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Coso Monitoring Program

October 1986 Through September 1987

by
E. M. Edwards
COMARCO Weapons Support Division

for the
Public Works Department

JUNE 1988

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NAVAL WEAPONS CENTER
CHINA LAKE, CA 93555-6001



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FOREWORD

This report presents the status of the Coso Monitoring Program conducted for the period October 1986 through September 1987 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.

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19 ABSTRACT (Continue on reverse 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, temperature logs of shallow wells, and rainfall in the Coso Hot Springs Resort Area. A weekly photographic essay of the mud pots and pools shows the variation of surface water levels throughout the year.					
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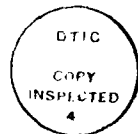
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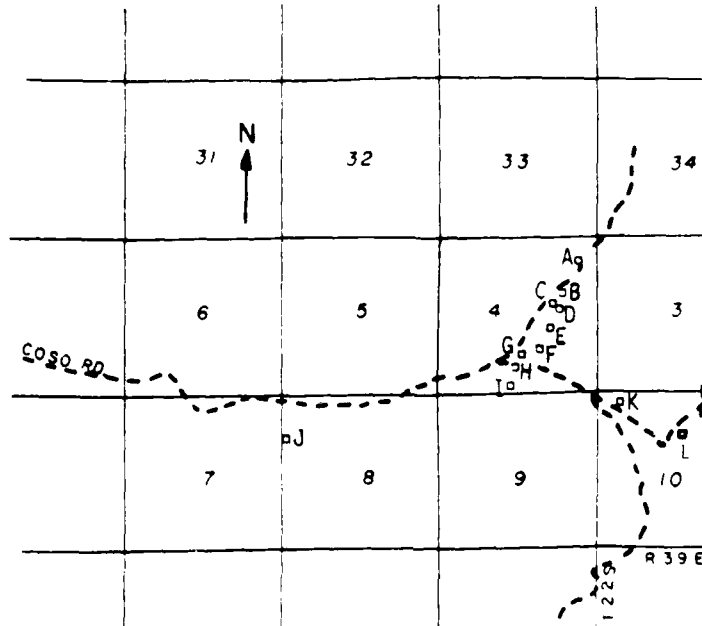
INTRODUCTION

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 tenth year of continual baseline data collection. The author collected data and photographs and reduced data. Personnel in the Geothermal Program Office have helped on the monitoring program. A welcome addition to this report is the introduction of stiff diagrams for water quality comparison by J. A. Whelan.

Figure 1 is a map of the Coso Hot Springs area and shows the various monitoring sites referred to in this report. The numbers that follow the site description indicate the monitoring functions: (1) continuous steam flow, (2) periodic steam flow, (3) continuous water level, (4) periodic water level, (5) continuous temperature, (6) periodic temperature, (7) photographic investigation of water level, and (8) water chemistry.

Individual sites are described only if new to the program or if a significant change to a site was made.



A.	Schober's Resort	1, 5
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FIGURE 1. Map of Coso Hot Springs Area
Showing Monitoring Site Locations.
Adapted from USGS Haiwee Reservoir
Quadrangle, 1951, 1:48,000.

STEAM FLOW AND STEAM TEMPERATURE MONITORING

Steam and temperature are measured at several sites in the Coso Hot Springs area. One monitoring station is located within Devils Kitchen; the other four sites are located along the Airport Lake - Coso Hot Springs fault. The conversion factors for the data gathered at each site are as follows: Devils Kitchen, 40.23; Coso Corrosion Array, 82.99; Two-Inch Steam Well, 15.7; Eight-Inch Steam Well, 20.56; Schober's Resort, 0.5265.

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 1.

The graph in Figure 2 shows an obvious change in the record beginning in November 1986. On this date and the beginning of each succeeding month, a manometer reading was taken across the orifice, calculations made with this reading to ascertain the correct steam flow reading, and the recording device was adjusted accordingly to give a stabilized reading throughout the year.

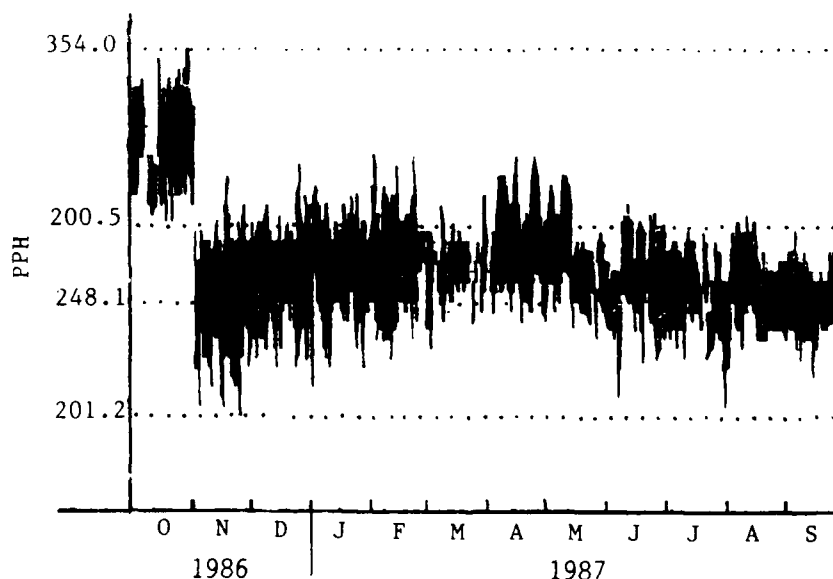


FIGURE 2. Devils Kitchen Steam Flow.

TABLE 1. Devils Kitchen Statistical Steam Flow Data,
Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	280.5	21.4	248.1	20.4

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 Figure 3. Yearly mean data and standard deviations for the high and low daily steam flows at this site are given in Table 2.

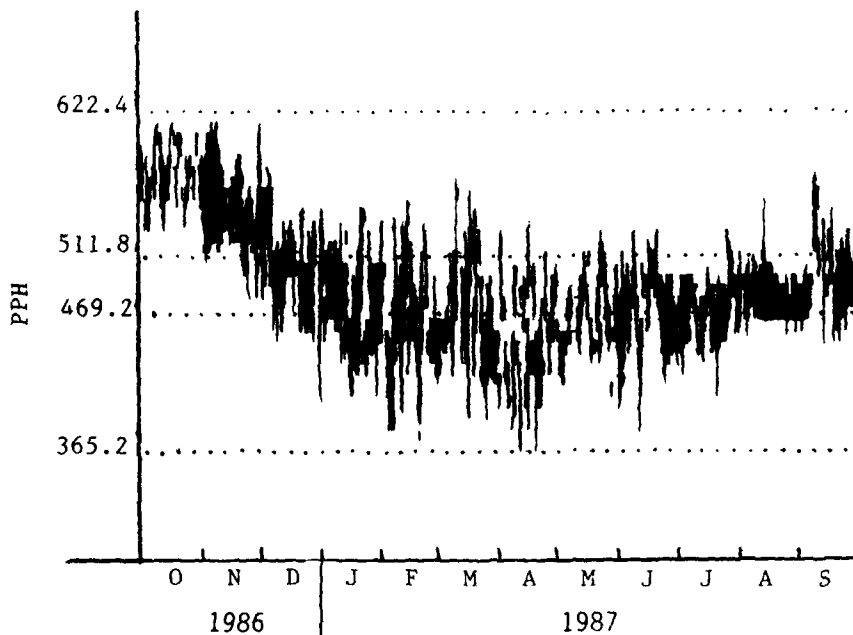


FIGURE 3. Coso Resort Corrosion Array.

TABLE 2. 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
1986/87	511.8	43.9	469.2	46.0

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 4 and 5. Yearly mean data and standard deviations are given for the high and low daily steam flows (Table 3), and for the high and low daily steam temperatures (Table 4).

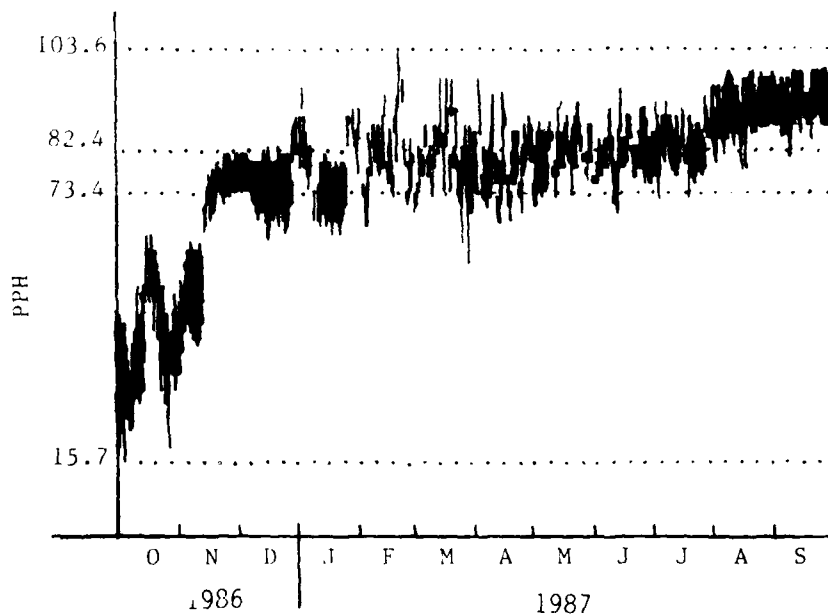


FIGURE 4. Two-Inch Steam Well Flow.

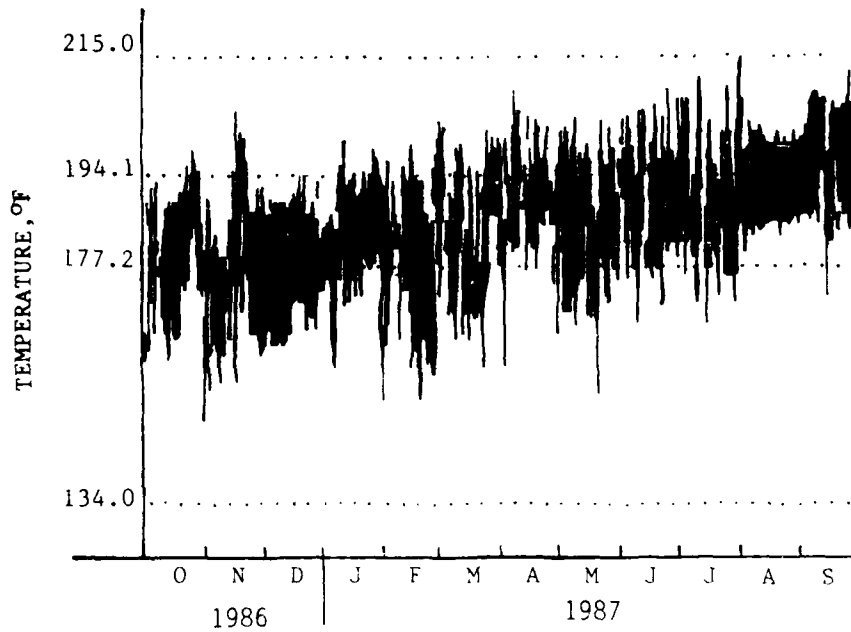


FIGURE 5. Two-Inch Steam Well Temperature.

TABLE 3. 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
1986/87	82.4	13.2	73.4	15.7

TABLE 4. Two-Inch Steam Well Statistical Steam Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	194.1	9.0	177.2	10.2

EIGHT-INCH "STOVE-PIPE" WELL

Daily steam flows at the Eight-Inch Well are given in Table A-4 (Appendix A) and are shown graphically in Figure 6. Yearly mean data and standard deviations for the high and low daily steam flows at the Eight-Inch Well are given in Table 5.

The calculations represent more stabilized results than usual because of the increase of manometer readings taken on a monthly basis. The recorder was down for maintenance during October 1986.

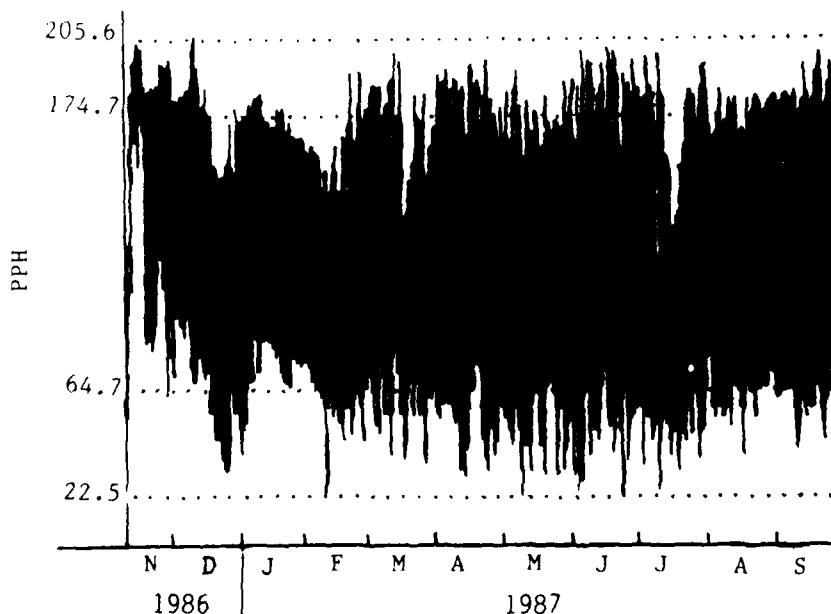


FIGURE 6. Eight-Inch Well Steam Flow.

TABLE 5. Eight-Inch Well Statistical Steam Flow Data.
Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	174.7	16.5	64.7	22.4

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 7 and 8. 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 temperature (Table 7). Fluctuation and range in the daily ambient temperature and for the high and low daily ambient temperatures (Table 8) in the Coso Hot Springs area are shown graphically as the ambient temperature at Schober's Resort in Figure 9.

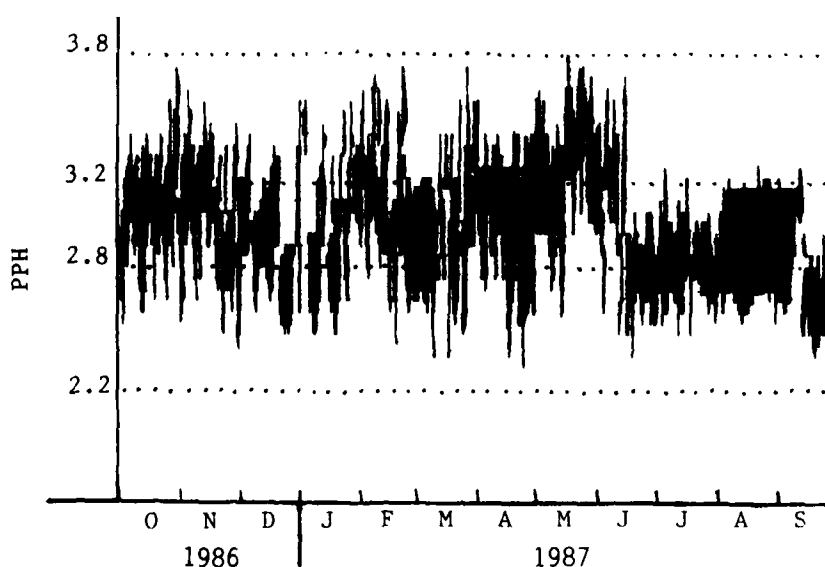


FIGURE 7. Schober's Resort Steam Flow.

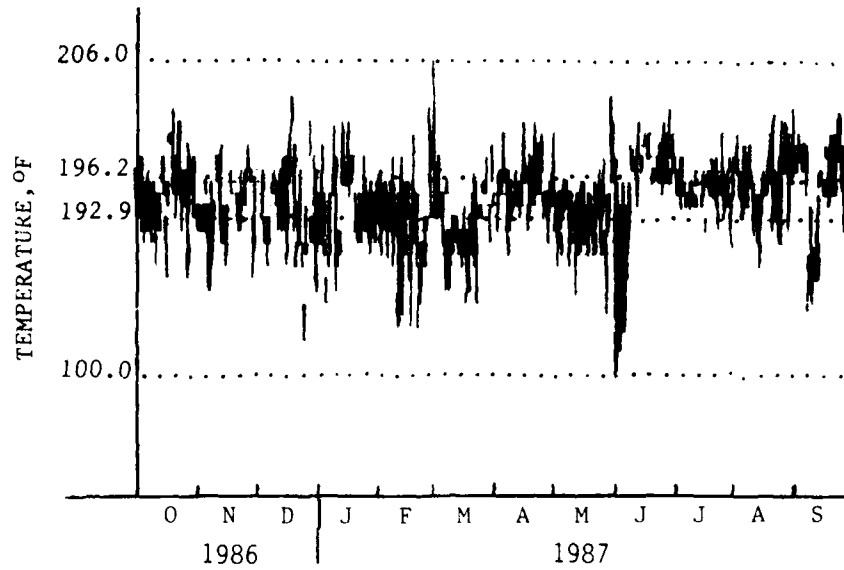


FIGURE 8. Schober's Resort Steam Temperature, °F.

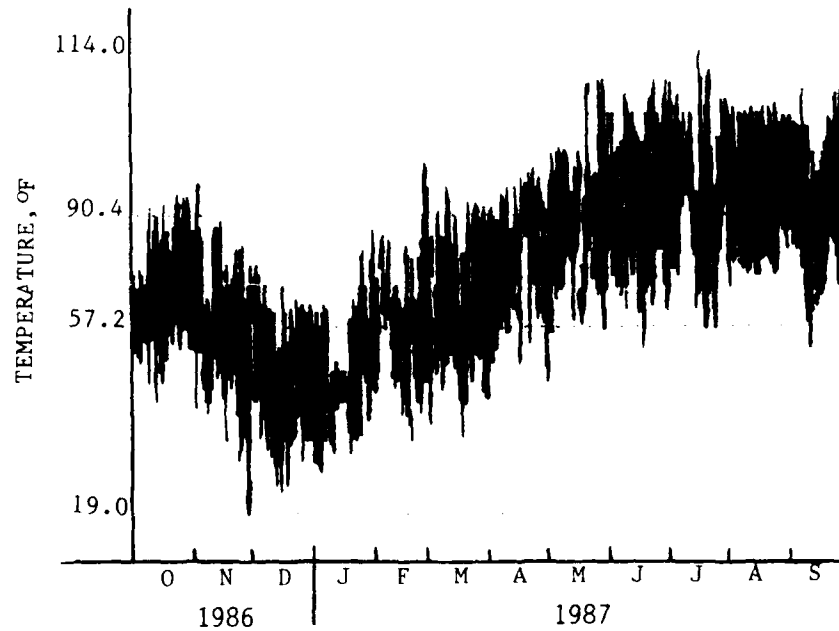


FIGURE 9. Schober's Resort Ambient Temperature, °F.

TABLE 6. Schober's Resort Statistical Steam Flow Data,
Pounds Per Hour (pph).

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	3.2	0.2	2.8	0.2

TABLE 7. Schober's Resort Statistical Steam
Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	196.2	2.9	192.9	3.5

TABLE 8. Schober's Resort Statistical Ambient
Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	80.4	16.9	57.2	14.8

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 10 and 11. Yearly mean data and standard deviations are given for the high and low ambient temperature (Table 9) and the mud temperatures (Table 10).

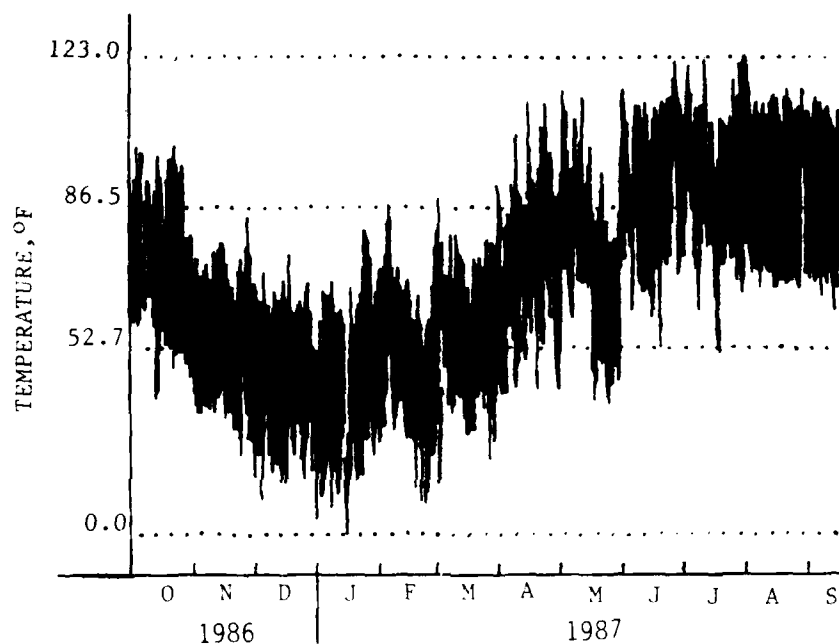


FIGURE 10. Coso Resort Mud Pot Ambient Temperature, °F.

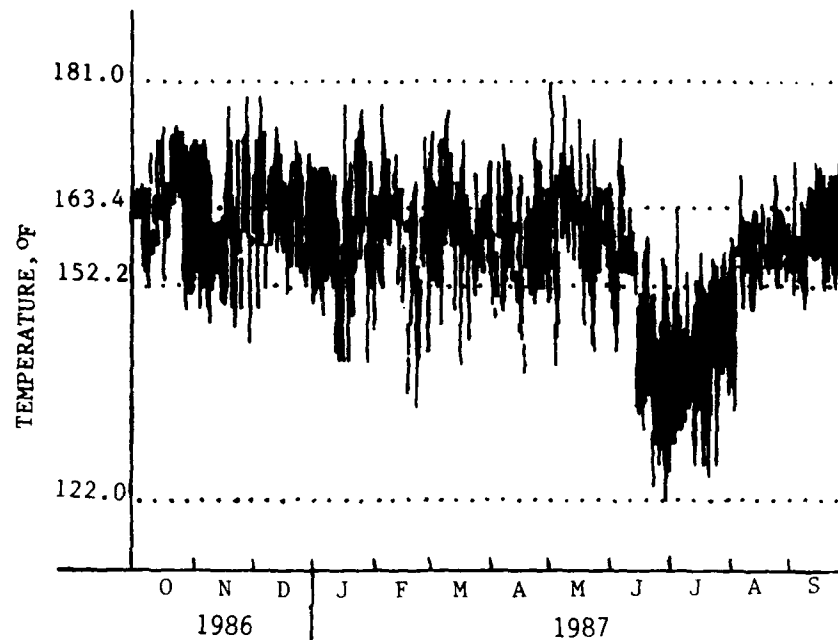


FIGURE 11. Coso Resort Mud Pot Water Temperature, °F.

TABLE 9. Coso Resort Mud Pot Statistical Ambient Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	86.6	20.8	52.7	20.0

TABLE 10. Coso Resort Statistical Mud Pot Water Temperature Data, °F.

Year	High daily flow		Low daily flow	
	Mean	Standard deviation	Mean	Standard deviation
1986/87	163.4	7.8	152.2	9.3

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 12 through 23 illustrate the 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 12. Gase Mud Pots, 10 October 1986.



South Pool.



Gray Mud Pots.



Red Mud Pots.



Brown Mud Pots.

FIGURE 13. Coso Mud Pots, 3 November 1986.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 14. Coso Mud Pots, 1 December 1986.



Gray Mud Pots.



Brown Mud Pots.

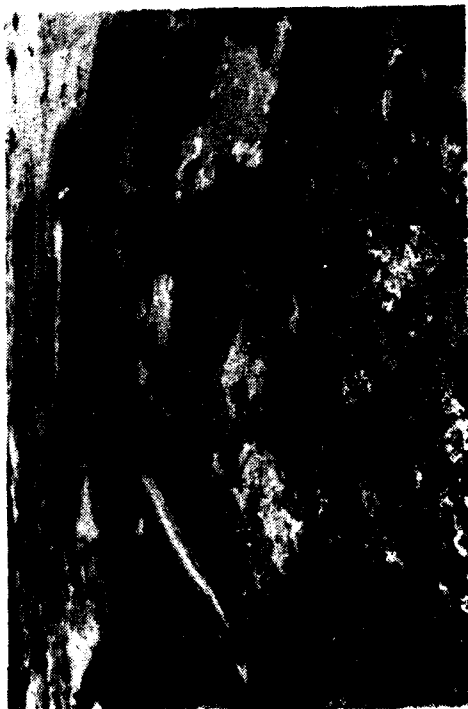


South Pool.



Red Mud Pots.

FIGURE 15. Coso Mud Pots, 12 January 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 16. Goso Mud Pots, 3 February 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 1. Goso Mud Pots, 4 March 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 18. Cose Mud Pots, 6 April 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 19. Coso Mud Pots, 1 May 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 20. Coso Mud Pots, 8 June 1987.



Gray Mud Pots.



Brown Mud Pots.

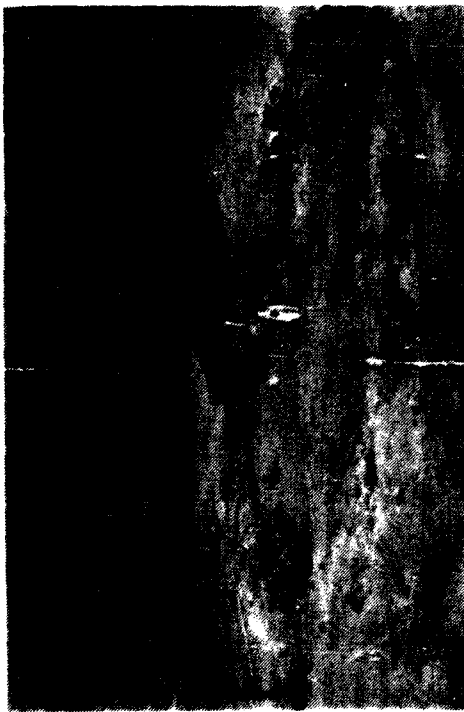


South Pool.



Red Mud Pots.

FIGURE 21. Coso Mud Pots, 1 July 1987.



South Pool.



Gray Mud Pots.



Red Mud Pots.



Brown Mud Pots.

FIGURE 22. Coso Mud Pots, 3 August 1987.



Gray Mud Pots.



Brown Mud Pots.



South Pool.



Red Mud Pots.

FIGURE 23. Coso Mud Pots, 8 September 1987.

WATER LEVEL MONITORING

Water levels were monitored in fiscal year 1987 in two wells and two pools.

Figure 24 is a plot of the water levels at Coso Well #1 and Well 4P-1. Table 11 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. Water levels for the South Pool are given in Table 12.

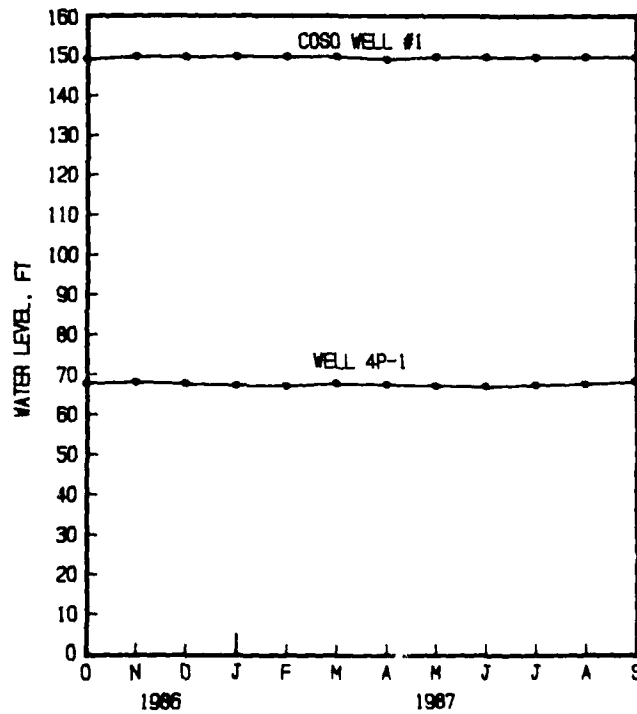


FIGURE 24. Water Levels at Coso Well #1 and Well 4P-1.

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TABLE 11. Elevation Data on Coso South Pool and Red Mud Pot,
October 1986 Through September 1987.

Date	Ambient temperature, °F	Pool designation	Elevation, ft	Change in elevation since 6 Oct 86, in.
06 Oct 86	60	1 South Pool	3611.64	0.00
		2 Red Mud Pot	3605.50	0.00
15 Oct 86	76	1	3612.37	+8.75
		2	3605.48	-0.25
20 Oct 86	64	1	3612.68	+12.50
		2	3605.54	+0.50
27 Oct 86	76	1	3613.06	+17.00
		2	3605.58	+1.00
03 Nov 86	...	1	3613.39	+21.00
		2	3605.58	+1.00
12 Nov 86	72	1	3613.76	+25.50
		2	3605.60	+1.25
17 Nov 86	...	1	3614.09	+29.50
		2	3605.58	+1.00
24 Nov 86	...	1	3614.56	+35.00
		2	3605.58	+1.00
02 Dec 86	63	1	3615.06	+41.00
		2	3605.60	+1.25
08 Dec 86	60	1	3615.26	+43.50
		2	3605.58	+1.00
15 Dec 86	55	1	3615.58	+47.25
		2	3605.58	+1.00
22 Dec 86	64	1	3615.72	+49.00
		2	3605.58	+1.00
29 Dec 86	60	1	3615.80	+50.00
		2	3605.58	+1.00
05 Jan 87	54	1	3616.14	+54.00
		2	3605.58	+1.00
12 Jan 87	62	1	3616.28	+55.75
		2	3605.56	+0.75
20 Jan 87	65	1	3616.32	+56.25
		2	3605.58	+1.00
26 Jan 87	65	1	3616.32	+56.25
		2	3605.58	+1.00
02 Feb 87	63	1	3616.62	+59.75
		2	3605.60	+1.25
09 Feb 87	60	1	3616.51	+58.50
		2	3605.58	+1.00

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TABLE 11. (Contd.)

Date	Ambient temperature, °F	Pool designation	Elevation, ft	Change in elevation since 6 Oct 86, in.
17 Feb 87	70	1	3616.58	+59.25
		2	3605.58	+1.00
24 Feb 87	51	1	3616.58	+59.25
		2	3605.58	+1.00
04 Mar 87	75	1	3616.58	+59.25
		2	3605.58	+1.00
09 Mar 87	66	1	3616.87	+62.75
		2	3605.62	+1.50
16 Mar 87	50	1	3616.83	+62.25
		2	3605.62	+1.50
23 Mar 87	52	1	3616.58	+59.25
		2	3605.60	+1.25
30 Mar 87	60	1	3616.70	+60.75
		2	3605.54	+0.50
06 Apr 87	78	1	3616.64	+60.00
		2	3605.62	+1.50
15 Apr 87	88	1	3616.49	+58.25
		2	3605.54	+0.50
20 Apr 87	74	1	3616.32	+56.25
		2	3605.52	+0.25
27 Apr 87	78	1	3616.14	+54.00
		2	3605.50	0.00
04 May 87	92	1	3615.91	+51.25
		2	3605.50	0.00
11 May 87	96	1	3615.91	+51.25
		2	3605.50	0.00
18 May 87	83	1	3615.99	+52.25
		2	3605.58	+1.00
27 May 87	79	1	3615.86	+50.75
		2	3605.54	+0.50
01 Jun 87	94	1	3615.78	+49.75
		2	3605.46	-0.50
09 Jun 87	85	1	3615.66	+48.25
		2	3605.54	+0.50
15 Jun 87	80	1	3615.45	+45.75
		2	3605.29	-2.50
22 Jun 87	95	1	3615.12	+41.75
		2	3605.17	-4.00
29 Jun 87	84	1	3614.99	+40.25
		2	3605.00	-6.00

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TABLE 11. (Contd.)

Date	Ambient temperature, °F	Pool designation	Elevation, ft	Change in elevation since 6 Oct 86, in.
06 Jul 87	85	1	3614.76	+37.50
		2	3605.00	-6.00
13 Jul 87	88	1	3614.59	+35.50
		2	3605.00	-6.00
20 Jul 87	82	1	3614.35	+32.50
		2	3605.00	-6.00
27 Jul 87	88	1	3614.33	+32.25
		2	3605.00	-6.00
03 Aug 87	98	1	3613.91	+27.25
		2	3605.00	-6.00
10 Aug 87	95	1	3613.78	+25.75
		2	3605.00	-6.00
17 Aug 87	90	1	3613.78	+25.75
		2	3605.02	-5.75
22 Aug 87	84	1	3613.54	+22.75
		2	3605.02	-5.75
31 Aug 87	94	1	3613.43	+21.50
		2	3605.00	-6.00
07 Sep 87	86	1	3613.39	+21.00
		2	3605.10	-4.75
14 Sep 87	74	1	3613.30	+20.00
		2	3605.21	-3.50
21 Sep 87	95	1	3613.32	+20.25
		2	3605.21	-3.50
28 Sep 87	93	1	3613.30	+20.00
		2	3605.23	-3.25

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TABLE 12. Summary of Water Levels at South Pool,
True Elevation, Referenced USGS Benchmark 3635-1905-13B,
January 1980 Through September 1987.

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

*Recalculated to true elevations from NWC Coso Monitoring Program,
January 1984 through September 1985, by S. C. Bjornstad and E. M.
Edwards (Reference 1).

RAINFALL AT COSO RESORT AREA AND ROSE VALLEY

Rainfall in the Coso Hot Springs basin is monitored at five sites as shown in Figure 25. Instrumentation at each site includes battery-operated strip recorders triggered from a tipping bucket. This new equipment gives continuous data not affected by evaporation, requiring only two or three trips per year to each site.

Data collected from Coso sites are listed in Table 13, and data collected in Rose Valley are listed in Table 14.

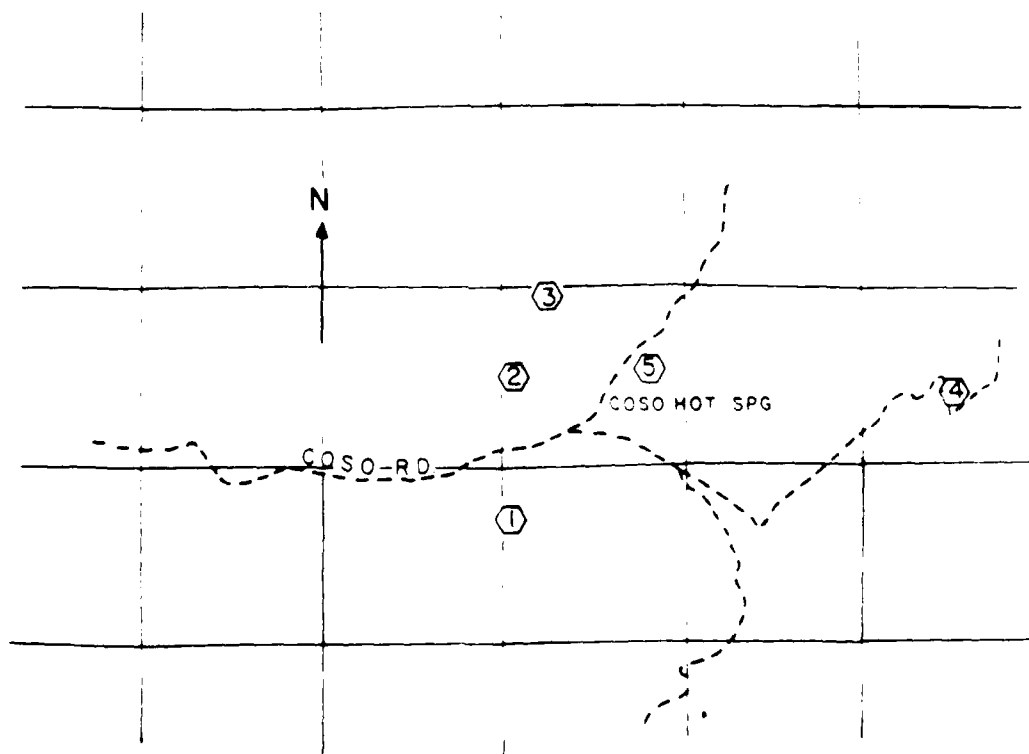


FIGURE 25. Rainfall at Coso Monitoring Stations.
Adapted from USGS Haiwee Reservoir Quadrangle,
1951, 1:48,000.

TABLE 13. Inches of Rainfall Recorded
at Coso Monitoring Stations.

Date	Tipping bucket stations				
	1	2	3	4	5
02 Oct 86	...	...	0.16	...	...
12 Nov 86	...	0.04	...	...	...
18 Nov 86	0.85	.82	.77	0.58	0.64
06 Dec 86	.09	.03	.03	...	.01
17 Dec 86	.02	...	...	...	...
20 Dec 86	...	...	...	.04	.01
04 Jan 87	.43	.45	.56	.49	.37
05 Jan 87	.19	.12	.14	...	.02
07 Jan 87	.15	888	...	.16	.12
10 Feb 87	.22	.02	.07	.13	.20
26 Feb 87	...	.01	.03	.05	.06
05 Mar 87	.42	.40	.61	.34	.51
06 Mar 87	.37	.28	.30	.11	.05
09 Mar 87	.11	.07	.08	...	.14
26 Apr 87	.01	...	.02	.02	.05
07 May 87	.04	.03	.07	...	.01
08 May 87	.05	.06	.09	...	.03
11 May 87	.35	.15	.21	.09	.06
14 May 87	.35	...	.09	...	.36
16 May 87	.05	.02	.02	...	...
17 May 87	.04	...	...	...	...
05 Jun 87	.07	.04	.18	.04	.10
06 Jun 87	.21	.08	...	...	.15
22 Jun 87	<u>0.26</u>	<u>0.10</u>	<u>0.12</u>	<u>0.04</u>	<u>0.12</u>
Total	4.28	2.72	3.55	2.09	3.01

NOTE: Stations 1, 2, and 3 were read intermittently throughout fiscal year 1987. Stations 4 and 5 were read after each rain.

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TABLE 14. Rose Valley Cumulative Rainfall,
October 1986 Through September 1987.

Date	Daily, in.	Cumulative, in.
02 Oct 86	0.03	...
18 Nov 86	.50	0.53
07 Dec 86	.04	0.57
04 Jan 87	.03	0.60
05 Jan 87	.92	1.52
07 Jan 87	.06	1.58
10 Feb 87	.12	1.70
14 Feb 87	.04	1.74
05 Mar 87	0.20	1.94
06 Mar 87	1.00	2.94
07 Mar 87	0.17	3.11
08 May 87	.07	3.18
09 May 87	.05	3.23
17 May 87	.04	3.27
06 Jun 87	.03	3.30
07 Jun 87	.14	3.44
27 Jul 87	.01	3.45
31 Aug 87	.01	3.46
01 Sep 87	0.01	3.47

WATER ANALYSES OF COSO HOT SPRINGS AREA SITES

COSO AREA WELL

Water from Coso Observation Well #1 was sampled on 29 June 1987 and is being monitored for chemical composition.

The chemical analysis for the well was performed by BC Laboratories, Inc., Bakersfield, Calif. (Table 15).

TABLE 15. Chemical Analysis of Coso Area Well.

Constituent	Coso Well #1, mg/L
Calcium	62
Magnesium	7.8
Sodium	1500
Potassium	118
Carbonate	0
Bicarbonate	165
Chloride	2474
Sulfate	90
Nitrate	(-) 0.4
Fluoride	3.8
Iron, total	1.6
Manganese	1.9
Arsenic	0.24
Copper	(-) 0.01
Zinc	0.26
Total dissolved solids, by summation	4568
Mercury	0.05
Aluminum	(-) 0.5
Boron	45.9
Silica	89
Ammonium	0.8
Lithium	12.6
Nitrite-nitrogen	(-) 0.01
Bromide	3.2
Phosphate	0.2
pH	7.7
Electrical conductivity, micromho/cm at 25°C	7700

(-) refers to "less than."

COSO RESORT COMPOUND STEAM ARRAY

Sampling of water from the Coso Resort compound steam array was conducted on 29 June 1987.

The chemical analysis of water from the condensate of this steam array was performed by BC Laboratories, Inc., Bakersfield, Calif. (Table 16).

TABLE 16. Chemical Analysis of Coso Resort Steam Array.

Constituent	Coso Resort array, mg/L
Calcium	0.7
Magnesium	0.27
Sodium	1.0
Potassium	0.3
Carbonate	0
Bicarbonate	5.2
Chloride	(-) 1.8
Sulfate	10
Nitrate	(-) 0.4
Fluoride	0.02
Iron, total	0.85
Manganese	0.10
Arsenic	(-) 0.01
Copper	(-) 0.01
Zinc	0.03
Total dissolved solids, by summation	20
Mercury	(-) 0.0002
Aluminum	(-) 0.5
Boron	(-) 0.10
Silica	1.4
Ammonium	1.4
Lithium	(-) 0.01
Nitrate-nitrogen	(-) 0.01
Bromide	(-) 0.5
Phosphate	(-) 0.1
pH	5.3
Electrical conductivity, micromho/cm at 25°C.	30

(-) refers to "less than."

COSO AREA POOLS

Water sampling of two Coso Area pools (Red Mud Pot and South Pool) that are being monitored was conducted on 29 June 1987. Chemical analyses of each pool were performed by BC Laboratories, Inc., Bakersfield, Calif. (Table 17).

TABLE 17. Chemical Analyses of Coso Area Pools.

Constituent	Red Mud Pots, mg/L	South Pool, mg/L
Acidity as hydrogen. . .	7.0	13.1
Calcium.	26	79
Magnesium.	9.3	33
Sodium.	24	130
Potassium.	8.3	21
Carbonate.	0	0
Bicarbonate.	0	0
Chloride.	(-) 1.8	93.1
Sulfate.	670	1500
Nitrate.	(-) 0.4	(-) 0.4
Fluoride.	0.13	0.43
Iron, total.	58.1	38.1
Manganese.	0.59	2.5
Arsenic.	0.02	0.17
Copper.	0.20	0.08
Zinc.	0.42	1.0
Total dissolved solids, by summation.	1058	2276
Mercury.	(-) 0.0002	0.03
Aluminum.	4.7	45.7
Boron.	(-) 0.10	2.1
Silica.	256	295
Ammonium.	52.7	61.7
Lithium.	0.02	0.65
Nitrite-nitrogen. . . .	(-) 0.01	(-) 0.01
Bromide.	(-) 1	(-) 1
Phosphate.	(-) 0.1	0.1
pH.	2.9	2.5
Electrical conductivity, micromho/cm at 25°C. .	1860	4600

(-) refers to "less than."

COSO DEVILS KITCHEN

Water sampling of two sources of water in Devils Kitchen was conducted on 29 June 1967. Chemical analyses of water from the spring south of the steam array and condensate from the steam array were performed by BC Laboratories, Inc., Bakersfield, Calif. (Table 18).

TABLE 18. Chemical Analyses of Coso Devils Kitchen.

Constituent	Devils Kitchen spring, mg/L	Devils Kitchen array, mg/L
Acidity as hydrogen . . .	15.8	0.1
Calcium	80	0.8
Magnesium	36	0.13
Sodium	60	1.0
Potassium	42	0.2
Carbonate	0	0
Bicarbonate	0	0
Chloride	(-) 1.8	(-) 1.8
Sulfate	1330	10
Nitrate	(-) 0.4	(-) 0.4
Fluoride	0.61	0.02
Iron, total	57.8	3.6
Manganese	2.7	0.06
Arsenic	0.02	(-) 0.01
Copper	(-) 0.01	(-) 0.01
Zinc	0.25	0.14
Total dissolved solids, by summation	1904	12
Mercury	(-) 0.0002	(-) 0.0002
Aluminum	12.2	(-) 0.5
Boron	3.3	(-) 0.10
Silica	311	0.12
Ammonium	13.4	(-) 0.3
Lithium	0.10	(-) 0.01
Nitrite-nitrogen	(-) 0.01	(-) 0.01
Bromide	(-) 1.	(-) 0.5
Phosphate	0.3	(-) 0.1
Hydroxide		0.
pH	2.4	4.2
Electrical conductivity, micromho/cm at 25°C . .	4600	12

(-) refers to "less than."

COMPARISON OF COSO WATERS WITH STIFF DIAGRAMS

A good way to compare waters is with modified stiff diagrams. These computer-generated plots of electrical equivalents of various ions allow visual comparison of water analyses, usually a more efficient method than comparing numbers.

Stiff diagrams show the results of an analysis of Coso Well #1 water (Figure 26 from Reference 2); this analysis is almost identical to that of one of the waters of CGEH-1, the first deep hole well drilled at Coso in 1977 (Figure 27). The CGEH-1 water was collected with a down-hole sampler at 3609 feet and cooled before opening to condense the vapors. The CGEH-1 sample represents a typical Coso geothermal brine—essentially a sodium-chloride brine with only minor amounts of calcium, magnesium, potassium, sulfate, and bicarbonate salts.

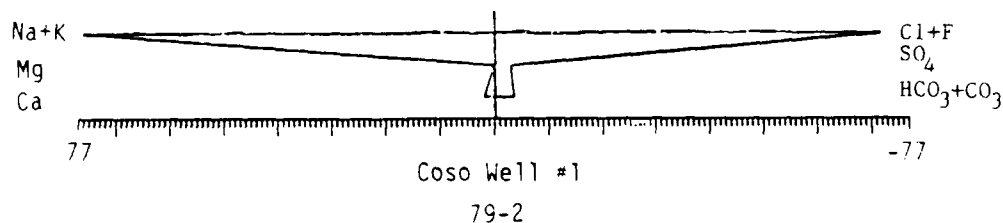


FIGURE 26. Chemical Samples of Coso Well #1 Water.

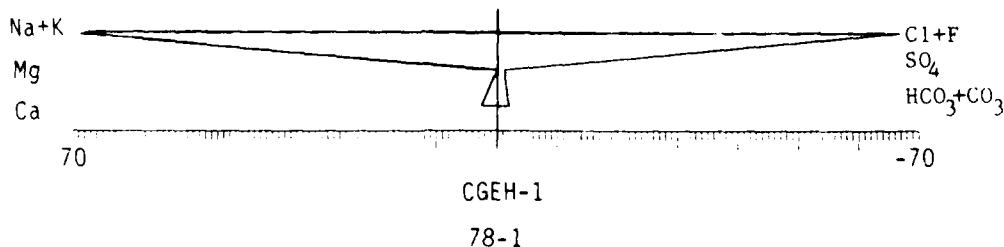


FIGURE 27. Chemical Samples of CGEH-1 Water.

The water of Coso Well #1 is essentially leakage of geothermal brine from Coso into Coso Valley (and the resort area). An analysis of water from Coso Well #2 (Figure 28 and Reference 3) indicates about 40% dilution by valley underflow, probably by waters similar in composition to that of Haiwee Spring, located above the north end of the valley (Figure 29). The only changes in quality from 1986 to 1987 are slight increases in bicarbonate, sulfate, and iron content.

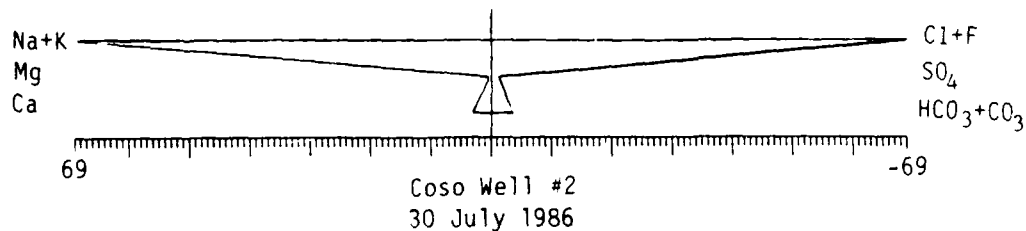


FIGURE 28. Chemical Samples of Coso Well #2 Water.

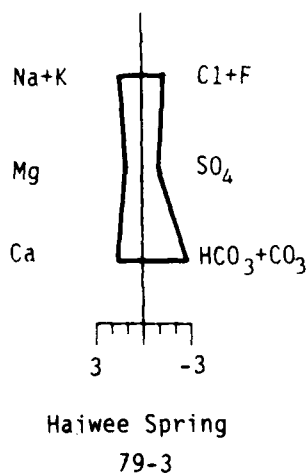


FIGURE 29. Chemical Samples of Haiwee Spring.

The waters of the spring in Devils Kitchen (Figure 30), the Mud Pot at the Coso Resort (Figure 31), and the South Pool at the Coso Resort (Figure 32) are acid sulfate. Normally the areas on the cation (positive) and anion (negative) sides of modified stiff diagrams are equal for good analyses. In plots of acid sulfate water, this is not the case as hydrogen, the dominate cation, is not plotted.

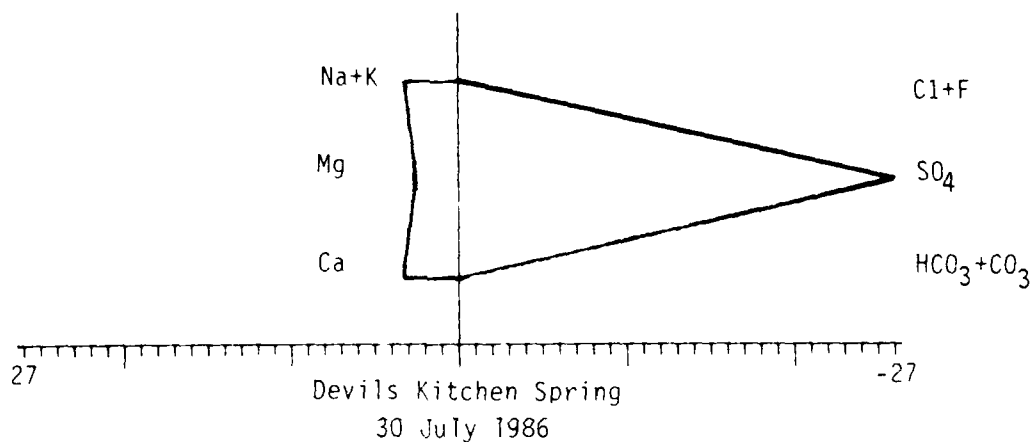


FIGURE 30. Chemical Samples of Devils Kitchen Spring.

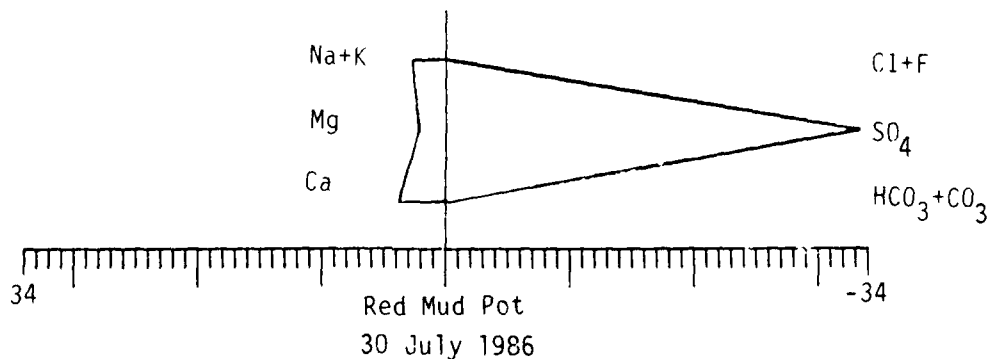


FIGURE 31. Chemical Samples of Red Mud Pot.

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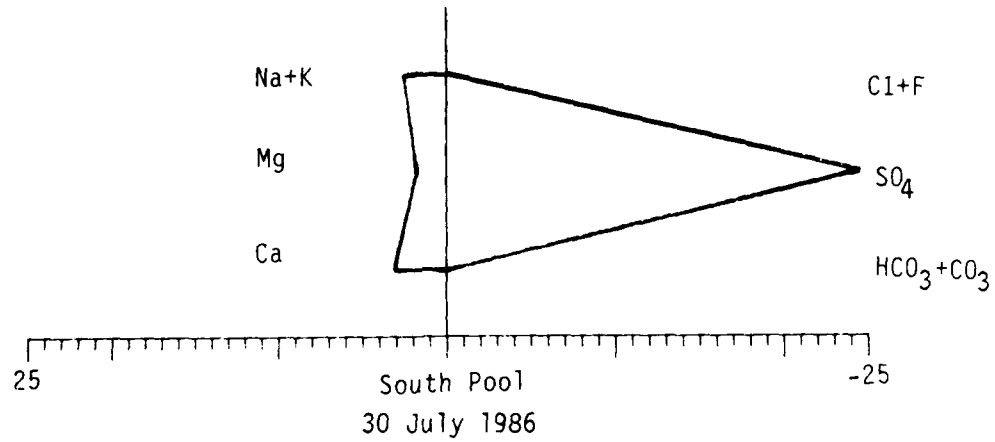


FIGURE 32. Chemical Analysis of South Pool Water.

The analyses of condensed steam from the Devils Kitchen (Figure 33) and the Coso compound steam array (Figure 34) indicate only minute carryover of acid sulfate water.

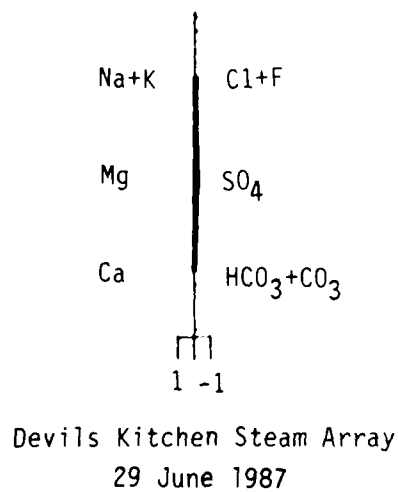
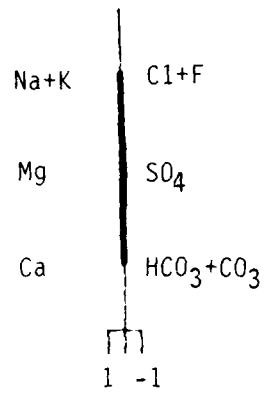


FIGURE 33. Chemical Analysis of Devils Kitchen Steam Array.

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#67 Comp. Steam Array
29 June 1987

FIGURE 34. Chemical Analysis of Coso Compound Steam Array.

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PLANS FOR 1988

A pressure method of water level data retrieval is to be implemented wherever possible on wells in the Coso Resort Area.

The comparison of readings of the manometer with the Barton meter indicates that the Barton meter readings were low during fiscal year 1987. In the future it is planned to calibrate the Barton meter monthly with the manometer to rectify the low meter readings.

SUMMARY

The ongoing monitoring program has successfully continued during this tenth year reporting period. Instruments have been calibrated monthly for more consistent data.

The photographic essay and the water level measurements continue to record the same types of variations from year to year for the mud pots and pools. The long-term continuity in this data indicates that local evaporation and rainfall are the major controlling factors of the observable surface phenomena.

The testing of the steam wells in the Condry and Jim Moore breccia pipes as well as wells in parcel 20 in the Coso steam field and the injections of spent fluids into the fracture network tapped by 31-8, 11-8, and 41-8 have shown no identifiable effects on the mud pots or pools within the National Register site as of the end of September 1987.

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REFERENCES

1. Naval Weapons Center. Coso Monitoring Program, January 1984 Through September 1985, by S. C. Bjornstad and E. M. Edwards. China Lake, Calif., NWC, January 1986. 113 pp. (NWC TP 6693, publication UNCLASSIFIED.)
2. United States Department of the Interior Geological Survey. Chemical Analyses and Preliminary Interpretation of Waters Collected From the OGEH No. 1 Geothermal Well At Coso, California, by R. O. Fournier and J. M. Thompson, U.S. Geological Survey, Menlo Park, Calif.; and C. F. Austin, Naval Weapons Center, China Lake, Calif. (Open File Report 78-434, publication UNCLASSIFIED.)
3. Naval Weapons Center. Coso Monitoring Program, October 1985 Through September 1986, by E. M. Edwards. China Lake, Calif., NWC, February 1987. 99 pp. (NWC TP 6794, publication UNCLASSIFIED.)

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Appendix A
DAILY STEAM FLOW DATA

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

The conversion factor for this table is 40.23.

1986			1986		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
10-1	8.5	7.7	11-1	8.2	7.2
10-2	8.2	7.3	11-2	8.2	7.2
10-3	8.4	7.3	11-3	6.9	5.5
10-4	8.4	7.3	11-4	6.5	5.5
10-5	8.4	7.7	11-5	6.6	5.1
10-6	8.4	7.7	11-6	6.9	6.1
10-7	8.5	7.7	11-7	6.7	5.6
10-8	8.2	8.1	11-8	6.8	5.6
10-9	8.0	8.0	11-9	6.7	5.7
10-10	7.7	7.2	11-10	6.8	5.5
10-11	7.6	7.1	11-11	6.7	5.3
10-12	7.7	7.1	11-12	6.7	6.0
10-13	7.6	7.1	11-13	6.7	5.8
10-14	7.6	7.2	11-14	7.0	6.0
10-15	8.7	7.7	11-15	6.8	5.7
10-16	8.7	7.3	11-16	6.8	5.2
10-17	8.3	7.2	11-17	6.5	5.1
10-18	8.4	7.3	11-18	7.2	5.6
10-19	7.9	7.0	11-19	7.5	5.8
10-20	8.5	7.5	11-20	7.1	5.6
10-21	8.5	7.3	11-21	6.8	5.4
10-22	8.3	7.0	11-22	6.8	5.4
10-23	8.4	7.4	11-23	6.7	5.3
10-24	8.5	7.3	11-24	6.8	5.5
10-25	8.6	7.3	11-25	7.0	5.0
10-26	8.4	7.3	11-26	6.9	5.6
10-27	8.4	7.5	11-27	7.1	6.1
10-28	8.6	7.4	11-28	7.2	6.0
10-29	8.8	7.3	11-29	6.8	5.9
10-30	8.8	7.6	11-30	6.7	5.5
10-31	8.3	7.5			

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TABLE A-1. (Contd.)

1986			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
12-1	6.8	5.7	1-1	7.2	6.0
12-2	7.0	6.0	1-2	6.8	5.3
12-3	6.8	5.8	1-3	7.3	6.5
12-4	6.9	5.6	1-4	7.4	6.7
12-5	7.0	6.3	1-5	7.2	6.2
12-6	7.0	5.8	1-6	7.0	6.1
12-7	6.9	6.2	1-7	7.0	6.0
12-8	7.1	5.7	1-8	7.0	5.7
12-9	7.2	6.0	1-9	7.2	5.6
12-10	7.2	6.4	1-10	6.9	5.8
12-11	6.9	6.1	1-11	6.9	5.5
12-12	6.8	6.0	1-12	6.7	6.1
12-13	6.7	5.7	1-13	6.8	6.2
12-14	6.8	5.5	1-14	7.0	6.3
12-15	6.8	6.4	1-15	6.9	6.2
12-16	7.1	5.7	1-16	6.8	6.2
12-17	6.7	6.1	1-17	6.9	6.1
12-18	6.8	6.2	1-18	7.2	6.0
12-19	6.9	6.2	1-19	7.0	6.5
12-20	7.0	6.2	1-20	7.0	6.0
12-21	6.6	6.0	1-21	7.1	6.8
12-22	6.9	6.4	1-22	7.3	6.3
12-23	6.7	5.9	1-23	7.1	6.6
12-24	6.8	5.5	1-24	7.0	5.9
12-25	7.0	5.7	1-25	7.3	5.7
12-26	7.3	5.6	1-26	6.8	6.0
12-27	7.6	5.8	1-27	6.9	6.0
12-28	7.0	5.9	1-28	7.0	5.5
12-29	6.9	6.1	1-29	6.8	6.2
12-30	7.3	5.6	1-30	6.8	6.1
12-31	7.1	5.6	1-31	6.8	6.4

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TABLE A-1. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
2-1	6.9	6.2	3-1	6.7	5.9
2-2	7.4	6.5	3-2	6.9	6.1
2-3	7.7	6.0	3-3	6.9	5.7
2-4	7.1	5.8	3-4	6.8	6.4
2-5	6.9	6.0	3-5	6.8	6.8
2-6	6.8	5.9	3-6	6.7	6.6
2-7	7.3	5.8	3-7	6.6	6.3
2-8	7.4	5.9	3-8	6.3	6.
2-9	7.3	5.8	3-9	7.2	6.0
2-10	7.0	5.9	3-10	7.0	6.2
2-11	7.2	5.6	3-11	6.8	6.3
2-12	7.3	5.9	3-12	6.1	6.1
2-13	7.1	5.9	3-13	6.8	6.2
2-14	7.6	6.0	3-14	6.9	6.2
2-15	7.0	6.7	3-15	7.0	6.4
2-16	6.9	6.2	3-16	6.6	6.5
2-17	7.0	6.8	3-17	6.8	6.3
2-18	7.0	6.1	3-18	6.9	6.4
2-19	7.1	6.1	3-19	6.6	6.5
2-20	7.0	6.2	3-20	6.8	6.3
2-21	7.1	6.3	3-21	6.7	6.5
2-22	7.3	5.8	3-22	6.8	6.4
2-23	7.7	6.3	3-23	6.7	6.6
2-24	7.4	6.0	3-24	6.5	6.5
2-25	6.9	6.5	3-25	6.4	6.0
2-26	6.8	6.5	3-26	6.6	6.4
2-27	6.9	6.6	3-27	6.8	6.6
2-28	6.9	6.7	3-28	6.6	6.6
			3-29	6.6	6.1
			3-30	7.3	6.3
			3-31	7.3	6.5

TABLE A-1. (Contd.)

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

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TABLE A-1. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
6-1	6.6	6.0	7-1	6.7	6.0
6-2	6.3	5.9	7-2	6.6	5.9
6-3	6.4	5.9	7-3	6.7	5.8
6-4	6.5	6.0	7-4	6.7	5.9
6-5	6.3	5.8	7-5	6.8	6.0
6-6	6.5	6.0	7-6	6.8	5.7
6-7	6.3	5.2	7-7	6.7	6.0
6-8	6.2	5.5	7-8	6.7	5.9
6-9	7.0	6.3	7-9	6.5	6.0
6-10	7.1	6.3	7-10	6.6	5.6
6-11	6.9	6.3	7-11	6.8	6.1
6-12	7.2	6.2	7-12	6.9	6.4
6-13	7.0	6.2	7-13	6.8	6.1
6-14	7.0	6.4	7-14	6.7	6.0
6-15	6.6	5.9	7-15	6.8	6.1
6-16	6.6	6.2	7-16	6.6	6.5
6-17	6.9	6.1	7-17	6.5	6.1
6-18	7.0	5.9	7-18	6.3	5.9
6-19	6.7	5.6	7-19	6.0	5.9
6-20	6.9	6.2	7-20	6.9	6.3
6-21	6.2	6.2	7-21	6.8	6.2
6-22	6.6	6.3	7-22	6.1	5.6
6-23	7.1	6.0	7-23	6.1	5.7
6-24	6.8	6.0	7-24	6.4	5.7
6-25	7.1	6.0	7-25	6.2	6.1
6-26	6.7	5.6	7-26	6.8	5.9
6-27	6.9	5.7	7-27	6.7	5.9
6-28	6.9	5.8	7-28	6.7	5.8
6-29	6.7	6.2	7-29	6.2	5.8
6-30	7.0	5.8	7-30	6.4	5.5
			7-31	6.2	5.1

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TABLE A-1. (Contd.)

1987				1987		
Date	Graph units			Date	Graph units	
	High	Low			High	Low
8-1	6.4	5.5		9-1	6.5	5.8
8-2	6.5	5.8		9-2	6.7	6.1
8-3	6.9	6.2		9-3	6.5	5.9
8-4	6.9	6.2		9-4	6.7	6.1
8-5	6.8	6.3		9-5	6.9	5.9
8-6	7.0	6.2		9-6	6.7	5.7
8-7	6.7	5.9		9-7	6.6	5.9
8-8	7.0	6.2		9-8	6.3	5.6
8-9	6.7	5.7		9-9	6.6	6.0
8-10	6.9	6.2		9-10	6.7	5.8
8-11	6.9	6.1		9-11	6.6	6.0
8-12	7.1	6.3		9-12	6.3	5.8
8-13	6.8	6.2		9-13	6.5	6.0
8-14	6.9	6.2		9-14	6.4	5.5
8-15	7.0	6.1		9-15	6.4	5.4
8-16	6.8	6.2		9-16	6.1	5.7
8-17	6.6	5.8		9-17	6.4	6.0
8-18	6.5	5.9		9-18	6.5	6.2
8-19	6.5	5.8		9-19	6.4	5.9
8-20	6.7	5.9		9-20	6.3	5.9
8-21	6.6	5.8		9-21	6.4	5.9
8-22	6.5	5.9		9-22	6.5	6.0
8-23	6.5	5.9		9-23	6.7	6.0
8-24	6.5	6.0		9-24	6.4	6.0
8-25	6.5	5.9		9-25	6.7	6.1
8-26	6.4	5.9		9-26	6.7	6.1
8-27	6.5	5.9		9-27	6.4	5.9
8-28	6.6	5.9		9-28	6.4	6.0
8-29	6.6	5.9		9-29	6.4	5.9
8-30	6.5	5.9		9-30	6.4	5.8
8-31	6.6	5.9				

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

The conversion factor for this table is 82.99.

1986			1986		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
10-1	7.5	7.4	11-1	7.0	6.6
10-2	7.2	6.7	11-2	7.1	6.5
10-3	6.9	6.7	11-3	7.0	6.2
10-4	6.7	6.4	11-4	7.1	6.1
10-5	7.1	6.7	11-5	7.3	6.4
10-6	6.8	6.4	11-6	7.3	6.2
10-7	6.9	6.7	11-7	7.4	6.3
10-8	7.0	6.8	11-8	7.3	6.3
10-9	7.3	6.7	11-9	7.4	6.4
10-10	7.4	7.2	11-10	7.2	6.2
10-11	7.3	7.3	11-11	6.9	6.2
10-12	7.3	6.6	11-12	7.0	6.3
10-13	7.1	6.5	11-13	6.8	6.4
10-14	7.0	6.4	11-14	6.8	6.4
10-15	7.0	6.7	11-15	6.6	6.5
10-16	7.1	6.7	11-16	6.8	6.3
10-17	7.4	7.0	11-17	6.9	6.4
10-18	7.4	7.3	11-18	6.9	6.3
10-19	7.3	7.2	11-19	6.8	6.5
10-20	7.0	6.6	11-20	7.1	6.3
10-21	7.3	7.0	11-21	7.1	6.7
10-22	7.3	7.1	11-22	6.7	6.1
10-23	6.8	6.7	11-23	6.3	6.0
10-24	6.7	6.4	11-24	6.6	6.0
10-25	7.1	6.6	11-25	6.7	5.8
10-26	7.0	6.7	11-26	6.8	6.7
10-27	7.1	6.9	11-27	6.7	6.3
10-28	6.8	6.8	11-28	6.4	6.2
10-29	7.0	6.7	11-29	6.5	5.8
10-30	7.3	7.1	11-30	7.0	6.1
10-31	7.3	7.3			

TABLE A-2. (Contd.)

1986			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
12-1	7.4	6.5	1-1	6.1	4.9
12-2	6.6	5.8	1-2	6.6	5.6
12-3	6.8	5.9	1-3	6.4	5.9
12-4	6.7	5.9	1-4	5.8	5.4
12-5	7.0	6.3	1-5	6.2	5.6
12-6	6.9	5.9	1-6	6.3	5.7
12-7	6.8	5.9	1-7	6.3	5.6
12-8	6.1	5.5	1-8	6.1	5.7
12-9	6.2	5.6	1-9	6.3	5.5
12-10	6.3	5.4	1-10	6.2	5.6
12-11	6.2	5.7	1-11	5.7	5.5
12-12	6.2	5.5	1-12	6.5	5.2
12-13	6.5	5.7	1-13	5.4	5.4
12-14	6.4	6.0	1-14	6.1	5.3
12-15	6.1	6.0	1-15	6.4	6.3
12-16	6.4	6.0	1-16	5.6	5.0
12-17	6.5	6.0	1-17	5.3	4.9
12-18	6.4	5.7	1-18	6.0	4.9
12-19	6.3	6.0	1-19	5.8	5.2
12-20	6.2	6.2	1-20	5.7	5.1
12-21	6.1	5.5	1-21	6.1	5.1
12-22	6.6	5.5	1-22	6.6	5.8
12-23	6.0	5.6	1-23	5.4	5.2
12-24	6.1	5.5	1-24	5.5	5.2
12-25	6.0	5.6	1-25	5.6	5.1
12-26	6.1	5.5	1-26	6.4	5.9
12-27	6.4	5.6	1-27	5.9	5.3
12-28	6.1	5.5	1-28	6.1	5.3
12-29	6.5	5.4	1-29	6.0	5.4
12-30	6.5	6.1	1-30	6.1	4.9
12-31	6.7	6.7	1-31	6.1	5.4

TABLE A-2. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
2-1	6.5	5.4	3-1	5.6	5.0
2-2	6.5	5.8	3-2	5.6	5.1
2-3	6.1	6.0	3-3	5.6	5.1
2-4	5.5	4.9	3-4	5.6	5.4
2-5	5.3	4.6	3-5	5.5	5.3
2-6	5.4	4.7	3-6	5.7	5.3
2-7	5.8	4.6	3-7	5.9	5.4
2-8	6.5	5.2	3-8	6.2	5.8
2-9	6.0	5.6	3-9	6.0	5.1
2-10	5.9	5.4	3-10	6.2	5.6
2-11	6.1	4.8	3-11	6.9	5.6
2-12	6.5	5.3	3-12	6.8	6.7
2-13	6.1	5.4	3-13	6.2	6.2
2-14	6.7	5.8	3-14	6.1	5.2
2-15	5.7	5.1	3-15	5.9	5.5
2-16	6.3	5.6	3-16	6.4	5.2
2-17	5.9	5.5	3-17	5.9	4.7
2-18	5.9	5.4	3-18	6.8	5.9
2-19	5.8	5.2	3-19	6.5	6.1
2-20	5.4	4.5	3-20	5.8	5.1
2-21	6.1	4.8	3-21	6.6	5.5
2-22	6.2	5.3	3-22	6.0	5.9
2-23	6.5	6.2	3-23	6.4	6.1
2-24	6.4	5.7	3-24	6.0	5.0
2-25	5.5	5.3	3-25	5.6	4.9
2-26	5.6	5.2	3-26	5.6	4.7
2-27	5.6	5.2	3-27	5.9	5.0
2-28	6.0	5.2	3-28	6.0	5.1
			3-29	5.8	5.2
			3-30	5.5	5.0
			3-31	5.3	5.0

TABLE A-2. (Contd.)

1987				1987		
Date	Graph units			Date	Graph units	
	High	Low			High	Low
4-1	5.5	5.2		5-1	6.1	5.8
4-2	5.1	4.8		5-2	5.6	5.4
4-3	6.4	5.6		5-3	5.5	5.1
4-4	5.8	5.6		5-4	5.4	5.0
4-5	5.4	5.0		5-5	5.5	5.0
4-6	5.2	4.8		5-6	5.5	5.3
4-7	4.9	4.8		5-7	5.8	5.6
4-8	4.7	4.6		5-8	5.9	5.4
4-9	5.5	4.7		5-9	5.9	5.6
4-10	6.1	5.6		5-10	5.5	5.5
4-11	5.4	5.2		5-11	5.8	5.8
4-12	5.2	4.4		5-12	5.7	5.4
4-13	5.9	5.7		5-13	6.0	5.3
4-14	6.0	5.5		5-14	6.0	5.6
4-15	5.1	4.8		5-15	6.2	5.8
4-16	5.6	4.6		5-16	6.2	5.8
4-17	6.4	5.8		5-17	5.9	5.6
4-18	6.5	5.9		5-18	6.2	6.1
4-19	5.4	5.1		5-19	5.6	5.2
4-20	6.1	5.6		5-20	5.4	5.3
4-21	5.5	4.4		5-21	5.4	5.3
4-22	5.2	4.9		5-22	6.0	5.5
4-23	5.6	4.8		5-23	6.3	5.2
4-24	5.8	4.9		5-24	6.4	5.9
4-25	5.2	5.1		5-25	6.3	5.9
4-26	6.2	5.6		5-26	6.2	5.6
4-27	5.6	5.4		5-27	5.9	5.4
4-28	5.6	5.1		5-28	5.7	5.3
4-29	6.0	5.4		5-29	5.0	4.9
4-30	6.0	5.7		5-30	5.5	5.4
				5-31	5.8	5.4

TABLE A-2. (Contd.)

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

TABLE A-2. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
8-1	6.1	5.6	9-1	5.9	5.7
8-2	6.2	5.9	9-2	5.9	5.6
8-3	5.9	5.9	9-3	5.9	5.5
8-4	6.0	5.6	9-4	6.0	5.7
8-5	6.1	5.5	9-5	6.1	5.6
8-6	6.1	5.6	9-6	5.8	5.6
8-7	6.0	5.6	9-7	6.0	5.7
8-8	5.9	5.7	9-8	6.0	5.9
8-9	6.0	5.8	9-9	6.9	6.2
8-10	6.2	5.6	9-10	6.9	6.2
8-11	6.1	5.7	9-11	6.8	6.0
8-12	6.0	5.6	9-12	6.3	6.1
8-13	6.1	5.6	9-13	5.6	5.6
8-14	6.2	5.6	9-14	6.5	5.4
8-15	6.7	5.6	9-15	6.0	5.8
8-16	6.0	5.6	9-16	5.9	5.8
8-17	6.1	5.6	9-17	6.4	5.9
8-18	6.1	5.6	9-18	6.6	6.0
8-19	6.0	5.6	9-19	6.0	5.4
8-20	5.9	5.6	9-20	5.9	5.6
8-21	6.0	5.6	9-21	6.2	5.5
8-22	5.9	5.6	9-22	6.1	5.4
8-23	5.8	5.6	9-23	6.3	5.6
8-24	5.9	5.6	9-24	6.2	5.7
8-25	5.9	5.6	9-25	6.2	5.5
8-26	6.0	5.5	9-26	6.4	5.7
8-27	5.8	5.6	9-27	6.2	5.8
8-28	5.8	5.6	9-28	6.1	5.7
8-29	6.0	5.6	9-29	6.0	5.8
8-30	6.0	5.6	9-30	6.2	5.9
8-31	6.0	5.5			

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

The conversion factors for this table is 15.7.

1986			1986		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
10-1	3.1	1.7	11-1	3.2	2.2
10-2	3.0	1.2	11-2	3.5	2.5
10-3	2.7	1.4*	11-3	3.3	2.8
10-4	2.9	1.0	11-4	3.7	2.9
10-5	2.6	1.8	11-5	3.9	3.0
10-6	2.4	1.6	11-6	3.9	3.0
10-7	2.1	1.4	11-7	4.0	2.8
10-8	2.6	1.5	11-8	3.9	2.7
10-9	2.8	1.8	11-9	3.9	2.7
10-10	3.2	1.9	11-10	3.9	2.6
10-11	3.4	2.0	11-11	3.8	2.7
10-12	3.0	1.8	11-12	4.0	2.9
10-13	3.3	2.0	11-13	3.8	3.2
10-14	3.4	2.4	11-14	4.5	4.1
10-15	4.0	3.2	11-15	4.7	4.2
10-16	4.1	3.8	11-16	4.9	4.5
10-17	3.9	3.2	11-17	4.8	4.3
10-18	4.1	3.5	11-18	5.0	4.7
10-19	3.8	2.8	11-19	4.8	4.4
10-20	3.9	3.3	11-20	5.1	4.6
10-21	3.7	2.7	11-21	5.1	4.7
10-22	3.6	2.8	11-22	5.0	4.8
10-23	3.2	2.0	11-23	4.9	4.6
10-24	3.4	2.2	11-24	5.2	4.5
10-26	3.0	1.8	11-25	5.1	4.6
10-27	3.0	1.8	11-26	5.2	4.7
10-27	2.6	1.2	11-27	5.2	4.6
10-28	2.8	2.4	11-28	5.1	4.7
10-29	3.1	2.2	11-29	5.1	4.7
10-30	3.3	2.0	11-30	5.2	4.7
10-31	3.0	2.4			

TABLE A-3. (Contd.)

1986			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
12-1	5.2	4.7	1-1	5.7	5.2
12-2	5.1	4.7	1-2	5.0	5.0
12-3	5.2	4.8	1-3	5.7	5.0
12-4	5.2	4.7	1-4	6.1	5.8
12-5	5.2	4.8	1-5	5.7	5.0
12-6	5.2	4.7	1-6	5.5	4.9
12-7	5.1	4.8	1-7	5.0	4.7
12-8	5.0	4.7	1-8	5.3	4.9
12-9	5.1	4.5	1-9	4.4	4.4
12-10	5.0	4.5	1-10	4.7	4.3
12-11	5.1	4.4	1-11	4.7	4.7
12-12	5.1	4.3	1-12	4.8	4.3
12-13	5.0	4.4	1-13	5.1	4.2
12-14	5.2	4.5	1-14	5.1	4.4
12-15	5.2	4.4	1-15	5.2	4.4
12-16	5.0	4.2	1-16	5.2	4.2
12-17	5.3	4.0	1-17	5.0	4.4
12-18	5.1	4.5	1-18	5.1	4.3
12-19	4.9	4.3	1-19	4.8	4.1
12-20	5.1	4.5	1-20	5.0	4.3
12-21	5.1	4.5	1-21	5.1	4.3
12-22	5.3	4.2	1-22	5.0	4.3
12-23	5.1	4.8	1-23	4.9	4.1
12-24	5.2	4.3	1-24	5.1	4.3
12-25	5.1	4.2	1-25	5.1	4.4
12-26	5.2	4.1	1-26	5.0	4.5
12-27	5.2	4.2	1-27	5.7	5.3
12-28	5.2	4.4	1-28	5.7	5.6
12-29	4.8	4.5	1-29	5.3	5.3
12-30	5.5	5.1	1-30	5.8	5.4
12-31	5.6	5.3	1-31	5.4	5.3

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TABLE A-3. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
2-1	5.5	4.9	3-1	5.2	5.1
2-2	5.8	5.4	3-2	4.6	4.4
2-3	5.4	5.4	3-3	4.8	4.5
2-4	4.8	4.6	3-4	5.3	4.7
2-5	4.7	4.2	3-5	5.2	5.1
2-6	5.0	4.2	3-6	5.2	4.9
2-7	5.5	4.9	3-7	5.6	5.3
2-8	5.3	4.9	3-8	5.6	5.3
2-9	5.6	5.3	3-9	5.2	4.9
2-10	5.6	5.1	3-10	5.3	4.9
2-11	5.1	5.1	3-11	5.1	4.6
2-12	5.6	4.9	3-12	5.6	5.0
2-13	5.3	5.0	3-13	5.6	5.4
2-14	5.7	5.0	3-14	5.5	5.2
2-15	6.0	5.7	3-15	6.3	5.5
2-16	5.1	4.8	3-16	5.5	5.3
2-17	5.2	5.2	3-17	5.3	4.7
2-18	5.5	4.7	3-18	6.2	5.3
2-19	4.9	4.6	3-19	5.8	5.5
2-20	5.7	5.5	3-20	5.2	4.7
2-21	6.0	5.1	3-21	6.2	5.7
2-22	6.6	5.8	3-22	5.3	5.0
2-23	6.4	6.3	3-23	5.8	5.0
2-24	6.2	5.9	3-24	5.1	4.6
2-25	5.4	5.0	3-25	5.1	4.5
2-26	4.7	4.5	3-26	5.3	4.0
2-27	5.1	4.6	3-27	5.4	4.9
2-28	5.4	4.7	3-28	5.6	4.8
			3-29	5.1	3.7
			3-30	5.6	4.4
			3-31	5.0	4.4

TABLE A-3. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
4-1	5.5	4.9	5-1	5.6	5.1
4-2	5.5	4.7	5-2	4.8	4.5
4-3	6.2	5.9	5-3	5.3	4.5
4-4	6.0	5.5	5-4	5.5	4.7
4-5	4.9	4.6	5-5	5.6	4.8
4-6	5.3	4.6	5-6	5.5	4.6
4-7	5.2	4.5	5-7	5.5	4.7
4-8	5.1	4.7	5-8	5.5	4.7
4-9	5.1	4.6	5-9	5.5	4.8
4-10	5.7	4.8	5-10	5.6	5.3
4-11	6.0	5.4	5-11	5.5	5.4
4-12	5.2	4.8	5-12	5.0	4.9
4-13	4.6	4.3	5-13	5.1	4.6
4-14	5.1	4.5	5-14	5.5	4.9
4-15	5.0	4.8	5-15	5.8	5.0
4-16	5.4	4.8	5-16	5.9	5.8
4-17	6.0	5.3	5-17	5.5	5.0
4-18	5.7	5.6	5-18	5.6	5.4
4-19	4.9	4.5	5-19	5.7	5.2
4-20	4.7	4.3	5-20	5.3	5.1
4-21	5.2	4.8	5-21	5.1	4.7
4-22	5.5	4.9	5-22	5.6	5.0
4-23	5.4	4.9	5-23	5.7	5.0
4-24	5.5	5.1	5-24	5.9	5.5
4-25	4.8	4.6	5-25	5.6	5.4
4-26	5.1	4.4	5-26	5.4	5.3
4-27	5.3	4.9	5-27	5.2	5.1
4-28	5.6	5.1	5-28	5.0	4.9
4-29	5.4	5.3	5-29	5.2	4.8
4-30	5.7	5.2	5-30	5.6	5.1
			5-31	5.6	5.1

TABLE A-3. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
6-1	4.9	4.8	7-1	5.5	4.9
6-2	4.6	4.6	7-2	5.5	4.9
6-3	5.1	4.8	7-3	5.9	5.0
6-4	5.4	5.0	7-4	5.7	4.6
6-5	5.3	4.9	7-5	5.5	5.2
6-6	5.3	5.1	7-6	5.7	5.3
6-7	5.4	5.0	7-7	5.7	5.1
6-8	5.3	5.0	7-8	5.9	5.5
6-9	5.7	5.3	7-9	5.4	5.3
6-10	5.8	5.3	7-10	5.7	5.0
6-11	5.4	4.8	7-11	5.5	5.3
6-12	5.0	4.5	7-12	5.4	4.9
6-13	5.1	4.4	7-13	5.7	4.9
6-14	5.6	5.1	7-14	5.4	5.1
6-15	6.1	5.5	7-15	5.4	5.2
6-16	5.4	5.0	7-16	5.8	5.3
6-17	5.4	5.1	7-17	5.7	5.7
6-18	5.7	5.1	7-18	5.3	5.1
6-19	5.7	5.5	7-19	5.4	4.6
6-20	5.7	5.4	7-20	5.7	5.1
6-21	5.3	4.9	7-21	5.6	4.9
6-22	5.3	4.9	7-22	5.2	4.8
6-23	5.3	5.0	7-23	5.6	4.9
6-24	5.3	5.0	7-24	5.6	5.1
6-25	5.5	5.0	7-25	5.5	5.2
6-26	5.8	5.1	7-26	5.5	4.9
6-27	5.8	4.8	7-27	5.4	5.0
6-28	5.6	5.1	7-28	6.0	5.5
6-29	5.4	4.8	7-29	5.8	5.5
6-30	5.4	4.8	7-30	5.6	5.4

TABLE A-3. (Contd.)

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

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

The conversion factor for this table is 20.56.

1986				1986		
Date	Graph units			Date	Graph units	
	High	Low			High	Low
11-12	6.0	2.6		12-1	9.6	4.9
11-13	8.9	5.1		12-2	8.6	3.5
11-14	9.5	7.2		12-3	8.8	4.6
11-15	9.6	8.3		12-4	8.7	4.8
11-16	9.8	8.0		12-5	8.6	4.6
11-17	9.9	7.5		12-6	8.9	4.4
11-18	9.8	8.5		12-7	8.9	4.2
11-19	9.8	8.4		12-8	9.0	4.8
11-20	9.1	4.1		12-9	9.0	4.6
11-21	8.8	4.2		12-10	9.2	3.6
11-22	9.0	3.9		12-11	9.7	3.3
11-23	8.9	4.2		12-12	9.6	3.3
11-24	9.0	4.4		12-13	10.0	3.5
11-25	9.1	6.5		12-14	9.4	3.8
11-26	8.8	5.7		12-15	8.6	3.8
11-27	9.5	6.3		12-16	8.7	3.4
11-28	9.5	5.2		12-17	9.0	3.5
11-29	9.4	3.0		12-18	8.6	3.6
11-30	9.3	3.8		12-19	8.4	3.5
				12-20	8.5	2.7
				12-21	7.5	2.2
				12-22	7.4	2.2
				12-23	7.3	2.2
				12-24	6.9	1.8
				12-25	7.3	1.6
				12-26	7.5	1.7
				12-27	7.3	1.7
				12-28	7.7	3.4
				12-29	8.4	3.2
				12-30	7.4	2.7
				12-31	8.7	2.9

TABLE A-4. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
1-1	7.3	2.4	2-1	8.0	3.7
1-2	8.4	1.9	2-2	7.8	4.0
1-3	8.2	2.4	2-3	7.6	3.6
1-4	8.4	2.5	2-4	7.5	3.3
1-5	8.5	3.7	2-5	7.9	4.1
1-6	8.1	3.3	2-6	7.6	3.2
1-7	8.7	4.6	2-7	7.8	3.2
1-8	8.8	4.2	2-8	7.7	3.2
1-9	8.8	3.5	2-9	7.6	3.0
1-10	7.9	3.5	2-9	7.1	1.1
1-11	8.9	4.2	2-10	7.4	3.1
1-12	8.8	4.1	2-11	6.8	2.8
1-13	8.5	4.2	2-12	7.0	3.0
1-14	8.3	4.2	2-13	6.7	2.6
1-15	8.4	4.1	2-14	7.5	2.8
1-17	8.2	4.0	2-15	7.9	3.0
1-18	8.3	3.8	2-16	7.0	2.5
1-19	7.9	4.0	2-17	6.6	2.2
1-20	8.6	4.2	2-18	8.1	3.2
1-21	8.6	3.5	2-20	8.1	2.8
1-22	7.9	3.3	2-21	7.4	3.6
1-23	8.6	4.3	2-22	8.4	2.3
1-24	8.2	3.2	2-23	9.3	2.6
1-25	8.3	3.8	2-24	8.0	3.0
1-26	7.9	3.8	2-25	7.9	3.2
1-27	8.1	4.0	2-26	9.4	2.9
1-28	7.8	3.7	2-27	9.3	2.2
1-29	8.0	3.9	2-28	8.4	3.2
1-31	7.8	3.6			

TABLE A-4. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
3-1	8.4	3.2	4-1	7.8	4.0
3-2	8.4	4.0	4-2	8.1	3.7
3-3	8.6	3.6	4-3	8.3	2.7
3-4	8.9	3.1	4-4	9.0	2.6
3-5	9.1	2.5	4-5	9.3	3.0
3-6	9.0	2.3	4-6	9.1	2.9
3-7	9.0	4.3	4-7	9.2	3.0
3-8	9.1	4.2	4-8	9.4	2.9
3-9	8.4	2.7	4-9	8.7	3.3
3-10	8.0	2.7	4-10	9.0	3.8
3-11	8.7	3.1	4-11	7.1	2.5
3-12	8.3	1.8	4-12	9.2	2.9
3-13	9.2	2.7	4-12	9.2	1.6
3-14	9.7	4.1	4-13	8.9	2.2
3-15	8.0	3.5	4-14	9.0	1.5
3-16	8.4	2.7	4-15	8.1	2.0
3-18	9.5	3.9	4-16	8.1	2.8
3-19	6.1	1.8	4-17	9.3	3.4
3-20	6.3	2.0	4-18	9.5	3.2
3-21	6.5	3.0	4-19	9.1	4.1
3-22	7.2	3.4	4-20	9.1	3.8
3-23	7.6	2.7	4-21	9.2	3.9
3-24	7.6	3.3	4-22	8.4	2.2
3-25	8.9	4.7	4-23	8.9	1.8
3-26	8.5	2.7	4-24	9.5	1.6
3-27	8.4	3.5	4-25	9.6	2.4
3-28	7.6	1.8	4-26	8.5	2.5
3-29	8.9	1.7	4-27	8.8	2.7
3-30	7.1	3.1	4-28	8.3	1.9
3-31	7.9	3.0	4-29	8.5	2.2
			4-30	8.0	3.1

TABLE A-4. (Contd.)

1987				1987		
Date	Graph units			Date	Graph units	
	High	Low			High	Low
5-1	8.6	3.1		6-1	8.9	3.1
5-2	7.8	2.6		6-2	9.2	1.5
5-3	8.1	2.7		6-3	7.3	2.6
5-4	9.0	2.4		6-4	7.9	1.2
5-5	7.7	2.2		6-5	9.1	2.8
5-6	8.0	2.1		6-6	6.3	1.4
5-7	9.1	3.9		6-7	9.8	4.2
5-8	9.4	2.4		6-8	9.4	3.2
5-9	8.7	1.6		6-9	9.6	1.9
5-10	8.7	1.1		6-10	8.8	3.9
5-11	7.7	2.2		6-11	9.5	2.4
5-12	7.3	2.1		6-12	9.0	3.9
5-13	8.8	2.8		6-13	7.4	2.2
5-14	8.0	1.6		6-14	8.9	2.8
5-15	8.2	2.9		6-15	9.1	4.7
5-16	8.6	3.4		6-16	9.5	4.1
5-17	8.5	3.1		6-17	8.4	2.6
5-18	7.9	2.1		6-18	9.8	2.4
5-19	7.8	2.9		6-19	9.7	3.5
5-20	7.9	1.5		6-20	9.3	1.9
5-21	8.9	3.6		6-21	9.7	3.2
5-22	8.8	3.5		6-22	9.6	2.9
5-23	8.4	4.0		6-23	9.2	2.4
5-24	8.2	3.1		6-24	7.8	1.1
5-25	8.4	1.5		6-25	9.3	3.5
5-26	8.4	2.1		6-26	8.7	1.8
5-27	8.3	2.8		6-27	9.1	2.6
5-28	7.9	3.0		6-28	8.8	2.6
5-29	8.3	1.7		6-29	8.9	2.7
5-30	9.2	2.0		6-30	9.6	3.1
5-31	8.9	2.5				

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TABLE A-4. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
7-1	8.9	2.8	8-1	9.5	3.8
7-2	9.0	3.0	8-2	8.8	4.1
7-3	8.8	1.7	8-3	8.1	2.8
7-4	8.8	2.7	8-4	8.1	2.6
7-5	8.9	2.6	8-5	8.2	2.8
7-6	9.6	3.2	8-6	8.5	2.8
7-7	9.1	2.2	8-7	9.0	3.3
7-8	8.9	2.4	8-8	8.3	2.6
7-9	8.7	2.5	8-9	8.0	2.7
7-10	5.3	1.2	8-10	8.4	2.8
7-11	9.7	2.6	8-11	8.8	2.4
7-12	8.9	2.8	8-12	8.5	3.3
7-13	7.5	3.3	8-13	8.6	3.3
7-14	7.7	2.5	8-14	8.8	3.2
7-15	7.5	2.2	8-15	8.1	3.1
7-16	5.6	1.9	8-16	8.1	2.8
7-17	6.3	2.4	8-17	8.2	1.9
7-18	6.5	1.9	8-18	8.1	2.8
7-19	6.6	1.6	8-19	8.8	3.3
7-20	7.5	2.6	8-20	8.4	3.1
7-21	7.1	2.3	8-21	8.4	3.1
7-22	7.9	2.2	8-22	8.6	2.6
7-23	8.7	2.9	8-23	8.9	3.5
7-24	9.0	2.8	8-24	8.8	3.3
7-25	9.0	2.3	8-25	8.7	3.2
7-26	8.9	4.0	8-26	8.6	3.3
7-27	7.7	3.1	8-27	8.6	3.2
7-28	8.3	1.9	8-28	8.7	3.7
7-29	9.1	2.4	8-29	8.8	3.6
7-30	9.4	2.4	8-30	8.8	3.5
7-31	9.5	3.2	8-31	8.9	3.8

TABLE A-4. (Contd.)

1987		
Date	Graph units	
	High	Low
9-1	8.9	3.0
9-2	8.6	3.1
9-3	8.7	3.0
9-4	8.8	3.1
9-5	8.9	3.2
9-6	8.8	3.7
9-7	8.7	3.2
9-8	8.5	3.5
9-9	8.8	3.0
9-10	9.0	2.1
9-11	8.3	2.9
9-12	8.6	3.0
9-13	8.8	4.1
9-14	9.5	2.6
9-15	8.9	3.6
9-16	8.1	2.8
9-17	8.5	3.0
9-18	8.8	2.8
9-19	9.3	3.9
9-20	9.7	3.2
9-21	9.7	2.5
9-22	8.7	2.2
9-23	8.3	3.0
9-24	8.6	3.0
9-25	9.1	3.9
9-26	9.5	3.8
9-27	9.4	4.2
9-28	9.1	4.0
9-29	9.3	4.2
9-30	8.9	3.8

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

The conversion factor for this table is 0.5265.

1986			1986		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
10-1	5.9	5.5	11-1	5.8	4.8
10-2	5.5	5.0	11-2	6.3	5.0
10-3	5.8	4.8	11-3	6.5	6.0
10-4	6.1	5.4	11-4	6.4	5.5
10-5	6.2	5.3	11-5	6.9	5.8
10-6	6.3	5.5	11-6	6.7	6.5
10-7	6.5	5.7	11-7	6.4	5.6
10-8	6.2	5.7	11-8	5.7	5.2
10-9	6.1	5.4	11-9	6.2	5.0
10-10	6.3	6.1	11-10	6.3	5.7
10-11	6.1	5.5	11-11	6.4	5.2
10-12	5.9	5.1	11-12	6.2	5.9
10-13	6.4	4.9	11-13	6.8	5.8
10-14	6.2	5.1	11-14	6.5	5.9
10-15	6.5	5.5	11-15	6.3	5.5
10-16	6.3	5.7	11-16	6.6	5.6
10-17	6.3	5.9	11-17	6.5	6.1
10-18	6.1	5.5	11-18	6.0	5.7
10-19	5.7	5.0	11-19	5.7	5.2
10-20	6.3	5.6	11-20	6.1	5.1
10-21	6.2	5.4	11-21	6.3	5.9
10-22	6.5	5.6	11-22	5.8	4.8
10-23	6.0	5.7	11-23	5.6	4.7
10-24	5.9	5.2	11-24	6.4	5.8
10-25	6.2	5.0	11-25	5.7	5.1
10-26	6.4	5.5	11-26	5.8	5.2
10-27	6.8	5.9	11-27	5.8	4.9
10-28	6.1	5.3	11-28	6.4	5.3
10-29	6.7	5.8	11-29	6.6	5.9
10-30	7.1	6.0	11-30	5.5	4.6
10-31	5.9	5.6			

TABLE A-5. (Contd.)

1986			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
12-1	6.1	4.7	1-1	6.8	4.9
12-2	6.1	5.9	1-2	5.5	5.5
12-3	6.1	5.4	1-3	6.7	6.5
12-4	6.0	5.4	1-4	6.8	6.3
12-5	6.4	5.5	1-5	6.5	6.5
12-6	6.5	5.8	1-6	5.6	4.9
12-7	5.7	5.6	1-7	5.6	5.1
12-8	5.6	5.1	1-8	5.5	4.7
12-9	5.8	4.9	1-9	5.6	4.7
12-10	5.7	5.1	1-10	6.0	4.8
12-11	5.8	5.4	1-11	6.1	5.0
12-12	5.9	5.3	1-12	6.2	6.0
12-13	6.1	5.5	1-13	6.6	5.5
12-14	6.1	5.3	1-14	6.5	6.4
12-15	5.8	5.2	1-15	5.4	5.3
12-16	6.0	5.0	1-16	5.5	5.0
12-17	6.2	5.1	1-17	5.6	4.9
12-18	6.4	5.6	1-18	6.3	5.7
12-19	6.1	5.5	1-19	5.9	4.7
12-20	6.3	5.5	1-20	5.9	4.7
12-21	5.3	4.9	1-21	5.8	5.0
12-22	5.4	4.8	1-22	6.3	5.6
12-23	5.3	4.8	1-23	6.7	6.3
12-24	5.5	4.7	1-24	5.9	5.2
12-25	5.5	4.9	1-25	5.7	5.0
12-26	5.4	4.8	1-26	6.2	5.6
12-27	5.4	4.7	1-27	6.8	6.0
12-28	5.5	4.8	1-28	6.5	6.4
12-29	5.5	5.4	1-29	6.3	5.8
12-30	5.9	5.9	1-30	6.4	5.7
12-31	6.4	5.5	1-31	6.0	5.7

TABLE A-5. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
2-1	6.7	5.5	3-1	6.0	5.0
2-2	6.9	6.3	3-2	6.0	5.0
2-3	6.3	6.0	3-3	5.9	5.1
2-4	6.0	5.3	3-4	6.0	5.2
2-5	6.5	5.2	3-5	6.1	5.0
2-6	6.1	5.7	3-6	6.1	5.0
2-7	6.9	5.8	3-7	6.1	4.9
2-8	7.0	6.1	3-8	6.1	5.1
2-9	6.2	5.6	3-9	6.0	5.1
2-10	6.9	6.4	3-10	5.9	4.5
2-11	6.1	5.3	3-11	5.8	5.5
2-12	6.4	5.6	3-12	5.4	5.2
2-13	6.2	5.4	3-13	6.5	5.7
2-14	6.8	5.6	3-14	6.1	5.4
2-15	5.7	5.0	3-15	5.9	5.2
2-16	5.7	4.9	3-16	6.5	6.0
2-17	5.8	5.5	3-17	6.3	6.0
2-18	5.9	5.0	3-18	5.7	4.5
2-19	5.4	4.6	3-19	6.5	5.6
2-20	6.7	5.5	3-20	5.6	4.9
2-21	6.5	5.4	3-21	6.1	4.8
2-22	7.1	6.4	3-22	5.8	5.0
2-23	6.3	6.1	3-23	6.8	5.8
2-24	5.9	5.1	3-24	5.6	5.4
2-25	6.1	4.9	3-25	5.7	4.7
2-26	6.1	5.0	3-26	6.4	4.8
2-27	5.9	5.2	3-27	7.1	5.5
2-28	5.9	5.0	3-28	6.4	5.5
			3-29	6.4	5.5
			3-30	6.8	5.5
			3-31	6.7	5.8

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TABLE A-5. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
4-1	6.8	5.0	5-1	6.8	5.8
4-2	6.2	5.6	5-2	6.8	5.6
4-3	6.1	5.2	5-3	6.9	5.7
4-4	6.2	5.6	5-4	6.6	5.6
4-5	6.5	5.1	5-5	6.8	5.8
4-6	6.4	5.8	5-6	6.2	5.6
4-7	6.2	5.8	5-7	6.5	5.7
4-8	6.0	5.4	5-8	6.2	5.4
4-9	6.4	5.8	5-9	6.2	5.1
4-10	5.9	5.2	5-10	6.4	5.2
4-11	6.5	5.7	5-11	6.2	5.4
4-12	6.2	5.6	5-12	6.6	5.7
4-13	6.3	5.6	5-13	6.2	5.5
4-14	6.1	5.2	5-14	6.4	4.9
4-15	6.2	5.7	5-15	6.2	5.8
4-16	5.9	5.2	5-16	6.9	6.1
4-17	6.2	4.8	5-17	7.2	6.1
4-18	6.0	4.5	5-18	6.8	6.3
4-19	6.2	4.6	5-19	6.9	6.1
4-20	6.5	5.0	5-20	6.7	5.6
4-21	6.4	5.2	5-21	6.6	6.0
4-22	6.5	5.8	5-22	6.9	6.2
4-23	6.2	4.8	5-23	7.1	6.2
4-24	5.8	5.2	5-24	6.6	5.8
4-25	6.2	4.4	5-25	7.1	6.3
4-26	6.5	4.8	5-26	6.9	6.5
4-27	6.4	4.9	5-27	6.6	5.9
4-28	6.4	5.0	5-28	6.8	5.7
4-29	6.5	5.2	5-29	7.0	5.9
4-30	5.8	4.9	5-30	6.5	5.7
			5-31	6.4	5.6

TABLE A-5. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
6-1	6.5	5.6	7-1	5.3	4.8
6-2	6.6	5.8	7-2	5.5	5.1
6-3	6.2	5.4	7-3	5.9	5.1
6-4	5.8	4.9	7-4	5.4	4.8
6-5	6.8	6.0	7-5	6.2	5.2
6-6	6.9	6.3	7-6	5.4	4.9
6-7	6.4	5.8	7-7	5.7	5.1
6-8	6.3	5.7	7-8	5.7	5.5
6-9	6.8	6.3	7-9	5.5	5.1
6-10	6.4	5.7	7-10	5.6	5.0
6-11	6.5	5.4	7-11	5.6	5.0
6-12	5.0	4.7	7-12	5.9	4.7
6-13	5.6	4.8	7-13	5.5	5.1
6-14	6.9	5.6	7-14	5.8	4.9
6-15	7.0	5.8	7-15	5.6	5.2
6-16	5.6	4.7	7-16	6.1	5.4
6-17	5.6	4.7	7-17	5.6	5.5
6-18	5.5	5.0	7-18	5.4	4.7
6-19	5.4	4.5	7-19	5.4	5.2
6-20	5.8	5.0	7-20	5.6	5.2
6-21	5.6	5.1	7-21	5.7	5.3
6-22	5.3	5.1	7-22	5.1	5.1
6-23	5.5	4.9	7-23	5.5	5.2
6-24	5.5	4.8	7-24	5.7	5.1
6-25	5.4	5.1	7-25	5.7	5.1
6-26	5.8	5.0	7-26	5.5	5.1
6-27	5.6	5.2	7-27	5.8	4.9
6-28	5.8	4.8	7-28	5.5	5.0
6-29	5.6	4.9	7-29	5.3	5.1
6-30	5.4	4.8	7-30	5.3	5.1
			7-31	5.6	4.8

TABLE A-5. (Contd.)

1987			1987		
Date	Graph units		Date	Graph units	
	High	Low		High	Low
8-1	5.2	5.1	9-1	5.9	5.2
8-2	5.8	5.2	9-2	6.1	5.0
8-3	5.7	4.9	9-3	6.0	5.0
8-4	6.0	5.0	9-4	6.0	4.9
8-5	5.9	5.1	9-5	6.0	4.9
8-6	6.1	5.2	9-6	6.0	5.0
8-7	6.0	5.1	9-7	6.0	5.0
8-8	5.9	5.1	9-8	6.0	5.3
8-9	6.0	5.2	9-9	5.9	5.4
8-10	6.0	5.0	9-10	6.0	5.9
8-11	5.9	5.0	9-11	6.0	5.9
8-12	6.0	4.9	9-12	6.2	5.7
8-13	5.9	4.9	9-13	6.0	5.8
8-14	6.0	4.8	9-14	5.6	5.4
8-15	6.0	4.9	9-15	5.3	4.7
8-16	6.0	4.9	9-16	5.2	4.9
8-17	6.0	4.9	9-17	5.4	4.7
8-18	5.9	5.0	9-18	5.4	4.9
8-19	6.0	5.0	9-19	5.0	4.6
8-20	6.0	5.1	9-20	5.3	4.5
8-21	6.0	5.1	9-21	5.4	4.8
8-22	6.2	5.1	9-22	5.2	4.6
8-23	6.0	5.1	9-23	5.1	5.0
8-24	5.9	5.1	9-24	5.6	4.7
8-25	6.1	5.2	9-25	5.5	5.0
8-26	5.9	5.1	9-26	5.1	4.7
8-27	6.1	5.1	9-27	5.1	4.4
8-28	6.1	5.0	9-28	5.0	4.3
8-29	6.0	5.2	9-29	5.2	4.6
8-30	5.9	5.1	9-30	5.1	4.2
8-31	6.0	4.8			

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Appendix B

DAILY STEAM WELL TEMPERATURE DATA

NWC TP 6912

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

1986				1986		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
10-1	154	134		11-1	168	149
10-2	165	160		11-2	190	161
10-3	189	185		11-3	183	155
10-4	187	162		11-4	163	161
10-5	192	171		11-5	181	163
10-6	182	180		11-6	183	164
10-7	193	165		11-7	181	162
10-8	182	180		11-8	179	159
10-9	177	176		11-9	178	156
10-10	179	176		11-10	179	164
10-11	184	168		11-11	179	161
10-12	188	155		11-12	177	160
10-13	188	165		11-13	186	179
10-14	189	160		11-14	179	164
10-15	184	169		11-15	195	174
10-16	189	168		11-16	190	175
10-17	189	164		11-17	206	156
10-18	189	164		11-18	190	174
10-19	186	165		11-19	202	186
10-20	191	174		11-20	179	169
10-21	189	178		11-21	201	177
10-22	193	173		11-22	197	185
10-23	196	175		11-23	185	175
10-24	188	175		11-24	187	165
10-25	194	183		11-25	187	166
10-26	199	191		11-26	187	165
10-27	197	189		11-27	188	175
10-28	193	150		11-28	192	164
10-29	195	173		11-29	186	161
10-30	185	175		11-30	192	162
10-31	180	172				

TABLE B-1. (Contd.)

1986			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
12-1	186	162	1-1	184	173
12-2	186	163	1-2	184	182
12-3	187	170	1-3	185	175
12-4	190	166	1-4	180	175
12-5	188	163	1-5	187	177
12-6	189	164	1-6	181	163
12-7	189	163	1-7	184	159
12-8	187	166	1-8	194	188
12-9	189	166	1-9	196	175
12-10	188	163	1-10	196	180
12-11	189	164	1-11	200	185
12-12	188	164	1-12	192	170
12-13	188	188	1-13	192	175
12-14	189	165	1-14	193	171
12-15	190	171	1-15	193	175
12-16	191	171	1-16	194	175
12-17	190	172	1-17	191	172
12-18	193	172	1-18	190	179
12-19	194	171	1-19	190	176
12-20	189	171	1-20	191	172
12-21	194	173	1-21	195	181
12-22	185	166	1-22	194	179
12-23	187	166	1-23	188	178
12-24	187	170	1-24	194	177
12-25	188	171	1-25	192	177
12-26	189	168	1-26	199	180
12-27	186	171	1-27	196	178
12-28	186	166	1-28	197	182
12-29	193	190	1-29	194	180
12-30	181	173	1-30	192	178
12-31	182	173	1-31	191	153

TABLE B-1. (Contd.)

1987				1987		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
2-1	191	180		3-1	204	172
2-2	197	163		3-2	202	186
2-3	185	167		3-3	203	191
2-4	184	176		3-4	186	181
2-5	193	185		3-5	184	180
2-6	187	181		3-6	191	169
2-7	176	176		3-7	188	171
2-8	185	181		3-8	190	169
2-9	178	164		3-9	195	164
2-10	183	176		3-10	199	173
2-11	196	173		3-11	198	180
2-12	193	173		3-12	200	186
2-13	180	178		3-13	180	165
2-14	192	169		3-14	184	169
2-15	200	159		3-15	179	178
2-16	188	170		3-16	196	164
2-17	194	162		3-17	192	175
2-18	185	154		3-18	174	169
2-19	179	153		3-19	179	168
2-20	193	164		3-20	195	168
2-21	186	175		3-21	191	188
2-22	187	164		3-22	178	169
2-23	185	160		3-23	192	159
2-24	183	174		3-24	195	173
2-25	186	158		3-25	202	176
2-26	196	189		3-26	197	188
2-27	198	186		3-27	198	187
2-28	201	178		3-28	201	188
				3-29	199	187
				3-30	194	191
				3-31	201	181

TABLE B-1. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
4-1	200	178	5-1	196	165
4-2	181	178	5-2	199	191
4-3	186	159	5-3	202	180
4-4	201	193	5-4	200	169
4-5	194	183	5-5	203	169
4-6	188	182	5-6	202	170
4-7	203	180	5-7	195	169
4-8	210	195	5-8	199	174
4-9	203	181	5-9	201	172
4-10	206	190	5-10	205	167
4-11	201	193	5-11	193	174
4-12	189	188	5-12	198	186
4-13	196	188	5-13	197	175
4-14	193	177	5-14	193	188
4-15	205	201	5-15	198	185
4-16	196	184	5-16	200	168
4-17	199	182	5-17	197	183
4-18	196	181	5-18	188	167
4-19	195	184	5-19	185	174
4-20	204	177	5-20	181	168
4-21	203	190	5-21	187	154
4-22	197	186	5-22	198	179
4-23	197	185	5-23	204	182
4-24	195	189	5-24	189	177
4-25	199	188	5-25	196	172
4-26	203	199	5-26	182	171
4-27	193	185	5-27	203	179
4-28	191	185	5-28	198	183
4-29	181	174	5-29	199	177
4-30	195	181	5-30	184	177
			5-31	191	175

TABLE B-1. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
6-1	197	192	7-1	208	183
6-2	201	200	7-2	201	182
6-3	204	190	7-3	208	188
6-4	199	182	7-4	206	176
6-5	205	175	7-5	208	182
6-6	202	191	7-6	190	189
6-7	199	184	7-7	190	184
6-8	199	177	7-8	194	179
6-9	191	186	7-9	186	181
6-10	194	167	7-10	197	171
6-11	206	181	7-11	210	182
6-12	201	184	7-12	212	192
6-13	206	194	7-13	202	202
6-14	205	194	7-14	188	177
6-15	182	178	7-15	185	167
6-16	196	178	7-16	198	178
6-17	200	176	7-17	204	177
6-18	200	180	7-18	191	182
6-19	207	181	7-19	196	185
6-20	192	177	7-20	190	179
6-21	197	182	7-21	193	172
6-22	193	170	7-22	187	185
6-23	205	182	7-23	202	186
6-24	199	191	7-24	191	176
6-25	194	180	7-25	209	176
6-26	210	182	7-26	211	196
6-27	198	182	7-27	202	176
6-28	198	182	7-28	189	176
6-29	195	182	7-29	187	171
6-30	197	179	7-30	204	176
			7-31	215	185

TABLE B-1. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
8-1	216	198	9-1	200	190
8-2	208	187	9-2	201	187
8-3	198	180	9-3	200	189
8-4	198	183	9-4	203	187
8-5	199	188	9-5	200	187
8-6	200	184	9-6	207	186
8-7	204	184	9-7	208	187
8-8	201	183	9-8	209	189
8-9	202	185	9-9	209	188
8-10	202	185	9-10	209	185
8-11	201	186	9-11	208	194
8-12	203	184	9-12	207	198
8-13	201	185	9-13	208	195
8-14	201	186	9-14	208	183
8-15	200	185	9-15	192	172
8-16	200	187	9-16	198	182
8-17	199	186	9-17	205	182
8-18	200	188	9-18	207	186
8-19	199	186	9-19	206	197
8-20	201	186	9-20	187	184
8-21	202	190	9-21	206	189
8-22	194	183	9-22	204	189
8-23	200	187	9-23	207	187
8-24	200	186	9-24	205	188
8-25	201	188	9-25	208	189
8-26	200	185	9-26	213	184
8-27	200	186	9-27	207	188
8-28	200	187	9-28	207	185
8-29	202	187	9-29	206	185
8-30	200	188	9-30	204	188
8-31	200	185			

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

1986			1985		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
10-2	197	195	11-1	194	193
10-3	198	193	11-2	194	192
10-4	198	192	11-3	193	192
10-5	196	191	11-4	194	192
10-6	196	192	11-5	196	195
10-7	197	192	11-6	194	187
10-8	196	192	11-7	194	187
10-9	195	191	11-8	196	189
10-10	196	194	11-9	194	191
10-11	195	189	11-10	197	197
10-12	195	193	11-11	198	196
10-13	195	192	11-12	198	195
10-14	198	196	11-13	199	191
10-15	198	195	11-14	194	191
10-16	193	188	11-15	192	189
10-17	196	194	11-16	194	190
10-18	200	199	11-17	196	196
10-19	202	197	11-18	197	195
10-20	197	195	11-19	195	195
10-21	198	193	11-20	196	196
10-22	201	195	11-21	195	193
10-23	201	195	11-22	195	192
10-24	196	192	11-23	197	192
10-25	197	196	11-24	193	193
10-26	197	194	11-25	197	194
10-27	199	188	11-26	199	196
10-28	198	195	11-27	199	197
10-29	197	197	11-28	197	196
10-30	198	193	11-29	193	188
10-31	194	193	11-30	196	191

TABLE B-2. (Contd.)

1986				1987		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
12-1	197	197		1-1	195	191
12-2	196	196		1-2	193	191
12-3	195	195		1-3	199	192
12-4	197	193		1-4	195	190
12-5	193	191		1-5	188	186
12-6	191	189		1-6	190	189
12-7	193	191		1-7	195	190
12-8	194	194		1-8	192	192
12-9	196	195		1-9	201	195
12-10	197	196		1-10	198	187
12-11	196	194		1-11	190	189
12-12	196	192		1-12	192	190
12-13	197	196		1-13	201	196
12-14	198	192		1-14	200	196
12-15	198	196		1-15	197	196
12-16	196	189		1-16	201	197
12-17	198	196		1-17	198	195
12-18	203	197		1-18	198	196
12-19	193	193		1-19	198	198
12-20	199	192		1-20	197	192
12-21	191	189		1-21	194	191
12-22	194	191		1-22	195	192
12-23	197	191		1-23	194	191
12-24	191	189		1-24	198	193
12-25	186	183		1-25	196	192
12-26	194	190		1-26	195	192
12-27	187	187		1-27	194	190
12-28	201	198		1-28	196	191
12-29	193	191		1-29	195	192
12-30	198	194		1-30	195	191
12-31	197	187		1-31	196	193

TABLE B-2. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
2-1	197	193	3-1	206	197
2-2	197	193	3-2	199	193
2-3	194	190	3-3	197	197
2-4	195	192	3-4	198	193
2-5	196	193	3-5	197	197
2-6	195	190	3-6	195	191
2-7	194	192	3-7	192	187
2-8	196	193	3-8	196	195
2-9	198	189	3-9	192	187
2-10	194	192	3-10	191	189
2-11	193	192	3-11	193	190
2-12	195	184	3-12	192	191
2-13	198	187	3-13	193	191
2-14	196	185	3-14	192	190
2-15	194	190	3-15	192	192
2-16	196	193	3-16	192	189
2-17	190	188	3-17	194	190
2-18	194	184	3-18	192	186
2-19	200	191	3-19	192	187
2-20	195	191	3-20	193	191
2-21	195	189	3-21	195	190
2-22	189	184	3-22	197	189
2-23	191	186	3-23	196	186
2-24	192	192	3-24	193	193
2-25	193	189	3-25	194	193
2-26	193	192	3-26	193	193
2-27	202	196	3-27	196	195
2-28	200	193	3-28	198	195
			3-29	194	194
			3-30	194	191
			3-31	199	196

TABLE B-2. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
4-1	195	194	5-1	200	194
4-2	193	193	5-2	194	192
4-3	197	192	5-3	195	189
4-4	197	195	5-4	195	192
4-5	200	195	5-5	195	190
4-6	200	196	5-6	196	193
4-7	195	195	5-7	196	194
4-8	197	190	5-8	195	194
4-9	196	192	5-9	195	189
4-10	195	193	5-10	195	191
4-11	195	194	5-11	194	193
4-12	197	195	5-12	194	187
4-13	195	194	5-13	195	192
4-14	196	193	5-14	193	190
4-15	201	194	5-15	196	192
4-16	201	196	5-16	196	191
4-17	197	196	5-17	190	190
4-18	194	192	5-18	194	190
4-19	198	193	5-19	195	192
4-20	198	195	5-20	194	192
4-21	201	194	5-21	192	190
4-22	198	195	5-22	196	190
4-23	199	195	5-23	195	193
4-24	198	195	5-24	197	193
4-25	200	197	5-25	194	190
4-26	195	193	5-26	198	194
4-27	195	195	5-27	192	190
4-28	195	191	5-28	190	185
4-29	196	195	5-29	195	192
4-30	197	194	5-30	203	196
			5-31	201	198

TABLE B-2. (Contd.)

1987				1987		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
6-1	198	180		7-1	198	197
6-2	196	180		7-2	197	195
6-3	190	182		7-3	196	195
6-4	194	182		7-4	198	194
6-5	196	184		7-5	198	196
6-6	192	184		7-6	196	195
6-7	194	188		7-7	195	194
6-8	196	192		7-8	195	195
6-9	199	197		7-9	196	194
6-10	197	197		7-10	196	195
6-11	198	197		7-11	195	194
6-12	197	194		7-12	195	194
6-13	201	198		7-13	197	196
6-14	198	197		7-14	196	196
6-15	199	199		7-15	196	196
6-16	200	199		7-16	195	194
6-17	199	199		7-17	197	195
6-18	200	198		7-18	193	192
6-19	198	198		7-19	197	196
6-20	197	196		7-20	197	195
6-21	197	196		7-21	198	195
6-22	198	197		7-22	197	195
6-23	199	196		7-23	198	194
6-24	199	198		7-24	197	192
6-25	201	195		7-25	196	196
6-26	200	197		7-26	200	195
6-27	200	196		7-27	197	193
6-28	202	198		7-28	196	195
6-29	197	196		7-29	197	194
6-30	200	197		7-30	198	197
				7-31	195	191

TABLE B-2. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
8-1	198	195	9-1	199	197
8-2	199	198	9-2	198	197
8-3	200	197	9-3	200	198
8-4	197	195	9-4	196	196
8-5	196	193	9-5	199	197
8-6	199	193	9-6	199	198
8-7	199	195	9-7	199	195
8-8	198	194	9-8	190	185
8-9	199	196	9-9	194	188
8-10	197	196	9-10	190	186
8-11	196	192	9-11	190	188
8-12	195	195	9-12	192	190
8-13	195	191	9-13	195	188
8-14	193	189	9-14	197	196
8-15	195	192	9-15	197	196
8-16	197	195	9-16	196	195
8-17	196	196	9-17	199	198
8-18	198	195	9-18	198	194
8-19	200	197	9-19	200	198
8-20	201	196	9-20	196	195
8-21	202	192	9-21	200	195
8-22	197	196	9-22	198	195
8-23	196	193	9-23	202	198
8-24	198	191	9-24	201	198
8-25	201	191	9-25	198	196
8-26	197	197	9-26	199	192
8-27	201	197	9-27	197	192
8-28	200	197	9-28	196	192
8-29	200	192	9-29	198	193
8-30	199	199	9-30	199	194
8-31	202	196			

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

1986			1986		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
10-2	67	55	11-1	65	53
10-3	68	52	11-2	77	53
10-4	65	55	11-3	71	41
10-5	65	51	11-4	87	65
10-6	70	50	11-5	78	52
10-7	68	59	11-6	75	54
10-8	66	55	11-7	61	45
10-9	66	54	11-8	62	42
10-10	77	46	11-9	63	40
10-11	82	57	11-10	60	42
10-12	73	55	11-11	57	45
10-13	77	58	11-12	76	51
10-14	80	42	11-13	78	53
10-15	80	55	11-14	70	47
10-16	74	48	11-15	72	49
10-17	75	46	11-16	79	52
10-18	83	52	11-17	65	43
10-19	76	51	11-18	62	34
10-20	77	56	11-19	70	51
10-21	73	60	11-20	60	47
10-22	70	54	11-21	66	45
10-23	78	58	11-22	67	50
10-24	83	65	11-23	70	48
10-25	85	60	11-24	73	39
10-26	83	53	11-25	66	30
10-27	73	60	11-26	73	32
10-28	84	65	11-27	74	36
10-29	76	57	11-28	62	38
10-30	84	59	11-29	63	19
10-31	82	53	11-30	66	23

TABLE B-3. (Contd.)

1986			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
12-1	70	60	1-1	57	36
12-2	64	59	1-2	57	29
12-3	62	42	1-3	60	29
12-4	70	44	1-4	57	29
12-5	68	56	1-5	48	28
12-6	62	35	1-6	60	42
12-7	59	39	1-7	62	34
12-8	66	39	1-8	61	40
12-9	61	32	1-9	45	42
12-10	61	37	1-10	44	33
12-11	55	31	1-11	48	32
12-12	60	38	1-12	48	41
12-13	52	29	1-13	50	41
12-14	46	25	1-14	48	42
12-15	53	34	1-15	47	42
12-16	52	24	1-16	48	42
12-17	66	34	1-17	48	42
12-18	60	49	1-18	47	43
12-19	54	25	1-19	47	36
12-20	53	34	1-20	59	31
12-21	61	34	1-21	55	34
12-22	57	42	1-22	63	44
12-23	55	35	1-23	52	34
12-24	63	39	1-24	61	40
12-25	60	42	1-25	66	35
12-26	61	39	1-26	72	62
12-27	62	30	1-27	73	48
12-28	58	35	1-28	66	46
12-29	60	34	1-29	54	38
12-30	57	37	1-30	59	40
12-31	62	34	1-31	71	46

TABLE B-3. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
2-1	77	45	3-1	90	46
2-2	61	44	3-2	86	59
2-3	67	57	3-3	65	38
2-4	67	47	3-4	76	68
2-5	58	56	3-5	59	54
2-6	75	70	3-6	66	48
2-7	76	60	3-7	81	55
2-8	67	57	3-8	66	66
2-9	67	61	3-9	76	45
2-10	75	59	3-10	68	53
2-11	60	53	3-11	87	50
2-12	63	47	3-12	84	55
2-13	65	45	3-13	81	52
2-14	66	46	3-14	60	54
2-15	63	48	3-15	74	49
2-16	61	51	3-16	80	50
2-17	50	40	3-17	71	48
2-18	61	43	3-18	60	43
2-19	74	39	3-19	61	35
2-20	72	37	3-20	72	42
2-21	39	34	3-21	72	42
2-22	71	54	3-22	83	57
2-23	63	47	3-23	66	56
2-24	58	42	3-24	63	46
2-25	61	50	3-25	81	55
2-26	71	40	3-26	83	52
2-27	75	46	3-27	82	52
2-28	91	54	3-28	79	51
			3-29	76	65
			3-30	82	44
			3-31	77	43

TABLE B-3. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
4-1	78	43	5-1	72	46
4-2	81	51	5-2	87	65
4-3	82	50	5-3	93	56
4-4	80	53	5-4	89	66
4-5	71	53	5-5	89	66
4-6	79	60	5-6	93	63
4-7	77	57	5-7	94	78
4-8	85	59	5-8	93	65
4-9	84	69	5-9	92	66
4-10	80	56	5-10	94	70
4-11	86	56	5-11	93	72
4-12	77	63	5-12	83	76
4-13	76	63	5-13	83	71
4-14	77	61	5-14	85	59
4-15	86	67	5-15	90	69
4-16	64	59	5-16	89	73
4-17	80	50	5-17	94	76
4-18	88	74	5-18	65	58
4-19	85	80	5-19	70	61
4-20	87	76	5-20	84	65
4-21	84	76	5-21	107	79
4-22	89	54	5-22	84	73
4-23	87	65	5-23	88	76
4-24	90	73	5-24	73	67
4-25	85	66	5-25	89	71
4-26	86	59	5-26	85	65
4-27	88	60	5-27	108	64
4-28	85	78	5-28	98	73
4-29	83	58	5-29	108	57
4-30	81	49	5-30	103	57
			5-31	97	65

TABLE B-3. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
6-1	101	73	7-1	102	64
6-2	92	80	7-2	107	72
6-3	101	68	7-3	103	74
6-4	93	83	7-4	98	69
6-5	85	66	7-5	102	70
6-6	94	71	7-6	105	68
6-7	83	64	7-7	99	82
6-8	95	65	7-8	98	82
6-9	105	86	7-9	101	85
6-10	104	61	7-10	95	85
6-11	101	83	7-11	97	86
6-12	94	72	7-12	100	85
6-13	101	68	7-13	101	81
6-14	98	76	7-14	96	73
6-15	97	94	7-15	82	72
6-16	96	60	7-16	85	61
6-17	81	63	7-17	83	66
6-18	95	53	7-18	114	64
6-19	95	57	7-19	108	80
6-20	101	64	7-20	97	57
6-21	100	66	7-21	102	57
6-22	104	68	7-22	108	59
6-23	106	62	7-23	109	64
6-24	108	67	7-24	94	74
6-25	96	81	7-25	78	57
6-26	101	73	7-26	86	58
6-27	97	73	7-27	96	70
6-28	99	74	7-28	91	73
6-29	105	66	7-29	104	78
6-30	108	61	7-30	95	82
			7-31	104	86

TABLE B-3. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
8-1	102	70	9-1	99	79
8-2	99	66	9-2	100	77
8-3	100	73	9-3	96	74
8-4	102	70	9-4	99	77
8-5	93	75	9-5	98	73
8-6	93	80	9-6	98	79
8-7	101	70	9-7	94	73
8-8	99	70	9-8	106	69
8-9	99	69	9-9	98	70
8-10	101	70	9-10	98	58
8-11	98	68	9-11	87	53
8-12	100	69	9-12	83	53
8-13	102	70	9-13	93	60
8-14	101	72	9-14	79	79
8-15	99	68	9-15	89	62
8-16	101	69	9-16	88	64
8-17	100	68	9-17	91	64
8-18	101	71	9-18	93	64
8-19	102	71	9-19	95	66
8-20	98	73	9-20	95	70
8-21	97	74	9-21	100	76
8-22	102	71	9-22	99	76
8-23	101	70	9-23	99	75
8-24	97	69	9-24	102	75
8-25	103	68	9-25	105	72
8-26	101	69	9-26	99	66
8-27	96	79	9-27	105	69
8-28	99	78	9-28	104	76
8-29	100	77	9-29	104	75
8-30	100	76	9-30	99	68
8-31	99	73			

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

1986			1986		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
10-2	74	66	11-1	71	42
10-3	89	59	11-2	73	39
10-4	93	68	11-3	74	37
10-5	101	58	11-4	70	38
10-6	97	60	11-5	70	37
10-7	100	63	11-6	70	40
10-8	75	63	11-7	71	39
10-9	88	62	11-8	73	39
10-10	93	87	11-9	68	38
10-11	92	65	11-10	69	40
10-12	87	58	11-11	69	46
10-13	91	41	11-12	76	37
10-14	98	43	11-13	59	46
10-15	99	52	11-14	76	41
10-16	94	57	11-15	78	43
10-17	83	58	11-16	78	45
10-18	73	54	11-17	72	36
10-19	93	54	11-18	73	40
10-20	98	53	11-19	69	37
10-21	98	54	11-20	63	49
10-22	96	48	11-21	67	33
10-23	102	52	11-22	64	33
10-24	97	58	11-23	62	36
10-25	93	52	11-24	71	31
10-26	95	53	11-25	74	27
10-27	97	52	11-26	71	47
10-28	77	49	11-27	77	37
10-29	79	49	11-28	84	31
10-30	76	46	11-29	74	32
10-31	80	49	11-30	63	30

TABLE B-4. (Contd.)

1986			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
12-1	68	22	1-1	52	12
12-2	66	34	1-2	44	23
12-3	56	27	1-3	59	25
12-4	64	33	1-4	45	17
12-5	60	16	1-5	66	18
12-6	71	43	1-6	65	24
12-7	55	37	1-7	65	33
12-8	63	27	1-8	61	26
12-9	56	29	1-9	69	14
12-10	60	23	1-10	63	28
12-11	66	26	1-11	61	23
12-12	57	25	1-12	60	18
12-13	64	33	1-13	62	31
12-14	62	23	1-14	58	35
12-15	60	20	1-15	26	14
12-16	69	25	1-16	32	8
12-17	61	20	1-17	50	22
12-18	63	34	1-18	67	36
12-19	75	47	1-19	55	35
12-20	57	31	1-20	58	24
12-21	61	27	1-21	58	21
12-22	60	37	1-22	63	23
12-23	63	35	1-23	65	22
12-24	64	32	1-24	71	34
12-25	61	26	1-25	81	31
12-26	62	21	1-26	79	31
12-27	66	31	1-27	75	51
12-28	68	40	1-28	74	45
12-29	61	36	1-29	63	27
12-30	53	23	1-30	58	35
12-31	51	34	1-31	66	35

TABLE B-4. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
2-1	69	30	3-1	81	35
2-2	72	48	3-2	89	45
2-3	66	34	3-3	43	20
2-4	75	41	3-4	78	57
2-5	83	51	3-5	61	48
2-6	87	73	3-6	70	51
2-7	84	59	3-7	60	39
2-8	72	33	3-8	80	59
2-9	64	36	3-9	66	37
2-10	69	42	3-10	69	39
2-11	72	40	3-11	80	47
2-12	67	43	3-12	75	42
2-13	61	40	3-13	75	41
2-14	66	40	3-14	74	45
2-15	62	31	3-15	73	36
2-16	69	46	3-16	62	32
2-17	64	31	3-17	67	32
2-18	54	34	3-18	48	35
2-19	59	30	3-19	63	33
2-20	59	19	3-20	74	33
2-21	65	33	3-21	73	41
2-22	58	29	3-22	71	41
2-23	48	16	3-23	74	58
2-24	53	32	3-24	67	43
2-25	56	15	3-25	72	38
2-26	59	18	3-26	78	42
2-27	67	27	3-27	79	44
2-28	76	29	3-28	70	26
			3-29	78	38
			3-30	77	30
			3-31	77	40

TABLE B-4. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
4-1	92	49	5-1	90	43
4-2	88	55	5-2	95	59
4-3	70	42	5-3	115	79
4-4	72	42	5-4	104	72
4-5	82	42	5-5	110	72
4-6	85	58	5-6	100	70
4-7	84	58	5-7	94	65
4-8	92	64	5-8	96	60
4-9	90	55	5-9	108	81
4-10	103	44	5-10	108	83
4-11	104	48	5-11	98	69
4-12	90	52	5-12	102	70
4-13	89	66	5-13	113	69
4-14	87	50	5-14	92	78
4-15	91	89	5-15	89	71
4-16	112	60	5-16	97	67
4-17	101	56	5-17	101	73
4-18	93	70	5-18	85	47
4-19	92	65	5-19	78	40
4-20	77	43	5-20	83	45
4-21	96	58	5-21	86	53
4-22	106	55	5-22	91	50
4-23	103	54	5-23	95	49
4-24	112	71	5-24	80	50
4-25	104	75	5-25	83	41
4-26	97	67	5-26	78	39
4-27	100	60	5-27	77	44
4-28	97	72	5-28	78	44
4-29	89	52	5-29	79	48
4-30	82	45	5-30	84	45
			5-31	98	72

TABLE B-4. (Contd.)

1987				1987		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
6-1	115	80		7-1	111	78
6-2	115	74		7-2	107	75
6-3	108	81		7-3	109	84
6-4	107	81		7-4	115	102
6-5	87	77		7-5	121	91
6-6	94	62		7-6	114	86
6-7	106	82		7-7	100	75
6-8	111	84		7-8	107	72
6-9	107	73		7-9	111	79
6-10	111	68		7-10	103	62
6-11	106	66		7-11	111	78
6-12	108	66		7-12	111	83
6-13	112	67		7-13	123	84
6-14	109	68		7-14	118	77
6-15	101	55		7-15	107	78
6-16	102	60		7-16	102	91
6-17	108	62		7-17	95	65
6-18	111	72		7-18	96	55
6-19	110	74		7-19	98	52
6-20	108	53		7-20	108	79
6-21	108	74		7-21	107	73
6-22	112	75		7-22	106	74
6-23	111	73		7-23	104	78
6-24	110	80		7-24	105	82
6-25	113	75		7-25	109	74
6-26	113	83		7-26	106	77
6-27	118	98		7-27	118	106
6-28	122	101		7-28	111	69
6-29	116	72		7-29	113	69
6-30	113	71		7-30	121	71
				7-31	119	66

TABLE B-4. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
8-1	122	78	9-1	110	75
8-2	123	78	9-2	110	70
8-3	117	80	9-3	107	72
8-4	112	75	9-4	108	74
8-5	107	71	9-5	112	69
8-6	108	74	9-6	113	70
8-7	112	72	9-7	110	71
8-8	110	72	9-8	112	65
8-9	108	68	9-9	110	75
8-10	109	71	9-10	109	70
8-11	112	74	9-11	109	68
8-12	109	73	9-12	111	73
8-13	107	72	9-13	108	71
8-14	109	71	9-14	106	62
8-15	112	73	9-15	105	69
8-16	114	67	9-16	105	67
8-17	105	68	9-17	110	73
8-18	113	71	9-18	110	80
8-19	109	69	9-19	113	75
8-20	107	69	9-20	110	79
8-21	106	71			
8-22	113	68			
8-23	115	68			
8-24	113	69			
8-25	112	69			
8-26	109	70			
8-27	109	71			
8-28	110	68			
8-29	111	67			
8-30	115	97			
8-31	109	71			

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

1986			1986		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
10-1	168	161	11-1	173	153
10-2	163	162	11-2	173	157
10-3	166	162	11-3	170	154
10-4	163	162	11-4	172	149
10-5	167	162	11-5	171	152
10-6	163	155	11-6	173	157
10-7	166	154	11-7	170	159
10-8	162	158	11-8	170	149
10-9	166	152	11-9	168	147
10-10	171	167	11-10	161	152
10-11	160	157	11-11	161	153
10-12	165	161	11-12	161	156
10-13	173	158	11-13	159	154
10-14	167	162	11-14	161	155
10-15	173	167	11-15	161	150
10-16	175	162	11-16	162	150
10-17	167	153	11-17	168	160
10-18	167	159	11-18	178	162
10-19	166	160	11-19	173	159
10-20	173	164	11-20	165	149
10-21	174	164	11-21	157	157
10-22	172	164	11-22	163	147
10-23	175	166	11-23	173	160
10-24	173	166	11-24	160	157
10-25	174	165	11-25	156	149
10-26	174	166	11-26	174	160
10-27	172	153	11-27	179	167
10-28	172	149	11-28	175	159
10-29	169	152	11-29	159	144
10-30	171	151	11-30	159	158
10-31	172	151			

TABLE B-5. (Contd.)

1986			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
12-1	168	160	1-1	162	150
12-2	173	166	1-2	169	151
12-3	172	149	1-3	167	158
12-4	179	160	1-4	166	155
12-5	169	158	1-5	169	152
12-6	174	163	1-6	165	148
12-7	158	152	1-7	169	157
12-8	165	164	1-8	169	153
12-9	168	158	1-9	168	155
12-10	169	158	1-10	165	154
12-11	169	160	1-11	161	152
12-12	175	161	1-12	168	154
12-13	173	157	1-13	162	143
12-14	171	160	1-14	152	142
12-15	166	163	1-15	153	143
12-16	167	157	1-16	158	142
12-17	165	163	1-17	178	154
12-18	165	151	1-18	159	156
12-19	166	161	1-19	167	141
12-20	170	155	1-20	170	156
12-21	163	163	1-21	159	148
12-22	173	162	1-22	162	154
12-23	171	155	1-23	173	160
12-24	171	164	1-24	174	164
12-25	168	158	1-25	177	156
12-26	165	154	1-26	176	160
12-27	158	155	1-27	171	162
12-28	157	153	1-28	158	155
12-29	167	153	1-29	162	142
12-30	171	158	1-30	170	161
12-31	169	156	1-31	165	152

TABLE B-5. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
2-1	165	146	3-1	171	143
2-2	165	159	3-2	174	160
2-3	158	157	3-3	167	153
2-4	166	153	3-4	162	162
2-5	178	152	3-5	166	152
2-6	169	160	3-6	172	163
2-7	170	160	3-7	173	147
2-8	170	159	3-8	159	158
2-9	165	158	3-9	174	158
2-10	165	162	3-10	177	162
2-11	168	166	3-11	169	162
2-12	171	162	3-12	171	158
2-13	166	161	3-13	167	167
2-14	165	153	3-14	164	149
2-15	166	161	3-15	167	158
2-16	158	149	3-16	163	162
2-17	161	160	3-17	169	141
2-18	147	146	3-18	173	154
2-19	147	137	3-19	164	157
2-20	164	147	3-20	165	159
2-21	166	152	3-21	163	145
2-22	167	156	3-22	160	156
2-23	155	135	3-23	159	158
2-24	153	142	3-24	158	151
2-25	162	156	3-25	168	153
2-26	160	155	3-26	158	155
2-27	173	158	3-27	163	157
2-28	166	157	3-28	164	154
			3-29	165	163
			3-30	163	159
			3-31	170	156

TABLE B-5. (Contd.)

1987				1987		
Date	Temperature, °F			Date	Temperature, °F	
	High	Low			High	Low
4-1	170	154		5-1	166	150
4-2	160	150		5-2	165	151
4-3	149	148		5-3	181	161
4-4	157	151		5-4	160	159
4-5	170	159		5-5	168	141
4-6	165	162		5-6	157	145
4-7	162	149		5-7	171	165
4-8	172	150		5-8	167	159
4-9	165	153		5-9	179	163
4-10	170	155		5-10	169	160
4-11	168	159		5-11	169	157
4-12	160	153		5-12	169	163
4-13	161	160		5-13	172	165
4-14	154	150		5-14	166	156
4-15	166	160		5-15	163	161
4-16	168	151		5-16	165	161
4-17	167	146		5-17	176	154
4-18	155	145		5-18	160	157
4-19	144	140		5-19	159	147
4-20	162	155		5-20	164	155
4-21	165	156		5-21	171	153
4-22	163	151		5-22	163	151
4-23	161	154		5-23	162	144
4-24	161	150		5-24	173	143
4-25	173	154		5-25	162	153
4-26	170	152		5-26	166	154
4-27	170	156		5-27	166	154
4-28	166	152		5-28	161	160
4-29	160	154		5-29	160	159
4-30	164	154		5-30	166	158
				5-31	164	155

TABLE B-5. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
6-1	167	152	7-1	147	126
6-2	164	149	7-2	144	132
6-3	160	147	7-3	145	130
6-4	156	143	7-4	151	130
6-5	157	151	7-5	163	132
6-6	173	157	7-6	148	134
6-7	169	154	7-7	144	132
6-8	163	160	7-8	144	135
6-9	159	154	7-9	146	133
6-10	156	156	7-10	154	137
6-11	163	154	7-11	145	135
6-12	160	154	7-12	145	136
6-13	157	154	7-13	145	137
6-14	157	151	7-14	149	127
6-15	149	135	7-15	153	134
6-16	151	134	7-16	151	140
6-17	151	135	7-17	157	135
6-18	150	132	7-18	152	127
6-19	157	136	7-19	141	129
6-20	159	138	7-20	151	136
6-21	149	137	7-21	151	125
6-22	149	138	7-22	153	134
6-23	151	124	7-23	156	141
6-24	145	130	7-24	155	141
6-25	138	132	7-25	155	127
6-26	144	127	7-26	152	137
6-27	147	129	7-27	153	142
6-28	156	130	7-28	155	140
6-29	155	122	7-29	157	142
6-30	151	122	7-30	147	141
			7-31	154	137

TABLE B-5. (Contd.)

1987			1987		
Date	Temperature, °F		Date	Temperature, °F	
	High	Low		High	Low
8-1	159	138	9-1	156	156
8-2	157	145	9-2	159	154
8-3	157	135	9-3	170	151
8-4	158	157	9-4	159	159
8-5	155	155	9-5	153	153
8-6	160	159	9-6	159	153
8-7	168	157	9-7	164	152
8-8	162	149	9-8	163	149
8-9	161	154	9-9	162	151
8-10	161	157	9-10	166	160
8-11	161	154	9-11	166	157
8-12	157	155	9-12	166	159
8-13	161	149	9-13	157	156
8-14	163	152	9-14	170	156
8-15	155	154	9-15	163	157
8-16	156	155	9-16	169	162
8-17	161	152	9-17	167	163
8-18	164	157	9-18	168	152
8-19	155	155	9-19	166	154
8-20	158	155	9-20	166	153
8-21	162	154	9-21	167	156
8-22	156	155	9-22	168	157
8-23	160	155	9-23	166	154
8-24	168	156	9-24	168	152
8-25	164	158	9-25	166	154
8-26	160	153	9-26	170	156
8-27	163	155	9-27	167	153
8-28	162	159	9-28	167	152
8-29	159	157	9-29	168	154
8-30	156	153	9-30	168	155
8-31	161	154			

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