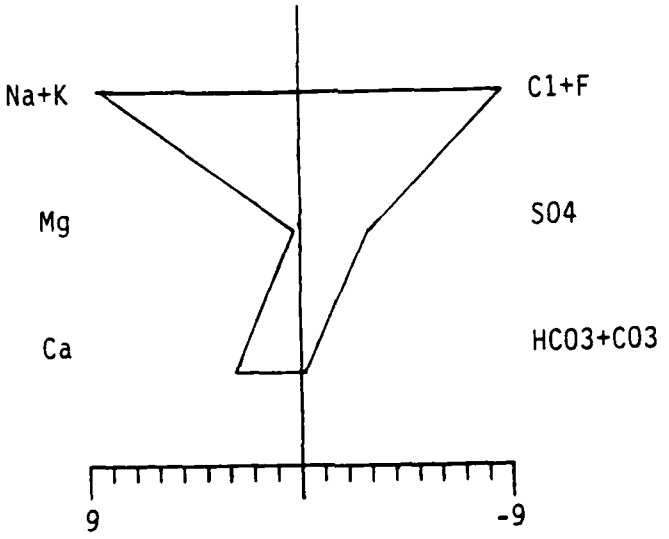


FIGURE 28. Stiff Diagram for Well 4K-1
26 September 1988.

PLANS FOR 1989

The present program will continue throughout 1989. In addition, the following repairs, etc. are planned: 1) determine the problems with, and rehabilitate Coso Well #1; 2) replace the Barton meter at Schober's Resort; 3) redesign the steam flow manifolds at each of the steam sites to give more consistent data; 4) rehabilitate rain gauges; and 5) install water level measuring systems in each of the wells, as available.

SUMMARY

The ongoing monitoring program has successfully continued during this eleventh year reporting period. Instruments have been updated and changed as required and calibrated on a monthly basis or as needed for more consistent data.

The steam flow instrumentation shows an increase in activity which is also indicated by the photographic essay and water level measurements at the Mud Pots and South Pool. The long term continuity in the data gathered indicates that local evaporation and rainfall are the major controlling factors of the observable surface phenomena. However, as indicated in this report, changes occurred at several sites which will be watched very closely during the coming year so that the magnitude or significance of the apparent changes can be properly gaged.

The testing of the steam wells in the California Energy Steam Field have shown no identifiable effect on the mud pots or pools within the national register site during this reporting period.

REFERENCES

1. Naval Weapons Center. Coso Monitoring Program, October 1986 Through September 1987. E. M. Edwards. China Lake, Calif., NWC, June 1988. 112 pp. (NWC TP 6919, publication UNCLASSIFIED.)

Appendix A

DAILY STEAM FLOW

TABLE A-1. Devils Kitchen Site Steam Flow Data, Unfactored.

The conversion factor for this table is 40.23 .

1987				1987		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
10-1	6.2	5.5		11-1	7.0	6.4
10-2	6.3	5.6		11-2	6.8	6.5
10-3	6.3	5.6		11-3	7.0	6.3
10-4	6.5	5.9		11-4	6.7	6.6
10-5	6.4	5.7		11-5	6.8	6.3
10-6	6.3	5.7		11-6	6.6	6.4
10-7	6.2	5.8		11-7	6.7	6.4
10-8	6.3	5.9		11-8	6.9	6.5
10-9	6.3	5.8		11-9	6.9	6.6
10-10	6.4	5.9		11-10	6.8	6.4
10-11	6.2	5.8		11-11	6.8	6.5
10-12	6.2	5.7		11-12	6.8	6.5
10-13	5.9	5.8		11-13	6.9	6.6
10-14	6.2	5.9		11-14	6.8	6.5
10-15	6.2	5.8		11-15	6.8	6.5
10-16	6.3	5.9		11-16	6.8	6.5
10-17	6.3	5.9		11-17	6.8	6.6
10-18	6.2	5.8		11-18	6.7	6.4
10-19	6.3	5.9		11-19	6.8	6.4
10-20	6.5	5.9		11-20	7.0	6.6
10-21	6.4	6.0		11-21	6.8	6.6
10-22	6.7	6.2		11-22	6.7	6.5
10-23	6.6	6.2		11-23	6.8	6.5
10-24	6.6	6.2		11-24	6.8	6.5
10-25	6.5	6.0		11-25	6.8	6.7
10-26	6.6	6.1		11-26	6.8	6.7
10-27	7.0	6.3		11-27	6.9	6.7
10-28	6.9	6.6		11-28	6.9	6.7
10-29	6.9	6.5		11-29	6.8	6.5
10-30	6.8	6.4		11-30	6.8	6.6
10-31	7.0	6.3				

TABLE A-1 (Cont'd.)

1987			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
12-1	6.9	6.6	1-1	6.7	6.4
12-2	6.8	6.6	1-2	6.7	6.3
12-3	6.8	6.5	1-3	6.7	6.4
12-4	6.9	6.6	1-4	6.9	6.4
12-5	6.8	6.6	1-5	6.9	6.7
12-6	6.8	6.6	1-6	6.9	6.6
12-7	6.6	6.3	1-7	6.9	6.6
12-8	6.8	6.3	1-8	6.7	6.3
12-9	6.6	6.4	1-9	6.5	6.2
12-10	6.7	6.4	1-10	6.5	6.4
12-11	6.7	6.5	1-11	6.9	6.3
12-12	6.8	6.5	1-12	6.7	5.2
12-13	6.6	6.5	1-13	6.7	6.5
12-14	6.7	6.4	1-14	6.7	6.4
12-15	6.8	6.6	1-15	6.8	6.5
12-16	7.4	6.2	1-16	6.9	6.3
12-17	7.0	6.1	1-17	6.9	6.7
12-18	6.7	6.3	1-18	6.8	6.3
12-19	6.7	5.5	1-19	6.6	6.3
12-20	6.6	6.2	1-20	6.7	6.3
12-21	6.6	6.1	1-21	6.8	6.4
12-22	7.0	6.6	1-22	6.7	6.3
12-23	6.9	6.6	1-23	6.8	6.4
12-24	6.9	6.8	1-24	6.6	6.2
12-25	6.8	6.6	1-25	6.6	6.3
12-26	6.6	6.3	1-26	6.8	6.3
12-27	6.5	6.2	1-27	6.8	6.5
12-28	6.8	6.5	1-28	6.8	6.5
12-29	6.9	6.6	1-29	6.8	6.4
12-30	6.7	6.4	1-30	6.6	6.2
12-31	6.7	6.3	1-31	6.7	6.4

TABLE A-1 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
2-1	6.8	6.4	3-1	7.2	7.0
2-2	6.7	6.5	3-2	7.2	6.8
2-3	6.7	6.3	3-3	7.0	6.7
2-4	6.7	6.4	3-4	6.7	6.4
2-5	6.7	6.3	3-5	6.7	6.3
2-6	6.8	6.4	3-6	6.8	6.5
2-7	6.7	6.3	3-7	6.8	6.6
2-8	6.7	6.2	3-8	6.9	6.4
2-9	6.6	6.2	3-9	6.9	6.6
2-10	6.7	6.3	3-10	7.1	6.8
2-11	6.6	6.3	3-11	7.1	6.8
2-12	6.8	6.4	3-12	7.0	6.7
2-13	6.7	6.4	3-13	6.9	6.7
2-14	6.6	6.3	3-14	6.8	6.5
2-15	6.5	6.2	3-15	6.8	6.4
2-16	6.8	6.4	3-16	6.6	6.3
2-17	6.8	6.6	3-17	6.3	6.2
2-18	6.6	6.4	3-18	6.4	6.0
2-19	6.5	6.2	3-19	6.6	5.9
2-20	6.6	6.2	3-20	6.7	6.1
2-21	6.6	6.4	3-21	6.9	6.2
2-22	6.6	6.4	3-22	7.2	6.5
2-23	6.7	6.2	3-23	7.4	6.7
2-24	6.6	6.1	3-24	7.4	6.7
2-25	6.6	6.2	3-25	6.9	6.6
2-26	6.6	6.0	3-26	7.0	6.6
2-27	6.8	6.4	3-27	6.8	6.4
2-28	6.7	6.3	3-28	6.7	6.5
2-29	7.2	6.7	3-29	6.9	6.5
			3-30	6.8	6.6
			3-31	6.8	6.6

TABLE A-1 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
4-1	6.8	6.5	5-1	6.2	6.0
4-2	6.9	6.5	5-2	6.3	6.1
4-3	7.1	6.5	5-3	6.7	6.0
4-4	6.9	6.4	5-4	6.6	6.1
4-5	7.1	6.3	5-5	6.6	6.4
4-6	7.1	6.4	5-6	6.6	6.2
4-7	7.0	6.4	5-7	6.7	6.2
4-8	6.9	6.3	5-8	6.5	6.1
4-9	6.9	6.3	5-9	7.0	6.0
4-10	6.9	6.3	5-10	7.4	5.9
4-11	6.7	6.5	5-11	7.4	6.1
4-12	7.1	6.4	5-12	7.7	6.2
4-13	6.7	6.4	5-13	7.6	6.3
4-14	6.8	6.5	5-14	7.7	6.4
4-15	6.9	6.7	5-15	7.8	6.5
4-16	6.8	6.7	5-16	7.0	6.2
4-17	6.9	6.6	5-17	6.9	6.2
4-18	6.5	6.0	5-18	6.9	6.0
4-19	6.6	6.2	5-19	6.9	6.0
4-20	6.7	6.3	5-20	7.2	6.0
4-21	6.6	6.2	5-21	7.5	6.0
4-22	6.6	6.3	5-22	7.6	6.2
4-23	6.5	6.2	5-23	7.6	6.4
4-24	6.4	6.1	5-24	7.5	6.2
4-25	6.7	6.0	5-25	7.5	6.1
4-26	7.2	6.2	5-26	7.4	6.1
4-27	7.2	6.4	5-27	7.3	6.2
4-28	6.9	6.3	5-28	7.1	6.2
4-29	6.8	6.0	5-29	6.6	6.3
4-30	6.4	6.0	5-30	6.3	6.0
			5-31	6.4	5.8

TABLE A-1 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
6-1	7.0	5.9	7-1	9.0	1.1
6-2	7.5	6.0	7-2	9.2	0.9
6-3	7.6	6.3	7-3	9.0	0.8
6-4	7.2	6.1	7-4	9.0	4.2
6-5	6.4	6.3	7-5	9.4	5.2
6-6	6.3	5.9	7-6	9.0	1.7
6-7	6.4	6.1	7-7	9.0	2.8
6-8	6.4	5.9	7-8	8.9	1.7
6-9	6.7	5.9	7-9	9.1	1.1
6-10	6.7	5.9	7-10	9.0	5.2
6-11	6.8	5.9	7-11	9.1	0.5
6-12	7.0	6.0	7-12	9.3	1.8
6-13	7.0	4.7	7-13	8.9	0.8
6-14	7.5	4.8	7-14	8.9	0.6
6-15	7.0	5.0	7-15	9.0	1.1
6-16	7.1	4.7	7-16	8.9	1.3
6-17	7.0	5.5	7-17	9.1	0.7
6-18	7.4	4.7	7-18	9.1	7.5
6-19	8.9	5.0	7-19	9.1	6.5
6-20	9.1	4.7	7-20	9.1	6.5
6-21	9.0	0.8	7-21	9.1	6.7
6-22	9.2	5.5	7-22	9.1	6.0
6-23	8.1	6.8	7-23	9.1	6.0
6-24	8.5	4.8	7-24	9.1	6.0
6-25	8.5	4.6	7-25	9.1	6.3
6-26	8.9	2.7	7-26	9.1	9.1
6-27	8.9	0.5	7-27	9.1	7.4
6-28	9.3	3.8	7-28	9 1	4.4
6-29	9.4	1.4	7-29	8.8	1.5
6-30	9.0	0.8	7-30	8.0	1.1
			7-31	7.9	1.0

TABLE A-1 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
8-1	7.5	1.3	9-1	6.7	0.7
8-2	7.2	1.5	9-2	6.9	1.4
8-3	6.7	1.2	9-3	6.9	0.9
8-4	6.7	0.3	9-4	7.0	1.2
8-5	7.1	0.9	9-5	7.7	1.1
8-6	7.0	0.7	9-6	7.7	1.1
8-7	6.5	1.5	9-7	7.9	1.1
8-8	7.4	1.2	9-8	7.9	0.9
8-9	7.9	0.5	9-9	7.9	1.3
8-10	8.0	1.0	9-10	8.6	2.0
8-11	8.0	1.9	9-11	8.6	2.2
8-12	8.0	1.6	9-12	8.0	3.7
8-13	7.8	1.3	9-13	7.8	3.7
8-14	7.5	1.3	9-14	7.7	3.7
8-15	7.2	1.0	9-15	7.4	3.7
8-16	7.0	1.1	9-16	7.5	3.7
8-17	6.5	0.6	9-17	7.8	3.7
8-18	6.1	0.4	9-18	8.4	3.7
8-19	6.1	1.0	9-19	8.3	4.0
8-20	6.7	0.9	9-20	9.6	5.7
8-21	6.5	1.1	9-21	9.3	5.8
8-22	6.0	1.3	9-22	8.7	3.8
8-23	7.5	0.9	9-23	8.3	3.7
8-24	6.7	1.7	9-24	8.1	3.7
8-25	6.2	1.0	9-25	8.4	3.7
8-26	6.8	1.4	9-26	8.4	3.7
8-27	6.6	1.2	9-27	8.6	3.7
8-28	6.3	1.2	9-28	8.4	3.8
8-29	6.6	0.9	9-29	8.1	3.7
8-30	7.5	1.4	9-30	7.8	3.8
8-31	7.4	0.8			

TABLE A-2. Corrosion Array Site Steam Flow Data, Unfactored.

The conversion factor for this table is 82.99,
until September, when it was changed to 120.

1987			1987		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
10-1	6.3	5.9	11-1	7.0	6.9
10-2	6.0	5.7	11-2	7.2	6.7
10-3	6.0	5.5	11-3	6.8	6.7
10-4	6.3	5.9	11-4	7.1	6.6
10-5	6.5	6.2	11-5	7.1	6.9
10-6	6.5	6.2	11-6	6.6	6.3
10-7	6.6	6.4	11-7	6.4	6.2
10-8	6.6	6.4	11-8	6.4	6.1
10-9	6.3	6.0	11-9	6.4	6.2
10-10	6.2	6.0	11-10	6.3	6.1
10-11	6.5	6.1	11-11	6.6	6.2
10-12	6.6	6.3	11-12	7.1	6.6
10-13	6.5	6.4	11-13	7.7	7.2
10-14	6.5	6.3	11-14	7.2	7.0
10-15	6.4	6.3	11-15	6.8	6.3
					6.7
10-16	6.5	6.1	11-16	7.2	6.7
10-17	6.4	6.2	11-17	7.1	6.3
10-18	6.5	6.1	11-18	6.6	6.1
10-19	6.6	6.4	11-19	6.5	6.8
10-20	6.5	6.1	11-20	7.6	
					7.0
10-21	6.7	6.3	11-21	7.5	6.9
10-22	7.2	6.8	11-22	7.5	7.0
10-23	6.9	6.7	11-23	7.2	6.9
10-24	6.4	6.1	11-24	7.8	7.2
10-25	6.2	5.5	11-25	7.4	
10-26	6.3	5.6	11-26	7.2	7.0
10-27	6.7	6.0	11-27	7.5	7.0
10-28	6.8	6.5	11-28	7.8	7.4
10-29	7.0	6.7	11-29	7.2	7.0
10-30	7.0	6.4	11-30	7.4	7.1
10-31	7.3	7.0			

TABLE A-2 (Cont'd)

1987			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
12-1	7.1	7.0	1-1	7.3	7.0
12-2	7.3	6.8	1-2	7.5	7.2
12-3	8.0	7.4	1-3	7.6	7.3
12-4	7.4	7.3	1-4	8.0	7.6
12-5	7.4	7.1	1-5	8.2	8.0
12-6	7.3	6.9	1-6	7.8	7.3
12-7	8.1	7.8	1-7	7.8	7.2
12-8	7.3	7.1	1-8	7.5	7.3
12-9	7.7	7.4	1-9	7.5	6.9
12-10	7.1	7.0	1-10	8.0	7.4
		6.6			
12-11	7.2	6.7	1-11	8.0	7.8
12-12	7.5	7.5	1-12	7.9	7.7
12-13	8.0	7.2	1-13	7.5	7.3
12-14	7.6	7.3	1-14	8.4	7.3
12-15	7.9		1-15	8.6	8.4
12-16	8.0	7.7	1-16	8.5	8.2
12-17	8.3	7.9	1-17	9.2	8.9
12-18	7.9	7.4	1-18	8.3	7.7
12-19	8.1	7.6	1-19	7.4	7.3
12-20	7.3	7.1	1-20	7.3	6.9
12-21	7.6	7.1	1-21	7.6	7.4
12-22	8.4	7.9	1-22	7.2	6.9
12-23	8.1	8.0	1-23	7.7	7.3
12-24	7.9	7.7	1-24	7.3	7.0
12-25	7.6	7.5	1-25	7.6	7.3
12-26	7.2	7.0	1-26	7.9	7.0
12-27	7.3	6.9	1-27	7.9	7.2
12-28	7.8	7.6	1-28	8.3	7.4
12-29	8.3	7.8	1-29	8.4	7.8
12-30	7.7	7.6	1-30	8.5	7.9
12-31	7.5	7.1	1-31	8.5	8.4

TABLE A-2 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
2-1	8.4	8.3	3-1	9.0	8.8
2-2	8.3	8.3	3-2	8.5	8.5
2-3	7.5	7.1	3-3	8.3	7.9
2-4	7.5	7.1	3-4	8.1	7.7
2-5	7.6	7.0	3-5	8.1	7.7
2-6	7.8	7.3	3-6	8.7	8.2
2-7	8.0	7.3	3-7	8.2	7.9
2-8	7.9	7.3	3-8	8.3	7.7
2-9	8.1	7.2	3-9	8.7	8.2
2-10	8.0	7.5	3-10	8.8	8.4
2-11	8.1	7.4	3-11	8.7	8.5
2-12	8.5	7.7	3-12	8.4	8.1
2-13	8.4	8.0	3-13	8.4	7.7
2-14	8.4	7.7	3-14	8.7	8.1
2-15	8.8	8.0	3-15	8.9	8.7
2-16	8.6	8.2	3-16	8.2	8.0
2-17	8.3	7.8	3-17	8.0	7.6
2-18	8.6	8.4	3-18	8.3	7.6
2-19	8.5	8.3	3-19	8.5	7.6
2-20	8.3	7.6	3-20	8.6	7.8
2-21	8.7	7.9	3-21	8.6	8.1
2-22	8.8	8.1	3-22	8.5	8.1
2-23	9.0	8.8	3-23	8.4	8.1
2-24	8.5	8.5	3-24	8.4	7.7
2-25	8.3	8.0	3-25	8.4	7.7
2-26	8.2	7.8	3-26	9.0	7.8
2-27	8.4	7.6	3-27	8.7	8.5
2-28	8.6	8.2	3-28	8.4	8.1
2-29	8.8	8.2	3-29	9.0	8.2
			3-30	8.8	8.6
			3-31	8.6	8.4

TABLE A-2 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
4-1	8.6	8.1				
4-2	8.9	8.1				
4-3	9.0	8.5				
4-4	8.7	8.1				
4-5	8.7	7.8				
4-6	8.8	8.0				
4-7	8.9	8.4				
4-8	8.4	8.0				
4-9	8.4	7.7				
4-10	8.7	7.8				
4-11	9.0	8.2				
4-12	9.0	8.4				
4-13	9.3	8.7				
4-14	9.6	9.2				
4-15	9.0	9.0				
4-16	9.1	8.9				
4-17	9.0	8.8				
4-18	9.4	9.0				
4-19	9.6	9.3				
4-20	9.8	9.5				
4-21	9.8	9.5		6-21	9.4	9.4
4-22	9.5	9.1		6-22	9.4	9.4
4-23	9.8	9.5		6-23	9.4	9.4
4-24	9.5	9.3		6-24	9.4	9.4
				6-25	9.4	9.4
				6-26	9.4	9.4
				6-27	9.6	9.2
				6-28	9.4	9.4
				6-29	9.2	9.0
				6-30	9.1	9.0

TABLE A-2 (Cont'd)

1988		
	Graph units	
Date	High	Low
7-1	9.3	9.0
7-2	9.2	9.1
7-3	9.3	9.1
7-4	9.3	9.1
7-5	9.3	9.1
7-6	9.2	9.1
7-7	9.2	9.1
7-8	9.2	9.0
7-9	9.1	9.1
7-10	9.2	9.2
7-11	9.3	9.3
7-12	9.5	9.3
7-13	9.4	9.2
7-14	9.4	9.2
7-15	9.5	9.3
7-16	9.4	9.3
7-17	9.3	9.1
7-18	9.4	9.3
7-19	9.5	9.5
7-20	9.5	9.4
7-21	9.4	9.3
7-22	9.4	9.4
7-23	9.6	9.5
7-24	9.6	9.5
7-25	9.5	9.4
7-26	9.7	9.6
7-27	9.9	9.7
7-28	9.9	9.7
7-29	9.9	9.7
7-30	9.8	9.7
7-31	9.8	9.7

TABLE A-3. Two-Inch Well Steam Flow Data, Unfactored.

The conversion factor for this table is 15.7.

1987				1987		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
10-1	6.0	5.6		11-1	6.1	5.8
10-2	5.7	5.5		11-2	6.4	5.5
10-3	5.7	5.3		11-3	5.9	5.6
10-4	5.8	5.4		11-4	6.2	5.6
10-5	6.0	5.7		11-5	6.3	5.5
10-6	6.1	5.8		11-6	5.9	5.4
10-7	6.3	5.8		11-7	5.8	5.0
10-8	6.2	5.9		11-8	5.8	4.9
10-9	6.0	5.9		11-9	5.8	5.0
10-10	5.9	5.6		11-10	5.7	5.4
10-11	5.9	5.4		11-11	5.9	4.9
10-12	6.2	5.7		11-12	6.2	5.2
10-13	6.2	5.9		11-13	6.7	5.9
10-14	6.2	5.7		11-14	6.4	5.9
10-15	6.0	5.7		11-15	5.8	5.0
10-16	5.7	5.5		11-16	6.1	5.5
10-17	5.9	5.4		11-17	6.0	5.6
10-18	6.1	5.6		11-18	5.5	4.8
10-19	6.2	5.7		11-19	5.5	4.5
10-20	6.1	5.6		11-20	6.4	5.2
10-21	6.2	5.4		11-21	6.3	5.6
10-22	6.2	5.6		11-22	6.2	5.6
10-23	6.2	5.6		11-23	6.0	5.7
10-24	5.7	5.2		11-24	6.4	5.2
10-25	5.6	5.4		11-25	5.8	5.5
10-26	5.8	5.1		11-26	5.8	5.3
10-27	6.0	5.6		11-27	6.2	5.3
10-28	6.2	5.4		11-28	6.6	6.0
10-29	6.3	5.7		11-29	5.9	5.5
10-30	6.1	5.4		11-30	5.8	5.2
10-31	6.4	6.0				

TABLE A-3 (Cont'd)

1987			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
12-1	6.0	5.6	1-1	5.4	4.7
12-2	5.8	5.2	1-2	5.6	4.8
12-3	5.9	5.0	1-3	5.7	5.2
12-4	6.4	5.7	1-4	5.9	5.5
12-5	6.0	5.1	1-5	6.4	5.8
12-6	5.8	5.1	1-6	5.8	4.7
12-7	5.9	5.1	1-7	5.9	5.0
12-8	6.1	5.1	1-8	5.7	5.1
12-9	5.5	5.1	1-9	5.5	4.9
12-10	5.9	5.0	1-10	5.8	5.0
12-11	6.0	5.2	1-11	6.6	6.0
12-12	6.3	5.7	1-12	5.5	4.8
12-13	6.1	5.7	1-13	5.4	4.5
12-14	5.6	4.8	1-14	5.8	4.6
12-15	6.4	5.5	1-15	6.5	6.0
12-16	6.4	6.1	1-16	6.4	5.9
12-17	6.5	6.1	1-17	7.3	6.3
12-18	6.1	5.5	1-18	6.1	5.6
12-19	6.0	5.5	1-19	5.1	4.8
12-20	5.3	4.7	1-20	5.3	4.1
12-21	5.5	5.2	1-21	5.7	4.8
12-22	6.6	5.7	1-22	5.1	4.3
12-23	6.0	5.5	1-23	5.9	4.8
12-24	5.7	5.6	1-24	5.5	4.6
12-25	5.7	5.3	1-25	5.6	5.3
12-26	5.5	4.9	1-26	5.7	4.7
12-27	5.5	4.9	1-27	5.9	4.7
12-28	5.8	5.3	1-28	6.1	5.1
12-29	6.2	5.6	1-29	6.5	5.7
12-30	5.6	5.1	1-30	6.3	5.6
12-31	5.2	4.7	1-31	6.4	5.7

TABLE A-3 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
2-1	6.3	5.6		3-1	6.8	5.6
2-2	5.9	5.7		3-2	6.5	6.0
2-3	5.4	4.7		3-3	6.5	5.4
2-4	5.5	4.8		3-4	6.4	5.3
2-5	5.5	4.7		3-5	6.4	5.1
2-6	5.8	4.8		3-6	6.6	5.3
2-7	5.9	4.9		3-7	6.3	5.5
2-8	5.9	5.1		3-8	6.0	4.8
2-9	5.9	4.7		3-9	6.5	5.1
2-10	5.6	4.9		3-10	6.4	5.5
2-11	5.7	4.8		3-11	6.3	5.5
2-12	6.0	4.9		3-12	6.0	5.2
2-13	6.3	5.3		3-13	5.9	4.9
2-14	5.8	5.0		3-14	6.6	5.6
2-15	6.3	5.1		3-15	7.3	6.2
2-16	6.1	4.9		3-16	6.2	5.3
2-17	5.8	4.8		3-17	5.7	4.8
2-18	6.2	5.4		3-18	5.9	4.7
2-19	5.6	4.9		3-19	6.2	4.9
2-20	5.7	4.8		3-20	6.5	5.1
2-21	6.0	4.7		3-21	6.8	5.6
2-22	6.4	5.2		3-22	6.4	5.5
2-23	6.1	5.1		3-23	6.5	5.4
2-24	5.8	4.7		3-24	6.1	5.1
2-25	6.1	4.8		3-25	6.3	5.0
2-26	6.2	5.0		3-26	6.6	5.1
2-27	5.9	5.1		3-27	7.1	5.8
2-28	6.0	4.5		3-28	5.9	5.7
2-29	6.0	5.4		3-29	6.4	5.2
				3-30	6.5	5.8
				3-31	6.2	5.4

TABLE A-3 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
4-1	6.2	5.2		5-1	5.6	5.2
4-2	6.5	5.3		5-2	6.5	5.8
4-3	6.8	5.6		5-3	6.5	6.1
4-4	6.3	5.0		5-4	6.4	6.0
4-5	5.9	5.0		5-5	6.6	6.0
4-6	6.4	4.7		5-6	6.8	6.2
4-7	6.7	4.9		5-7	7.0	6.7
4-8	6.3	5.6		5-8	6.6	6.2
4-9	6.1	4.9		5-9	6.7	6.2
4-10	6.0	4.9		5-10	6.8	6.8
4-11	6.5	4.9		5-11	6.1	5.9
4-12	6.2	5.3		5-12	6.2	5.3
4-13	6.3	5.6		5-13	6.2	5.4
4-14	6.7	5.8		5-14	6.5	5.4
4-15	6.1	4.5		5-15	6.6	6.0
4-16	6.1	4.5		5-16	6.6	6.2
4-17	6.4	4.6		5-17	5.9	5.7
4-18	6.3	4.8		5-18	6.5	5.6
4-19	6.5	5.3		5-19	6.4	5.8
4-20	6.7	5.5		5-20	6.3	5.6
4-21	6.3	5.5		5-21	6.3	5.8
4-22	5.9	5.2		5-22	6.4	5.8
4-23	5.9	4.5		5-23	6.5	5.7
4-24	6.3	5.8		5-24	6.3	5.5
4-25	6.1	4.7		5-25	6.3	5.5
4-26	6.3	5.0		5-26	6.4	5.7
4-27	6.4	5.4		5-27	7.1	6.3
4-28	6.4	5.7		5-28	6.8	6.7
4-29	6.2	5.1		5-29	6.5	6.2
4-30	6.5	5.5		5-30	6.3	6.2
				5-31	6.7	5.4

TABLE A-3 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
6-1	6.2	5.2	7-1	7.6	6.9
6-2	6.3	5.3	7-2	7.8	6.8
6-3	6.5	5.3	7-3	7.5	6.9
6-4	6.6	6.0	7-4	7.4	7.1
6-5	6.6	6.3	7-5	7.7	7.1
6-6	6.5	5.9	7-6	7.8	7.1
6-7	6.3	5.4	7-7	7.8	7.1
6-8	6.4	5.7	7-8	7.8	7.5
6-9	6.4	5.7	7-9	7.9	7.6
6-10	6.4	5.6	7-10	7.9	7.7
6-11	6.2	5.6	7-11	7.5	7.4
6-12	6.4	5.7	7-12	7.7	6.9
6-13	6.3	5.9	7-13	7.6	7.1
6-14	6.2	5.4	7-14	7.5	7.1
6-15	6.2	5.5	7-15	7.6	7.1
6-16	6.5	5.7	7-16	7.7	7.1
6-17	6.5	5.9	7-17	7.8	7.1
6-18	6.3	5.5	7-18	7.6	6.4
6-19	7.1	5.5	7-19	7.5	6.6
6-20	6.9	6.0	7-20	7.6	6.4
6-21	9.3	8.1	7-21	7.7	6.2
6-22	9.2	8.1	7-22	7.5	5.9
6-23	9.7	8.6	7-23	7.6	6.1
6-24	9.6	8.1	7-24	7.5	6.3
6-25	9.4	8.2	7-25	7.6	6.4
6-26	9.3	7.5	7-26	7.5	6.5
6-27	9.0	7.4	7-27	7.7	6.7
6-28	9.3	8.1	7-28	7.6	6.3
6-29	7.4	6.9	7-29	7.6	6.6
6-30	7.6	6.8	7-30	7.7	6.6
			7-31	7.5	6.9

TABLE A-3 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
8-1	7.5	7.2		9-1	6.8	6.1
8-2	7.6	7.4		9-2	6.5	5.9
8-3	7.7	7.3		9-3	6.5	6.5
8-4	7.7	7.1		9-4	6.4	5.9
8-5	7.6	6.9		9-5	6.8	6.1
8-6	7.6	7.2		9-6	7.2	6.9
8-7	7.6	7.2		9-7	7.2	6.9
8-8	7.8	7.2		9-8	7.4	7.2
8-9	7.6	7.2		9-9	7.3	7.1
8-10	7.6	7.2		9-10	7.1	7.0
8-11	7.5	7.3		9-11	7.4	6.8
8-12	7.6	7.3		9-12	6.6	6.0
8-13	7.5	7.1		9-13	7.2	7.1
8-14	7.6	7.2		9-14	7.2	7.0
8-15	7.6	7.0		9-15	7.5	7.5
8-16	7.7	6.6		9-16	6.9	6.9
8-17	7.8	7.1		9-17	7.3	7.0
8-18	7.6	6.8		9-18	7.1	6.9
8-19	7.5	6.6		9-19	6.7	6.0
8-20	7.4	6.7		9-20	6.8	6.6
8-21	7.4	7.0		9-21	6.6	6.1
8-22	7.6	7.0		9-22	6.7	6.0
8-23	7 6	7.3		9-23	7.3	6.8
8-24	7.6	7.0		9-24	7.2	6.7
8-25	7.5	7.2		9-25	7.2	7.0
8-26	7.6	7.4		9-26	7.0	7.0
8-27	7.6	7.3		9-27	7.2	7.1
8-28	7.6	7.1		9-28	7.0	6.8
8-29	6.4	6.0		9-29	7.0	6.6
8-30	6.5	6.2		9-30	6.9	6.9
8-31	6.6	5.9				

TABLE A-4. Eight-Inch Well Steam Flow Data, Unfactored.

The conversion factor for this table is 20.56

1987			1987		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
10-1	10.0	7.0	11-1	5.3	7.0
10-2	10.0	10.0	11-2	8.0	10.0
10-3	10.0	11.0	11-3	10.0	9.0
10-4	10.0	7.0	11-4	5.6	9.0
10-5	10.0	11.0	11-5	8.4	6.0
10-6	9.8	8.0	11-6	8.7	3.0
10-7	10.0	5.0	11-7	10.0	11.0
10-8	10.0	5.0	11-8	10.0	7.0
10-9	9.9	13.0	11-9	10.0	9.0
10-10	10.0	2.0	11-10	10.0	8.0
10-11	10.0	5.0	11-11	10.0	7.0
10-12	10.0	4.0	11-12	10.0	4.0
10-13	10.0	9.0	11-13	10.0	7.0
10-14	10.0	11.0	11-14	9.7	5.0
10-15	9.9	7.0	11-15	7.5	7.0
10-16	9.8	6.0	11-16	10.0	10.0
10-17	10.0	6.0	11-17	10.0	11.0
10-18	10.0	7.0	11-18	10.0	14.0
10-19	7.6	6.0	11-19	10.0	10.0
10-20	10.0	10.0	11-20	9.9	7.0
10-21	8.9	6.0	11-21	9.9	4.0
10-22	8.8	7.0	11-22	10.0	3.0
10-23	8.1	11.0	11-23	10.0	8.0
10-24	3.6	10.0	11-24	10.0	12.0
10-25	9.6	9.0	11-25	5.6	11.0
10-26	9.8	7.0	11-26	9.9	9.0
10-27	9.2	7.0	11-27	9.9	8.0
10-28	9.0	8.0	11-28	10.0	8.0
10-29	9.4	6.0	11-29	10.0	7.0
10-30	9.9	8.0	11-30	8.5	11.0
10-31	8.0	8.0			

TABLE A-4 (Cont'd)

1987			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
12-1	10.0	9.0	1-1	9.3	9.0
12-2	10.0	8.0	1-2	8.7	10.0
12-3	9.8	8.0	1-3	10.0	9.0
12-4	8.4	4.0	1-4	8.8	6.0
12-5	8.4	5.0	1-5	9.8	3.0
12-6	9.7	10.0	1-6	2.8	7.0
12-7	8.3	7.0	1-7	8.9	6.0
12-8	8.4	7.0	1-8	9.4	7.0
12-9	10.0	5.0	1-9	8.7	6.0
12-10	10.0	4.0	1-10	10.0	4.0
12-11	3.7	8.0	1-11	8.0	9.0
12-12	4.7	10.0	1-12	9.2	6.0
12-13	9.9	8.0	1-13	10.0	12.0
12-14	4.2	9.0	1-14	10.0	8.0
12-15	4.5	5.0	1-15	7.3	9.0
12-16	8.6	7.0	1-16	10.0	3.0
12-17	5.9	9.0	1-17	2.1	9.0
12-18	8.8	11.0	1-18	10.0	9.0
12-19	8.5	8.0	1-19	85.8	11.0
12-20	5.7	7.0	1-20	9.7	8.0
12-21	8.9	9.0	1-21	10.0	13.0
12-22	4.9	8.0	1-22	9.4	14.0
12-23	2.2	11.0	1-23	10.0	11.0
12-24	4.2	9.0	1-24	10.0	5.0
12-25	8.3	9.0	1-25	10.0	10.0
12-26	8.9	7.0	1-26	10.0	10.0
12-27	4.9	7.0	1-27	10.0	8.0
12-28	8.8	8.0	1-28	10.0	9.0
12-29	9.7	6.0	1-29	9.2	7.0
12-30	2.9	9.0	1-30	10.0	12.0
12-31	8.9	9.0	1-31	9.0	10

TABLE A-4 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
2-1	9.9	14.0	3-1	3.8	5.0
2-2	4.4	10.0	3-2	7.4	8.0
2-3	9.6	8.0	3-3	7.5	9.0
2-4	9.2	7.0	3-4	7.8	9.0
2-5	8.9	9.0	3-5	7.4	10.0
2-6	10.0	6.0	3-6	7.3	11.0
2-7	10.0	9.0	3-7	10.0	7.0
2-8	3.6	8.0	3-8	4.5	5.0
2-9	101.0	11.0	3-9	9.2	9.0
2-10	6.1	8.0	3-10	6.7	8.0
2-11	6.4	7.0	3-11	7.2	8.0
2-12	3.5	4.0	3-12	8.5	9.0
2-13	7.0	17.0	3-13	9.4	12.0
2-14	3.5	9.0	3-14	10.0	10.0
2-15	8.0	8.0	3-15	6.8	8.0
2-16	3.5	8.0	3-16	6.9	10.0
2-17	8.0	8.0	3-17	8.5	6.0
2-18	3.1	8.0	3-18	9.4	9.0
2-19	7.7	8.0	3-19	10.0	12.0
2-20	7.7	11.0	3-20	10.0	12.0
2-21	9.4	13.0	3-21	9.7	17.0
2-22	6.1	7.0	3-22	9.8	20.0
2-23	8.9	10.0	3-23	9.9	16.0
2-24	7.8	7.0	3-24	9.7	13.0
2-25	8.0	8.0	3-25	9.9	18.0
2-26	9.0	5.0	3-26	9.8	14.0
2-27	1.6	6.0	3-27	9.9	13.0
2-28	6.2	13.0	3-28	4.9	9.0
2-29	5.0	4.0	3-29	1.7	7.0
			3-30	3.8	12.0
			3-31	6.2	9

TABLE A-4 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
4-1	8.7	6.0	5-1	5.7	9.0
4-2	9.4	6.0	5-2	10.0	9.0
4-3	9.3	10.0	5-3	10.0	13.0
4-4	8.7	8.0	5-4	10.0	8.0
4-5	8.7	9.0	5-5	7.3	8.0
4-6	10.0	6.0	5-6	10.0	10.0
4-7	10.0	6.0	5-7	9.9	11.0
4-8	9.7	10.0	5-8	10.0	9.0
4-9	10.0	8.0	5-9	10.0	11.0
4-10	10.0	8.0	5-10	10.0	8.0
4-11	9.2	7.0	5-11	10.0	3.0
4-12	8.1	7.0	5-12	10.0	8.0
4-13	4.5	7.0	5-13	10.0	8.0
4-14	5.1	7.0	5-14	10.0	5.0
4-15	9.9	9.0	5-15	10.0	8.0
4-16	9.9	9.0	5-16	5.8	8.0
4-17	9.4	8.0	5-17	11.0	11.0
4-18	9.9	6.0	5-18	10.0	10.0
4-19	7.3	9.0	5-19	9.0	9.0
4-20	7.3	7.0	5-20	6.0	6.0
4-21	9.8	9.0	5-21	3.5	7.0
4-22	9.8	11.0	5-22	3.7	7.0
4-23	9.1	14.0	5-23	10.0	11.0
4-24	10.0	12.0	5-24	5.5	1.0
4-25	9.9	7.0	5-25	9.1	10.0
4-26	10.0	3.0	5-26	10.0	9.0
4-27	10.0	10.0	5-27	10.0	9.0
4-28	10.0	10.0	5-28	10.0	10.0
4-29	10.0	12.0	5-29	10.0	8.0
4-30	9.7	11.0	5-30	10.0	5.0
			5-31	5.5	4

TABLE A-4 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
6-1	9.1	3.0		7-1	10.0	9.0
6-2	10.0	7.0		7-2	10.0	12.0
6-3	10.0	3.0		7-3	10.0	10.0
6-4	10.0	9.0		7-4	10.0	13.0
6-5	10.0	10.0		7-5	6.7	3.0
6-6	10.0	10.0		7-6	9.9	13.0
6-7	10.0	9.0		7-7	10.0	14.0
6-8	10.0	14.0		7-8	9.9	12.0
6-9	10.0	1.0		7-9	10.0	4.0
6-10	9.9	3.0		7-10	9.9	13.0
6-11	10.0	13.0		7-11	10.0	21.0
6-12	10.0	10.0		7-12	10.0	11.0
6-13	10.0	4.0		7-13	10.0	10.0
6-14	4.9	9.0		7-14	10.0	8.0
6-15	8.9	13.0		7-15	10.0	8.0
6-16	9.2	0.0		7-16	9.9	24.0
6-17	10.0	5.0		7-17	10.0	39.0
6-18	10.0	6.0		7-18	10.0	50.0
6-19	10.0	9.0		7-19	8.7	11.0
6-20	10.0	11.0		7-20	10.0	11.0
6-21	10.0	15.0		7-21	9.9	3.0
6-22	9.9	14.0		7-22	10.0	8.0
6-23	10.0	7.0		7-23	10.0	50.0
6-24	9.9	5.0		7-24	10.0	40.0
6-25	10.0	10.0		7-25	5.9	12.0
6-26	10.0	12.0		7-26	9.7	14.0
6-27	10.0	5.0		7-27	10.0	10.0
6-28	10.0	9.0		7-28	10.0	9.0
6-29	6.7	10.0		7-29	10.0	9.0
6-30	9.2	5.0		7-30	10.0	21.0
				7-31	9.9	29

TABLE A-4 (Cont'd)

1988			1988		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
8-1	5.3	13.0	9-1	10.0	5.0
8-2	10.0	11.0	9-2	9.9	21.0
8-3	10.0	9.0	9-3	10.0	8.0
8-4	10.0	6.0	9-4	10.0	6.0
8-5	10.0	45.0	9-5	10.0	6.0
8-6	10.0	11.0	9-6	4.7	12.0
8-7	10.0	32.0	9-7	10.0	7.0
8-8	10.0	53.0	9-8	9.9	4.0
8-9	5.9	11.0	9-9	10.0	7.0
8-10	9.1	12.0	9-10	10.0	5.0
8-11	10.0	11.0	9-11	8.7	7.0
8-12	9.9	10.0	9-12	4.6	12.0
8-13	10.0	6.0	9-13	8.5	13.0
8-14	10.0	30.0	9-14	10.0	13.0
8-15	6.4	9.0	9-15	10.0	11.0
8-16	7.5	11.0	9-16	10.0	11.0
8-17	10.0	9.0	9-17	8.6	5.0
8-18	10.0	4.0	9-18	7.8	6.0
8-19	10.0	6.0	9-19	4.3	12.0
8-20	9.9	40.0	9-20	5.6	10.0
8-21	9.9	50.0	9-21	6.5	11.0
8-22	10.0	52.0	9-22	8.0	8.0
8-23	8.7	18.0	9-23	9.9	7.0
8-24	10.0	16.0	9-24	10.0	7.0
8-25	10.0	37.0	9-25	8.9	11.0
8-26	10.0	67.0	9-26	8.5	12.0
8-27	10.0	64.0	9-27	9.2	10.0
8-28	9.9	71.0	9-28	8.7	9.0
8-29	5.7	12.0	9-29	8.2	9.0
8-30	9.1	11.0	9-30	9.9	7.0
8-31	10.0	12.0			

TABLE A-5. Schober's 1 Resort Steam Flow Data, Unfactored.

The conversion factor for this table is 0.5265.

1987			1987		
	Graph units			Graph units	
Date	High	Low	Date	High	Low
10-1	5.5	5.0	11-1	6.0	5.8
10-2	5.4	4.7	11-2	6.3	5.9
10-3	5.4	4.6	11-3	5.8	5.5
10-4	5.8	4.9	11-4	6.4	5.6
10-5	5.8	5.4	11-5	6.2	5.9
10-6	5.8	5.2	11-6	5.9	5.5
10-7	6.0	5.2	11-7	6.0	5.6
10-8	5.8	5.3	11-8	6.1	5.6
10-9	5.6	5.1	11-9	6.2	5.7
10-10	5.5	5.0	11-10	5.7	5.3
10-11	5.6	5.0	11-11	6.0	5.4
10-12	6.0	5.5	11-12	6.4	5.9
10-13	5.9	5.5	11-13	7.2	6.3
10-14	6.0	5.2	11-14	6.5	6.1
10-15	5.6	5.2	11-15	6.2	5.4
10-16	5.6	5.1	11-16	6.4	5.9
10-17	5.7	5.2	11-17	6.2	5.7
10-18	6.1	5.4	11-18	5.8	5.2
10-19	6.0	5.6	11-19	6.1	5.3
10-20	5.8	5.4	11-20	7.0	6.3
10-21	6.0	5.5	11-21	6.5	6.0
10-22	6.0	5.6	11-22	6.7	6.2
10-23	5.7	5.4	11-23	6.3	6.0
10-24	5.3	5.1	11-24	6.9	5.7
10-25	5.6	4.9	11-25	6.1	5.6
10-26	5.7	5.3	11-26	6.2	5.5
10-27	6.0	5.7	11-27	7.0	5.9
10-28	6.2	5.7	11-28	6.9	6.6
10-29	6.3	5.9	11-29	6.3	5.9
10-30	6.2	5.7	11-30	6.4	5 9
10-31	6.3	5.9			

TABLE A-5 (Cont'd)

1987				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
12-1	6.3	5.8		1-1	6.7	6.2
12-2	6.0	5.9		1-2	7.0	6.5
12-3	6.4	6.4		1-3	7.1	6.7
12-4	7.1	6.4		1-4	7.2	6.9
12-5	6.4	6.0		1-5	7.4	6.9
12-6	6.5	5.9		1-6	6.8	6.3
12-7	6.4	5.8		1-7	7.1	6.5
12-8	6.9	6.2		1-8	6.8	6.5
12-9	6.2	5.9		1-9	6.8	6.4
12-10	6.6	6.1		1-10	7.2	6.6
12-11	6.7	6.2		1-11	8.0	7.6
12-12	7.1	6.4		1-12	6.8	6.4
12-13	6.8	6.3		1-13	6.8	6.5
12-14	6.3	6.0		1-14	7.3	6.6
12-15	6.9	6.3		1-15	8.1	7.4
12-16	7.3	6.7		1-16	7.8	7.5
12-17	6.9	6.8		1-17	8.7	8.0
12-18	7.0	6.2		1-18	7.0	6.9
12-19	6.6	6.3		1-19	6.6	6.3
12-20	6.1	5.6		1-20	6.7	6.2
12-21	6.3	6.0		1-21	7.0	6.8
12-22	7.5	7.1		1-22	7.0	6.2
12-23	6.7	6.4		1-23	6.7	7.0
12-24	6.6	6.4		1-24	7.1	6.8
12-25	6.6	6.2		1-25	7.3	7.1
12-26	6.4	6.0		1-26	7.6	7.1
12-27	6.7	6.2		1-27	7.7	7.2
12-28	7.1	6.7		1-28	7.9	7.3
12-29	7.4	7.1		1-29	8.2	7.9
12-30	6.5	6.2		1-30	7.9	7.4
12-31	6.6	6.2		1-31	8.0	7.6

TABLE A-5 (Cont'd)

1988				1988		
	Graph units				Graph units	
Date	High	Low		Date	High	Low
2-1	7.9	7.7		3-1	8.9	8.4
2-2	7.7	7.4		3-2	8.5	8.0
2-3	7.2	6.8		3-3	8.5	8.1
2-4	7.4	7.1		3-4	8.6	8.1
2-5	7.5	7.0		3-5	78.6	8.2
2-6	7.9	7.5		3-6	9.0	8.7
2-7	7.8	7.5		3-7	8.5	8.3
2-8	7.7	7.5		3-8	8.4	8.0
2-9	7.9	7.5		3-9	9.3	8.7
2-10	7.8	7.5		3-10	9.0	8.6
2-11	7.9	7.4		3-11	8.8	8.4
2-12	8.2	7.8		3-12	8.7	8.2
2-13	8.4	8.0		3-13	8.6	8.3
2-14	7.9	7.5		3-14	9.3	9.0
2-15	8.5	7.9		3-15	9.7	9.3
2-16	8.1	8.0		3-16	8.8	8.5
2-17	8.0	7.4		3-17	8.7	8.1
2-18	8.1	7.8		3-18	9.0	8.4
2-19	8.0	7.4		3-19	9.2	8.6
2-20	8.0	7.5		3-20	9.4	8.9
2-21	8.5	8.0		3-21	9.5	9.2
2-22	8.6	8.4		3-22	9.1	8.7
2-23	8.4	8.1		3-23	9.4	9.0
2-24	8.4	8.0		3-24	9.1	8.6
2-25	8.6	8.1		3-25	9.2	8.8
2-26	8.7	8.4		3-26	9.7	9.2
2-27	8.6	8.1		3-27	9.8	9.6
2-28	8.6	8.2		3-28	9.0	8.9
2-29	8.5	8.4		3-29	9.8	9.0
				3-30	9.5	9.2
				3-31	9.4	9

TABLE A-5 (Cont'd)

1988		
	Graph units	
Date	High	Low
4-1	9.5	9.0
4-2	9.7	9.3
4-3	9.9	9.5
4-4	9.6	9.4
4-5	9.3	8.9
4-6	9.7	9.2
4-7	9.9	9.3
4-8	9.7	9.2
4-9	9.7	8.9
4-10	9.9	9.0

Appendix B

DAILY TEMPERATURE DATA

TABLE B-1. Two-Inch Steam Well Temperature, °F.

1987			1987		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
10-1	193	182	11-1	188	175
10-2	201	181	11-2	183	173
10-3	212	192	11-3	187	163
10-4	208	193	11-4	187	159
10-5	193	182	11-5	185	168
10-6	194	178	11-6	186	176
10-7	194	177	11-7	200	181
10-8	192	165	11-8	204	182
10-9	187	173	11-9	202	180
10-10	199	183	11-10	205	186
10-11	203	186	11-11	203	175
10-12	188	170	11-12	192	170
10-13	187	158	11-13	190	168
10-14	187	170	11-14	180	165
10-15	190	172	11-15	200	174
10-16	203	181	11-16	191	176
10-17	201	185	11-17	202	176
10-18	191	173	11-18	202	176
10-19	190	170	11-19	203	188
10-20	196	178	11-20	192	174
10-21	193	174	11-21	184	164
10-22	188	172	11-22	189	168
10-23	189	172	11-23	186	175
10-24	196	172	11-24	195	177
10-25	203	182	11-25	168	151
10-26	204	175	11-26	186	165
10-27	189	186	11-27	188	176
10-28	182	174	11-28	190	176
10-29	187	169	11-29	179	169
10-30	188	173	11-30	195	174
10-31	186	164			

TABLE B-1 (Cont'd)

1987			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
12-1	186	172	1-1	197	173
12-2	194	180	1-2	202	178
12-3	200	177	1-3	184	169
12-4	190	171	1-4	188	167
12-5	190	186	1-5	189	179
12-6	186	177	1-6	199	173
12-7	194	156	1-7	193	179
12-8	188	168	1-8	190	171
12-9	198	176	1-9	206	182
12-10	199	174	1-10	199	177
12-11	187	168	1-11	175	164
12-12	187	156	1-12	197	174
12-13	163	153	1-13	201	192
12-14	197	171	1-14	203	177
12-15	187	175	1-15	184	162
12-16	181	169	1-16	186	175
12-17	185	153	1-17	184	163
12-18	185	158	1-18	183	144
12-19	182	156	1-19	199	178
12-20	201	195	1-20	202	191
12-21	203	177	1-21	195	170
12-22	188	161	1-22	202	185
12-23	176	151	1-23	201	171
12-24	164	146	1-24	198	187
12-25	169	157	1-25	202	181
12-26	201	178	1-26	205	185
12-27	194	182	1-27	199	172
12-28	182	173	1-28	190	175
12-29	185	167	1-29	187	168
12-30	197	182	1-30	185	165
12-31	200	185	1-31	185	174

TABLE B-1 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
2-1	184	170	3-1	186	152
2-2	181	161	3-2	171	157
2-3	200	175	3-3	196	170
2-4	194	162	3-4	198	168
2-5	204	183	3-5	201	184
2-6	205	171	3-6	186	172
2-7	198	177	3-7	190	168
2-8	196	174	3-8	199	173
2-9	195	174	3-9	175	164
2-10	191	164	3-10	183	153
2-11	196	173	3-11	183	151
2-12	202	177	3-12	189	164
2-13	193	168	3-13	200	177
2-14	202	177	3-14	180	178
2-15	182	158	3-15	188	169
2-16	185	150	3-16	188	150
2-17	199	166	3-17	195	184
2-18	184	157	3-18	199	166
2-19	193	154	3-19	203	182
2-20	204	168	3-20	200	176
2-21	198	185	3-21	181	171
2-22	187	168	3-22	184	179
2-23	186	171	3-23	187	180
2-24	204	173	3-24	200	173
2-25	203	172	3-25	194	179
2-26	191	168	3-26	197	186
2-27	191	171	3-27	186	170
2-28	189	172	3-28	201	182
2-29	187	165	3-29	198	184
			3-30	180	157
			3-31	177	150

TABLE B-1 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
4-1	197	161		5-1	196	171
4-2	191	177		5-2	202	194
4-3	188	176		5-3	193	179
4-4	193	180		5-4	187	176
4-5	206	192		5-5	180	162
4-6	204	185		5-6	190	180
4-7	188	179		5-7	193	170
4-8	189	167		5-8	198	178
4-9	202	185		5-9	204	190
4-10	201	183		5-10	203	197
4-11	185	179		5-11	204	190
4-12	192	179		5-12	203	179
4-13	181	180		5-13	186	175
4-14	182	162		5-14	191	177
4-15	185	160		5-15	188	176
4-16	185	166		5-16	183	176
4-17	188	177		5-17	189	169
4-18	197	180		5-18	186	168
4-19	193	166		5-19	183	164
4-20	185	165		5-20	203	177
4-21	187	165		5-21	199	185
4-22	183	165		5-22	203	185
4-23	188	174		5-23	187	163
4-24	194	190		5-24	192	180
4-25	189	182		5-25	196	179
4-26	196	179		5-26	192	179
4-27	192	179		5-27	187	170
4-28	187	169		5-28	192	177
4-29	198	174		5-29	183	163
4-30	186	156		5-30	185	162
				5-31	199	185

TABLE B-1 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
6-1	203	179	7-1	183	182
6-2	202	177	7-2	185	184
6-3	194	171	7-3	182	180
6-4	194	170	7-4	184	183
6-5	188	168	7-5	183	181
6-6	190	160	7-6	183	181
6-7	194	170	7-7	185	173
6-8	197	163	7-8	181	181
6-9	198	182	7-9	182	180
6-10	194	173	7-10	182	177
6-11	194	178	7-11	189	186
6-12	188	184	7-12	187	182
6-13	185	173	7-13	179	178
6-14	204	184	7-14	183	178
6-15	205	187	7-15	184	183
6-16	193	180	7-16	184	181
6-17	194	182	7-17	182	182
6-18	206	183	7-18	199	180
6-19	194	188	7-19	209	175
6-20	186	171	7-20	208	179
6-21	203	178	7-21	183	180
6-22	197	162	7-22	186	166
6-23	193	172	7-23	186	173
6-24	194	180	7-24	196	180
6-25	200	179	7-25	188	167
6-26	199	181	7-26	181	163
6-27	191	179	7-27	175	166
6-28	200	184	7-28	178	169
6-29	188	183	7-29	175	170
6-30	183	179	7-30	180	168
			7-31	177	163

TABLE B-1 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
8-1	184	184	9-1	188	161
8-2	189	176	9-2	188	172
8-3	192	191	9-3	185	167
8-4	185	179	9-4	179	166
8-5	181	179	9-5	164	150
8-6	193	190	9-6	187	170
8-7	192	183	9-7	186	166
8-8	182	172	9-8	188	160
8-9	193	178	9-9	187	169
8-10	191	177	9-10	182	166
8-11	184	181	9-11	187	169
8-12	183	177	9-12	180	154
8-13	183	166	9-13	193	185
8-14	184	169	9-14	206	181
8-15	203	187	9-15	195	185
8-16	202	187	9-16	193	169
8-17	192	188	9-17	195	189
8-18	191	185	9-18	199	146
8-19	179	177	9-19	170	162
8-20	180	177	9-20	151	151
8-21	193	181	9-21	184	181
8-22	190	185	9-22	181	165
8-23	192	187	9-23	164	159
8-24	195	188	9-24	185	170
8-25	193	181	9-25	168	157
8-26	193	184	9-26	186	184
8-27	183	180	9-27	182	172
8-28	188	187	9-28	162	159
8-29	168	154	9-29	182	181
8-30	185	175	9-30	180	172
8-31	188	169			

TABLE B-2. Schober's 2 Resort Steam Temperature, °F.

1987				1987		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
10-1	201.0	196.0		11-1	193.0	192.0
10-2	200.0	196.0		11-2	195.0	194.0
10-3	200.0	197.0		11-3	193.0	192.0
10-4	203.0	199.0		11-4	192.0	191.0
10-5	200.0	199.0		11-5	194.0	192.0
10-6	201.0	195.0		11-6	196.0	194.0
10-7	201.0	195.0		11-7	199.0	197.0
10-8	199.0	195.0		11-8	200.0	197.0
10-9	201.0	193.0		11-9	199.0	197.0
10-10	195.0	195.0		11-10	194.0	193.0
10-11	199.0	196.0		11-11	196.0	192.0
10-12	197.0	195.0		11-12	197.0	196.0
10-13	194.0	192.0		11-13	197.0	196.0
10-14	196.0	194.0		11-14	197.0	195.0
10-15	199.0	191.0		11-15	196.0	196.0
10-16	199.0	193.0		11-16	196.0	193.0
10-17	200.0	195.0		11-17	189.0	188.0
10-18	200.0	197.0		11-18	194.0	192.0
10-19	199.0	197.0		11-19	200.0	198.0
10-20	197.0	192.0		11-20	202.0	202.0
10-21	196.0	194.0		11-21	201.0	198.0
10-22	199.0	198.0		11-22	197.0	195.0
10-23	200.0	199.0		11-23	191.0	191.0
10-24	196.0	196.0		11-24	196.0	192.0
10-25	194.0	193.0		11-25	198.0	194.0
10-26	193.0	193.0		11-26	193.0	193.0
10-27	195.0	193.0		11-27	195.0	193.0
10-28	197.0	195.0		11-28	195.0	194.0
10-29	195.0	195.0		11-29	197.0	196.0
10-30	196.0	196.0		11-30	196.0	195.0
10-31	197.0	194.0				

TABLE B-2 (Cont'd)

1987			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
12-1	194.0	193.0	1-1	195.0	193.0
12-2	196.0	195.0	1-2	196.0	193.0
12-3	197.0	195.0	1-3	195.0	194.0
12-4	195.0	195.0	1-4	195.0	194.0
12-5	195.0	194.0	1-5	197.0	194.0
12-6	195.0	193.0	1-6	195.0	195.0
12-7	194.0	194.0	1-7	196.0	195.0
12-8	195.0	194.0	1-8	196.0	195.0
12-9	195.0	194.0	1-9	196.0	195.0
12-10	197.0	196.0	1-10	195.0	195.0
12-11	198.0	195.0	1-11	192.0	191.0
12-12	194.0	193.0	1-12	195.0	194.0
12-13	194.0	192.0	1-13	197.0	196.0
12-14	194.0	193.0	1-14	193.0	190.0
12-15	194.0	193.0	1-15	196.0	195.0
12-16	194.0	192.0	1-16	193.0	192.0
12-17	195.0	194.0	1-17	191.0	191.0
12-18	196.0	194.0	1-18	192.0	192.0
12-19	195.0	193.0	1-19	193.0	193.0
12-20	196.0	195.0	1-20	195.0	193.0
12-21	194.0	193 0	1-21	196.0	195.0
12-22	192.0	190.0	1-22	196.0	194.0
12-23	193.0	192.0	1-23	197.0	196.0
12-24	196.0	194.0	1-24	195.0	194.0
12-25	197.0	196.0	1-25	198.0	198.0
12-26	196.0	196.0	1-26	197.0	195.0
12-27	195.0	195.0	1-27	198.0	194.0
12-28	195.0	193.0	1-28	197.0	196.0
12-29	197.0	193.0	1-29	195.0	194.0
12-30	196.0	195.0	1-30	198.0	197.0
12-31	196.0	195.0	1-31	197.0	196

TABLE B-2 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
2-1	196.0	196.0		3-1	197.0	196.0
2-2	197.0	193.0		3-2	196.0	194.0
2-3	194.0	194.0		3-3	197.0	195.0
2-4	196.0	195.0		3-4	197.0	196.0
2-5	199.0	198.0		3-5	196.0	196.0
2-6	199.0	196.0		3-6	197.0	195.0
2-7	199.0	198.0		3-7	197.0	195.0
2-8	197.0	195.0		3-8	197.0	195.0
2-9	195.0	194.0		3-9	196.0	193.0
2-10	198.0	196.0		3-10	196.0	195.0
2-11	199.0	194.0		3-11	196.0	196.0
2-12	198.0	195.0		3-12	197.0	197.0
2-13	197.0	196.0		3-13	196.0	196.0
2-14	197.0	196.0		3-14	196.0	195.0
2-15	199.0	196.0		3-15	196.0	195.0
2-16	198.0	194.0		3-16	195.0	194.0
2-17	196.0	195.0		3-17	196.0	196.0
2-18	196.0	193.0		3-18	197.0	195.0
2-19	194.0	193.0		3-19	197.0	197.0
2-20	195.0	194.0		3-20	199.0	196.0
2-21	198.0	196.0		3-21	197.0	196.0
2-22	197.0	194.0		3-22	198.0	197.0
2-23	198.0	195.0		3-23	198.0	197.0
2-24	198.0	195.0		3-24	199.0	197.0
2-25	199.0	198.0		3-25	198.0	196.0
2-26	199.0	198.0		3-26	202.0	195.0
2-27	197.0	196.0		3-27	201.0	196.0
2-28	197.0	196.0		3-28	197.0	194.0
2-29	196.0	195.0		3-29	195.0	192.0
				3-30	195.0	195.0
				3-31	195.0	195

TABLE B-2 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
4-1	196.0	194.0		5-1	199.0	198.0
4-2	198.0	194.0		5-2	198.0	197.0
4-3	197.0	197.0		5-3	199.0	196.0
4-4	197.0	197.0		5-4	197.0	194.0
4-5	199.0	196.0		5-5	195.0	195.0
4-6	200.0	198.0		5-6	198.0	196.0
4-7	199.0	199.0		5-7	199.0	198.0
4-8	199.0	197.0		5-8	201.0	199.0
4-9	199.0	198.0		5-9	201.0	200.0
4-10	198.0	196.0		5-10	201.0	199.0
4-11	199.0	197.0		5-11	197.0	197.0
4-12	198.0	196.0		5-12	198.0	196.0
4-13	197.0	193.0		5-13	198.0	195.0
4-14	193.0	191.0		5-14	198.0	198.0
4-15	195.0	191.0		5-15	198.0	198.0
4-16	197.0	195.0		5-16	198.0	197.0
4-17	196.0	195.0		5-17	196.0	194.0
4-18	197.0	195.0		5-18	197.0	195.0
4-19	195.0	195.0		5-19	199.0	199.0
4-20	196.0	195.0		5-20	199.0	198.0
4-21	197.0	197.0		5-21	201.0	197.0
4-22	198.0	195.0		5-22	198.0	196.0
4-23	196.0	194.0		5-23	196.0	195.0
4-24	196.0	195.0		5-24	199.0	194.0
4-25	199.0	197.0		5-25	198.0	195.0
4-26	198.0	197.0		5-26	199.0	196.0
4-27	199.0	197.0		5-27	195.0	195.0
4-28	198.0	196.0		5-28	197.0	194.0
4-29	198.0	192.0		5-29	200.0	195.0
4-30	196.0	196.0		5-30	198.0	195.0
				5-31	197.0	196

TABLE B-2 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
6-1	200.0	195.0	7-1	204.0	201.0
6-2	201.0	199.0	7-2	207.0	201.0
6-3	200.0	198.0	7-3	201.0	197.0
6-4	201.0	199.0	7-4	203.0	200.0
6-5	196.0	196.0	7-5	202.0	201.0
6-6	191.0	190.0	7-6	204.0	204.0
6-7	195.0	193.0	7-7	206.0	205.0
6-8	197.0	196.0	7-8	203.0	203.0
6-9	198.0	197.0	7-9	202.0	201.0
6-10	200.0	199.0	7-10	202.0	201.0
6-11	200.0	197.0	7-11	204.0	202.0
6-12	198.0	195.0	7-12	204.0	201.0
6-13	201.0	200.0	7-13	203.0	202.0
6-14	203.0	200.0	7-14	203.0	202.0
6-15	200.0	200.0	7-15	204.0	202.0
6-16	200.0	200.0	7-16	206.0	205.0
6-17	202.0	200.0	7-17	205.0	205.0
6-18	202.0	202.0	7-18	205.0	203.0
6-19	202.0	201.0	7-19	206.0	205.0
6-20	202.0	199.0	7-20	206.0	204.0
6-21	201.0	200.0	7-21	205.0	205.0
6-22	200.0	199.0	7-22	204.0	202.0
6-23	203.0	201.0	7-23	206.0	204.0
6-24	201.0	200.0	7-24	206.0	204.0
6-25	200.0	199.0	7-25	206.0	204.0
6-26	199.0	198.0	7-26	206.0	205.0
6-27	198.0	198.0	7-27	206.0	204.0
6-28	202.0	199.0	7-28	206.0	204.0
6-29	204.0	201.0	7-29	204.0	203.0
6-30	202.0	201.0	7-30	205.0	202.0
			7-31	202.0	202

TABLE B-2 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
8-1	205.0	204.0		9-1	210.0	209.0
8-2	204.0	203.0		9-2	210.0	206.0
8-3	204.0	203.0		9-3	205.0	204.0
8-4	205.0	204.0		9-4	204.0	200.0
8-5	204.0	202.0		9-5	199.0	199.0
8-6	205.0	203.0		9-6	197.0	194.0
8-7	203.0	203.0		9-7	201.0	200.0
8-8	204.0	201.0		9-8	202.0	201.0
8-9	207.0	207.0		9-9	202.0	199.0
8-10	212.0	211.0		9-10	202.0	199.0
8-11	210.0	210.0		9-11	202.0	199.0
8-12	205.0	205.0		9-12	200.0	198.0
8-13	201.0	199.0		9-13	210.0	209.0
8-14	195.0	194.0		9-14	207.0	206.0
8-15	207.0	206.0		9-15	204.0	199.0
8-16	210.0	207.0		9-16	197.0	194.0
8-17	210.0	209.0		9-17	191.0	191.0
8-18	209.0	207.0		9-18	193.0	191.0
8-19	205.0	204.0		9-19	201.0	199.0
8-20	202.0	199.0		9-20	198.0	197.0
8-21	198.0	197.0		9-21	197.0	196.0
8-22	199.0	196.0		9-22	198.0	197.0
8-23	198.0	196.0		9-23	200.0	198.0
8-24	208.0	207.0		9-24	197.0	197.0
8-25	212.0	210.0		9-25	201.0	195.0
8-26	210.0	210.0		9-26	199.0	197.0
8-27	205.0	204.0		9-27	198.0	196.0
8-28	199.0	199.0		9-28	199.0	198.0
8-29	196.0	195.0		9-29	200.0	198.0
8-30	208.0	207.0		9-30	198.0	194.0
8-31	210.0	208.0				

TABLE B-3. Schober's 2 Resort Ambient Temperature, °F.

1987				1987		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
10-1	98.0	62.0		11-1	80.0	44.0
10-2	101.0	67.0		11-2	94.0	62.0
10-3	100.0	67.0		11-3	92.0	72.0
10-4	97.0	63.0		11-4	82.0	50.0
10-5	98.0	65.0		11-5	80.0	46.0
10-6	92.0	60.0		11-6	91.0	57.0
10-7	90.0	60.0		11-7	95.0	62.0
10-8	83.0	55.0		11-8	81.0	53.0
10-9	92.0	61.0		11-9	80.0	45.0
10-10	84.0	53.0		11-10	94.0	48.0
10-11	88.0	54.0		11-11	71.0	56.0
10-12	87.0	53.0		11-12	83.0	52.0
10-13	89.0	53.0		11-13	74.0	38.0
10-14	80.0	64.0		11-14	85.0	38.0
10-15	81.0	52.0		11-15	98.0	49.0
10-16	89.0	64.0		11-16	91.0	48.0
10-17	84.0	53.0		11-17	89.0	46.0
10-18	85.0	54.0		11-18	96.0	40.0
10-19	86.0	53.0		11-19	88.0	42.0
10-20	86.0	52.0		11-20	82.0	51.0
10-21	92.0	67.0		11-21	83.0	34.0
10-22	81.0	62.0		11-22	83.0	35.0
10-23	69.0	63.0		11-23	86.0	34.0
10-24	67.0	56.0		11-24	61.0	44.0
10-25	62.0	56.0		11-25	78.0	35.0
10-26	71.0	49.0		11-26	81.0	33.0
10-27	94.0	64.0		11-27	79.0	32.0
10-28	72.0	55.0		11-28	85.0	40.0
10-29	91.0	61.0		11-29	73.0	36.0
10-30	75.0	59.0		11-30	69.0	41.0
10-31	80.0	46.0				

TABLE B-3 (Cont'd)

1987			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
12-1	80.0	35.0	1-1	69.0	33.0
12-2	85.0	37.0	1-2	66.0	35.0
12-3	72.0	45.0	1-3	59.0	36.0
12-4	60.0	44.0	1-4	49.0	41.0
12-5	67.0	44.0	1-5	64.0	31.0
12-6	79.0	44.0	1-6	74.0	35.0
12-7	74.0	41.0	1-7	68.0	36.0
12-8	67.0	43.0	1-8	80.0	36.0
12-9	84.0	41.0	1-9	77.0	39.0
12-10	81.0	41.0	1-10	85.0	41.0
12-11	59.0	41.0	1-11	67.0	32.0
12-12	47.0	34.0	1-12	85.0	34.0
12-13	47.0	34.0	1-13	63.0	46.0
12-14	44.0	25.0	1-14	77.0	33.0
12-15	40.0	35.0	1-15	45.0	36.0
12-16	50.0	36.0	1-16	58.0	37.0
12-17	68.0	41.0	1-17	71.0	35.0
12-18	55.0	38.0	1-18	69.0	31.0
12-19	79.0	29.0	1-19	76.0	29.0
12-20	74.0	29.0	1-20	78.0	34.0
12-21	73.0	36.0	1-21	80.0	36.0
12-22	58.0	37.0	1-22	80.0	35.0
12-23	43.0	32.0	1-23	89.0	41.0
12-24	52.0	32.0	1-24	85.0	36.0
12-25	71.0	26.0	1-25	83.0	37.0
12-26	69.0	27.0	1-26	84.0	42.0
12-27	72.0	28.0	1-27	91.0	47.0
12-28	70.0	28.0	1-28	84.0	47.0
12-29	73.0	27.0	1-29	85.0	35.0
12-30	74.0	25.0	1-30	72.0	32.0
12-31	75.0	66.0	1-31	78.0	27

TABLE B-3 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
2-1	59.0	28.0	3-1	64.0	47.0
2-2	63.0	44.0	3-2	72.0	50.0
2-3	70.0	48.0	3-3	76.0	51.0
2-4	69.0	34.0	3-4	76.0	51.0
2-5	70.0	37.0	3-5	73.0	47.0
2-6	58.0	42.0	3-6	71.0	48.0
2-7	52.0	40.0	3-7	72.0	46.0
2-8	94.0	37.0	3-8	75.0	46.0
2-9	92.0	40.0	3-9	58.0	41.0
2-10	88.0	43.0	3-10	60.0	41.0
2-11	92.0	39.0	3-11	66.0	41.0
2-12	75.0	43.0	3-12	69.0	37.0
2-13	81.0	47.0	3-13	67.0	37.0
2-14	91.0	60.0	3-14	76.0	40.0
2-15	94.0	38.0	3-15	80.0	48.0
2-16	79.0	47.0	3-16	85.0	48.0
2-17	92.0	43.0	3-17	95.0	42.0
2-18	79.0	43.0	3-18	99.0	47.0
2-19	100.0	37.0	3-19	104.0	48.0
2-20	77.0	46.0	3-20	102.0	48.0
2-21	91.0	45.0	3-21	82.0	47.0
2-22	96.0	43.0	3-22	81.0	47.0
2-23	96.0	45.0	3-23	84.0	55.0
2-24	97.0	44.0	3-24	91.0	51.0
2-25	101.0	46.0	3-25	90.0	61.0
2-26	78.0	54.0	3-26	95.0	57.0
2-27	87.0	45.0	3-27	70.0	43.0
2-28	67.0	59.0	3-28	72.0	41.0
2-29	61.0	41.0	3-29	68.0	54.0
			3-30	71.0	46.0
			3-31	78.0	45

TABLE B-3 (Cont'd)

1988			1983		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
4-1	83.0	47.0	5-1	71.0	47.0
4-2	85.0	48.0	5-2	95.0	50.0
4-3	86.0	50.0	5-3	86.0	56.0
4-4	85.0	55.0	5-4	72.0	48.0
4-5	92.0	59.0	5-5	78.0	39.0
4-6	85.0	58.0	5-6	75.0	47.0
4-7	84.0	58.0	5-7	83.0	46.0
4-8	87.0	49.0	5-8	90.0	51.0
4-9	87.0	49.0	5-9	105.0	56.0
4-10	85.0	55.0	5-10	117.0	61.0
4-11	85.0	57.0	5-11	117.0	67.0
4-12	74.0	62.0	5-12	101.0	69.0
4-13	64.0	46.0	5-13	109.0	63.0
4-14	57.0	43.0	5-14	110.0	66.0
4-15	74.0	48.0	5-15	99.0	64.0
4-16	85.0	50.0	5-16	94.0	64.0
4-17	92.0	54.0	5-17	108.0	63.0
4-18	71.0	53.0	5-18	102.0	61.0
4-19	60.0	46.0	5-19	102.0	67.0
4-20	76.0	51.0	5-20	102.0	57.0
4-21	83.0	43.0	5-21	77.0	52.0
4-22	70.0	42.0	5-22	72.0	54.0
4-23	85.0	43.0	5-23	93.0	52.0
4-24	77.0	48.0	5-24	108.0	62.0
4-25	80.0	55.0	5-25	101.0	58.0
4-26	97.0	59.0	5-26	103.0	64.0
4-27	98.0	60.0	5-27	100.0	58.0
4-28	89.0	51.0	5-28	74.0	54.0
4-29	88.0	52.0	5-29	90.0	54.0
4-30	87.0	55.0	5-30	106.0	63.0
			5-31	81.0	58

TABLE B-3 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
8-1	106.0	77.0		9-1	105.0	79.0
8-2	109.0	77.0		9-2	93.0	73.0
8-3	105.0	76.0		9-3	100.0	74.0
8-4	100.0	79.0		9-4	105.0	89.0
8-5	97.0	66.0		9-5	92.0	79.0
8-6	101.0	65.0		9-6	113.0	76.0
8-7	103.0	68.0		9-7	119.0	75.0
8-8	105.0	76.0		9-8	112.0	74.0
8-9	108.0	75.0		9-9	112.0	74.0
8-10	102.0	72.0		9-10	105.0	71.0
8-11	98.0	63.0		9-11	114.0	75.0
8-12	96.0	58.0		9-12	121.0	76.0
8-13	94.0	53.0		9-13	93.0	74.0
8-14	90.0	55.0		9-14	104.0	84.0
8-15	103.0	64.0		9-15	94.0	73.0
8-16	104.0	72.0		9-16	92.0	62.0
8-17	105.0	73.0		9-17	85.0	65.0
8-18	105.0	74.0		9-18	90.0	71.0
8-19	101.0	73.0		9-19	97.0	73.0
8-20	102.0	77.0		9-20	84.0	63.0
8-21	104.0	71.0		9-21	103.0	64.0
8-22	102.0	80.0		9-22	109.0	67.0
8-23	100.0	85.0		9-23	111.0	68.0
8-24	89.0	75.0		9-24	107.0	63.0
8-25	94.0	72.0		9-25	103.0	66.0
8-26	85.0	65.0		9-26	108.0	66.0
8-27	88.0	63.0		9-27	112.0	74.0
8-28	84.0	64.0		9-28	114.0	82.0
8-29	96.0	70.0		9-29	123.0	81.0
8-30	103.0	72.0		9-30	123.0	75.0
8-31	105.0	87.0				

TABLE B-4. Mud Pots' Ambient Temperature, °F.

1987				1987		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
10-1				11-1	63	52
10-2				11-2	72	42
10-3				11-3	70	34
10-4				11-4	68	63
10-5				11-5	67	42
10-6				11-6	68	36
10-7				11-7	72	37
10-8				11-8	81	42
10-9				11-9	80	42
10-10				11-10	80	40
10-11				11-11	86	39
10-12				11-12	81	40
10-13				11-13	75	49
10-14				11-14	71	44
10-15				11-15	62	27
10-16				11-16	70	28
10-17				11-17	66	42
10-18				11-18	72	34
10-19				11-19	78	26
10-20	96	63		11-20	69	28
10-21	95	58		11-21	72	33
10-22	78	52		11-22	74	28
10-23	75	50		11-23	69	31
10-24	67	44		11-24	68	33
10-25	79	49		11-25	52	29
10-26	90	50		11-26	61	23
10-27	93	64		11-27	63	21
10-28	84	59		11-28	61	23
10-29	78	46		11-29	61	34
10-30	78	39		11-30	60	23
10-31	57	47				

TABLE B-4 (Cont'd)

1987			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
12-1	60	38	1-1	54	14
12-2	65	23	1-2	51	17
12-3	69	26	1-3	49	23
12-4	61	35	1-4	67	34
12-5	58	32	1-5	46	30
12-6	59	39	1-6	60	19
12-7	66	41	1-7	61	23
12-8	60	25	1-8	57	20
12-9	63	32	1-9	64	23
12-10	69	32	1-10	58	27
12-11	73	32	1-11	77	36
12-12	42	29	1-12	55	24
12-13	37	15	1-13	65	18
12-14	40	8	1-14	71	25
12-15	29	10	1-15	56	34
12-16	29	20	1-16	64	17
12-17	43	31	1-17	35	23
12-18	59	30	1-18	53	26
12-19	52	34	1-19	57	21
12-20	58	19	1-20	62	16
12-21	57	17	1-21	71	22
12-22	60	23	1-22	61	33
12-23	41	28	1-23	63	19
12-24	29	14	1-24	51	24
12-25	39	15	1-25	74	41
12-26	49	7	1-26	78	25
12-27	51	13	1-27	79	36
12-28	48	29	1-28	73	34
12-29	48	14	1-29	69	33
12-30	52	12	1-30	68	25
12-31	49	9	1-31	59	22

TABLE B-4 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
2-1	78	30		3-1	88	42
2-2	50	36		3-2	86	42
2-3	64	21		3-3	85	42
2-4	69	29		3-4	81	42
2-5	75	26		3-5	79	39
2-6	69	21		3-6	79	40
2-7	75	25		3-7	80	24
2-8	79	31		3-8	74	31
2-9	79	34		3-9	80	38
2-10	81	37		3-10	58	31
2-11	74	51		3-11	58	25
2-12	75	30		3-12	64	29
2-13	81	29		3-13	66	22
2-14	69	33		3-14	88	41
2-15	76	32		3-15	85	29
2-16	67	34		3-16	75	39
2-17	71	36		3-17	74	42
2-18	54	22		3-18	80	29
2-19	77	37		3-19	85	36
2-20	79	29		3-20	89	41
2-21	82	33		3-21	89	42
2-22	83	36		3-22	87	50
2-23	89	40		3-23	95	48
2-24	85	43		3-24	100	54
2-25	86	40		3-25	101	51
2-26	84	42		3-26	93	34
2-27	58	46		3-27	89	50
2-28	81	34		3-28	78	37
2-29	77	43		3-29	79	31
				3-30	69	38
				3-31	70	37

TABLE B-4 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
4-1	79	32	5-1	70	33
4-2	86	39	5-2	77	67
4-3	93	40	5-3	79	39
4-4	98	48	5-4	72	47
4-5	94	50	5-5	60	35
4-6	100	53	5-6	69	35
4-7	101	55	5-7	68	42
4-8	89	52	5-8	80	36
4-9	94	43	5-9	92	43
4-10	94	43	5-10	101	53
4-11	98	56	5-11	109	64
4-12	96	50	5-12	109	63
4-13	81	58	5-13	100	63
4-14	58	46	5-14	105	57
4-15	53	34	5-15	106	62
4-16	74	42	5-16	106	66
4-17	83	45	5-17	94	63
4-18	82	39	5-18	101	64
4-19	68	47	5-19	100	64
4-20	59	39	5-20	102	61
4-21	64	32	5-21	105	59
4-22	66	32	5-22	106	61
4-23	62	30	5-23	108	66
4-24	79	27	5-24	105	59
4-25	86	38	5-25	108	58
4-26	87	47	5-26	105	53
4-27	89	48	5-27	102	58
4-28	89	43	5-28	103	54
4-29	90	42	5-29	73	47
4-30	81	50	5-30	79	45
			5-31	92	78

TABLE B-4 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
6-1	105	61		7-1	115	59
6-2	108	60		7-2	114	66
6-3	110	66		7-3	112	68
6-4	102	58		7-4	105	57
6-5	84	53		7-5	105	92
6-6	102	73		7-6	105	56
6-7	82	36		7-7	110	62
6-8	92	44		7-8	115	65
6-9	98	45		7-9	111	64
6-10	104	49		7-10	115	67
6-11	100	52		7-11	115	82
6-12	109	64		7-12	112	56
6-13	104	70		7-13	111	61
6-14	109	71		7-14	111	66
6-15	115	73		7-15	113	65
6-16	105	63		7-16	118	69
6-17	116	76		7-17	116	74
6-18	108	71		7-18	127	83
6-19	106	83		7-19	125	94
6-20	111	77		7-20	121	79
6-21	112	71		7-21	115	77
6-22	115	68		7-22	122	79
6-23	109	82		7-23	118	83
6-24	115	72		7-24	118	76
6-25	106	67		7-25	113	79
6-26	117	73		7-26	116	79
6-27	118	75		7-27	113	79
6-28	114	54		7-28	121	85
6-29	110	61		7-29	121	80
6-30	111	60		7-30	115	75
				7-31	113	77

TABLE B-4 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
8-1	107	63	9-1	112	74
8-2	112	67	9-2	116	76
8-3	114	67	9-3	110	78
8-4	113	70	9-4	115	75
8-5	106	78	9-5	114	75
8-6	102	55	9-6	110	66
8-7	104	57	9-7	109	70
8-8	113	62	9-8	110	66
8-9	111	82	9-9	105	62
8-10	109	69	9-10	99	64
8-11	106	62	9-11	94	61
8-12	98	55	9-12	86	50
8-13	95	47	9-13	88	53
8-14	94	42	9-14	89	46
8-15	106	68	9-15	95	53
8-16	104	54	9-16	95	54
8-17	109	60	9-17	96	49
8-18	113	65	9-18	97	58
8-19	114	69	9-19	100	74
8-20	106	70	9-20	78	54
8-21	104	70	9-21	71	42
8-22	108	64	9-22	78	46
8-23	116	98	9-23	98	64
8-24	107	79	9-24	85	47
8-25	114	85	9-25	85	46
8-26	109	78	9-26	91	47
8-27	104	72	9-27	96	49
8-28	107	67	9-28	93	63
8-29	115	71	9-29	98	69
8-30	114	72	9-30	97	62
8-31	109	70			

TABLE B-5. Mud Pots' Water Temperature, °F.

1987			1987		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
10-1	173	158	11-1	170	169
10-2	174	154	11-2	168	168
10-3	170	156	11-3	167	163
10-4	173	158	11-4	173	163
10-5	172	158	11-5	163	152
10-6	172	158	11-6	163	162
10-7	171	157	11-7	177	162
10-8	174	163	11-8	175	162
10-9	174	158	11-9	174	162
10-10	175	156	11-10	174	163
10-11	171	152	11-11	163	153
10-12	172	155	11-12	174	162
10-13	177	163	11-13	169	157
10-14	172	161	11-14	170	153
10-15	167	162	11-15	167	158
10-16	174	161	11-16	172	162
10-17	176	165	11-17	171	163
10-18	177	161	11-18	172	161
10-19	173	162	11-19	172	159
10-20	171	162	11-20	167	157
10-21	173	164	11-21	161	160
10-22	168	166	11-22	172	160
10-23	171	169	11-23	174	164
10-24	175	169	11-24	171	165
10-25	172	168	11-25	170	163
10-26	181	168	11-26	165	155
10-27	149	165	11-27	169	155
10-28	171	159	11-28	171	156
10-29	165	165	11-29	169	160
10-30	176	159	11-30	169	161
10-31	176	164			

TABLE B-5 (Cont'd)

1987			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
12-1	170	161	1-1	164	154
12-2	170	159	1-2	160	159
12-3	169	159	1-3	166	159
12-4	167	160	1-4	161	159
12-5	170	160	1-5	163	160
12-6	165	161	1-6	171	158
12-7	171	159	1-7	173	161
12-8	168	158	1-8	165	158
12-9	169	156	1-9	170	159
12-10	169	157	1-10	164	159
12-11	171	157	1-11	167	163
12-12	170	158	1-12	167	166
12-13	169	157	1-13	167	165
12-14	167	156	1-14	175	157
12-15	158	156	1-15	167	153
12-16	154	149	1-16	174	150
12-17	158	146	1-17	162	151
12-18	162	142	1-18	149	153
12-19	163	155	1-19	163	148
12-20	167	156	1-20	174	159
12-21	167	157	1-21	160	149
12-22	171	149	1-22	162	155
12-23	153	143	1-23	154	146
12-24	160	140	1-24	156	147
12-25	158	152	1-25	158	149
12-26	166	151	1-26	144	151
12-27	161	159	1-27	152	150
12-28	164	153	1-28	160	154
12-29	164	152	1-29	168	157
12-30	165	153	1-30	165	155
12-31	163	154	1-31	171	157

TABLE B-5 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
2-1	173	159	3-1	173	151
2-2	167	158	3-2	161	158
2-3	171	160	3-3	172	167
2-4	169	156	3-4	175	168
2-5	169	159	3-5	174	162
2-6	170	156	3-6	173	160
2-7	178	154	3-7	171	154
2-8	174	160	3-8	173	157
2-9	176	162	3-9	173	162
2-10	162	159	3-10	172	160
2-11	157	153	3-11	165	160
2-12	173	159	3-12	159	150
2-13	172	160	3-13	161	154
2-14	171	167	3-14	167	156
2-15	174	160	3-15	171	158
2-16	162	159	3-16	163	161
2-17	161	158	3-17	171	156
2-18	165	163	3-18	174	160
2-19	168	164	3-19	175	159
2-20	170	155	3-20	176	152
2-21	165	160	3-21	173	161
2-22	173	169	3-22	173	166
2-23	178	174	3-23	172	169
2-24	176	176	3-24	169	164
2-25	175	168	3-25	171	165
2-26	170	160	3-26	171	170
2-27	159	159	3-27	172	162
2-28	166	154	3-28	175	154
2-29	174	162	3-29	171	154
			3-30	171	171
			3-31	162	155

TABLE B-5 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
4-1	165	157	5-1	163	160
4-2	172	161	5-2	171	163
4-3	171	162	5-3	174	172
4-4	174	161	5-4	176	163
4-5	173	165	5-5	179	169
4-6	173	166	5-6	171	163
4-7	178	158	5-7	162	156
4-8	173	156	5-8	174	174
4-9	173	165	5-9	180	170
4-10	174	162	5-10	177	176
4-11	173	161	5-11	180	166
4-12	174	160	5-12	180	167
4-13	168	159	5-13	180	163
4-14	166	154	5-14	178	167
4-15	169	166	5-15	178	166
4-16	176	165	5-16	167	165
4-17	176	170	5-17	177	168
4-18	176	161	5-18	178	170
4-19	171	157	5-19	175	172
4-20	169	154	5-20	177	165
4-21	173	156	5-21	170	164
4-22	169	152	5-22	165	162
4-23	167	163	5-23	168	160
4-24	172	153	5-24	172	163
4-25	178	158	5-25	175	163
4-26	172	162	5-26	178	167
4-27	177	162	5-27	175	167
4-28	178	165	5-28	174	161
4-29	173	167	5-29	167	154
4-30	170	157	5-30	156	155
			5-31	177	163

TABLE B-5 (Cont'd)

1988				1988		
	Temperature, °F				Temperature, °F	
Date	High	Low		Date	High	Low
6-1	178	169		7-1	176	161
6-2	179	169		7-2	171	159
6-3	180	169		7-3	172	160
6-4	179	169		7-4	169	160
6-5	167	163		7-5	170	156
6-6	175	159		7-6	170	161
6-7	173	165		7-7	170	161
6-8	173	154		7-8	172	160
6-9	175	165		7-9	170	159
6-10	179	167		7-10	169	158
6-11	178	166		7-11	170	162
6-12	178	160		7-12	167	160
6-13	177	160		7-13	170	165
6-14	186	175		7-14	174	158
6-15	183	170		7-15	164	159
6-16	176	167		7-16	163	159
6-17	174	165		7-17	164	157
6-18	181	172		7-18	164	159
6-19	179	169		7-19	170	161
6-20	181	178		7-20	170	160
6-21	178	169		7-21	169	154
6-22	176	169		7-22	174	157
6-23	179	176		7-23	169	161
6-24	180	173		7-24	169	157
6-25	180	161		7-25	168	158
6-26	177	168		7-26	179	178
6-27	183	169		7-27	188	178
6-28	182	173		7-28	182	175
6-29	174	169		7-29	177	176
6-30	177	164		7-30	179	172
				7-31	167	163

TABLE B-5 (Cont'd)

1988			1988		
	Temperature, °F			Temperature, °F	
Date	High	Low	Date	High	Low
8-1	172	170	9-1	182	170
8-2	178	165	9-2	181	172
8-3	178	175	9-3	181	171
8-4	175	171	9-4	185	172
8-5	174	171	9-5	180	172
8-6	177	168	9-6	177	171
8-7	173	171	9-7	181	170
8-8	174	172	9-8	182	168
8-9	181	171	9-9	177	170
8-10	188	179	9-10	176	155
8-11	177	172	9-11	169	159
8-12	179	170	9-12	167	162
8-13	177	167	9-13	170	164
8-14	175	161	9-14	174	165
8-15	176	165	9-15	174	165
8-16	182	170	9-16	174	162
8-17	182	171	9-17	172	162
8-18	186	163	9-18	169	156
8-19	180	168	9-19	170	164
8-20	186	179	9-20	165	157
8-21	181	169	9-21	165	156
8-22	187	169	9-22	177	162
8-23	188	172	9-23	173	162
8-24	191	180	9-24	173	170
8-25	190	171	9-25	174	164
8-26	181	171	9-26	173	165
8-27	180	174	9-27	176	163
8-28	181	175	9-28	176	163
8-29	181	169	9-29	170	160
8-30	174	172	9-30	172	165
8-31	183	165			

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