COLORADO GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES

INFORMATION SERIES NO. 6

HYDROGEOLOGICAL DATA OF THERMAL SPRINGS AND WELLS IN COLORADO

by

James K. Barrett and Richard Howard Pearl

COLORADO GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES
STATE OF COLORADO
Denver, Colorado

1976

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The Colorado Geological Survey was legislatively re-established in February 1969 to meet the geologic needs of the citizens, governmental agencies, and mineral industries of Colorado. This modern legislation is aimed at applying geologic knowledge toward the solution of today's and tomorrow's problems of an expanding population, mounting environmental concern, and the growing demand for mineral resources.

SPECIFIC LEGISLATIVE CHARGES ARE:

"Assist, consult with and advise state and local governmental agencies on geologic problems."

"Promote economic development of mineral resources."

"Evaluate the physical features of Colorado with reference to present and potential human and animal use."

"Conduct studies to develop geological information."

"Inventory the State's mineral resources."

"Collect, preserve and distribute geologic information."

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"Prepare, publish and distribute geologic reports, maps and bulletins."

"Evaluate the geologic factors affecting all new subdivisions in unincorporated areas of the State."

"Promulgate model geologic hazard area control regulation."

"Provide technical assistance to local governments concerning designation of and guidelines for matters of State interest in geologic hazard areas and the identification of mineral resource areas."

"To provide other governmental agencies with technical assistance regarding geothermal resources."

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COLORADO GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES
STATE OF COLORADO
Denver, Colorado

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HYDROGEOLOGICAL DATA OF THERMAL SPRINGS AND WELLS IN COLORADO

by

JAMES K. BARRETT and RICHARD HOWARD PEARL

INTRODUCTION

The need for an appraisal of the geothermal resource potential of Colorado led to a two year cooperative investigation between the U.S. Geological Survey and the Colorado Geological Survey. This project, funded in part by U.S. Geological Survey Grant No. 14-08-0001-G-221, began in May 1975 and is scheduled for completion in May, 1977.

This report makes available to the public, information obtained during the data gathering phase of the investigation. Information presented includes: location of all thermal springs and wells, field measurements of temperature, discharge, specific conductance (a measure of the total amount of dissolved solids), pH, chemical and spectrographic analysis of dissolved mineral matter, and associated radioactivity in the thermal waters.

During the investigation, water samples were collected from most of the thermal springs and wells in Colorado and sent either to the U.S. Geological Survey, Water Resources Division's Salt Lake City, Utah laboratory or the Atlanta, Georgia laboratory for determination of dissolved mineral matter. These analytical results are presented in table 1. Samples of the thermal waters were also collected and sent to the U.S. Geological Survey, Water Resources Division's Denver Spectrographic Laboratory for analysis of trace elements (Table 2). Data presented in table 3, Radioactivity Associated with Thermal Waters In Colorado, were collected in cooperation with the U.S. Environmental Protection Agency, Office of Radiation Programs, Las Vegas, Nevada.

An index map showing the location of all thermal springs and wells in Colorado is included (Fig. 1).

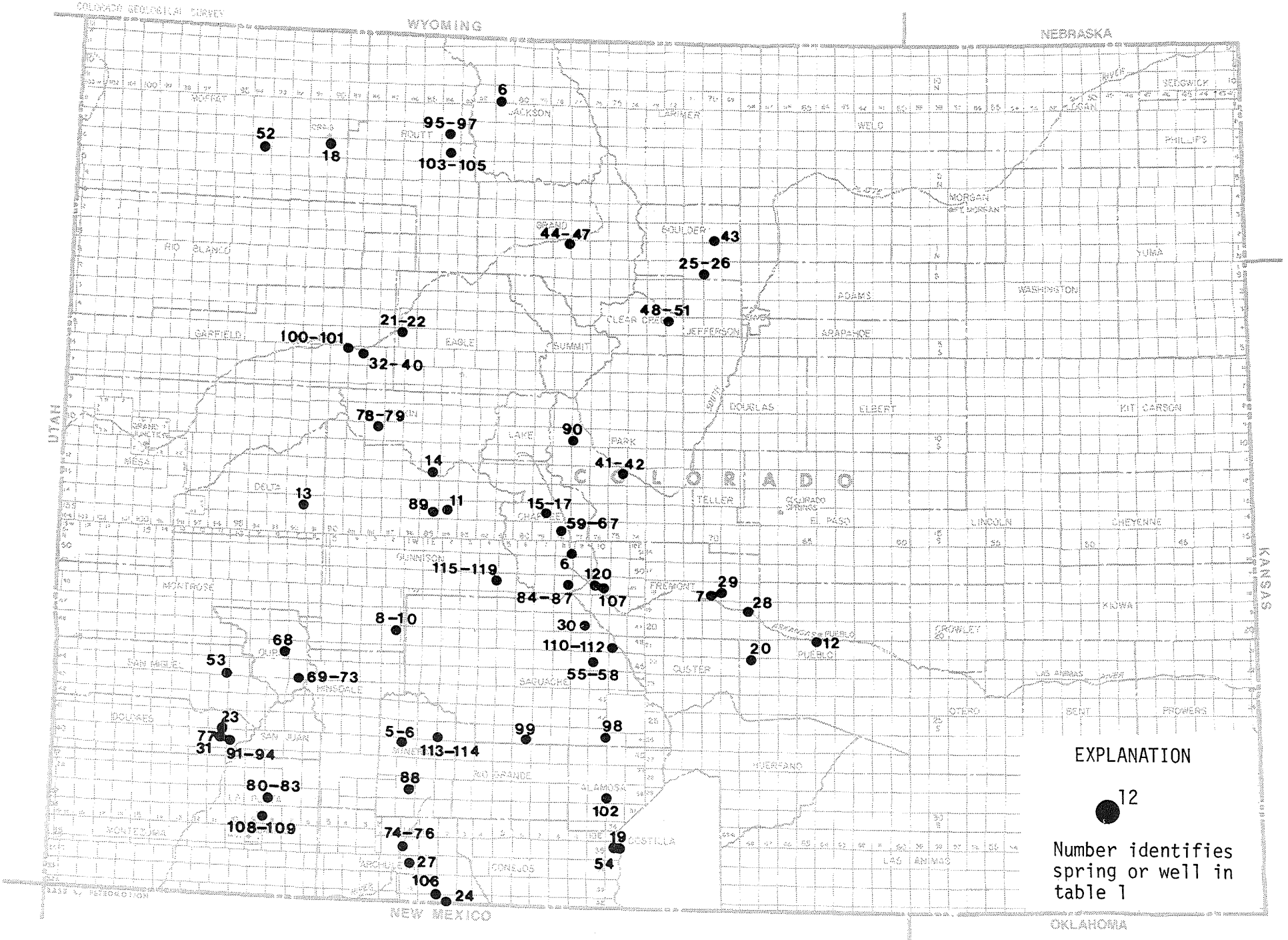

FIGURE 1. LOCATION OF THERMAL SPRINGS AND WELLS Scale approx. 1:2,600,000

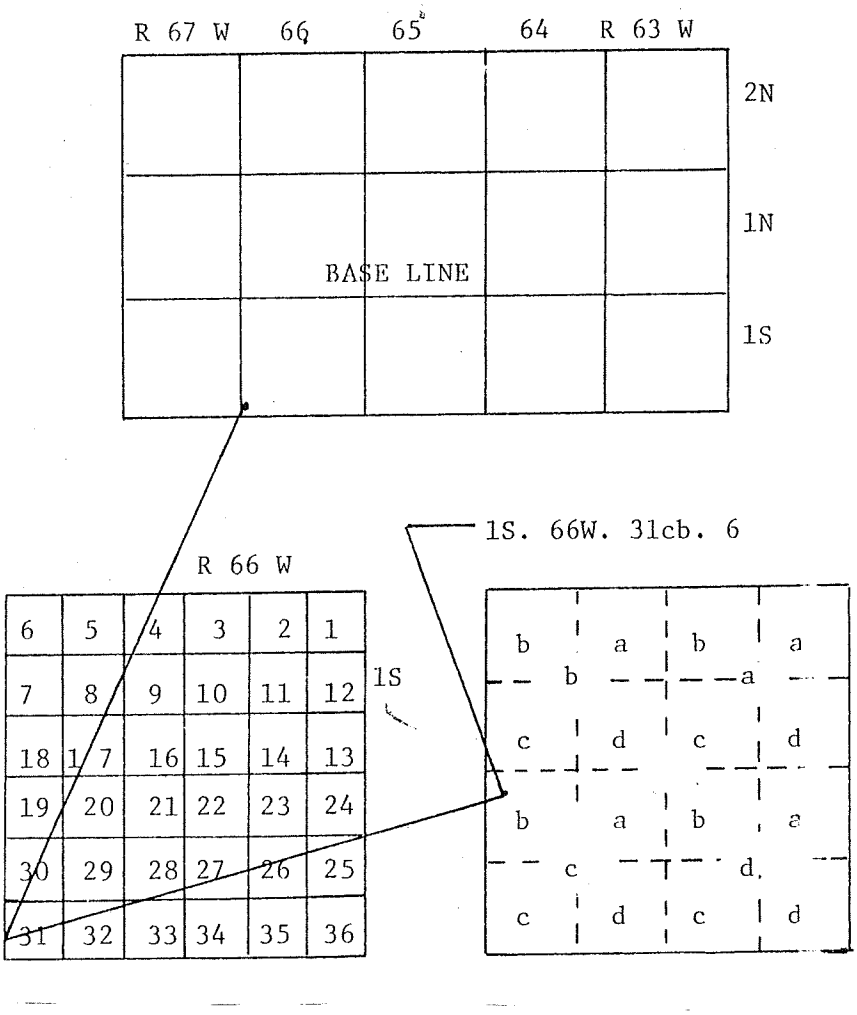

Figure 2. Well-numbering system in Colorado

The well numbering system used in this report is based on the U.S. Bureau of Land Management system of land subdivision, and shows the location of the spring or well by township, range, section, and position within the section. In this report all lands are referenced to the 6th Principal Meridan or the New Mexico Principal Meridan. The first two segments of the number designate the township and range, the third number designates the section. The letters following the section number locate the feature within the section. The first letter denotes the quarter section, the second the quarter-quarter section. These letters are assigned within the section in a counter-clockwise direction beginning with "a" in the northeast quarter. Letters are assigned within each quarter section and within each quarter-quarter section in the same manner. In the example above the spring is located in the NW¼,SW¼, Sec. 31, T. 1 S., R. 66 W., 6th Principal Meridan

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Antelope Warm Spring

Location: 37°44'36"N. Latitude; 107°02'14"W. Longtitude; T. 40 N., R. 2 W., Sec. 1 dd, N.M.P.M., Mineral County

	Date Sampled	
	8/75	10/75*
Arsenic (As), (UG/L):	0	0
Boron (B), (UG/L):	130	130
Cadium (Cd), (UG/L):	0	0
Calcium (Ca), (MG/L):	4	1.7
Chloride (Cl), (MG/L):	2.8	3.5
Flouride (F), (MG/L):	2.0	1.6
Iron (Fe), (UG/L):	20	60
Lithium (Li), (UG/L):	10	8
Magnesium (Mg), (MG/L):	0.3	0.6
Manganese (Mn), (UG/L):	0	0
Mercury (Hg), (UG/L):	0	0
Nitrogen (N), (MG/L):	0.08	0.02
Phosphate (PO_4)		
Ortho diss. as P, (MG/L):	0	0.01
Ortho, (MG/L):	0	0.03
Potassium (K), (MG/L):	0.1	0.3
Selenium (Se), (UG/L):	0	0
Silica (SiO_2), (MG/L):	41	39
Sodium (Na), (MG/L):	44	43
Sulfate (SO_4), (MG/L):	2.2	3.2
Zinc (Zn), (UG/L):	30	0
Alkalinity		
As Calcium Carbonate, (MG/L):	90	95
As Bicarbonate, (MG/L):	110	77
Hardness		
Noncarbonate, (MG/L):	0	0
Total, (MG/L):	11	7
Specific conductance (Micromohs):	180	160
Total dissolved solids (TDS), (MG/L):	151	150
pH, Field	-	8.9
Discharge (gpm):	3E	3E
Temperature (°C):	32	32

*Remarks: Contains 19 mg/1 of carbonate.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Birdsie Warm Spring

Location: 37°44'36"N. Latitude; 107°02'14"W. Longtitude; T. 40 N., R. 2 W., Sec. 14 abc, N.M.P.M., Mineral County

Temperature: 30°C

Discharge: 15 gpm

Specific Conductance: 200

pH: 8.6

Brands Ranch Artesian Well

Location: 40°42'17"N. Latitude; 106°32'05"W. Longtitude; T. 9 N., R. 81 W., Sec. 31 dcd, 6th P.M., Jackson County

Temperature: 42°C

Discharge: 80 gpm (est.)

Specific conductance: 405

pH: 6.0

Remarks: This is an old oil well, 800 feet deep.

Brown's Canon Warm Spring

Location: 38°38'14"N. Latitude; 106°04'17"W. Longtitude; T. 51 N., R. 8 E., Sec. 23 cca, N.M.P.M., Chaffee County.

Temperature: 25°C

Discharge: 1 gpm (est.)

Specific conductance: 775

pH: 8.0

Brown's Grotto Warm Spring

Location: 38°37'50"N. Latitude; 106°04'10"W. Longtitude; T. 51 N., R. 8 E., Sec. 34 bab, N.M.P.M., Chaffee County

Temperature: 23°C

Discharge: 5 gpm (est.)

Specific conductance: 720

pH: 7.0

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Canon City Hot Spring (Flowing hot water well)

Location: 38°25'57"N. Latitude; 105°15'46"W. Longtitude; T. 18 S., R. 70 W., Sec. 31 d, 6th. P.M., Fremont County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	11	-	-
Boron (B), (UG/L):	190	200	200
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	190	190	170
Chloride (Cl), (MG/L):	180	190	190
Flouride (F), (MG/L):	1.5	1.5	1.5
Iron (Fe), (UG/L):	30	30	20
Lithium (Li), (UG/L):	230	-	-
Magnesium (Mg), (MG/L):	62	55	61
Manganese (Mn), (UG/L):	10	10	0
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.55	0.65	0.67
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.73	0.01	0.03
Ortho, (MG/L):	2.2	0.03	0.09
Potassium (K), (MG/L):	15	16	15
Selenium (Se), (UG/L):	1	-	-
Silica (SiO_2), (MG/L):	22	21	21
Sodium (Na), (MG/L):	190	180	190
Sulfate (SO_4), (MG/L):	130	130	120
Zinc (Zn), (UG/L):	10	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	728	728	728
As Bicarbonate, (MG/L):	887	888	888
Hardness			
Noncarbonate, (MG/L):	2	0	0
Total, (MG/L):	730	700	680
Specific conductance (Micromohs):	1,900	2,010	1,980
Total dissolved solids (TDS), (MG/L):	1,230	1,220	1,210
pH, Field	6.3	6.2	6.1
Discharge (gpm):	5	1	2
Temperature (°C):	40	40	40
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cebolla Hot Springs: Spring A

Location: 30°16'26"N. Latitude; 107°05'54"W. Longtitude; T. 46 N., R. 2 W., Sec. 4 ab, N.M.P.M., Gunnison County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	45	41	-	-
Boron (B), (UG/L):	1,100	1,100	1,100	1,100
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	120	120	120	120
Chloride (Cl), (MG/L):	120	120	120	120
Flouride (F), (MG/L):	3.7	3.9	4.6	4.9
Iron (Fe), (UG/L):	50	50	0	20
Lithium (Li), (UG/L):	710	750	-	-
Magnesium (Mg), (MG/L):	50	47	48	51
Manganese (Mn), (UG/L):	50	50	50	100
Mercury (Hg), (UG/L):	0.5	0	-	-
Nitrogen (N), (MG/L):	0.08	0.04	0.06	0.03
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.11	0.03	0.06	0.10
Ortho, (MG/L):	0.34	0.09	0.18	0.31
Potassium (K), (MG/L):	63	64	58	66
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	74	66	85	92
Sodium (Na), (MG/L):	310	310	330	310
Sulfate (SO_4), (MG/L):	130	120	130	120
Zinc (Zn), (UG/L):	30	8	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	960	968	960	968
As Bicarbonate, (MG/L):	1,170	1,180	1,170	1,180
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	510	490	500	510
Specific conductance (Micromohs):	2,100	2,000	2,220	2,200
Total dissolved solids (TDS), (MG/L):	1,450	1,440	1,470	1,450
pH, Field	-	6.8	6.9	6.4
Discharge (gpm):	-	3	3	3
Temperature (°C):	41	41	39	38

Remarks: Located in southern most of two cabins, approx. 300 feet south of road. Western pool in building.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cebolla Hot Springs: Spring B

Location: 30°16'26"N. Latitude; 107°05'54"W. Longtitude: T. 46 N., R. 2 W., Sec. 4 ab, N.M.P.M., Gunnison County

	Date Sampled 7/75
Arsenic (As), (UG/L):	40
Boron (B), (UG/L):	1,100
Cadium (Cd), (UG/L):	1
Calcium (Ca), (MG/L):	120
Chloride (Cl), (MG/L):	120
Flouride (F), (MG/L):	5.8
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	720
Magnesium (Mg), (MG/L):	50
Manganese (Mn), (UG/L):	50
Mercury (Hg), (UG/L):	0.2
Nitrogen (N), (MG/L):	0.08
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	64
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	77
Sodium (Na), (MG/L):	310
Sulfate (SO_4), (MG/L):	130
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	968
As Bicarbonate, (MG/L):	1,180
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	510
Specific conductance (Micromohs):	2,050
Total dissolved solids (TDS), (MG/L):	1,460
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	38

Remarks: Located in same building as Spring A. Eastern pool in building.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cebolla Hot Springs: Spring C

Location: 38°16'26"N. Latitude; 107°05'54"W. Longtitude; T. 46 N., R. 2 W., Sec. 4 ab, N.M.P.M., Gunnison County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	40
Boron (B), (UG/L):	1,100
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	130
Chloride (Cl), (MG/L):	120
Flouride (F), (MG/L):	4.6
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	710
Magnesium (Mg), (MG/L):	51
Manganese (Mn), (UG/L):	40
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.03
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	63
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	79
Sodium (Na), (MG/L):	300
Sulfate (SO_4), (MG/L):	130
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	960
As Bicarbonate, (MG/L):	1,170
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	530
Specific conductance (Micromohs):	2,100
Total dissolved solids (TDS), (MG/L):	1,460
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	40

Remarks: Located in northern cabin, approx. 200 feet south of road and approx. 75 feet northwest of Springs A and B.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cement Creek Warm Spring

Location: 38°50'06"N. Latitude; 106°49'34"W. Longtitude; T. 14 S., R. 84 W., Sec. 18 cd, 6th P.M., Gunnison County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	10	10	-	-
Boron (B), (UG/L):	60	60	70	80
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	75	69	73	68
Chloride (Cl), (MG/L):	11	10	11	11
Flouride (F), (MG/L):	1.9	1.4	1.9	1.5
Iron (Fe), (UG/L):	10	30	0	10
Lithium (Li), (UG/L):	90	90	-	-
Magnesium (Mg), (MG/L):	22	18	18	20
Manganese (Mn), (UG/L):	10	0	0	0
Mercury (Hg), (UG/L):	0.2	0	-	-
Nitrogen (N), (MG/L):	0.14	0.11	0.15	0.15
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.01	0	0	0
Ortho, (MG/L):	0.03	0	0	0
Potassium (K), (MG/L):	5.8	6	6	6.4
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	19	17	17	18
Sodium (Na), (MG/L):	36	41	40	36
Sulfate (SO_4), (MG/L):	81	74	80	69
Zinc (Zn), (UG/L):	10	0	-	-
Alkalinity As Calcium Carbonate, (MG/L):	248	253	250	251
As Bicarbonate, (MG/L):	302	308	305	306
Hardness Noncarbonate, (MG/L):	30	0	6	1
Total, (MG/L):	280	250	260	250
Specific conductance (Micromohs):	640	540	650	625
Total dissolved solids (TDS), (MG/L):	401	389	398	382
pH, Field	-	7.2	7.0	7.2
Discharge (gpm):	-	80	60	60
Temperature (°C):	26	25	25	26
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Clark Spring Warm Water Well

Location: 38°15'29". Latitude; 104°36'35"W. Longtitude; T. 21 S., R. 65 W., Sec. 1 aa, 6th. P.M., Pueblo County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	100
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	75
Chloride (Cl), (MG/L):	28
Flouride (F), (MG/L):	1.4
Iron (Fe), (UG/L):	2,700
Lithium (Li), (UG/L):	220
Magnesium (Mg), (MG/L):	45
Manganese (Mn), (UG/L):	40
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	18
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	11
Sodium (Na), (MG/L):	250
Sulfate (SO_4), (MG/L):	620
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	265
As Bicarbonate, (MG/L):	323
Hardness	
Noncarbonate, (MG/L):	110
Total, (MG/L):	370
Specific conductance (Micromohs):	1,650
Total dissolved solids (TDS), (MG/L):	1,210
pH, Field	6.8
Discharge (gpm):	12
Temperature (°C):	25
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Colonel Chinn Hot Water Well

Location: 38°52'23"N. Latitude; 107°38'04"W. Longtitude; T. 14 S., R. 92 W., Sec. 14 adc, 6th P.M., Delta County

	Date Sampled 4/76*
Arsenic (As), (UG/L):	-
Boron (B), (UG/L):	1,700
Cadium (Cd), (UG/L):	-
Calcium (Ca), (MG/L):	110
Chloride (Cl), (MG/L):	400
Flouride (F), (MG/L):	2.5
Iron (Fe), (UG/L):	100
Lithium (Li), (UG/L):	-
Magnesium (Mg), (MG/L):	32
Manganese (Mn), (UG/L):	880
Mercury (Hg), (UG/L):	-
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	41
Selenium (Se), (UG/L):	-
Silica (SiO_2), (MG/L):	25
Sodium (Na), (MG/L):	570
Sulfate (SO_4), (MG/L):	-
Zinc (Zn), (UG/L):	-
Alkalinity	
As Calcium Carbonate, (MG/L):	896
As Bicarbonate, (MG/L):	764
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	410
Specific conductance (Micromohs):	3,560
Total dissolved solids (TDS), (MG/L):	-
pH, Field	6.5
Discharge (gpm):	-
Temperature (°C):	42

*Remarks: Contains 162 mg/1 of carbonate.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Conundrum Hot Spring

Location: 39°00'44"N. Latitude; 106°53'26"W. Longtitude; T. 12 S., R. 85 W., Sec. 16, 6th P.M., Pitkin County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	30
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	500
Chloride (Cl), (MG/L):	8.6
Flouride (F), (MG/L):	2.3
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	1.4
Manganese (Mn), (UG/L):	140
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	3.4
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	38
Sodium (Na), (MG/L):	44
Sulfate (SO_4), (MG/L):	1,300
Zinc (Zn), (UG/L):	10
Alkalinity As Calcium Carbonate, (MG/L):	15
As Bicarbonate, (MG/L):	18
Hardness Noncarbonate, (MG/L):	1,200
Total, (MG/L):	1,300
Specific conductance (Micromohs):	2,400
Total dissolved solids (TDS), (MG/L):	1,910
pH, Field	-
Discharge (gpm):	50
Temperature (°C):	38

Remarks: Two springs within 100 feet of each other. Lower spring sampled.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cottonwood Hot Spring

Location: 38°48'48"N. Latitude; 106°13'21"W. Longtitude; T. 14 S., R. 79 W., Sec. 21 dc. 6th P.M., Chaffee County

	Date Sampled
	6/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	90
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	6.2
Chloride (Cl), (MG/L):	30
Flouride (F), (MG/L):	14
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	160
Magnesium (Mg), (MG/L):	0.5
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.08
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	2.8
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	60
Sodium (Na), (MG/L):	110
Sulfate (SO_4), (MG/L):	110
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	60
As Bicarbonate, (MG/L):	73
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	18
Specific conductance (Micromohs):	510
Total dissolved solids (TDS), (MG/L):	370
pH, Field	-
Discharge (gpm):	10E
Temperature (°C):	58
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cottonwood Hot Spring Area: Jump Steady Hot Spring

Location: 38°48'40"N. Latitude; 106°13'20"W. Longtitude; T. 14 S., R. 79 W., Sec. 21 dd, 6th P.M., Chaffee County

	Date Sampled			
	6/75	10/75	1/76	4/76*
Arsenic (As), (UG/L):	4	5	-	-
Boron (B), (UG/L):	90	90	110	80
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	6.4	5.6	5.9	5.8
Chloride (Cl), (MG/L):	28	30	30	32
Flouride (F), (MG/L):	14	13	14	1.7
Iron (Fe), (UG/L):	10	0	0	10
Lithium (Li), (UG/L):	150	160	-	-
Magnesium (Mg), (MG/L):	0.6	0.3	0.3	0
Manganese (Mn), (UG/L):	10	10	0	0
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.12	0.12	0.10	0.12
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0	0	0.01	0
Ortho, (MG/L):	0	0	0.03	0
Potassium (K), (MG/L):	2.6	2.7	2.7	2.7
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	58	54	58	13
Sodium (Na), (MG/L):	100	110	110	100
Sulfate (SO_4), (MG/L):	110	110	110	110
Zinc (Zn), (UG/L):	20	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	60	62	61	61
As Bicarbonate, (MG/L):	73	76	74	56
Hardness Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	18	15	16	14
Specific conductance (Micromohs):	500	510	547	540
Total dissolved solids (TDS), (MG/L):	356	364	368	302
pH, Field	-	6.0	8.2	8.5
Discharge (gpm):	-	90	50	50
Temperature (°C):	54	52	53	53

* Remarks: Contains 9 mg/1 of carbonate

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Cottonwood Hot Springs Area: Merrifield Hot Water Well

Location: 38°48'40"N. Latitude; 106°13'21"W. Longtitude; T. 14 S., R. 79 W., Sec. 21 dd, 6th P.M., Chaffee County

	Date Sampled 6/75*
Arsenic (As), (UG/L):	4
Boron (B), (UG/L):	80
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	9.5
Chloride (Cl), (MG/L):	23
Flouride (F), (MG/L):	12
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	110
Magnesium (Mg), (MG/L):	0.8
Manganese (Mn), (UG/L):	10
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.09
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	2.5
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	48
Sodium (Na), (MG/L):	81
Sulfate (SO_4), (MG/L):	87
Zinc (Zn), (UG/L):	20
Alkalinity As Calcium Carbonate, (MG/L):	62
As Bicarbonate, (MG/L):	71
Hardness Noncarbonate, (MG/L):	0
Total, (MG/L):	27
Specific conductance (Micromohs):	440
Total dissolved solids (TDS), (MG/L):	301
pH, Field	8.8
Discharge (gpm):	-
Temperature (°C):	46

* Remarks: Contains 23 mg/1 of carbonate

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Craig Warm Water Well

Location: 40°30'06"N. Latitude; 107°33'04"W. Longtitude; T. 6 N., R. 91 W., Sec. 1 dcb, 6th P.M., Moffat County

	Date Sampled
	1/76
Arsenic (As), (UG/L):	-
Boron (B), (UG/L):	210
Cadium (Cd), (UG/L):	-
Calcium (Ca), (MG/L):	5.8
Chloride (Cl), (MG/L):	4.1
Flouride (F), (MG/L):	3.1
Iron (Fe), (UG/L):	60
Lithium (Li), (UG/L):	-
Magnesium (Mg), (MG/L):	0.9
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	-
Nitrogen (N), (MG/L):	0.04
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	4.1
Selenium (Se), (UG/L):	-
Silica (SiO_2), (MG/L):	19
Sodium (Na), (MG/L):	360
Sulfate (SO_4), (MG/L):	6.7
Zinc (Zn), (UG/L):	-
Alkalinity	
As Calcium Carbonate, (MG/L):	819
As Bicarbonate, (MG/L):	998
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	18
Specific conductance (Micromohs):	1,440
Total dissolved solids (TDS), (MG/L):	896
pH, Field	8.2
Discharge (gpm):	24
Temperature (°C):	39
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Dexter Warm Spring

Location: 37°17'41"N. Latitude; 105°47'05"W. Longtitude; T. 35 N., R. 11 E., Sec. 8 ada, N.M.P.M., Conejos County

Temperature: 20°C

Discharge: 50 gpm (est.)

Specific conductance: 340

pH: 7.9

Remarks: Several springs and seeps in marshy area, flow difficult to estimate, each spring has a discharge over 5 gpm.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Don K Ranch Artesian Well

Location: 38°10'20"N. Latitude; 105°00'32"W. Longtitude; T. 22 S., R. 68 W., Sec. 5 a, 6th P.M., Fremont County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	140
Boron (B), (UG/L):	560
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	160
Chloride (Cl), (MG/L):	150
Flouride (F), (MG/L):	1.9
Iron (Fe), (UG/L):	1,100
Lithium (Li), (UG/L):	520
Magnesium (Mg), (MG/L):	66
Manganese (Mn), (UG/L):	870
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	50
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	40
Sodium (Na), (MG/L):	400
Sulfate (SO_4), (MG/L):	64
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	1,300
As Bicarbonate, (MG/L):	1,580
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	670
Specific conductance (Micromohs):	2,300
Total dissolved solids (TDS), (MG/L):	1,710
pH, Field	6.5
Discharge (gpm):	25
Temperature (°C):	28
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Dotsero Warm Springs

Location: 39°37'39"N. Latitude; 107°06'22"W. Longtitude; T. 5 S., R. 87 W., Sec. 12 bd, 6th. P.M., Eagle County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	0	-	-
Boron (B), (UG/L):	210	210	220
Cadium (Cd), (UG/L):	2	-	-
Calcium (Ca), (MG/L):	230	260	240
Chloride (Cl), (MG/L):	5,400	5,800	5,400
Flouride (F), (MG/L):	-	0.8	0.3
Iron (Fe), (UG/L):	20	0	40
Lithium (Li), (UG/L):	100	-	-
Magnesium (Mg), (MG/L):	62	79	65
Manganese (Mn), (UG/L):	20	0	20
Mercury (Hg), (UG/L):	0.1	-	-
Nitrogen (N), (MG/L):	-	0.06	0.06
Phosphate (PO_4) Ortho diss. as P, (MG/L):	-	0.02	0.01
Ortho, (MG/L):	-	0.06	0.03
Potassium (K), (MG/L):	44	95	44
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):		13	13
Sodium (Na), (MG/L):	3,500	3,500	3,500
Sulfate (SO_4), (MG/L):	420	430	450
Zinc (Zn), (UG/L):	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	372	370	372
As Bicarbonate, (MG/L):	454	451	454
Hardness Noncarbonate, (MG/L):	460	600	490
Total, (MG/L):	830	970	870
Specific conductance (Micromohs):	20,000	17,000	18,500
Total dissolved solids (TDS), (MG/L):		10,400	9,940
pH, Field	-	7.2	7.0
Discharge (gpm):	500E	525E	800E
Temperature (°C):	31	31	32

Remarks: This spring located on north side of Colorado River. See also page

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Dotsero Warm Springs, South

Location: 39°37'37"N. Latitude; 107°06'00"W. Longtitude; T. 5 S., R. 87 W., Sec. 12 b, 6th. P.M. Eagle County

	Date Sampled
	12/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	190
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	250
Chloride (Cl), (MG/L):	4,900
Flouride (F), (MG/L):	0.3
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	80
Magnesium (Mg), (MG/L):	54
Manganese (Mn), (UG/L):	20
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.09
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	37
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	13
Sodium (Na), (MG/L):	3,100
Sulfate (SO_4), (MG/L):	480
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	345
As Bicarbonate, (MG/L):	421
Hardness	
Noncarbonate, (MG/L):	500
Total, (MG/L):	850
Specific conductance (Micromohs):	15,000
Total dissolved solids (TDS), (MG/L):	9,040
pH, Field	7.0
Discharge (gpm):	1,000E
Temperature (°C):	32

Remarks: This spring located on south side of Colorado River. See also page

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Dunton Hot Spring

Location: 37°46'18"N. Latitude; 108°05'38"W. Longtitude; T. 41 N., R. 11 W., Sec. 32 N.M.P.M., Dolores County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	5	-	-
Boron (B), (UG/L):	90	110	90
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	330	360	340
Chloride (Cl), (MG/L):	6.6	6.3	7.0
Flouride (F), (MG/L):	0.6	0.4	0.7
Iron (Fe), (UG/L):	2,300	830	1,100
Lithium (Li), (UG/L):	100	-	-
Magnesium (Mg), (MG/L):	45	43	45
Manganese (Mn), (UG/L):	1,800	1,700	1,900
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.06	0.01	0.02
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.03	0.05	0.01
Ortho, (MG/L):	0.09	0.15	0.03
Potassium (K), (MG/L):	19	21	21
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	34	32	33
Sodium (Na), (MG/L):	35	34	34
Sulfate (SO_4), (MG/L):	350	340	310
Zinc (Zn), (UG/L):	0	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	719	828	837
As Bicarbonate, (MG/L):	877	1,010	1,020
Hardness			
Noncarbonate, (MG/L):	290	250	200
Total, (MG/L):	1,000	1,100	1,000
Specific conductance (Micromohs):	1,850	1,890	1,860
Total dissolved solids (TDS), (MG/L):	1,260	1,340	1,300
pH, Field	-	7.0	6.4
Discharge (gpm):	26	25	25
Temperature (°C):	44	42	42
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Dutch Crowley Artesian Well

Location: 37°00'01"N. Latitude; 106°47'03"W. Longtitude; T. 32 N., R. 2 E., Sec. 19 cbb, N.M.P.M., Archuleta County

Temperature: 70°C

Discharge: 75 gpm (est.)

Specific conductance: 960

pH: 7.0

Remarks: This is an old oil test well, 1725 feet deep.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Eldorado Springs: Spring A

Location: 39°55'52"N. Latitude; 105°16'46"W. Longtitude; T. 1 S., R. 71 W., Sec. 25 da, 6th. P.M., Boulder County

	Date Sampled 9/75
Arsenic (As), (UG/L):	14
Boron (B), (UG/L):	20
Cadium (Cd), (UG/L):	1
Calcium (Ca), (MG/L):	15
Chloride (Cl), (MG/L):	1
Flouride (F), (MG/L):	0.2
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	4.8
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.54
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	3.2
Selenium (Se), (UG/L):	1
Silica (SiO_2), (MG/L):	16
Sodium (Na), (MG/L):	6.9
Sulfate (SO_4), (MG/L):	20
Zinc (Zn), (UG/L):	30
Alkalinity	
As Calcium Carbonate, (MG/L):	52
As Bicarbonate, (MG/L):	63
Hardness	
Noncarbonate, (MG/L):	6
Total, (MG/L):	57
Specific conductance (Micromohs):	152
Total dissolved solids (TDS), (MG/L):	101
pH, Field	6.9
Discharge (gpm):	-
Temperature (°C):	24

Remarks: Actually a well located on the south side of the creek, approx. 100 feet east of the bridge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Eldorado Springs: Spring B

Location: 39°55'53"N. Latitude; 105°16'47"W. Longtitude; T. 1 S., R. 71 W., Sec. 25 da, 6th. P.M., Boulder County

	Date Sampled		
	9/75	2/76	4/76
Arsenic (As), (UG/L):	8	-	-
Boron (B), (UG/L):	20	10	30
Cadium (Cd), (UG/L):	2	-	-
Calcium (Ca), (MG/L):	12	11	11
Chloride (Cl), (MG/L):	0.8	1.5	0.8
Flouride (F), (MG/L):	0.2	0.4	0.3
Iron (Fe), (UG/L):	20	0	0
Lithium (Li), (UG/L):	10	-	-
Magnesium (Mg), (MG/L):	2.9	3.3	3.0
Manganese (Mn), (UG/L):	0	0	0
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.63	0.78	0.76
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.07	0.06	0.06
Ortho, (MG/L):	0.21	0.18	0.18
Potassium (K), (MG/L):	3.1	3.3	3.0
Selenium (Se), (UG/L):	1	-	-
Silica (SiO_2), (MG/L):	15	15	15
Sodium (Na), (MG/L):	6.3	7.3	6.7
Sulfate (SO_4), (MG/L):	19	23	19
Zinc (Zn), (UG/L):	20	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	35	38	35
As Bicarbonate, (MG/L):	43	46	43
Hardness			
Noncarbonate, (MG/L):	7	3	5
Total, (MG/L):	42	41	40
Specific conductance (Micromohs):	122	130	135
Total dissolved solids (TDS), (MG/L):	84	91	84
pH, Field	6.7	6.6	6.6
Discharge (gpm):	-	-	-
Temperature (°C):	25	26	24

Remarks: Located within the stone building approx. 175 feet north of creek and 200 feet northwest of bridge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Eoff Artesian Well

Location: 37°11'26"N. Latitude; 106°59'36"W. Longtitude; T. 34 N., R. 1 W., Sec. 7 cdc, N.M.P.M., Archuleta County

Temperature: 39°C

Discharge: 50 gpm (est.)

Specific conductance: 2,500

pH: 7.0

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Florence Artesian Well

Location: 38°24'53"N. Latitude; 105°02'43"W. Longtitude; T. 19 S., R. 68 W., Sec. 7 ba, 6th. P.M., Fremont County

	Date Sampled 9/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	160
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	180
Chloride (Cl), (MG/L):	98
Flouride (F), (MG/L):	1.1
Iron (Fe), (UG/L):	500
Lithium (Li), (UG/L):	240
Magnesium (Mg), (MG/L):	78
Manganese (Mn), (UG/L):	50
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.03
Potassium (K), (MG/L):	32
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	21
Sodium (Na), (MG/L):	270
Sulfate (SO_4), (MG/L):	210
Zinc (Zn), (UG/L):	10
Alkalinity As Calcium Carbonate, (MG/L):	984
As Bicarbonate, (MG/L):	1,200
Hardness Noncarbonate, (MG/L):	0
Total, (MG/L):	770
Specific conductance (Micromohs):	2,200
Total dissolved solids (TDS), (MG/L):	1,480
pH, Field	6.3
Discharge (gpm):	130
Temperature (°C):	28
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Fremont Natatorium Hot Spring

Location: 38°27'38"N. Latitude; 105°11'46"W. Longtitude; T. 18 S., R. 70 W., Sec. 26 6th. P.M., Fremont County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	0	-	-
Boron (B), (UG/L):	90	80	90
Cadium (Cd), (UG/L):	1	-	-
Calcium (Ca), (MG/L):	150	140	140
Chloride (Cl), (MG/L):	36	30	30
Flouride (F), (MG/L):	0.5	0.5	0.5
Iron (Fe), (UG/L):	880	980	990
Lithium (Li), (UG/L):	120	-	-
Magnesium (Mg), (MG/L):	70	67	67
Manganese (Mn), (UG/L):	50	50	40
Mercury (Hg), (UG/L):	0.1	-	-
Nitrogen (N), (MG/L):	0.03	0.01	0.01
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0	0	0.01
Ortho, (MG/L):	0	0	0.03
Potassium (K), (MG/L):	13	13	12
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	16	15	15
Sodium (Na), (MG/L):	220	210	210
Sulfate (SO_4), (MG/L):	550	510	540
Zinc (Zn), (UG/L):	10	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	515	519	519
As Bicarbonate, (MG/L):	628	633	633
Hardness			
Noncarbonate, (MG/L):	150	110	110
Total, (MG/L):	660	630	630
Specific conductance (Micromohs):	1,900	1,900	1,850
Total dissolved solids (TDS), (MG/L):	1,370	1,300	1,330
pH, Field	6.9	6.8	6.7
Discharge (gpm):	20	20	18
Temperature (°C):	35	36	35
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Fullinwider Warm Spring

Location: 38°18'18"N. Latitude; 105°58'55"W. Longtitude; T. 47 N., R. 9 E., Sec. 21 dc, N.M.P.M., Saguache County

	Date Sampled 10/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	50
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	21
Chloride (Cl), (MG/L):	15
Flouride (F), (MG/L):	4.4
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	100
Magnesium (Mg), (MG/L):	4.2
Manganese (Mn), (UG/L):	5
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.29
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	1.6
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	27
Sodium (Na), (MG/L):	80
Sulfate (SO_4), (MG/L):	120
Zinc (Zn), (UG/L):	8
Alkalinity As Calcium Carbonate, (MG/L):	95
As Bicarbonate, (MG/L):	116
Hardness Noncarbonate, (MG/L):	0
Total, (MG/L):	70
Specific conductance (Micromohs):	530
Total dissolved solids (TDS), (MG/L):	332
pH, Field	6.7
Discharge (gpm):	11
Temperature (°C):	18
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Geyser Warm Spring

Location: 37°44'48"N. Latitude; 108°07'02"W. Longtitude; T. 40 N, R. 11 W., Sec. 6, N.M.P.M., Dolores County

	Date Sampled 9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	120
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	170
Chloride (Cl), (MG/L):	2.4
Flouride (F), (MG/L):	0.4
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	280
Magnesium (Mg), (MG/L):	40
Manganese (Mn), (UG/L):	700
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.02
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.09
Ortho, (MG/L):	0.28
Potassium (K), (MG/L):	29
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	37
Sodium (Na), (MG/L):	400
Sulfate (SO_4), (MG/L):	68
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	1,450
As Bicarbonate, (MG/L):	1,770
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	590
Specific conductance (Micromohs):	2,500
Total dissolved solids (TDS), (MG/L):	1,620
pH, Field	-
Discharge (gpm):	25-200±E*
Temperature (°C):	28

*Remarks: Due to geyser like activity discharge varies. Were unable to make accurate measurement of discharge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Big Spring (feeds swimming pool)

Location: 39°32'59"N. Latitude; 107°19'18"W. Longtitude; T. 6 S., R. 89 W., Sec. 9 ad, 6th. P.M., Garfield County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	890
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	510
Chloride (Cl), (MG/L):	11,000
Flouride (F), (MG/L):	2.3
Iron (Fe), (UG/L):	60
Lithium (Li), (UG/L):	800
Magnesium (Mg), (MG/L):	91
Manganese (Mn), (UG/L):	80
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	180
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	32
Sodium (Na), (MG/L):	6,900
Sulfate (SO_4), (MG/L):	1,100
Zinc (Zn), (UG/L):	30
Alkalinity	
As Calcium Carbonate, (MG/L):	634
As Bicarbonate, (MG/L):	773
Hardness	
Noncarbonate, (MG/L):	1,000
Total, (MG/L):	1,600
Specific conductance (Micromohs):	36,800
Total dissolved solids (TDS), (MG/L):	20,200
pH, Field	6.3
Discharge (gpm):	2,263
Temperature (°C):	50

Remarks: Located on north side of Colorado River.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Drinking Spring

Location: 39°32'59"N. Latitude; 107°19'19"W. Longtitude; T. 6 S., R. 89 W., Sec. 9 ad, 6th P.M., Garfield County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	1	1	-	-
Boron (B), (UG/L):	910	880	920	870
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	510	530	500	480
Chloride (Cl), (MG/L):	11,000	11,000	11,000	10,000
Flouride (F), (MG/L):	2.3	2.0	2.7	2.2
Iron (Fe), (UG/L):	20	150	20	40
Lithium (Li), (UG/L):	810	900	-	-
Magnesium (Mg), (MG/L):	90	88	82	15
Manganese (Mn), (UG/L):	80	90	70	60
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.01	0	0.01	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.03	0.05	0.06	0.05
Ortho, (MG/L):	0.09	0.15	0.18	0.15
Potassium (K), (MG/L):	180	170	380	180
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	32	29	30	30
Sodium (Na), (MG/L):	7,000	6,900	7,000	6,600
Sulfate (SO_4), (MG/L):	1,100	1,100	1,100	1,100
Zinc (Zn), (UG/L):	20	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	638	637	634	633
As Bicarbonate, (MG/L):	778	777	773	772
Hardness				
Noncarbonate, (MG/L):	1,000	1,000	950	630
Total, (MG/L):	1,600	1,700	1,600	1,300
Specific conductance (Micromohs):	36,800	30,100	31,100	30,000
Total dissolved solids (TDS), (MG/L):	20,300	20,200	20,500	18,800
pH, Field	6.3	6.5	6.4	6.4
Discharge (gpm):	-	-	161	140
Temperature (°C):	50	50	51	51

Remarks: Located approx. 100 feet east of pool.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Vapor Caves, Mens Hot Spring

Location: 39°32'59"N. Latitude; 107°19'17"W. Longtitude; T. 6 S., R. 89 W., Sec. 9 ad, 6th. P.M., Garfield County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	870
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	440
Chloride (Cl), (MG/L):	9,600
Flouride (F), (MG/L):	1.9
Iron (Fe), (UG/L):	80
Lithium (Li), (UG/L):	670
Magnesium (Mg), (MG/L):	40
Manganese (Mn), (UG/L):	70
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	150
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	28
Sodium (Na), (MG/L):	6,300
Sulfate (SO_4), (MG/L):	1,100
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	610
As Bicarbonate, (MG/L):	744
Hardness	
Noncarbonate, (MG/L):	650
Total, (MG/L):	1,300
Specific conductance (Micromohs):	31,000
Total dissolved solids (TDS), (MG/L):	18,000
pH, Field	6.7
Discharge (gpm):	5E
Temperature (°C):	50

Remarks: Located on north side of Colorado River

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Graves Spring

Location: 39°33'14"N. Latitude; 107°20'08"W. Longtitude; T. 6 S., R. 89 W., Sec. 9 bb, 6th. P.M., Garfield County

	Date Sampled 9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	1,000
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	770
Chloride (Cl), (MG/L):	11,000
Flouride (F), (MG/L):	2.9
Iron (Fe), (UG/L):	70
Lithium (Li), (UG/L):	690
Magnesium (Mg), (MG/L):	150
Manganese (Mn), (UG/L):	50
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.04
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	180
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	32
Sodium (Na), (MG/L):	7,000
Sulfate (SO_4), (MG/L):	2,000
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	610
As Bicarbonate, (MG/L):	744
Hardness	
Noncarbonate, (MG/L):	1,900
Total, (MG/L):	2,500
Specific conductance (Micromohs):	33,500
Total dissolved solids (TDS), (MG/L):	21,500
pH, Field	7.0
Discharge (gpm):	5
Temperature (°C):	46

Remarks: Located at 0281 164 Road in Glenwood Springs.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Spring A*

Location: 39°32'58"N. Latitude; 107°19'10"W. Longtitude; T. 6 S., R. 89 W., Sec. 9 bb, 6th. P.M., Garfield County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	800
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	410
Chloride (Cl), (MG/L):	9,600
Flouride (F), (MG/L):	2.2
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	730
Magnesium (Mg), (MG/L):	88
Manganese (Mn), (UG/L):	70
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	160
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	30
Sodium (Na), (MG/L):	6,000
Sulfate (SO_4), (MG/L):	980
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	604
As Bicarbonate, (MG/L):	736
Hardness	
Noncarbonate, (MG/L):	780
Total, (MG/L):	1,400
Specific conductance (Micromohs):	31,000
Total dissolved solids (TDS), (MG/L):	17,600
pH, Field	6.3
Discharge (gpm):	2-3E
Temperature (°C):	44

*Remarks: Located on south side of Colorado River, 480 feet west of siphon.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Spring B*

Location: 39°33'02"N. Latitude; 107°19'04"W. Longtitude; T. 6 S., R. 89 W., Sec. 10 cb, 6th. P.M., Garfield County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	0	1	-	-
Boron (B), (UG/L):	760	830	840	840
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	450	490	49	360
Chloride (Cl), (MG/L):	9,900	9,800	9,500	9,500
Flouride (F), (MG/L):	2.1	2.3	2.1	2.1
Iron (Fe), (UG/L):	30	60	30	40
Lithium (Li), (UG/L):	800	860	-	-
Magnesium (Mg), (MG/L):	86	79	76	86
Manganese (Mn), (UG/L):	70	70	70	60
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.02	0.18	0.01	0
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0.03	0.04	0.04
Ortho, (MG/L):	0.03	0.09	0.12	0.12
Potassium (K), (MG/L):	170	160	190	170
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	30	27	28	28
Sodium (Na), (MG/L):	6,300	6,400	6,500	6,300
Sulfate (SO_4), (MG/L):	1,000	1,100	1,000	990
Zinc (Zn), (UG/L):	20	20	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	613	617	614	612
As Bicarbonate, (MG/L):	747	752	749	746
Hardness				
Noncarbonate, (MG/L):	870	930	0	640
Total, (MG/L):	1,500	1,600	440	1,300
Specific conductance (Micromohs):	35,000	31,000	29,100	29,700
Total dissolved solids (TDS), (MG/L):	18,300	18,400	17,700	17,800
pH, Field	6.5	7.0	6.7	7.0
Discharge (gpm):	75	75	100	110
Temperature (°C):	51	50	51	51

* Remarks: Located on south side of Colorado River 27 feet west of siphon.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Spring D*

Location: 39°33'05"N. Latitude; 107°19'00"W. Longtitude; T. 6 S., R. 89 W., Sec. 10 cb, 6th. P.M., Garfield County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	810
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	450
Chloride (Cl), (MG/L):	9,800
Flouride (F), (MG/L):	2.1
Iron (Fe), (UG/L):	30
Lithium (Li), (UG/L):	800
Magnesium (Mg), (MG/L):	82
Manganese (Mn), (UG/L):	70
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	160
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	30
Sodium (Na), (MG/L):	89
Sulfate (SO_4), (MG/L):	1,000
Zinc (Zn), (UG/L):	10
Alkalinity As Calcium Carbonate, (MG/L):	611
As Bicarbonate, (MG/L):	745
Hardness Noncarbonate, (MG/L):	850
Total, (MG/L):	1,500
Specific conductance (Micromohs):	36,000
Total dissolved solids (TDS), (MG/L):	18,000
pH, Field	6.4
Discharge (gpm):	74
Temperature (°C):	50

*Remarks: Located on south side of Colorado River, 225 feet east of siphon

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Railroad Spring*

Location: 39°33'16"N. Latitude; 107°18'51"W. Longtitude; T. 6 S., R. 88 W., Sec. 10 bab, 6th. P.M., Garfield County

	Date Sampled	
	1/76	4/76
Arsenic (As), (UG/L):	-	-
Boron (B), (UG/L):	850	890
Cadium (Cd), (UG/L):	-	-
Calcium (Ca), (MG/L):	460	460
Chloride (Cl), (MG/L):	10,000	10,000
Flouride (F), (MG/L):	2.4	2.1
Iron (Fe), (UG/L):	20	40
Lithium (Li), (UG/L):	-	-
Magnesium (Mg), (MG/L):	80	86
Manganese (Mn), (UG/L):	70	80
Mercury (Hg), (UG/L):	-	-
Nitrogen (N), (MG/L):	0.01	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.04	0.04
Ortho, (MG/L):	0.12	0.12
Potassium (K), (MG/L):	200	180
Selenium (Se), (UG/L):	-	-
Silica (SiO_2), (MG/L):	29	29
Sodium (Na), (MG/L):	6,100	6,200
Sulfate (SO_4), (MG/L):	1,100	880
Zinc (Zn), (UG/L):	-	-
Alkalinity As Calcium Carbonate, (MG/L):	636	627
As Bicarbonate, (MG/L):	775	764
Hardness Noncarbonate, (MG/L):	840	880
Total, (MG/L):	1,500	1,500
Specific conductance (Micromohs):	30,500	29,900
Total dissolved solids (TDS), (MG/L):	18,400	18,200
pH, Field	7.1	6.5
Discharge (gpm):	75	75
Temperature (°C):	51	51

* Remarks: Located on south side of Colorado River west of railroad tunnel.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Glenwood Springs Area: Spring C

Location: $39^{o}32'02"$N. Latitude; $107^{o}19'02"$W. Longtitude; T. 6 S., R. 89 W., Sec. 10 cb, 6th P.M., Garfield County

Temperature: 46^{o}C

Discharge: 2-3 gpm

Specific conductance:--

Remarks: Located 170 feet east of siphon pipe on south side of Colorado River.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hartsel Hot Springs: Spring A

Location: 39°01'05"N. Latitude; 105°47'40"W. Longtitude; T. 12 S., R. 75 W., Sec. 8 da, 6th P.M., Park County

	Date Sampled
	6/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	560
Cadium (Cd), (UG/L):	1
Calcium (Ca), (MG/L):	120
Chloride (Cl), (MG/L):	820
Flouride (F), (MG/L):	2.1
Iron (Fe), (UG/L):	170
Lithium (Li), (UG/L):	1,000
Magnesium (Mg), (MG/L):	20
Manganese (Mn), (UG/L):	150
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.22
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	33
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	41
Sodium (Na), (MG/L):	680
Sulfate (SO_4), (MG/L):	320
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	393
As Bicarbonate, (MG/L):	479
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	380
Specific conductance (Micromohs):	3,780
Total dissolved solids (TDS), (MG/L):	2,280
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	52

Remarks: Western most spring

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hartsel Hot Springs: Spring B

Location: 39°01'05"N. Latitude; 105°47'39"W. Longtitude; T. 12 S., R. 75 W., Sec. 8 da, 6th P.M., Park County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	2	1	-	-
Boron (B), (UG/L):	550	540	510	380
Cadium (Cd), (UG/L):	1	0	-	-
Calcium (Ca), (MG/L):	120	110	120	120
Chloride (Cl), (MG/L):	780	820	820	820
Flouride (F), (MG/L):	2	1.8	2.0	2.0
Iron (Fe), (UG/L):	520	570	450	420
Lithium (Li), (UG/L):	1,000	1,000	-	-
Magnesium (Mg), (MG/L):	20	20	19	21
Manganese (Mn), (UG/L):	180	210	180	170
Mercury (Hg), (UG/L):	0.1	0.1	-	-
Nitrogen (N), (MG/L):	0.03	0.03	0.03	0.06
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.03	0	0.01	0.01
Ortho, (MG/L):	0.09	0	0.03	0.03
Potassium (K), (MG/L):	32	33	34	33
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	38	35	36	37
Sodium (Na), (MG/L):	650	670	710	670
Sulfate (SO_4), (MG/L):	260	320	320	380
Zinc (Zn), (UG/L):	10	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	397	413	410	403
As Bicarbonate, (MG/L):	484	503	500	491
Hardness Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	380	360	380	390
Specific conductance (Micromohs):	3,850	3,600	3,800	3,800
Total dissolved solids (TDS), (MG/L):	2,140	2,260	2,310	2,330
pH, Field	-	7.0	6.6	6.6
Discharge (gpm):	-	40	48	50
Temperature (°C):	52	45	45	45

Remarks: Eastern most spring.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Haystack Butte Warm Water Well

Location: 40°05'48"N. Latitude; 105°14'16"W. Longtitude; T. 2 N., R. 70 W., Sec. 33 ba, 6th P.M., Boulder County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	740
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	2.5
Chloride (Cl), (MG/L):	30
Flouride (F), (MG/L):	4.4
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	240
Magnesium (Mg), (MG/L):	0.7
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.03
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	1.3
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	29
Sodium (Na), (MG/L):	510
Sulfate (SO_4), (MG/L):	7.9
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	1,030
As Bicarbonate, (MG/L):	1,250
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	9
Specific conductance (Micromohs):	1,840
Total dissolved solids (TDS), (MG/L):	1,200
pH, Field	8.0
Discharge (gpm):	4E
Temperature (°C):	28
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hot Sulphur Springs: Spring A

Location: 40°04'33"N. Latitude; 106°06'43"W. Longtitude; T. 1 N., R. 78 W., Sec. 3 dc, 6th P.M., Grand County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	6	5	-	-
Boron (B), (UG/L):	570	560	480	560
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	14	15	15	15
Chloride (Cl), (MG/L):	140	140	140	120
Flouride (F), (MG/L):	12	9.4	13	12
Iron (Fe), (UG/L):	20	80	10	30
Lithium (Li), (UG/L):	1,100	1,500	-	-
Magnesium (Mg), (MG/L):	3.7	3.6	3.2	3.9
Manganese (Mn), (UG/L):	70	70	80	90
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.02	0	0.13	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0.01	0.01	0.03
Ortho, (MG/L):	0.03	0.03	0.03	0.09
Potassium (K), (MG/L):	25	23	23	23
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	35	31	31	33
Sodium (Na), (MG/L):	430	440	450	420
Sulfate (SO_4), (MG/L):	140	140	130	120
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	667	668	680	689
As Bicarbonate, (MG/L):	813	815	829	840
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	50	52	51	54
Specific conductance (Micromohs):	1,920	1,800	1,930	1,900
Total dissolved solids (TDS), (MG/L):	1,200	1,210	1,220	1,160
pH, Field	6.6	7.1	6.9	6.9
Discharge (gpm):	--	12	12	13
Temperature (°C):	44	44	44	44

Remarks: Located approx. 250 feet north of lodge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hot Sulphur Springs: Spring B

Location: 40°04'33"N. Latitude; 106°06'44"W. Longtitude; T. 1 N., R. 78 W., Sec. 3 dc, 6th P.M., Grand County

	Date Sampled 7/75
Arsenic (As), (UG/L):	5
Boron (B), (UG/L):	570
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	15
Chloride (Cl), (MG/L):	140
Flouride (F), (MG/L):	12
Iron (Fe), (UG/L):	100
Lithium (Li), (UG/L):	1,100
Magnesium (Mg), (MG/L):	3.1
Manganese (Mn), (UG/L):	80
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	24
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	35
Sodium (Na), (MG/L):	430
Sulfate (SO_4), (MG/L):	140
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	670
As Bicarbonate, (MG/L):	817
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	50
Specific conductance (Micromohs):	1,850
Total dissolved solids (TDS), (MG/L):	1,200
pH, Field	6.7
Discharge (gpm):	1
Temperature (°C):	41

Remarks: Located approx. 75 feet northwest of Spring A in collection box.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hot Sulphur Springs: Spring C

Location: 40°04'33"N. Latitude; 106°06'45"W. Longtitude; T. 1 N., R. 78 W., Sec. 3 dc, 6th P.M., Grand County

	Date Sampled	
	7/75	10/75
Arsenic (As), (UG/L):	4	6
Boron (B), (UG/L):	530	560
Cadium (Cd), (UG/L):	0	0
Calcium (Ca), (MG/L):	15	15
Chloride (Cl), (MG/L):	140	140
Flouride (F), (MG/L):	12	9.5
Iron (Fe), (UG/L):	60	120
Lithium (Li), (UG/L):	1,100	1,500
Magnesium (Mg), (MG/L):	3.5	3.2
Manganese (Mn), (UG/L):	90	70
Mercury (Hg), (UG/L):	0	0
Nitrogen (N), (MG/L):	0	0
Phosphate (PO_4)		
Ortho diss. as P, (MG/L):	0	0.01
Ortho, (MG/L):	0	0.03
Potassium (K), (MG/L):	25	22
Selenium (Se), (UG/L):	0	0
Silica (SiO_2), (MG/L):	35	31
Sodium (Na), (MG/L):	440	430
Sulfate (SO_4), (MG/L):	140	130
Zinc (Zn), (UG/L):	0	10
Alkalinity		
As Calcium Carbonate, (MG/L):	668	679
As Bicarbonate, (MG/L):	814	828
Hardness		
Noncarbonate, (MG/L):	0	0
Total, (MG/L):	52	51
Specific conductance (Micromohs):	1,870	1,700
Total dissolved solids (TDS), (MG/L):	1,210	1,190
pH, Field	6.8	7.1
Discharge (gpm):	3	15
Temperature (°C):	40	40

Remarks: Located at base of north wall of indoor swimming pool building.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Hot Sulphur Springs: Spring D

Location: 40°04'32"N. Latitude; 106°06'45"W. Longtitude; T. 1 N., R. 78 W., Sec. 3 dc, 6th P.M., Grand County

	Date Sampled
	10/75
Arsenic (As), (UG/L):	9
Boron (B), (UG/L):	570
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	16
Chloride (Cl), (MG/L):	140
Flouride (F), (MG/L):	9.1
Iron (Fe), (UG/L):	200
Lithium (Li), (UG/L):	1,500
Magnesium (Mg), (MG/L):	3.0
Manganese (Mn), (UG/L):	90
Mercury (Hg), (UG/L):	0.1
Nitrogen (N), (MG/L):	0.02
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	23
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	30
Sodium (Na), (MG/L):	430
Sulfate (SO_4), (MG/L):	150
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	648
As Bicarbonate, (MG/L):	790
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	52
Specific conductance (Micromohs):	1,800
Total dissolved solids (TDS), (MG/L):	1,190
pH, Field	7.1
Discharge (gpm):	23
Temperature (°C):	40

Remarks: Located approx. 50 feet south of pool building in marshy area.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Idaho Hot Springs: Spring A

Location: 39°44'20"N. Latitude; 105°30'43"W. Longtitude; T. 4 S., R. 73 W., Sec. 1 ba, 6th P.M., Clear Creek County

	Date Sampled			
	7/75	10/75	2/76	4/76
Arsenic (As), (UG/L):	20	19	-	-
Boron (B), (UG/L):	350	360	300	470
Cadium (Cd), (UG/L):	0	1	-	-
Calcium (Ca), (MG/L):	140	150	130	130
Chloride (Cl), (MG/L):	66	66	64	66
Flouride (F), (MG/L):	4.8	3.7	4.1	4.1
Iron (Fe), (UG/L):	20	70	10	110
Lithium (Li), (UG/L):	640	900	-	-
Magnesium (Mg), (MG/L):	36	40	34	36
Manganese (Mn), (UG/L):	40	40	70	60
Mercury (Hg), (UG/L):	0	0.2	-	-
Nitrogen (N), (MG/L):	0.13	0.05	0.20	0.15
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.11	0.03	0.02	0.06
Ortho, (MG/L):	0.34	0.09	0.06	0.18
Potassium (K), (MG/L):	80	84	71	76
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	68	58	74	60
Sodium (Na), (MG/L):	500	530	490	500
Sulfate (SO_4), (MG/L):	380	430	400	380
Zinc (Zn), (UG/L):	10	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	1,240	1,250	1,140	1,140
As Bicarbonate, (MG/L):	1,510	1,520	1,390	1,390
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	500	540	460	470
Specific conductance (Micromohs):	3,400	2,800	2,760	2,600
Total dissolved solids (TDS), (MG/L):	2,020	2,110	1,950	1,940
pH, Field	-	6.9	6.7	6.9
Discharge (gpm):	21	-	-	-
Temperature (°C):	45	40	40	40

Remarks: Located 75 feet south of lodge, east of the creek in the cliff.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Idaho Hot Springs: Spring B

Location: 39°44'21"N. Latitude; 105°30'43"W. Longtitude; T. 3 S., R. 73 W., Sec. 36 cd, 6th P.M., Clear Creek County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	12
Boron (B), (UG/L):	370
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	130
Chloride (Cl), (MG/L):	69
Flouride (F), (MG/L):	4.8
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	660
Magnesium (Mg), (MG/L):	50
Manganese (Mn), (UG/L):	20
Mercury (Hg), (UG/L):	0.1
Nitrogen (N), (MG/L):	0.08
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.06
Ortho, (MG/L):	0.18
Potassium (K), (MG/L):	82
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	68
Sodium (Na), (MG/L):	520
Sulfate (SO_4), (MG/L):	400
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	1,250
As Bicarbonate, (MG/L):	1,520
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	530
Specific conductance (Micromohs):	2,900
Total dissolved solids (TDS), (MG/L):	2,070
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	24

Remarks: Located 50 feet east of the southeast corner of the lodge in the cliff.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Idaho Hot Springs: Spring C

Location: 39°44'19"N. Latitude; 105°30'43"W. Longtitude; T. 4 S., R. 73 W., Sec. 1 ba, 6th P.M., Clear Creek County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	170
Cadium (Cd), (UG/L):	1
Calcium (Ca), (MG/L):	77
Chloride (Cl), (MG/L):	36
Flouride (F), (MG/L):	2.9
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	340
Magnesium (Mg), (MG/L):	23
Manganese (Mn), (UG/L):	40
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.13
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.03
Potassium (K), (MG/L):	44
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	45
Sodium (Na), (MG/L):	260
Sulfate (SO_4), (MG/L):	210
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	623
As Bicarbonate, (MG/L):	759
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	290
Specific conductance (Micromohs):	1,620
Total dissolved solids (TDS), (MG/L):	1,070
pH, Field	-
Discharge (gpm):	1
Temperature (°C):	20

Remarks· Located 100 feet south of lodge and east of the creek.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Idaho Hot Springs: Lodge Hot Water Well

Location: 39°44'22"N. Latitude; 105°30'43"W. Longtitude; T. 3 S., R. 73 W., Sec. 36 cd, 6th P.M., Clear Creek County

	Date Sampled 10/75
Arsenic (As), (UG/L):	46
Boron (B), (UG/L):	360
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	150
Chloride (Cl), (MG/L):	66
Flouride (F), (MG/L):	3.5
Iron (Fe), (UG/L):	1,000
Lithium (Li), (UG/L):	870
Magnesium (Mg), (MG/L):	38
Manganese (Mn), (UG/L):	70
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	82
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	58
Sodium (Na), (MG/L):	520
Sulfate (SO_4), (MG/L):	420
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	1,220
As Bicarbonate, (MG/L):	1,490
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	530
Specific conductance (Micromohs):	2,920
Total dissolved solids (TDS), (MG/L):	2,070
pH, Field	6.9
Discharge (gpm):	30
Temperature (°C):	46

Remarks: Located at south end of swimming pool, approx. 100 feet north of lodge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Juniper Hot Springs

Location: 40°28'01"N. Latitude; 107°57'10"W. Longtitude; T. 6 N., R. 94 W., Sec. 16 cd, 6th P.M., Moffat County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	0	1	-	-
Boron (B), (UG/L):	540	550	480	520
Cadium (Cd), (UG/L):	1	0	-	-
Calcium (Ca), (MG/L):	3.7	2.9	3.9	3.3
Chloride (Cl), (MG/L):	94	93	89	90
Flouride (F), (MG/L):	4	3.1	3.3	3.3
Iron (Fe), (UG/L):	10	10	10	20
Lithium (Li), (UG/L):	170	250	-	-
Magnesium (Mg), (MG/L):	0.8	0.4	0.3	0.3
Manganese (Mn), (UG/L):	10	10	0	0
Mercury (Hg), (UG/L):	0.2	0	-	-
Nitrogen (N), (MG/L):	0.05	0.01	0.10	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0.01	0.03	0.03
Ortho, (MG/L):	0.03	0.03	0.09	0.09
Potassium (K), (MG/L):	2.3	2.0	2.2	2.1
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	33	29	31	32
Sodium (Na), (MG/L):	460	480	470	460
Sulfate (SO_4), (MG/L):	12	8.3	20	13
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	902	894	894	902
As Bicarbonate, (MG/L):	1,100	1,090	1,090	1,100
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	13	9	11	9
Specific conductance (Micromohs):	1,900	1,900	1,800	1,850
Total dissolved solids (TDS), (MG/L):	1,150	1,160	1,160	1,150
pH, Field	7.8	8.0	8.2	7.9
Discharge (gpm):	13	14	13	18
Temperature (°C):	38	33	37	36
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Lemon Hot Spring

Location: 38°51'00"N. Latitude; 108°03'11"W. Longtitude; T. 44 N., R. 11 W., Sec. 34 dd, N.M.P.M., San Miguel County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	240	-	-
Boron (B), (UG/L):	2,600	490	2,500
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	140	150	150
Chloride (Cl), (MG/L):	260	280	270
Flouride (F), (MG/L):	4.7	4.9	5.0
Iron (Fe), (UG/L):	850	890	840
Lithium (Li), (UG/L):	4,400	-	-
Magnesium (Mg), (MG/L):	11	10	11
Manganese (Mn), (UG/L):	380	380	390
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0	0.08	0.01
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.05	0.08	1.4
Ortho, (MG/L):	0.15	0.25	4.3
Potassium (K), (MG/L):	84	80	84
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	95	100	94
Sodium (Na), (MG/L):	730	780	760
Sulfate (SO_4), (MG/L):	880	860	810
Zinc (Zn), (UG/L):	0	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	902	902	910
As Bicarbonate, (MG/L):	1,100	1,100	1,110
Hardness			
Noncarbonate, (MG/L):	0	0	0
Total, (MG/L):	400	420	420
Specific conductance (Micromohs):	3,920	3,950	3,950
Total dissolved solids (TDS), (MG/L):	2,760	2,810	2,740
pH, Field	-	6.5	6.2
Discharge (gpm):	8	10	10
Temperature (°C):	31	33	33

Remarks:

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

McIntyre Warm Spring

Location: 37°16'48'N. Latitude; 105°49'07"W. Longtitude; T. 35 N., R. 11 E, Sec. 18 bcb, N.M.P.M., Conejos County

Temperature: 14°C

Discharge: 5 gpm (est.)

Specific conductance: 265

pH: 7.9

Remarks: 15-20 springs in area. Temperatures range from 10°C-14°C. Flow from group appears to be large but difficult to estimate due to surface water runoff through the area.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mineral Hot Springs: Spring A

Location: 38°10'08"N. Latitude; 105°55'05"W. Longtitude; T. 45 N., R. 9 E., Sec. 12 ad, N.M.P.M., Saguache County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	28	32	-	-
Boron (B), (UG/L):	360	350	370	450
Cadium (Cd), (UG/L):	0	1	-	-
Calcium (Ca), (MG/L):	57	60	57	59
Chloride (Cl), (MG/L):	39	41	39	37
Flouride (F), (MG/L):	3.7	3.6	3.9	4.6
Iron (Fe), (UG/L):	270	220	150	250
Lithium (Li), (UG/L):	300	320	-	-
Magnesium (Mg), (MG/L):	14	13	13	13
Manganese (Mn), (UG/L):	20	20	20	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.14	0.04	0	0
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.04	0.01	0	0.04
Ortho, (MG/L):	0.12	0.03	0	0.12
Potassium (K), (MG/L):	14	14	15	14
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	48	45	47	47
Sodium (Na), (MG/L):	130	140	140	140
Sulfate (SO_4), (MG/L):	170	180	170	150
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	275	275	288	289
As Bicarbonate, (MG/L):	335	335	351	352
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	200	200	200	200
Specific conductance (Micromohs):	970	1,000	1,020	995
Total dissolved solids (TDS), (MG/L):	643	663	658	639
pH, Field	-	6.5	7.0	6.8
Discharge (gpm):	100	167	70	95
Temperature (°C):	60	60	60	60

Remarks: Actually a well, located in easternmost group of springs.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mineral Hot Springs: Spring C

Location: 38°10'06"N. Latitude; 105°55'11"W. Longtitude; T. 45 N., R. 9 E., Sec. 12 ad, N.M.P.M., Saguache County

	Date Sampled
	6/75
Arsenic (As), (UG/L):	28
Boron (B), (UG/L):	370
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	60
Chloride (Cl), (MG/L):	43
Flouride (F), (MG/L):	4.2
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	330
Magnesium (Mg), (MG/L):	14
Manganese (Mn), (UG/L):	30
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	6.5
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	14
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	50
Sodium (Na), (MG/L):	150
Sulfate (SO_4), (MG/L):	190
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	280
As Bicarbonate, (MG/L):	341
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	210
Specific conductance (Micromohs):	1,060
Total dissolved solids (TDS), (MG/L):	723
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	60

Remarks: Located approx. 2300 feet east of Colo. 17 and 150 feet northwest of Spring A

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mineral Hot Springs: Spring D

Location: 38°10'04"N. Latitude; 105°55'20"W. Longtitude; T. 45 N., R. 9 W., Sec. 12 ad, N.M.P.M., Saguache County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	26	36	-	-
Boron (B), (UG/L):	370	350	340	400
Cadium (Cd), (UG/L):	0	1	-	-
Calcium (Ca), (MG/L):	55	59	56	58
Chloride (Cl), (MG/L):	39	40	40	38
Flouride (F), (MG/L):	3.9	3.4	3.8	4.6
Iron (Fe), (UG/L):	30	130	50	60
Lithium (Li), (UG/L):	330	320	-	-
Magnesium (Mg), (MG/L):	13	13	13	13
Manganese (Mn), (UG/L):	20	10	20	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	2	0.05	0.02	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.03	0.01	0	0.04
Ortho, (MG/L):	0.09	0.03	0	0.12
Potassium (K), (MG/L):	14	14	14	14
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	48	45	46	47
Sodium (Na), (MG/L):	140	150	140	140
Sulfate (SO_4), (MG/L):	170	190	170	160
Zinc (Zn), (UG/L):	8	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	286	290	289	288
As Bicarbonate, (MG/L):	349	354	352	351
Hardness Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	190	200	190	200
Specific conductance (Micromohs):	995	1,000	950	995
Total dissolved solids (TDS), (MG/L):	665	690	657	648
pH, Field	-	6.5	6.5	7.3
Discharge (gpm):	-	-	5E	-
Temperature (°C):	59	60	60	60

Remarks: Located in concrete cistern approx. 1800 feet east of Colo. 17.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mineral Hot Springs: Spring B

Location: 38°10'07"N. Latitude; 105°55'06"W. Longtitude; T. 45 N., R. 9 E., Sec. 12 ad, N.M.P.M., Saguache County

Temperature: 51°C

Discharge: small

Specific conductance: 1,000

Remarks: Located approximately 25 feet northwest of Spring A

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs: Spring A

Location: 38°43'58"N. Latitude; 106°09'40"W. Longtitude; T. 15 S., R. 78 W., Sec. 19 bc, 6th P.M., Chaffee County

	Date Sampled			
	7/75	10/75*	1/76	4/76
Arsenic (As), (UG/L):	1	2	-	-
Boron (B), (UG/L):	20	20	20	20
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	11	10	11	10
Chloride (Cl), (MG/L):	4.4	5.3	5.3	5.2
Flouride (F), (MG/L):	9.1	8.3	10	10
Iron (Fe), (UG/L):	40	0	0	10
Lithium (Li), (UG/L):	90	90	-	-
Magnesium (Mg), (MG/L):	0.5	0.2	0.9	0.8
Manganese (Mn), (UG/L):	10	10	0	0
Mercury (Hg), (UG/L):	0	0.1	-	-
Nitrogen (N), (MG/L):	0.14	0.12	0.21	0.19
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.05	0.01	0	0.05
Ortho, (MG/L):	0.15	0.03	0	0.15
Potassium (K), (MG/L):	2.1	2.1	2.2	2.2
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	60	58	56	59
Sodium (Na), (MG/L):	57	58	57	58
Sulfate (SO_4), (MG/L):	65	69	64	64
Zinc (Zn), (UG/L):	10	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	58	60	62	62
As Bicarbonate, (MG/L):	71	67	75	76
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	30	26	31	28
Specific conductance (Micromohs):	326	335	331	327
Total dissolved solids (TDS), (MG/L):	245	248	244	248
pH, Field	-	8.6	7.9	7.8
Discharge (gpm):	-	18	20	23
Temperature (°C):	54	54	54	56

* Remarks: Contains 3 mg/l of carbonate. Located approx. 200 feet east of old swimming pool.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs: Spring F

Location: 38°43'58"N. Latitude; 106°09'43"W. Longtitude; T. 15 S., R. 78 W., Sec. 19 bc, 6th P.M., Chaffee County

	Date Sampled 7/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	10
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	12
Chloride (Cl), (MG/L):	3.8
Flouride (F), (MG/L):	8.3
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	80
Magnesium (Mg), (MG/L):	0.5
Manganese (Mn), (UG/L):	10
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.24
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	1.9
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	57
Sodium (Na), (MG/L):	50
Sulfate (SO_4), (MG/L):	58
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	60
As Bicarbonate, (MG/L):	73
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	32
Specific conductance (Micromohs):	310
Total dissolved solids (TDS), (MG/L):	229
pH, Field	-
Discharge (gpm):	12
Temperature (°C):	49

Remarks: Located at southeast corner of swimming pool.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs: Spring B

Location: 38°43'58"N. Latitude; 106°09'41"W. Longtitude; T. 15 S., R. 78 W., Sec. 19 bc, 6th P.M., Chaffee County

Temperature: 54°C

Discharge: Large

Specific conductance: 320

Remarks: Located at east end of old swimming pool. Waters used in upper swimming pool.

Mt. Princeton Hot Springs: Spring D

Location: 38°43'58"N. Latitude; 106°09'39"W. Longtitude; T. 15 S., R. 78 W., Sec. 19 bc, 6th P.M., Chaffee County

Temperature: 44°C

Discharge:--

Specific conductance: 320

Remarks: Located about 30 feet east of Spring A

Mt. Princeton Hot Springs: Spring E

Location: 38°43'58"N. Latitude; 106°09'39"W. Longtitude; T. 15 S., R. 78 W., Sec. 19 bc, 6th P.M., Chaffee County

Temperature: 50°C

Discharge:--

Specific conductance: 330

Remarks: This is the big spring located about 10 feet east of Spring D

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Hortense Hot Spring

Location: 38°43'59"N. Latitude; 106°10'26" W. Longtitude; T. 15 S., R. 79 W., Sec. 24 bd, 6th P.M., Chaffee County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	3	3	-	-
Boron (B), (UG/L):	40	50	40	40
Cadium (Cd), (UG/L):	1	1	-	-
Calcium (Ca), (MG/L):	4.5	4.4	4.0	4.7
Chloride (Cl), (MG/L):	9.8	10	11	10
Flouride (F), (MG/L):	18	14	19	15
Iron (Fe), (UG/L):	40	0	0	10
Lithium (Li), (UG/L):	140	140	-	-
Magnesium (Mg), (MG/L):	0.5	0.1	0	0
Manganese (Mn), (UG/L):	0	10	0	0
Mercury (Hg), (UG/L):	0	0.2	-	-
Nitrogen (N), (MG/L):	0.06	0.01	0.01	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.05	0.01	0.01	0.07
Ortho, (MG/L):	0.15	0.03	0.03	0.21
Potassium (K), (MG/L):	3.2	3.1	3.1	3.2
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	72	68	74	88
Sodium (Na), (MG/L):	93	94	100	94
Sulfate (SO_4), (MG/L):	97	100	99	98
Zinc (Zn), (UG/L):	10	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	68	71	67	71
As Bicarbonate, (MG/L):	83	17	82	86
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	13	11	10	12
Specific conductance (Micromohs):	450	480	469	471
Total dissolved solids (TDS), (MG/L):	340	336	351	341
pH, Field	-	8.5	8.2	8.2
Discharge (gpm):	-	18	18	17
Temperature (°C):	81	82	83	83
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Hortense Hot Water Well

Location: 38°43'58"N. Latitude; 106°10'27"W. Longtitude; T. 15 S., R. 79 W., Sec. 24 bd, 6th P.M., Chaffee County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	30
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	6.4
Chloride (Cl), (MG/L):	8.3
Flouride (F), (MG/L):	14
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	120
Magnesium (Mg), (MG/L):	1
Manganese (Mn), (UG/L):	10
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.02
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.03
Potassium (K), (MG/L):	2.8
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	72
Sodium (Na), (MG/L):	84
Sulfate (SO_4), (MG/L):	92
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	62
As Bicarbonate, (MG/L):	75
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	20
Specific conductance (Micromohs):	420
Total dissolved solids (TDS), (MG/L):	318
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	82
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Woolmington Hot Water Well

Location: 38°43'24"N. Latitude; 106°10'38"W. Longtitude; T. 15 S., R. 79 W., Sec. 24 db, 6th P.M., Chaffee County

	Date Sampled
	8/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	20
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	11
Chloride (Cl), (MG/L):	3.9
Flouride (F), (MG/L):	0.1
Iron (Fe), (UG/L):	30
Lithium (Li), (UG/L):	60
Magnesium (Mg), (MG/L):	0.6
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.11
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	1.7
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	1
Sodium (Na), (MG/L):	40
Sulfate (SO_4), (MG/L):	47
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	62
As Bicarbonate, (MG/L):	75
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	30
Specific conductance (Micromohs):	250
Total dissolved solids (TDS), (MG/L):	143
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	39
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Wright Hot Water Well (East)

Location: 38°44'00"N. Latitude; 106°10'00"W. Longtitude; T. 15 S., R. 79 W., Sec. 24 ad, 6th P.M., Chaffee County

	Date Sampled 8/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	20
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	8.3
Chloride (Cl), (MG/L):	4.9
Flouride (F), (MG/L):	10
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	100
Magnesium (Mg), (MG/L):	0.3
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.15
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	2.1
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	53
Sodium (Na), (MG/L):	61
Sulfate (SO_4), (MG/L):	60
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	56
As Bicarbonate, (MG/L):	68
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	22
Specific conductance (Micromohs):	240
Total dissolved solids (TDS), (MG/L):	234
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	67
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Wright Hot Water Well (West)

Location: 38°43'58"N. Latitude; 106°10'25"W. Longtitude; T. 15 S., R. 79 W., Sec. 24 ac, 6th P.M., Chaffee County

	Date Sampled 7/75
Arsenic (As), (UG/L):	1
Boron (B), (UG/L):	30
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	5.8
Chloride (Cl), (MG/L):	6.4
Flouride (F), (MG/L):	13
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	100
Magnesium (Mg), (MG/L):	0.3
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0.2
Nitrogen (N), (MG/L):	0.09
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	8.8
Ortho, (MG/L):	27
Potassium (K), (MG/L):	2.5
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	68
Sodium (Na), (MG/L):	73
Sulfate (SO_4), (MG/L):	81
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	59
As Bicarbonate, (MG/L):	72
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	16
Specific conductance (Micromohs):	370
Total dissolved solids (TDS), (MG/L):	313
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	72
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Mt. Princeton Hot Springs Area: Young Life Hot Water Well

Location: 38°43'57"N. Latitude; 106°10'27"W. Longtitude; T. 15 S., R. 79 W., Sec. 24 bd, 6th P.M., Chaffee County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	20
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	8.5
Chloride (Cl), (MG/L):	3.9
Flouride (F), (MG/L):	9.2
Iron (Fe), (UG/L):	30
Lithium (Li), (UG/L):	90
Magnesium (Mg), (MG/L):	0.3
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.15
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	2.3
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	71
Sodium (Na), (MG/L):	60
Sulfate (SO_4), (MG/L):	67
Zinc (Zn), (UG/L):	30
Alkalinity	
As Calcium Carbonate, (MG/L):	59
As Bicarbonate, (MG/L):	72
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	22
Specific conductance (Micromohs):	320
Total dissolved solids (TDS), (MG/L):	259
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	66
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Orvis Hot Spring

Location: 38°07'59"N. Latitude; 107°44'01"W. Longtitude; T. 45 N., R. 8 W., Sec. 22cd, N.M.P.M., Ouray County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	240	-	-
Boron (B), (UG/L):	1,000	990	1,000
Cadium (Cd), (UG/L):	1	-	-
Calcium (Ca), (MG/L):	260	290	280
Chloride (Cl), (MG/L):	85	88	86
Flouride (F), (MG/L):	3.6	4.1	4.0
Iron (Fe), (UG/L):	920	920	960
Lithium (Li), (UG/L):	1,400	-	-
Magnesium (Mg), (MG/L):	19	18	19
Manganese (Mn), (UG/L):	130	130	130
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.02	0.01	0.01
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.01	0.07	0.11
Ortho, (MG/L):	0.03	0.21	0.34
Potassium (K), (MG/L):	28	33	30
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	51	60	53
Sodium (Na), (MG/L):	420	460	390
Sulfate (SO_4), (MG/L):	1,200	1,400	1,200
Zinc (Zn), (UG/L):	10	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	335	227	348
As Bicarbonate, (MG/L):	409	277	424
Hardness			
Noncarbonate, (MG/L):	390	570	430
Total, (MG/L):	730	800	780
Specific conductance (Micromohs):	2,900	3,180	3,030
Total dissolved solids (TDS), (MG/L):	2,270	2,490	2,270
pH, Field	-	6.5	6.6
Discharge (gpm):	<1	<1	<1
Temperature (°C):	53	52	52
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ouray Area: Wesbaden Vapor Caves and Motel Hot Spring A

Location: 38°01'15"N. Latitude; 107°40'03"W. Longtitude; T. 44 N., R. 7 W., Sec. 31-, N.M.P.M., Ouray County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	16
Boron (B), (UG/L):	150
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	350
Chloride (Cl), (MG/L):	31
Flouride (F), (MG/L):	2.7
Iron (Fe), (UG/L):	90
Lithium (Li), (UG/L):	2,400
Magnesium (Mg), (MG/L):	8
Manganese (Mn), (UG/L):	800
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.05
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	11
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	40
Sodium (Na), (MG/L):	120
Sulfate (SO_4), (MG/L):	910
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	175
As Bicarbonate, (MG/L):	213
Hardness	
Noncarbonate, (MG/L):	730
Total, (MG/L):	910
Specific conductance (Micromohs):	1,900
Total dissolved solids (TDS), (MG/L):	1,580
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	53

Remarks: Located just inside cave entrance to the left.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ouray Area: Wesbaden Vapor Caves and Motel Hot Spring B

Location: 38°01'15"N. Latitude; 107°40'03"W. Longtitude; T. 44 N., R. 7 W., Sec. 31-, N.M.P.M., Ouray County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	4
Boron (B), (UG/L):	60
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	150
Chloride (Cl), (MG/L):	14
Flouride (F), (MG/L):	1.1
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	1,200
Magnesium (Mg), (MG/L):	8.3
Manganese (Mn), (UG/L):	20
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.04
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	5
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	29
Sodium (Na), (MG/L):	53
Sulfate (SO_4), (MG/L):	340
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	155
As Bicarbonate, (MG/L):	189
Hardness	
Noncarbonate, (MG/L):	250
Total, (MG/L):	410
Specific conductance (Micromohs):	975
Total dissolved solids (TDS), (MG/L):	695
pH, Field	-
Discharge (gpm):	2E
Temperature (°C):	30

Remarks: Located 15 feet inside cave on ledge about 8 feet above floor.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ouray Area: Wesbaden Vapor Caves and Motel Hot Spring C

Location: 38°01'15"N. Latitude; 107°40'03"W. Longtitude; T. 44 N., R. 7 W., Sec. 31-, N.M.P.M., Ouray County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	12	-	-
Boron (B), (UG/L):	160	170	170
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	300	310	310
Chloride (Cl), (MG/L):	30	32	34
Flouride (F), (MG/L):	2.7	3	3
Iron (Fe), (UG/L):	30	0	20
Lithium (Li), (UG/L):	3,200	-	-
Magnesium (Mg), (MG/L):	8.8	8.5	8.9
Manganese (Mn), (UG/L):	470	480	540
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.03	0.03	0.04
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.01	0.02	0.05
Ortho, (MG/L):	0.03	0.06	0.15
Potassium (K), (MG/L):	8.9	9.1	9.4
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	39	39	39
Sodium (Na), (MG/L):	110	110	110
Sulfate (SO_4), (MG/L):	780	820	780
Zinc (Zn), (UG/L):	20	-	-
Alkalinity As Calcium Carbonate, (MG/L):	159	159	157
As Bicarbonate, (MG/L):	194	194	192
Hardness Noncarbonate, (MG/L):	630	650	650
Total, (MG/L):	790	810	810
Specific conductance (Micromohs):	1,840	1,810	1,850
Total dissolved solids (TDS), (MG/L):	1,380	1,430	1,390
pH, Field	-	-	7.1
Discharge (gpm):	1E	30E	5E
Temperature (°C):	46	30	48
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ouray Area: Pool Spring

Location: 38°01'00"N. Latitude; 107°40'41"W. Longtitude;

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	13	-	-
Boron (B), (UG/L):	200	200	200
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	370	360	360
Chloride (Cl), (MG/L):	41	44	44
Flouride (F), (MG/L):	3	3.6	3.2
Iron (Fe), (UG/L):	10	0	40
Lithium (Li), (UG/L):	2,800	-	-
Magnesium (Mg), (MG/L):	8.9	8.5	8.8
Manganese (Mn), (UG/L):	670	750	720
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.01	0.01	0.02
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.01	0.02	0.03
Ortho, (MG/L):	0.03	0.06	0.09
Potassium (K), (MG/L):	9.2	8.8	9.4
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	47	49	49
Sodium (Na), (MG/L):	110	120	110
Sulfate (SO_4), (MG/L):	990	1,000	990
Zinc (Zn), (UG/L):	10	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	106	107	108
As Bicarbonate, (MG/L):	129	131	132
Hardness			
Noncarbonate, (MG/L):	850	830	830
Total, (MG/L):	960	930	940
Specific conductance (Micromohs):	2,000	2,020	2,030
Total dissolved solids (TDS), (MG/L):	1,650	1,660	1,640
pH, Field	6.7	6.5	7.3
Discharge (gpm):	125	60	200
Temperature (°C):	67	69	69

Remarks: Located in Box Canyon

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ouray Area: Uncompahgre Hot Spring

Location: 38°01'06"N. Latitude; 107°40'34"W. Longtitude; T. 44 N., R. 7 W., Sec. 31-, N.M.P.M., Ouray County

	Date Sampled
	4/76
Arsenic (As), (UG/L):	-
Boron (B), (UG/L):	200
Cadium (Cd), (UG/L):	-
Calcium (Ca), (MG/L):	350
Chloride (Cl), (MG/L):	42
Flouride (F), (MG/L):	3
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	-
Magnesium (Mg), (MG/L):	9.2
Manganese (Mn), (UG/L):	1,200
Mercury (Hg), (UG/L):	-
Nitrogen (N), (MG/L):	0.53
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.03
Ortho, (MG/L):	0.09
Potassium (K), (MG/L):	9.4
Selenium (Se), (UG/L):	-
Silica (SiO_2), (MG/L):	44
Sodium (Na), (MG/L):	110
Sulfate (SO_4), (MG/L):	930
Zinc (Zn), (UG/L):	-
Alkalinity	
As Calcium Carbonate, (MG/L):	113
As Bicarbonate, (MG/L):	138
Hardness	
Noncarbonate, (MG/L):	800
Total, (MG/L):	910
Specific conductance (Micromohs):	2,040
Total dissolved solids (TDS), (MG/L):	1,570
pH, Field	7.7
Discharge (gpm):	5
Temperature (°C):	49
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pagosa Springs: Big Spring

Location: 37°15'52"N. Latitude; 107°00'37"W. Longtitude; T. 35 N., R. 2 W., Sec. 13cd, N.M.P.M., Archuleta County

	Date Sampled			
	8/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	120	130	-	-
Boron (B), (UG/L):	1,800	1,700	2,000	2,300
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	230	210	240	230
Chloride (Cl), (MG/L):	180	180	190	180
Flouride (F), (MG/L):	4.3		5	4.8
Iron (Fe), (UG/L):	80	20	20	20
Lithium (Li), (UG/L):	2,900	3,200	-	-
Magnesium (Mg), (MG/L):	25	23	2.6	24
Manganese (Mn), (UG/L):	230	220	220	200
Mercury (Hg), (UG/L):	0.1	0	-	-
Nitrogen (N), (MG/L):	0.02	-	0.01	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.07	-	0.03	0.07
Ortho, (MG/L):	0.21	-	0.09	0.21
Potassium (K), (MG/L):	90	87	87	85
Selenium (Se), (UG/L):	0	-	-	-
Silica (SiO_2), (MG/L):	54	-	58	59
Sodium (Na), (MG/L):	790	780	800	730
Sulfate (SO_4), (MG/L):	1,400	1,500	1,500	1,300
Zinc (Zn), (UG/L):	10	20	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	701	705	707	702
As Bicarbonate, (MG/L):	855	859	862	856
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	680	620	610	670
Specific conductance (Micromohs):	5,810	4,000	4,200	4,340
Total dissolved solids (TDS), (MG/L):	3,200		3,310	3,040
pH, Field	6.5	6.9	6.6	6.5
Discharge (gpm):	265	226	241	260
Temperature (°C):	58	57	55	54

Remarks:

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pagosa Springs: Courthouse Hot Water Well

Location: 37°15'55"N. Latitude; 107°00'37"W. Longtitude; T. 35 N., R. 2 W., Sec. 13 cd, N.M.P.M., Archuleta County

	Date Sampled
	8/75
Arsenic (As), (UG/L):	93
Boron (B), (UG/L):	1,800
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	250
Chloride (Cl), (MG/L):	170
Flouride (F), (MG/L):	4.5
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	2,800
Magnesium (Mg), (MG/L):	25
Manganese (Mn), (UG/L):	270
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	89
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	52
Sodium (Na), (MG/L):	780
Sulfate (SO_4), (MG/L):	1,500
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	704
As Bicarbonate, (MG/L):	858
Hardness	
Noncarbonate, (MG/L):	23
Total, (MG/L):	730
Specific conductance (Micromohs):	6,300
Total dissolved solids (TDS), (MG/L):	3,300
pH, Field	6.5
Discharge (gpm):	30
Temperature (°C):	56
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pagosa Springs: Spa Motel Hot Water Well

Location: 37°15'51"N. Latitude; 107°00'35"W. Longtitude; T. 35 N., R. 2 W., Sec. 13 cd, N.M.P.M., Archuleta County

	Date Sampled
	8/75
Arsenic (As), (UG/L):	80
Boron (B), (UG/L):	1,900
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	230
Chloride (Cl), (MG/L):	160
Flouride (F), (MG/L):	4.4
Iron (Fe), (UG/L):	210
Lithium (Li), (UG/L):	2,900
Magnesium (Mg), (MG/L):	24
Manganese (Mn), (UG/L):	250
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	91
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	51
Sodium (Na), (MG/L):	780
Sulfate (SO_4), (MG/L):	1,600
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	618
As Bicarbonate, (MG/L):	753
Hardness	
Noncarbonate, (MG/L):	56
Total, (MG/L):	670
Specific conductance (Micromohs):	6,000
Total dissolved solids (TDS), (MG/L):	3,320
pH, Field	6.5
Discharge (gpm):	-
Temperature (°C):	53
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Paradise Hot Spring

Location: 37°45'15"N. Latitude; 108°07'53"W. Longtitude; T. 40 N., R. 11 W., Sec. 6-, N.M.P.M., Dolores County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	140	-	-
Boron (B), (UG/L):	9,300	1,000	4,300
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	160	240	170
Chloride (Cl), (MG/L):	3,100	3,300	3,100
Flouride (F), (MG/L):	3.9	3.8	3.7
Iron (Fe), (UG/L):	150	60	200
Lithium (Li), (UG/L):	9,600	-	-
Magnesium (Mg), (MG/L):	27	30	28
Manganese (Mn), (UG/L):	780	860	830
Mercury (Hg), (UG/L):	0.1	-	-
Nitrogen (N), (MG/L):	0.07	0.11	0.09
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.10	0.12	0.22
Ortho, (MG/L):	0.31	0.37	0.67
Potassium (K), (MG/L):	360	380	370
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	150	200	150
Sodium (Na), (MG/L):	1,800	1,900	1,900
Sulfate (SO_4), (MG/L):	140	140	110
Zinc (Zn), (UG/L):	50	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	515	562	572
As Bicarbonate, (MG/L):	628	685	697
Hardness			
Noncarbonate, (MG/L):	0	160	0
Total, (MG/L):	510	720	540
Specific conductance (Micromohs):	9,560	10,700	10,000
Total dissolved solids (TDS), (MG/L):	6,070	6,530	6,180
pH, Field	-	6.9	6.8
Discharge (gpm):	26	34	30
Temperature (°C):	46	40	42
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Penny Hot Springs

Location: 39°13'33"N. Latitude; 107°13'28"W. Longtitude; T. 10 S., R. 88 W., Sec. 4 ba, 6th P.M., Pitkin County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	5	-	-
Boron (B), (UG/L):	700	640	690
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	410	420	390
Chloride (Cl), (MG/L):	240	250	240
Flouride (F), (MG/L):	3	3.4	3.4
Iron (Fe), (UG/L):	1,300	1,000	1,300
Lithium (Li), (UG/L):	970	-	-
Magnesium (Mg), (MG/L):	50	51	53
Manganese (Mn), (UG/L):	380	430	430
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.02	0.01	0.01
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.02	0.04	0.05
Ortho, (MG/L):	0.06	0.12	0.15
Potassium (K), (MG/L):	38	36	38
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	96	74	150
Sodium (Na), (MG/L):	400	390	380
Sulfate (SO_4), (MG/L):	1,300	1,300	1,200
Zinc (Zn), (UG/L):	20	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	468	486	491
As Bicarbonate, (MG/L):	570	593	599
Hardness			
Noncarbonate, (MG/L):	760	770	700
Total, (MG/L):	1,200	1,300	1,200
Specific conductance (Micromohs):	3,550	3,450	3,850
Total dissolved solids (TDS), (MG/L):	2,820	2,820	2,750
pH, Field	-	6.3	6.3
Discharge (gpm):	10	10	10
Temperature (°C):	40	46	45

Remarks: Located in meadows on east side of Crystal River. Sampling point is located 50 feet south of wooden fence-like structure.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Penny Hot Springs: Granges Spring

Location: 39°13'50"N. Latitude; 107°13'36"W. Longtitude; T. 9 S., R. 88 W., Sec. 33 cdc, 6th P.M., Pitkin County

	Date Sampled
	1/76
Arsenic (As), (UG/L):	-
Boron (B), (UG/L):	650
Cadium (Cd), (UG/L):	-
Calcium (Ca), (MG/L):	440
Chloride (Cl), (MG/L):	260
Flouride (F), (MG/L):	2.7
Iron (Fe), (UG/L):	2,300
Lithium (Li), (UG/L):	-
Magnesium (Mg), (MG/L):	55
Manganese (Mn), (UG/L):	300
Mercury (Hg), (UG/L):	-
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	38
Selenium (Se), (UG/L):	-
Silica (SiO_2), (MG/L):	81
Sodium (Na), (MG/L):	400
Sulfate (SO_4), (MG/L):	1,400
Zinc (Zn), (UG/L):	-
Alkalinity	
As Calcium Carbonate, (MG/L):	463
As Bicarbonate, (MG/L):	565
Hardness	
Noncarbonate, (MG/L):	860
Total, (MG/L):	1,300
Specific conductance (Micromohs):	3,760
Total dissolved solids (TDS), (MG/L):	2,960
pH, Field	9.2
Discharge (gpm):	12
Temperature (°C):	56

Remarks: Biggest spring on west side of Crystal River, approx. 100 yards north of house.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pinkerton Hot Springs: Spring A

Location: 37°26'50"N. Latitude; 107°48'17"W. Longtitude; T. 37 N., R. 9 W., Sec. 25 ab, N.M.P.M., La Plata County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	120	-	-
Boron (B), (UG/L):	3,000	2,800	2,800
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	510	560	530
Chloride (Cl), (MG/L):	1,000	1,000	1,000
Flouride (F), (MG/L):	2.1	1.9	3.9
Iron (Fe), (UG/L):	4,400	4,000	4,500
Lithium (Li), (UG/L):	2,500	-	-
Magnesium (Mg), (MG/L):	79	69	72
Manganese (Mn), (UG/L):	470	490	480
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.10	0.01	0
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.05	0.01	0.07
Ortho, (MG/L):	0.15	0.03	0.21
Potassium (K), (MG/L):	120	110	120
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	28	28	29
Sodium (Na), (MG/L):	750	690	720
Sulfate (SO_4), (MG/L):	690	610	540
Zinc (Zn), (UG/L):	0	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	1,340	1,330	1,250
As Bicarbonate, (MG/L):	1,630	1,620	1,520
Hardness			
Noncarbonate, (MG/L):	260	350	370
Total, (MG/L):	1,600	1,700	1,600
Specific conductance (Micromohs):	5,600	6,060	5,930
Total dissolved solids (TDS), (MG/L):	3,990	3,880	3,770
pH, Field	-	6.5	6.4
Discharge (gpm):	54	54	54
Temperature (°C):	32	32	32

Remarks: Located south of resort and approx. 50 feet east of U.S. 550.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pinkerton Hot Springs: Spring B

Location: 37°27'58"N. Latitude; 107°48'18"W. Longtitude; T. 37 N., R. 9 W., Sec. 25 a, N.M.P.M., La Plata County

	Date Sampled 9/75
Arsenic (As), (UG/L):	160
Boron (B), (UG/L):	3,000
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	530
Chloride (Cl), (MG/L):	990
Flouride (F), (MG/L):	-
Iron (Fe), (UG/L):	4,400
Lithium (Li), (UG/L):	2,800
Magnesium (Mg), (MG/L):	71
Manganese (Mn), (UG/L):	530
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	-
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.04
Potassium (K), (MG/L):	120
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	-
Sodium (Na), (MG/L):	720
Sulfate (SO_4), (MG/L):	610
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	1,350
As Bicarbonate, (MG/L):	1,640
Hardness	
Noncarbonate, (MG/L):	280
Total, (MG/L):	1,600
Specific conductance (Micromohs):	6,000
Total dissolved solids (TDS), (MG/L):	-
pH, Field	-
Discharge (gpm):	20
Temperature (°C):	33

Remarks: Located approx. 1200 feet west of Spring A

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Pinkerton Hot Springs: Mound Spring

Location: 37°27'07"N. Latitude; 107°48'20"W. Longtitude; T. 37 N., R. 9 W., Sec. 25 ba, N.M.P.M., La Plata County

	Date Sampled		
	9/75	1/76	4/76
Arsenic (As), (UG/L):	180	-	-
Boron (B), (UG/L):	3,000	3,000	2,900
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	550	550	550
Chloride (Cl), (MG/L):	1,000	1,000	900
Flouride (F), (MG/L):	2.1	1.9	3.0
Iron (Fe), (UG/L):	4,100	4,200	4,300
Lithium (Li), (UG/L):	2,800	-	-
Magnesium (Mg), (MG/L):	74	68	72
Manganese (Mn), (UG/L):	500	490	480
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.06	0	0
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.01	0.03	0
Ortho, (MG/L):	0.03	0.09	0
Potassium (K), (MG/L):	120	120	120
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	29	28	28
Sodium (Na), (MG/L):	730	710	710
Sulfate (SO_4), (MG/L):	620	600	650
Zinc (Zn), (UG/L):	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	1,340	1,320	1,330
As Bicarbonate, (MG/L):	1,630	1,610	1,620
Hardness Noncarbonate, (MG/L):	340	330	340
Total, (MG/L):	1,700	1,700	1,700
Specific conductance (Micromohs):	5,600	6,050	5,890
Total dissolved solids (TDS), (MG/L):	3,940	3,880	3,840
pH, Field	-	6.5	6.4
Discharge (gpm):	8E	5E	5E
Temperature (°C):	30	29	29
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters In Colorado.

Pinkerton Hot Springs: Little Mound Spring

Location: 37°27'09"N. Latitude; 107°48'21"W. Longtitude; T. 37 N., R. 9 W., Sec. 25 ba, N.M.P.M., La Plata County

Temperature: 26°C

Discharge: 2 gpm (est.)

Specific conductance: 5,500

pH: 7.0

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Poncha Hot Springs: Spring A

Location: 38°29'49"N. Latitude; 106°04'37"W. Longtitude; T. 49 N., R. 8 E., Sec. 15 cb, N.M.P.M., Chaffee County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	2	3	-	-
Boron (B), (UG/L):	80	70	80	60
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	20	17	17	17
Chloride (Cl), (MG/L):	49	50	51	49
Flouride (F), (MG/L):	11	11	12	14
Iron (Fe), (UG/L):	20	0	20	0
Lithium (Li), (UG/L):	190	180	-	-
Magnesium (Mg), (MG/L):	0.7	0.5	0.2	0.2
Manganese (Mn), (UG/L):	40	50	40	30
Mercury (Hg), (UG/L):	0.1	0	-	-
Nitrogen (N), (MG/L):	0.05	0	0.01	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.05	0.02	0.03	0.12
Ortho, (MG/L):	0.15	0.06	0.09	0.12
Potassium (K), (MG/L):	8	8.1	8.3	8.7
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	81	71	100	77
Sodium (Na), (MG/L):	190	200	200	190
Sulfate (SO_4), (MG/L):	200	220	200	190
Zinc (Zn), (UG/L):	10	10	-	-
Alkalinity As Calcium Carbonate, (MG/L):	177	166	180	180
As Bicarbonate, (MG/L):	216	202	219	219
Hardness Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	53	45	43	43
Specific conductance (Micromohs):	870	1,040	996	995
Total dissolved solids (TDS), (MG/L):	667	678	697	654
pH, Field	-	8.0	7.7	7.5
Discharge (gpm):	-	-	-	200
Temperature (°C):	71	70	70	50

Remarks: Located 270 feet southeast of house in lowest collection box. Discharge may represent total discharge of all springs.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Poncha Hot Springs: Spring B

Location: 38°29'49"N. Latitude; 106°04'36"W. Longtitude; T. 49 N., R. 8 E., Sec. 15 cb, N.M.P.M., Chaffee County

	Date Sampled
	6/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	70
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	18
Chloride (Cl), (MG/L):	48
Flouride (F), (MG/L):	12
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	180
Magnesium (Mg), (MG/L):	0.5
Manganese (Mn), (UG/L):	40
Mercury (Hg), (UG/L):	0.1
Nitrogen (N), (MG/L):	0.02
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	7.8
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	83
Sodium (Na), (MG/L):	190
Sulfate (SO_4), (MG/L):	190
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	176
As Bicarbonate, (MG/L):	214
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	47
Specific conductance (Micromohs):	940
Total dissolved solids (TDS), (MG/L):	655
pH, Field	-
Discharge (gpm):	30E
Temperature (°C):	66

Remarks: Located approx. 140 feet southeast of Spring A and approx. 50feet higher up the hill.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Poncha Hot Springs: Spring C

Location: 38°29'50"N. Latitude; 106°04'31"W. Longtitude; T. 49 N., R. 8 E., Sec. 15 bc, N.M.P.M., Chaffee County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	6	4	-	-
Boron (B), (UG/L):	80	70	60	150
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	24	17	17	17
Chloride (Cl), (MG/L):	49	50	52	49
Flouride (F), (MG/L):	11	8.9	12	13
Iron (Fe), (UG/L):	40	10	30	0
Lithium (Li), (UG/L):	200	180	-	-
Magnesium (Mg), (MG/L):	0.8	0.4	0.3	0.4
Manganese (Mn), (UG/L):	50	40	40	40
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.02	0.01	0.02	0
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.05	0.02	0.03	0.05
Ortho, (MG/L):	0.15	0.06	0.09	0.15
Potassium (K), (MG/L):	8.3	8.1	8.3	8.6
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	81	71	88	79
Sodium (Na), (MG/L):	190	190	200	190
Sulfate (SO_4), (MG/L):	200	210	200	190
Zinc (Zn), (UG/L):	4	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	176	174	179	180
As Bicarbonate, (MG/L):	214	212	218	219
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	63	44	44	44
Specific conductance (Micromohs):	960	860	998	999
Total dissolved solids (TDS), (MG/L):	670	660	685	655
pH, Field	-	8.0	7.5	7.5
Discharge (gpm):	2	3	2	4
Temperature (°C):	63	62	63	62

Remarks: Uppermost spring in draw east of Springs A and B

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Poncha Hot Springs: Spring D

Location: 38°29'50"N. Latitude; 106°04'32"W. Longtitude; T. 49 N., R. 8 E., Sec. 15 bc, N.M.P.M., Chaffee County

Temperature: 56°C

Discharge: 2 gpm (est.)

Specific conductance: 1,000

Remarks: Located approximately 40 feet northwest of Spring C

Poncha Hot Springs: Spring E

Location: 38°29'50"N. Latitude; 106°04'32"W. Longtitude; T. 49 N., R. 8 E., Sec. 15 bc, N.M.P.M., Chaffee County

Temperature: 60°C

Discharge: 2 gpm (est.)

Specific conductance: 950

Remarks: Located approximately 20 feet southwest of Spring D

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rainbow Hot Spring

Location: 37°30'34"N. Latitude; 106°56'52"W. Longtitude; T. 38 N., R. 1 W., Sec. 9, N.M.P.M., Mineral County

	Date Sampled 9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	50
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	2.1
Chloride (Cl), (MG/L):	0.7
Flouride (F), (MG/L):	2.2
Iron (Fe), (UG/L):	80
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	0.2
Manganese (Mn), (UG/L):	10
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	0.2
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	39
Sodium (Na), (MG/L):	45
Sulfate (SO_4), (MG/L):	30
Zinc (Zn), (UG/L):	10
Alkalinity As Calcium Carbonate, (MG/L):	70
As Bicarbonate, (MG/L):	85
Hardness Noncarbonate, (MG/L):	0
Total, (MG/L):	6
Specific conductance (Micromohs):	220
Total dissolved solids (TDS), (MG/L):	161
pH, Field	-
Discharge (gpm):	45
Temperature (°C):	40
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Ranger Warm Spring

Location: 38°48'57"N. Latitude; 106°52'28"W. Longtitude; T. 14 S., R. 85 W., Sec. 22 dc, 6th P.M., Gunnison County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	12	15	-	-
Boron (B), (UG/L):	80	80	80	80
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	73	70	72	71
Chloride (Cl), (MG/L):	17	18	19	19
Flouride (F), (MG/L):	1.8	0.2	1.5	1.9
Iron (Fe), (UG/L):	10	20	0	10
Lithium (Li), (UG/L):	140	160	-	-
Magnesium (Mg), (MG/L):	22	20	20	23
Manganese (Mn), (UG/L):	0	0	0	0
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.10	0.08	0.12	0.14
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0	0	0
Ortho, (MG/L):	0.03	0	0	0
Potassium (K), (MG/L):	7.2	7.7	8.1	8.2
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	20	18	19	19
Sodium (Na), (MG/L):	59	61	62	63
Sulfate (SO_4), (MG/L):	89	90	100	89
Zinc (Zn), (UG/L):	30	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	285	298	272	298
As Bicarbonate, (MG/L):	347	363	332	363
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	270	260	260	270
Specific conductance (Micromohs):	700	730	760	760
Total dissolved solids (TDS), (MG/L):	461	465	466	474
pH, Field	-	7.1	6.9	7.1
Discharge (gpm):	132	250E	225E	175E
Temperature (°C):	26	27	27	27
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rhodes Warm Spring

Location: 30°09'49"N. Latitude; 106°03'53"W. Longtitude; T. 10 S., R. 78 W., Sec. 24 cb, 6th P.M., Park County

	Date Sampled	
	6/75	10/75
Arsenic (As), (UG/L):	1	1
Boron (B), (UG/L):	30	20
Cadium (Cd), (UG/L):	1	0
Calcium (Ca), (MG/L):	33	32
Chloride (Cl), (MG/L):	1.8	4.1
Flouride (F), (MG/L):	0.2	0.3
Iron (Fe), (UG/L):	20	40
Lithium (Li), (UG/L):	10	20
Magnesium (Mg), (MG/L):	21	19
Manganese (Mn), (UG/L):	5	10
Mercury (Hg), (UG/L):	0	0
Nitrogen (N), (MG/L):	0.21	0.16
Phosphate (PO_4)		
Ortho diss. as P, (MG/L):	0	0
Ortho, (MG/L):	0	0
Potassium (K), (MG/L):	1	1.2
Selenium (Se), (UG/L):	0	0
Silica (SiO_2), (MG/L):	11	12
Sodium (Na), (MG/L):	5.5	8.6
Sulfate (SO_4), (MG/L):	14	16
Zinc (Zn), (UG/L):	20	10
Alkalinity		
As Calcium Carbonate, (MG/L):	162	166
As Bicarbonate, (MG/L):	197	202
Hardness		
Noncarbonate, (MG/L):	7	0
Total, (MG/L):	170	160
Specific conductance (Micromohs):	340	340
Total dissolved solids (TDS), (MG/L):	186	194
pH, Field	8.2	6.5
Discharge (gpm):	-	200
Temperature (°C):	24	25
Remarks:		

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rico Area: Diamond Drill Hole

Location: 37°41'20"N. Latitude; 108°01'45"W. Longtitude; T. 40 N., R. 11 W., Sec. -, N.M.P.M., Dolores County

	Date Sampled
	1/76
Arsenic (As), (UG/L):	-
Boron (B), (UG/L):	70
Cadium (Cd), (UG/L):	-
Calcium (Ca), (MG/L):	590
Chloride (Cl), (MG/L):	2.4
Flouride (F), (MG/L):	1.4
Iron (Fe), (UG/L):	30
Lithium (Li), (UG/L):	-
Magnesium (Mg), (MG/L):	82
Manganese (Mn), (UG/L):	1,300
Mercury (Hg), (UG/L):	-
Nitrogen (N), (MG/L):	0.07
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.08
Ortho, (MG/L):	0.25
Potassium (K), (MG/L):	28
Selenium (Se), (UG/L):	-
Silica (SiO_2), (MG/L):	120
Sodium (Na), (MG/L):	66
Sulfate (SO_4), (MG/L):	810
Zinc (Zn), (UG/L):	-
Alkalinity	
As Calcium Carbonate, (MG/L):	919
As Bicarbonate, (MG/L):	1,120
Hardness	
Noncarbonate, (MG/L):	890
Total, (MG/L):	1,800
Specific conductance (Micromohs):	2,710
Total dissolved solids (TDS), (MG/L):	2,250
pH, Field	7.0
Discharge (gpm):	15
Temperature (°C):	44

Remarks: Located approximately 100 yards northwest of Little Spring in the middle of the floodplain.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rico Area: Big Geyser Warm Spring

Location: 37°41'15"N. Latitude; 108°01'44"W. Longtitude; T. 40 N., R. 11 W., Sec. -, N.M.P.M., Dolores County

	Date Sampled	
	9/75	4/76
Arsenic (As), (UG/L):	31	-
Boron (B), (UG/L):	80	70
Cadium (Cd), (UG/L):	1	-
Calcium (Ca), (MG/L):	680	690
Chloride (Cl), (MG/L):	4.1	4.3
Flouride (F), (MG/L):	2.1	1.5
Iron (Fe), (UG/L):	8,300	8,500
Lithium (Li), (UG/L):	250	-
Magnesium (Mg), (MG/L):	98	93
Manganese (Mn), (UG/L):	3,100	4,400
Mercury (Hg), (UG/L):	0	-
Nitrogen (N), (MG/L):	0.05	0.01
Phosphate (PO_4)		
Ortho diss. as P, (MG/L):	0.08	0.18
Ortho, (MG/L):	0.25	0.55
Potassium (K), (MG/L):	30	31
Selenium (Se), (UG/L):	0	-
Silica (SiO_2), (MG/L):	110	140
Sodium (Na), (MG/L):	78	67
Sulfate (SO_4), (MG/L):	900	920
Zinc (Zn), (UG/L):	1,000	-
Alkalinity		
As Calcium Carbonate, (MG/L):	1,390	1,350
As Bicarbonate, (MG/L):	1,700	1,650
Hardness		
Noncarbonate, (MG/L):	710	750
Total, (MG/L):	2,100	2,100
Specific conductance (Micromohs):	3,250	3,100
Total dissolved solids (TDS), (MG/L):	2,750	2,740
pH, Field	-	6.8
Discharge (gpm):	8	12
Temperature (°C):	34	36
Remarks:		

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rico Area: Geyser Warm Spring

Location: 37°41'17"N. Latitude; 108°01'44"W. Longtitude; T. 40 N., R. 11 W., Sec. -, N.M.P.M., Dolores County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	26
Boron (B), (UG/L):	80
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	680
Chloride (Cl), (MG/L):	3.9
Flouride (F), (MG/L):	2.1
Iron (Fe), (UG/L):	8,500
Lithium (Li), (UG/L):	250
Magnesium (Mg), (MG/L):	100
Manganese (Mn), (UG/L):	1,900
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.02
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.09
Ortho, (MG/L):	0.28
Potassium (K), (MG/L):	32
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	110
Sodium (Na), (MG/L):	80
Sulfate (SO_4), (MG/L):	920
Zinc (Zn), (UG/L):	80
Alkalinity	
As Calcium Carbonate, (MG/L):	1,420
As Bicarbonate, (MG/L):	1,730
Hardness	
Noncarbonate, (MG/L):	690
Total, (MG/L):	2,100
Specific conductance (Micromohs):	3,200
Total dissolved solids (TDS), (MG/L):	2,790
pH, Field	-
Discharge (gpm):	14
Temperature (°C):	38
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Rico Area: Little Spring

Location: 37°41'19"N. Latitude; 108°01'44"W. Longtitude; T. 40 N., R. 11 W., Sec. -, N.M.P.M., Dolores County

	Date Sampled	
	9/75	1/76
Arsenic (As), (UG/L):	26	-
Boron (B), (UG/L):	90	70
Cadium (Cd), (UG/L):	0	-
Calcium (Ca), (MG/L):	620	690
Chloride (Cl), (MG/L):	2.3	3
Flouride (F), (MG/L):	1.5	4.8
Iron (Fe), (UG/L):	4,800	7,400
Lithium (Li), (UG/L):	210	-
Magnesium (Mg), (MG/L):	110	92
Manganese (Mn), (UG/L):	1,500	1,600
Mercury (Hg), (UG/L):	0.1	-
Nitrogen (N), (MG/L):	0.05	0.08
Phosphate (PO_4)		
Ortho diss. as P, (MG/L):	0.08	0.11
Ortho, (MG/L):	0.25	0.34
Potassium (K), (MG/L):	5.6	32
Selenium (Se), (UG/L):	0	-
Silica (SiO_2), (MG/L):	120	120
Sodium (Na), (MG/L):	76	77
Sulfate (SO_4), (MG/L):	1,000	960
Zinc (Zn), (UG/L):	100	-
Alkalinity		
As Calcium Carbonate, (MG/L):	1,400	1,190
As Bicarbonate, (MG/L):	1,710	1,450
Hardness		
Noncarbonate, (MG/L):	600	910
Total, (MG/L):	2,000	2,100
Specific conductance (Micromohs):	4,700	3,350
Total dissolved solids (TDS), (MG/L):	2,790	2,700
pH, Field	-	7.0
Discharge (gpm):	13	15
Temperature (°C):	38	39
Remarks:		

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Routt Hot Springs: Spring A

Location: 40°33'34"N. Latitude, 106°51'00"W. Longtitude; T. 7 N., R. 84 W., Sec. 18 dc, 6th P.M., Routt County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	38	85	-	-
Boron (B), (UG/L):	280	290	260	280
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	13	7.3	7.7	7.7
Chloride (Cl), (MG/L):	140	130	120	130
Flouride (F), (MG/L):	18	14	16	17
Iron (Fe), (UG/L):	0	60	0	110
Lithium (Li), (UG/L):	290	420	-	-
Magnesium (Mg), (MG/L):	0.4	0.2	0.1	0.1
Manganese (Mn), (UG/L):	0	10	0	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0	0	0.01	0.02
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0.02	0.04	0.05
Ortho, (MG/L):	0.03	0.06	0.12	0.15
Potassium (K), (MG/L):	9	8.3	8.5	8.8
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	97	80	86	89
Sodium (Na), (MG/L):	160	160	160	160
Sulfate (SO_4), (MG/L):	47	49	54	45
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	112	113	114	114
As Bicarbonate, (MG/L):	136	138	139	139
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	34	19	20	20
Specific conductance (Micromohs):	830	890	810	1,000
Total dissolved solids (TDS), (MG/L):	552	518	521	527
pH, Field	7.6	6.5	9.3	7.8
Discharge (gpm):	33	50	25	35
Temperature (°C):	64	64	64	64

Remarks: Located south of creek and approximately 100 feet up the hillside

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Routt Hot Springs: Spring B

Location: 40°33'35"N. Latitude; 106°50'59"W. Longtitude; T. 7 N., R. 84 W., Sec. 18 dc, 6th P.M., Routt County

	Date Sampled 7/75
Arsenic (As), (UG/L):	100
Boron (B), (UG/L):	280
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	7.8
Chloride (Cl), (MG/L):	130
Flouride (F), (MG/L):	17
Iron (Fe), (UG/L):	80
Lithium (Li), (UG/L):	310
Magnesium (Mg), (MG/L):	0.5
Manganese (Mn), (UG/L):	10
Mercury (Hg), (UG/L):	0.1
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	9.1
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	98
Sodium (Na), (MG/L):	160
Sulfate (SO_4), (MG/L):	49
Zinc (Zn), (UG/L):	6
Alkalinity	
As Calcium Carbonate, (MG/L):	111
As Bicarbonate, (MG/L):	135
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	22
Specific conductance (Micromohs):	770
Total dissolved solids (TDS), (MG/L):	539
pH, Field	7.1
Discharge (gpm):	30
Temperature (°C):	62

Remarks: Biggest spring north of creek, approximately 5 feet above creek.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Routt Hot Springs: Spring C

Location: 40°33'34"N. Latitude; 106°50'59"W. Longtitude; T. 7 N., R. 84 W., Sec. 18 dc, 6th P.M., Routt County

Temperature: 54°C

Discharge: 2 gpm (est.)

Specific conductance: 860

Remarks: Located approximately 50 feet east of Spring A

Routt Hot Springs: Spring D

Location: 40°33'34"N. Latitude; 106°50'58"W. Longtitude; T. 7 N., R. 84 W., Sec. 18 dc, 6th P.M., Routt County

Temperature: 51°C

Discharge: 2 gpm (est.)

Specific conductance: 830

Remarks: Located approximately 40 feet southeast of Spring D

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Sand Dunes Swimming Pool: Hot Water Well

Location: 37°46'42"N. Latitude; 105°51'20"W. Longtitude; T. 41 N., R. 10 E., Sec. 27 aa, N.M.P.M., Alamosa County

	Date Sampled 8/75
Arsenic (As), (UG/L):	144
Boron (B), (UG/L):	510
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	3.2
Chloride (Cl), (MG/L):	4.7
Flouride (F), (MG/L):	5.9
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	0.4
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.06
Ortho, (MG/L):	0.18
Potassium (K), (MG/L):	8.6
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	120
Sodium (Na), (MG/L):	81
Sulfate (SO_4), (MG/L):	23
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	144
As Bicarbonate, (MG/L):	176
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	10
Specific conductance (Micromohs):	385
Total dissolved solids (TDS), (MG/L):	334
pH, Field	8.3
Discharge (gpm):	-
Temperature (°C):	44
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Shaws Warm Spring

Location: 37°45'01"N. Latitude; 106°19'01"W. Longtitude; T. 41 N., R. 6 E., Sec. 33 dd, N.M.P.M., Saguache County

	Date Sampled			
	8/75*	10/75*	1/76*	4/76*
Arsenic (As), (UG/L):	0	0	-	-
Boron (B), (UG/L):	130	140	120	270
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	0.9	0.5	2.7	0.9
Chloride (Cl), (MG/L):	7.5	7.2	7.3	7.0
Flouride (F), (MG/L):	3.1	2.9	3.0	4.2
Iron (Fe), (UG/L):	40	20	10	0
Lithium (Li), (UG/L):	10	10	-	-
Magnesium (Mg), (MG/L):	0.6	0.3	0.7	0.1
Manganese (Mn), (UG/L):	0	0	0	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.01	0.02	0.02	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.04	0.03	0.05	0.04
Ortho, (MG/L):	0.12	0.09	0.15	0.12
Potassium (K), (MG/L):	1.5	1.4	1.5	1.5
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	83	73	100	76
Sodium (Na), (MG/L):	130	130	130	130
Sulfate (SO_4), (MG/L):	50	53	46	46
Zinc (Zn), (UG/L):	0	0	-	-
Alkalinity As Calcium Carbonate, (MG/L):	214	222	221	219
As Bicarbonate, (MG/L):	121	114	154	127
Hardness Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	5	2	10	3
Specific conductance (Micromohs):	550	540	569	556
Total dissolved solids (TDS), (MG/L):	406	402	424	398
pH, Field	9.3	9.3	9.0	8.9
Discharge (gpm):	34	34	52	40
Temperature (°C):	30	30	30	30

Remarks: Carbonate content (MG/L): 69; 77; 57; and 69 mg/l respectively

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

South Canyon Hot Springs: Spring A

Location: 39°33'16"N. Latitude; 107°23'53"W. Longtitude; T. 6 S., R. 90 W., Sec. 2 cd, 6th P.M., Garfield County

	Date Sampled			
	7/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	2	1	-	-
Boron (B), (UG/L):	210	260	290	260
Cadium (Cd), (UG/L):	0	1	-	-
Calcium (Ca), (MG/L):	7.0	7.7	7.9	7.8
Chloride (Cl), (MG/L):	190	210	200	190
Flouride (F), (MG/L):	4.2	3.0	4.0	3.5
Iron (Fe), (UG/L):	20	30	10	30
Lithium (Li), (UG/L):	150	150	-	-
Magnesium (Mg), (MG/L):	1.0	1.4	2.2	0.9
Manganese (Mn), (UG/L):	40	40	50	50
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.04	0.19	0.01	0.07
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.02	0.02	0.01	0.01
Ortho, (MG/L):	0.06	0.06	0.03	0.03
Potassium (K), (MG/L):	8.2	8.0	8.2	8.2
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	44	39	45	41
Sodium (Na), (MG/L):	280	280	270	270
Sulfate (SO_4), (MG/L):	110	100	94	100
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	248	249	251	250
As Bicarbonate, (MG/L):	302	303	306	305
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	22	25	29	23
Specific conductance (Micromohs):	1,300	1,300	1,220	1,100
Total dissolved solids (TDS), (MG/L):	794	800	783	772
pH, Field	7.1	7.6	-	7.3
Discharge (gpm):	12	7	9	17
Temperature (°C):	48	48	48	47
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

South Canyon Hot Springs: Spring B

Location: 39°33'15"N. Latitude; 107°23'51"W. Longtitude; T. 6 S., R. 90 W., Sec. 2 cd, 6th P. M., Garfield County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	230
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	7.1
Chloride (Cl), (MG/L):	190
Flouride (F), (MG/L):	4.0
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	150
Magnesium (Mg), (MG/L):	0.9
Manganese (Mn), (UG/L):	50
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.03
Potassium (K), (MG/L):	7.8
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	43
Sodium (Na), (MG/L):	260
Sulfate (SO_4), (MG/L):	100
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	239
As Bicarbonate, (MG/L):	291
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	21
Specific conductance (Micromohs):	1,300
Total dissolved solids (TDS), (MG/L):	757
pH, Field	7.1
Discharge (gpm):	1E
Temperature (°C):	48
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Splashland Hot Water Well

Location: 37°29'19"N. Latitude; 105°51'27"W. Longtitude; T. 38 N., R. 10 E., Sec. 34 dd, N.M.P.M., Alamosa County

	Date Sampled
	8/75
Arsenic (As), (UG/L):	65
Boron (B), (UG/L):	340
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	4.1
Chloride (Cl), (MG/L):	6.4
Flouride (F), (MG/L):	4.2
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	0.4
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	9.9
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	110
Sodium (Na), (MG/L):	72
Sulfate (SO_4), (MG/L):	29
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	124
As Bicarbonate, (MG/L):	151
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	12
Specific conductance (Micromohs):	365
Total dissolved solids (TDS), (MG/L):	311
pH, Field	8.3
Discharge (gpm):	-
Temperature (°C):	40
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Steamboat Springs Area: Heart Hot Spring

Location: 40°28'58"N. Latitude; 106°49'37"W. Longtitude; T. 6 N., R. 84 W., Sec. 17 adb, 6th. P.M., Routt County

	Date Sampled
	4/76
Arsenic (As), (UG/L):	5
Boron (B), (UG/L):	700
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	18
Chloride (Cl), (MG/L):	320
Flouride (F), (MG/L):	1.9
Iron (Fe), (UG/L):	40
Lithium (Li), (UG/L):	350
Magnesium (Mg), (MG/L):	1
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.04
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	11
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	49
Sodium (Na), (MG/L):	300
Sulfate (SO_4), (MG/L):	150
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	84
As Bicarbonate, (MG/L):	103
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	49
Specific conductance (Micromohs):	1,450
Total dissolved solids (TDS), (MG/L):	903
pH, Field	8.0
Discharge (gpm):	140 (7/75)
Temperature (°C):	39

Remarks: Located at east end of main street. Supplies water to swimming pool.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Steamboat Springs Area: Sulphur Cave Spring

Location: 40°29'02"N. Latitude; 106°50'23"W. Longtitude; T. 6 N., R. 84 W., Sec. 17 bdb, 6th. P.M., Routt County

	Date Sampled
	4/76
Arsenic (As), (UG/L):	45
Boron (B), (UG/L):	2,900
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	90
Chloride (Cl), (MG/L):	1,000
Flouride (F), (MG/L):	3.0
Iron (Fe), (UG/L):	60
Lithium (Li), (UG/L):	3,000
Magnesium (Mg), (MG/L):	24
Manganese (Mn), (UG/L):	310
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.06
Ortho, (MG/L):	0.18
Potassium (K), (MG/L):	110
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	18
Sodium (Na), (MG/L):	1,600
Sulfate (SO_4), (MG/L):	490
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	1,980
As Bicarbonate, (MG/L):	2,420
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	320
Specific conductance (Micromohs):	5,800
Total dissolved solids (TDS), (MG/L):	4,530
pH, Field	6.5
Discharge (gpm):	10
Temperature (°C):	20
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Steamboat Springs Area: Steamboat Spring

Location: 40°29'18"N. Latitude; 106°50'27"W. Longtitude; T. 6 N., R. 84 W., Sec. 8 cca, 6th. P.M., Routt County

	Date Sampled
	4/76
Arsenic (As), (UG/L):	130
Boron (B), (UG/L):	3,200
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	110
Chloride (Cl), (MG/L):	1,400
Flouride (F), (MG/L):	2.9
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	3,700
Magnesium (Mg), (MG/L):	31
Manganese (Mn), (UG/L):	380
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.16
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.07
Ortho, (MG/L):	0.21
Potassium (K), (MG/L):	140
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	21
Sodium (Na), (MG/L):	2,200
Sulfate (SO_4), (MG/L):	590
Zinc (Zn), (UG/L):	30
Alkalinity	
As Calcium Carbonate, (MG/L):	2,780
As Bicarbonate, (MG/L):	3,390
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	400
Specific conductance (Micromohs):	9,130
Total dissolved solids (TDS), (MG/L):	6,170
pH, Field	6.7
Discharge (gpm):	20
Temperature (°C):	26
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Stinking Springs

Location: 37°02'05"N. Latitude; 106°48'25"W. Longtitude; T. 32 N., R. 1 E., Sec.2 dd, N.M.P.M., Archuleta County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	60
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	210
Chloride (Cl), (MG/L):	7.3
Flouride (F), (MG/L):	0.6
Iron (Fe), (UG/L):	140
Lithium (Li), (UG/L):	90
Magnesium (Mg), (MG/L):	27
Manganese (Mn), (UG/L):	120
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0
Ortho, (MG/L):	0
Potassium (K), (MG/L):	12
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	24
Sodium (Na), (MG/L):	20
Sulfate (SO_4), (MG/L):	470
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	212
As Bicarbonate, (MG/L):	258
Hardness	
Noncarbonate, (MG/L):	420
Total, (MG/L):	640
Specific conductance (Micromohs):	1,250
Total dissolved solids (TDS), (MG/L):	899
pH, Field	-
Discharge (gpm):	24
Temperature (°C):	27
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Swissvale Warm Springs: Spring A

Location: 38°28'49"N. Latitude; 105°53'25"W. Longtitude; T. 49 N., R. 10 E., Sec. 20 cda, N.M.P.M., Fremont County

Temperature: 28°C

Discharge: 125 gpm

Specific conductance: 880

pH: 7.0

Remarks: Located 30 feet south of U.S. Bureau of Land Management cadastral survey marker.

Swissvale Warm Springs: Spring F

Location: 38°28'49"N. Latitude; 105°53'28"W. Longtitude; T. 49 N., R. 10 E., Sec. 20 cda, N.M.P.M., Fremont County

Temperature: 20°C

Discharge: 20 gpm (est.)

Specific conductance: 775

pH: 7.0

Remarks: Located approximately 350 feet west of Spring A and about 20 feet above the river bank.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Trimble Hot Spring

Location: 37°23'28"N. Latitude; 107°50'52"W. Longtitude; T. 36 N., R. 9 W., Sec. 15 bb, N.M.P.M., La Plata County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	17
Boron (B), (UG/L):	1,400
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	510
Chloride (Cl), (MG/L):	220
Flouride (F), (MG/L):	2.7
Iron (Fe), (UG/L):	50
Lithium (Li), (UG/L):	1,600
Magnesium (Mg), (MG/L):	42
Manganese (Mn), (UG/L):	80
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.08
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	47
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	72
Sodium (Na), (MG/L):	510
Sulfate (SO_4), (MG/L):	1,400
Zinc (Zn), (UG/L):	10
Alkalinity	
As Calcium Carbonate, (MG/L):	894
As Bicarbonate, (MG/L):	1,090
Hardness	
Noncarbonate, (MG/L):	550
Total, (MG/L):	1,400
Specific conductance (Micromohs):	4,400
Total dissolved solids (TDS), (MG/L):	3,340
pH, Field	-
Discharge (gpm):	1E
Temperature (°C):	36
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Tripp Hot Spring

Location: 37°23'30"N. Latitude; 107°50'52"W. Longtitude; T. 36 N., R. 9 W., Sec. 10 cc, N.M.P.M., La Plata County

	Date Sampled
	9/75
Arsenic (As), (UG/L):	17
Boron (B), (UG/L):	1,500
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	470
Chloride (Cl), (MG/L):	220
Flouride (F), (MG/L):	2.7
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	1,600
Magnesium (Mg), (MG/L):	41
Manganese (Mn), (UG/L):	80
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.16
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.05
Ortho, (MG/L):	0.15
Potassium (K), (MG/L):	47
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	69
Sodium (Na), (MG/L):	500
Sulfate (SO_4), (MG/L):	1,400
Zinc (Zn), (UG/L):	20
Alkalinity	
As Calcium Carbonate, (MG/L):	810
As Bicarbonate, (MG/L):	988
Hardness	
Noncarbonate, (MG/L):	530
Total, (MG/L):	1,300
Specific conductance (Micromohs):	3,900
Total dissolved solids (TDS), (MG/L):	3,240
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	44
Remarks:	

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Valley View Hot Springs: Spring A

Location: 38°11'32"N. Latitude; 105°48'49"W. Longtitude; T. 46 N., R. 10 E., Sec. 36 db, N.M.P.M., Saguache County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	1	1	-	-
Boron (B), (UG/L):	8	10	7	310
Cadium (Cd), (UG/L):	0	1	-	-
Calcium (Ca), (MG/L):	51	50	50	50
Chloride (Cl), (MG/L):	0.8	1.5	1.1	0.9
Flouride (F), (MG/L):	0.4	0.4	0.3	0.7
Iron (Fe), (UG/L):	10	20	10	10
Lithium (Li), (UG/L):	0	10	-	-
Magnesium (Mg), (MG/L):	15	14	14	14
Manganese (Mn), (UG/L):	20	10	0	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.57	0.11	0.17	0.14
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.01	0	0.03	0.01
Ortho, (MG/L):	0.03	0	0.09	0.03
Potassium (K), (MG/L):	2.5	2.6	2.7	2.8
Selenium (Se), (UG/L):	1	0	-	-
Silica (SiO_2), (MG/L):	21	20	20	20
Sodium (Na), (MG/L):	3.5	3.7	3.9	3.3
Sulfate (SO_4), (MG/L):	96	95	89	80
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	98	102	102	103
As Bicarbonate, (MG/L):	120	124	124	125
Hardness				
Noncarbonate, (MG/L):	91	81	81	80
Total, (MG/L):	190	180	180	180
Specific conductance (Micromohs):	390	384	385	381
Total dissolved solids (TDS), (MG/L):	252	249	243	234
pH, Field	-	6.5	6.8	7.5
Discharge (gpm):	-	60E	-	-
Temperature (°C):	37	36	35	36

Remarks: Located approx. 300 feet east of old swimming pool.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Valley View Hot Springs: Spring B

Location: 38°11'31"N. Latitude; 105°48'50"W. Longtitude; T. 46 N., R. 10 E., Sec. 36 db, N.M.P.M., Saguache County

	Date Sampled
	6/75
Arsenic (As), (UG/L):	2
Boron (B), (UG/L):	8
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	46
Chloride (Cl), (MG/L):	2.6
Flouride (F), (MG/L):	0.3
Iron (Fe), (UG/L):	20
Lithium (Li), (UG/L):	10
Magnesium (Mg), (MG/L):	14
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.22
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.01
Ortho, (MG/L):	0.03
Potassium (K), (MG/L):	2.2
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	19
Sodium (Na), (MG/L):	3.7
Sulfate (SO_4), (MG/L):	82
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	105
As Bicarbonate, (MG/L):	128
Hardness	
Noncarbonate, (MG/L):	68
Total, (MG/L):	170
Specific conductance (Micromohs):	350
Total dissolved solids (TDS), (MG/L):	234
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	32

Remarks: Located 150 feet southwest of Spring A

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Valley View Hot Springs: Spring D

Location: 38°11'23"N. Latitude; 105°48'35"W. Longtitude; T. 46 N., R. 10 E., Sec. 36, N.M.P.M., Saguache County

	Date Sampled		
	10/75	1/76	4/76
Arsenic (As), (UG/L):	1	-	-
Boron (B), (UG/L):	9	20	220
Cadium (Cd), (UG/L):	1	-	-
Calcium (Ca), (MG/L):	49	51	50
Chloride (Cl), (MG/L):	1.8	2.5	0.6
Flouride (F), (MG/L):	0.5	0.2	0.4
Iron (Fe), (UG/L):	10	60	20
Lithium (Li), (UG/L):	10	-	-
Magnesium (Mg), (MG/L):	12	13	13
Manganese (Mn), (UG/L):	10	10	0
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.12	0.17	0.15
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0	0	0.01
Ortho, (MG/L):	0	0	0.03
Potassium (K), (MG/L):	2.4	2.8	2.5
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	17	18	18
Sodium (Na), (MG/L):	3.2	4.3	2.6
Sulfate (SO_4), (MG/L):	82	93	73
Zinc (Zn), (UG/L):	10	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	100	102	103
As Bicarbonate, (MG/L):	122	124	125
Hardness			
Noncarbonate, (MG/L):	72	79	76
Total, (MG/L):	170	180	180
Specific conductance (Micromohs):	360	370	361
Total dissolved solids (TDS), (MG/L):	229	247	223
pH, Field	6.0	6.5	7.5
Discharge (gpm):	120E	75E	75E
Temperature (°C):	34	35	36

Remarks: Located 1200 feet southeast of Spring A and 300 feet up the hillside

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Wagon Wheel Gap Hot Springs: 4UR Ranch Spring

Location: 37°41'06"N. Latitude; 106°49'47"W. Longtitude; T. 41 N., R. 1 E., Sec. 35 dd, N.M.P.M., Mineral County

	Date Sampled		
	10/75	1/76	4/76
Arsenic (As), (UG/L):	21	-	-
Boron (B), (UG/L):	2,500	1,300	2,600
Cadium (Cd), (UG/L):	0	-	-
Calcium (Ca), (MG/L):	61	60	66
Chloride (Cl), (MG/L):	200	200	200
Flouride (F), (MG/L):	6.6	6.7	7.6
Iron (Fe), (UG/L):	30	10	0
Lithium (Li), (UG/L):	2,200	-	-
Magnesium (Mg), (MG/L):	15	14	15
Manganese (Mn), (UG/L):	310	320	300
Mercury (Hg), (UG/L):	0	-	-
Nitrogen (N), (MG/L):	0.01	0.01	0
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0.02	0.07	0.10
Ortho, (MG/L):	0.06	0.21	0.31
Potassium (K), (MG/L):	51	48	48
Selenium (Se), (UG/L):	0	-	-
Silica (SiO_2), (MG/L):	81	90	84
Sodium (Na), (MG/L):	480	460	490
Sulfate (SO_4), (MG/L):	170	170	200
Zinc (Zn), (UG/L):	20	-	-
Alkalinity			
As Calcium Carbonate, (MG/L):	853	828	837
As Bicarbonate, (MG/L):	1,040	1,010	1,020
Hardness			
Noncarbonate, (MG/L):	0	0	0
Total, (MG/L):	210	210	230
Specific conductance (Micromohs):	2,400	2,240	2,200
Total dissolved solids (TDS), (MG/L):	1,580	1,550	1,620
pH, Field	7.0	7.0	6.7
Discharge (gpm):	30E	30E	28E
Temperature (°C):	57	55	57
Remarks:			

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Wagon Wheel Gap Hot Springs: CFI Spring

Location: 37°41'02"N. Latitude; 106°49'47"W. Longtitude; T. 40 N., R. 1 E., Sec. 2 ab, N.M.P.M., Mineral County

	Date Sampled			
	8/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	0	2	-	-
Boron (B), (UG/L):	2,600	2,500	1,300	2,600
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	67	68	66	68
Chloride (Cl), (MG/L):	200	200	200	190
Flouride (F), (MG/L):	7	6.3	6.8	8.5
Iron (Fe), (UG/L):	210	250	120	170
Lithium (Li), (UG/L):	1,800	2,000	-	-
Magnesium (Mg), (MG/L):	16	15	15	15
Manganese (Mn), (UG/L):	560	530	560	540
Mercury (Hg), (UG/L):	0	0.1	-	-
Nitrogen (N), (MG/L):	0.01	0.03	0.04	0.02
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.05	0.02	0.06	0.08
Ortho, (MG/L):	0.15	0.06	0.18	0.25
Potassium (K), (MG/L):	48	47	46	46
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	74	68	88	67
Sodium (Na), (MG/L):	450	460	450	430
Sulfate (SO_4), (MG/L):	140	150	160	130
Zinc (Zn), (UG/L):	0	2	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	837	837	837	845
As Bicarbonate, (MG/L):	1,020	1,020	1,020	1,030
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	230	230	230	230
Specific conductance (Micromohs):	2,800	2,400	2,360	2,330
Total dissolved solids (TDS), (MG/L):	1,510	1,520	1,540	1,470
pH, Field	-	6.4	6.5	6.4
Discharge (gpm):	30	50	30	32
Temperature (°C):	50	51	48	50
Remarks:				

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Waunita Hot Springs: Spring C

Location: 38°30'50"N. Latitude; 106°30'27"W. Longtitude; T. 49 N., R. 4 E., Sec. 11 cc, N.M.P.M., Gunnison County

	Date Sampled			
	7/75	10/75*	1/76*	4/76
Arsenic (As), (UG/L):	0	2	-	-
Boron (B), (UG/L):	70	60	60	60
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	11	5.9	11	5.8
Chloride (Cl), (MG/L):	15	15	15	16
Flouride (F), (MG/L):	17	18	19	20
Iron (Fe), (UG/L):	40	30	10	10
Lithium (Li), (UG/L):	200	220	-	-
Magnesium (Mg), (MG/L):	0.2	0	0.3	7.3
Manganese (Mn), (UG/L):	0	5	0	10
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.02	0	0.01	0.01
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.05	0.01	0.04	0.05
Ortho, (MG/L):	0.15	0.03	0.12	0.15
Potassium (K), (MG/L):	10	10	9.8	10
Selenium (Se), (UG/L):	0	0	-	-
Silica (SiO_2), (MG/L):	110	110	140	120
Sodium (Na), (MG/L):	150	160	160	150
Sulfate (SO_4), (MG/L):	180	190	190	180
Zinc (Zn), (UG/L):	0	0	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	106	116	113	109
As Bicarbonate, (MG/L):	129	119	119	133
Hardness				
Noncarbonate, (MG/L):	0	0	0	0
Total, (MG/L):	28	15	29	45
Specific conductance (Micromohs):	720	796	766	756
Total dissolved solids (TDS), (MG/L):	557	579	613	575
pH, Field	-	8.4	8.5	7.9
Discharge (gpm):	-	30	55	50
Temperature (°C):	78	80	77	77

Remarks: Contains 11 mg/l and 9 mg/l of carbonate respectively.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Waunita Hot Springs: Spring D

Location: 38°30'50"N. Latitude; 106°30'28"W. Longtitude; T. 49 N., R. 4 E., Sec. 11 cc, N.M.P.M., Gunnison County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	70
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	6.0
Chloride (Cl), (MG/L):	15
Flouride (F), (MG/L):	18
Iron (Fe), (UG/L):	10
Lithium (Li), (UG/L):	210
Magnesium (Mg), (MG/L):	0
Manganese (Mn), (UG/L):	0
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.01
Phosphate (PO_4) Ortho diss. as P, (MG/L):	0.02
Ortho, (MG/L):	0.06
Potassium (K), (MG/L):	10
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	130
Sodium (Na), (MG/L):	160
Sulfate (SO_4), (MG/L):	190
Zinc (Zn), (UG/L):	0
Alkalinity As Calcium Carbonate, (MG/L):	108
As Bicarbonate, (MG/L):	132
Hardness Noncarbonate, (MG/L):	0
Total, (MG/L):	15
Specific conductance (Micromohs):	770
Total dissolved solids (TDS), (MG/L):	594
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	54

Remarks: Located in old concrete swimming pool approx. 400 feet west of lodge.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Waunita Hot Springs: Spring A

Location: 38°30'50"N. Latitude; 106°30'27"W. Longtitude; T. 49 N., R. 4 E., Sec. 11 cc, N.M.P.M., Gunnison County

Temperature: 76°C

Discharge:--

Specific conductance: 750

Remarks: Located in rock shed in front of lodge.

Waunita Hot Springs: Spring B

Location: 38°30'50"N. Latitude; 106°30'27"W. Longtitude; T. 49 N., R. 4 E., Sec. 11 cc, N.M.P.M., Gunnison County

Temperature: 78°C

Discharge: --

Specific conductance: 720

Remarks: Located 75 feet from Spring A along creek.

Lower Waunita Hot Springs: Spring A

Location: 38°31'02"N. Latitude; 106°30'56"W. Longtitude; T. 49 N., R. 4 E., Sec. 10 bc, N.M.P.M., Gunnison County

Temperature: 70°C

Discharge: 75 gpm (est.)

Specific conductance: 765

Remarks Area consists of a series of small to medium-sized springs.

Lower Waunita Hot Springs: Spring C

Location: 38°30'27"N. Latitude; 106°30'55"W. Longtitude; T. 49 N., R. 4 E., Sec. 10 bc, N.M.P.M., Gunnison County

Temperature: 70°C

Discharge: 8 gpm

Specific conductance: 780

Remarks: Located under rock building.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Lower Wanunita Hot Springs: Spring B

Location: 38°31'00"N. Latitude; 106°30'55"W. Longtitude; T. 49 N., R. 4 E., Sec. 10 bc, N.M.P.M., Gunnison County

	Date Sampled		
	7/75	10/75	4/76
Arsenic (As), (UG/L):	0	0	-
Boron (B), (UG/L):	70	60	60
Cadium (Cd), (UG/L):	0	0	-
Calcium (Ca), (MG/L):	7.8	8.6	8.5
Chloride (Cl), (MG/L):	15	16	15
Flouride (F), (MG/L):	17	15	16
Iron (Fe), (UG/L):	50	10	160
Lithium (Li), (UG/L):	200	200	-
Magnesium (Mg), (MG/L):	0.7	0.4	1.0
Manganese (Mn), (UG/L):	20	30	30
Mercury (Hg), (UG/L):	0	0	-
Nitrogen (N), (MG/L):	0.04	0	0.01
Phosphate (PO_4)			
Ortho diss. as P, (MG/L):	0	0.01	0.04
Ortho, (MG/L):	0	0.03	0.12
Potassium (K), (MG/L):	9.9	10	10
Selenium (Se), (UG/L):	0	0	-
Silica (SiO_2), (MG/L):	88	77	86
Sodium (Na), (MG/L):	150	160	150
Sulfate (SO_4), (MG/L):	180	180	160
Zinc (Zn), (UG/L):	10	0	-
Alkalinity			
As Calcium Carbonate, (MG/L):	125	135	135
As Bicarbonate, (MG/L):	152	165	165
Hardness			
Noncarbonate, (MG/L):	0	0	0
Total, (MG/L):	22	23	25
Specific conductance (Micromohs):	765	830	773
Total dissolved solids (TDS), (MG/L):	544	549	528
pH, Field	-	8.0	7.7
Discharge (gpm):	-	20E	25E
Temperature (°C):	70	70	70

Remarks: Located in small cement pool near east margin of group.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Lower Waunita Hot Springs: Spring D

Location: 38°31'01"N. Latitude; 106°31'00"W. Longtitude; T. 49 N., R. 4 E., Sec. 10 bc, N.M.P.M., Gunnison County

	Date Sampled
	7/75
Arsenic (As), (UG/L):	0
Boron (B), (UG/L):	70
Cadium (Cd), (UG/L):	0
Calcium (Ca), (MG/L):	6.9
Chloride (Cl), (MG/L):	15
Flouride (F), (MG/L):	20
Iron (Fe), (UG/L):	170
Lithium (Li), (UG/L):	200
Magnesium (Mg), (MG/L):	0.5
Manganese (Mn), (UG/L):	20
Mercury (Hg), (UG/L):	0
Nitrogen (N), (MG/L):	0.05
Phosphate (PO_4)	
Ortho diss. as P, (MG/L):	0.04
Ortho, (MG/L):	0.12
Potassium (K), (MG/L):	10
Selenium (Se), (UG/L):	0
Silica (SiO_2), (MG/L):	86
Sodium (Na), (MG/L):	150
Sulfate (SO_4), (MG/L):	170
Zinc (Zn), (UG/L):	0
Alkalinity	
As Calcium Carbonate, (MG/L):	126
As Bicarbonate, (MG/L):	153
Hardness	
Noncarbonate, (MG/L):	0
Total, (MG/L):	19
Specific conductance (Micromohs):	800
Total dissolved solids (TDS), (MG/L):	535
pH, Field	-
Discharge (gpm):	-
Temperature (°C):	62

Remarks: Located within gazebo along creek at west edge of the spring area.

Table 1. Physical Properties and Chemical Analysis of Thermal Waters in Colorado.

Wellsville Warm Spring

Location: 38°29'07"N. Latitude; 105°54'36"W. Longtitude; T. 49 N., R. 10 E., Sec. 18-, N.M.P.M., Chaffee County

	Date Sampled			
	6/75	10/75	1/76	4/76
Arsenic (As), (UG/L):	10	9	-	-
Boron (B), (UG/L):	100	100	100	90
Cadium (Cd), (UG/L):	0	0	-	-
Calcium (Ca), (MG/L):	79	76	81	76
Chloride (Cl), (MG/L):	61	62	63	62
Flouride (F), (MG/L):	0.5	0.9	0.6	-
Iron (Fe), (UG/L):	20	60	0	0
Lithium (Li), (UG/L):	110	100	-	-
Magnesium (Mg), (MG/L):	24	27	25	26
Manganese (Mn), (UG/L):	5	10	0	0
Mercury (Hg), (UG/L):	0	0	-	-
Nitrogen (N), (MG/L):	0.27	0.26	0.33	0.20
Phosphate (PO_4)				
Ortho diss. as P, (MG/L):	0.02	0	0.01	0.02
Ortho, (MG/L):	0.06	0	0.03	0.06
Potassium (K), (MG/L):	6.2	6.1	6.3	6.3
Selenium (Se), (UG/L):	2	4	-	-
Silica (SiO_2), (MG/L):	32	30	31	31
Sodium (Na), (MG/L):	51	50	49	52
Sulfate (SO_4), (MG/L):	65	72	63	65
Zinc (Zn), (UG/L):	0	10	-	-
Alkalinity				
As Calcium Carbonate, (MG/L):	249	264	269	269
As Bicarbonate, (MG/L):	304	322	328	328
Hardness				
Noncarbonate, (MG/L):	47	37	36	28
Total, (MG/L):	300	300	310	300
Specific conductance (Micromohs):	670	760	816	809
Total dissolved solids (TDS), (MG/L):	470	484	482	482
pH, Field	-	7.0	7.1	7.2
Discharge (gpm):	-	160	175	200
Temperature (°C):	32	33	28	28
Remarks:				

Table 2. Spectrographic Analyses of Thermal Waters in Colorado. Values Reported in Micrograms/liter (UG/L).

Spring	Aluminum Al	Barium Ba	Beryllium Be	Bismuth Bi	Chromium Cr	Cobalt Co	Copper Cu	Gallium Ga	Germanium Ge	Lead Pb	Nickel Ni	Silver Ag	Strontium Sr	Tin Sn	Titanium Ti	Vandium Va	Zirconium Zr
Canon City	20	100	< 2	< 9	< 9	< 9	< 2	< 4	< 20	< 9	< 9	<1	1,100	< 10	< 5	< 5	< 20
Cebolla Hot Springs:Spg. A	60	130	5	<10	< 10	<10	2	< 5	< 15	< 10	<10	<1	6,000	< 15	< 5	<10	< 22
Cement Creek Warm Spring	30	82	0	< 3	< 3	< 3	0	< 1	< 3	< 3	< 3	0	480	< 3	10	< 3	< 4
Clark Spring Warm Water Well	20	20	< 2	< 7	< 7	< 7	3	< 3	< 20	< 7	< 7	<1	2,400	< 8	< 4	< 4	< 10
Conundrum Hot Spring	60	20	< 3	<10	< 10	<10	3	< 5	< 20	< 10	<10	<1	3,800	< 15	< 5	< 5	< 20
Cottonwood Hot Spring	70	52	0	0	< 3	< 3	7	6	< 3	< 3	4	0	200	< 3	< 2	< 3	< 4
Cottonwood Hot Spring Area Merrifield Hot Water Well	40	40	0	< 2	< 2	< 2	5	2	< 3	< 2	< 2	0	190	< 2	< 2	< 2	< 3
Don K Ranch Artesian Well	40	300	< 3	<12	< 12	<12	< 3	< 6	< 30	< 12	<12	<2	1,100	< 17	< 6	< 6	< 30
Dotsero Warm Springs	100	70	<10	<60	< 60	<60	<12	<30	<100	< 60	<60	<6	2,500	< 85	<30	<30	<100
Dunton Hot Spring	40	55	< 2	<10	< 9	< 9	< 2	< 4	< 9	< 9	< 9	<1	3,000	< 9	< 4	< 9	< 10
Eldorado Springs: Spg. A	5	200	< 0	< 1	< 1	< 1	< 2	0	< 2	< 1	< 1	<0	300	< 1	< 0	4	< 2
Eldorado Springs: Spg. B	20	100	< 0	< 1	1	< 1	2	0	< 1	4	< 1	<0	300	< 0.7	< 0	< 0.3	< 1
Florence Artesian Well	30	60	< 3	<10	< 10	<10	3	< 5	< 20	< 10	<10	<1	2,900	< 13	< 5	< 5	< 20
Fremont Natatorium Hot Spg.	30	30	< 2	<10	< 9	< 9	< 2	< 4	< 20	< 9	< 9	<1	1,700	< 10	< 5	< 5	< 20
Geyser Warm Spring	210	1,000	< 6	<26	< 24	<24	< 6	<10	< 24	< 24	<24	<3	12,000	< 24	<12	<24	< 30
Glenwood Springs Area Big Spring	220	100	<20	<150	<100	<50	<20	<50	<100	<100	<50	<10	8,900	<150	<50	<50	<200
Spring B	500	90	<20	<90	< 90	<90	<20	<40	< 90	< 90	<90	<9	8,100	< 90	<40	<90	<140
Spring D	650	80	<20	<90	< 90	<90	<20	<40	< 90	< 90	<90	<9	9,000	< 90	<40	<90	<140
Hartsel Hot Springs: Spg. A	100	90	< 3	<13	< 13	<13	< 3	< 6	< 13	< 13	<13	<2	2,200	< 13	< 6	<13	< 20
Haystack Butte Wm. Wtr. Well	100	60	< 2	<10	< 10	< 5	< 2	< 4	< 10	< 10	<10	<1	200	< 10	< 5	< 5	< 20
Hot Sulphur Springs: Spg. A	95	100	< 2	< 9	< 9	< 9	3	< 4	< 9	< 9	< 9	<1	630	< 9	< 5	< 9	< 15
Hot Sulphur Springs: Spg. B	130	130	< 2	< 9	< 9	< 9	2	< 4	< 9	< 9	< 9	<1	790	< 9	< 5	< 9	< 15
Idaho Hot Springs: Spg. A	140	74	< 3	<20	< 15	< 7	8	< 7	< 15	< 15	< 7	<2	5,500	< 20	< 7	< 7	< 30
Idaho Hot Springs: Spg. B	200	160	< 3	<20	< 15	< 7	9	< 7	< 15	< 15	< 7	<2	6,000	< 20	< 7	< 7	< 30
Juniper Hot Springs	95	120	< 2	< 9	< 9	< 9	8	< 4	< 9	< 9	< 9	<1	360	< 9	< 5	< 9	< 15
Lemon Hot Springs	75	30	10	<20	< 17	<17	< 4	< 8	< 17	< 17	<17	<2	7,000	< 17	< 8	<17	< 20
Mineral Hot Springs: Spg A.	45	90	< 1	< 4	< 4	< 4	2	< 2	< 4	< 4	< 4	<0	1,200	< 4	< 2	< 4	< 6
Mineral Hot Springs: Spg. D	40	90	< 1	< 5	< 5	< 5	< 1	< 2	< 5	< 5	< 5	<0	920	< 5	< 2	< 5	< 6
Mt. Princeton Hot Spgs. Area Spring A	20	14	0	< 2	< 2	< 2	1	3	< 2	< 2	< 2	0	190	< 2	< 1	3	< 3
Hortense Hot Wtr. Well	130	43	0	< 3	< 2	< 2	5	8	< 3	3	< 2	0	180	< 2	< 2	2	< 3
Orvis Hot Spring	90	35	< 3	<13	< 13	< 7	4	< 6	< 13	< 13	<13	<2	6,000	< 13	< 7	< 7	< 30
Ouray Area: Wesbaden Hot Spring A	250	24	< 2	< 9	< 9	< 9	5	< 4	< 9	< 9	< 9	<1	10,000	< 9	< 4	< 9	< 10
Pool Spring	50	40	< 2	<10	< 9	< 9	< 2	< 4	< 9	< 9	< 9	<1	5,600	< 9	< 4	< 9	< 10
Pagosa Springs: Big Spring	130	40	< 4	<30	< 20	<10	7	<10	< 20	< 20	<10	<2	4,000	< 30	<10	<10	< 40
Pagosa Springs: Spa Well	350	28	< 4	<30	< 20	<10	14	<10	< 20	< 20	<10	<2	4,600	< 30	<10	<10	< 40
Paradise Hot Spring	240	290	< 8	<40	< 37	<37	< 8	<17	< 37	< 37	<37	<4	3,800	< 37	<17	<37	< 40
Penny Hot Spring	30	40	< 4	<16	< 16	<16	< 4	< 4	< 20	< 16	<10	<2	5,700	< 16	< 8	<10	< 30
Pinkerton Hot Spg.: Spg. A	130	33	10	<30	< 26	<26	< 6	<12	< 26	< 26	<26	<3	5,000	< 26	<12	<26	< 30
Poncha Hot Springs: Spg. A	70	80	< 2	< 4	< 4	< 4	< 1	< 2	< 4	< 4	< 4	0	560	< 4	< 2	< 4	< 8
Poncha Hot Springs: Spg. C	35	70	< 2	< 4	< 4	< 4	< 1	< 2	< 4	< 4	< 4	0	520	< 4	< 2	< 4	< 8

Table 2. Spectrographic Analyses of Thermal Waters in Colorado (Continued). Values Reported in Micrograms/liter (UG/L).

Spring	Aluminum Al	Barium Ba	Beryllium Be	Bismuth Bi	Chromium Cr	Cobalt Co	Copper Cu	Gallium Ga	Germanium Ge	Lead Pb	Nickel Ni	Silver Ag	Strontium Sr	Tin Sn	Titanium Ti	Vandium Va	Zirconium Zr
Rainbow Hot Spring	40	1	< 0.3	< 1	< 1	< 1	< 1	1	< 1	< 1	< 2	< 0.3	42	< 3	< 0.5	< 1	< 1
Ranger Warm Spring	100	140	0	< 4	< 4	< 4	8	< 2	< 5	< 4	< 4	0	360	< 5	3	< 4	< 7
Rhodes Warm Spring	5	180	0	< 2	0	< 2	1	0	< 2	< 2	< 2	0	65	< 2	0	< 1	< 3
Rico Area: Geyser Warm Spg.	130	34	10	<20	< 17	< 17	< 4	< 8	< 17	< 17	<17	< 2	6,700	< 17	< 8	< 17	< 20
Routt Hot Springs: Spring A	70	16	< 1	< 4	< 4	< 4	1	< 2	< 4	< 4	< 4	< 0	360	< 4	< 2	< 4	< 5
Routt Hot Springs: Spring B	150	20	< 1	< 4	< 4	< 4	4	< 2	< 4	< 4	< 4	0	380	< 4	< 2	< 4	< 5
Sand Dunes Swimming Pool Well	20	17	0	< 3	< 3	< 3	1	0	< 3	< 3	< 3	0	30	< 3	< 2	5	< 4
Shaws Warm Spring	40	3	0	< 3	< 3	< 3	1	< 1	< 4	< 3	< 3	< 0	10	< 3	< 2	< 3	< 4
South Canyon Hot Springs: Spring A	75	120	< 1	< 5	< 5	< 5	5	< 3	< 5	< 5	< 5	0	230	< 5	< 3	< 5	< 8
Splashland Hot Water Well	30	35	< 0.5	< 2	< 2	< 2	2	< 0.7	< 3	< 2	< 2	< 0.2	42	< 2	< 2	30	< 3
Stinking Springs	44	37	< 1	< 6	< 5	< 5	< 1	< 3	< 5	< 5	< 5	< 1	1,700	< 5	< 3	< 5	< 7
Trimble Hot Spring	40	15	< 3	<10	< 10	< 10	< 3	< 5	< 10	< 10	<10	< 2	4,500	< 10	< 5	< 10	< 10
Tripp Hot Spring	160	35	< 5	<20	< 20	< 20	< 5	<10	< 20	< 20	<20	< 2	7,500	< 20	< 10	< 20	< 20
Valley View Hot Springs: Spring A	10	74	0	< 2	0	< 2	1	0	< 2	< 2	2	0	500	< 2	0	< 1	< 4
Wagon Wheel Gap Hot Springs: 4UR Ranch Spring	110	160	< 5	<11	< 11	< 11	< 3	< 5	< 11	30	<11	0	3,400	< 11	17	< 11	< 20
CFI Spring	60	120	< 5	<10	< 10	< 10	< 3	< 5	< 10	< 10	<10	< 1	2,100	< 10	< 5	< 10	< 20
Waunita Hot Springs: Spg. C	110	110	0	< 4	< 4	< 4	3	< 2	< 6	< 4	< 4	0	240	< 6	< 2	< 4	< 8
Lower Waunita Hot Springs: Spring B	85	94	0	< 4	< 4	< 4	1	6	< 5	< 4	< 4	0	290	< 5	< 2	< 4	< 7
Spring D	20	78	0	< 4	< 4	< 4	0	< 2	< 5	< 4	< 4	0	300	< 5	< 2	< 4	< 7
Wellsville Warm Spring	40	110	< 0.7	< 4	< 4	< 4	0.7	< 2	< 4	< 4	< 4	< 0.4	400	< 4	< 2	< 4	< 5

Table 3. Radioactivity associated with thermal waters in Colorado. Values reported in Picocuries/liter (PCi/l).

Spring or Well	Date Sampled *	Temp °C	pH	^{222}Rn	^{226}Ra	^{228}Ra	^{234}U	^{235}U	^{238}U	^{230}Th	^{232}Th
Canon City Hot Spring	9/75	40	6.3	N.A.	0.39 ± .099	2.8 ± 0.75	15.0 ± 1.6	.25 ± .076	6.5 ± .73	<.027	<.019
Clark Spring Warm Water Well	9/75	25	6.8	N.A.	10. ± .48	18. ± 1.4	0.092 ± 0.037	<.013	0.026 ± .021	<.025	<.015
Conundrum Hot Spring	9/75	38	-	N.A.	0.11 ± .058	<0.58 ±	<0.040	<.024	<0.028	.019 ± .018	<.021
Cottonwood Hot Springs Area Merrifield Hot Water Well	9/74*	50	8.4	250 ± 94	0.68 ± .12	N.A.	0.24 ± 0.048	N.A.	0.18 ± .041	<.014	<.014
Don K Ranch Artesian Well	9/75	28	6.5	N.A.	7.2 ± .40	4.1 ± 0.83	12.0 ± 1.2	.15 ± .058	4.0 ± .47	<.026	<.020
Dotsero Warm Spring	9/74*	32	6.8	1800 ± 84	1.1 ± .16	N.A.	1.1 ± 0.12	N.A.	0.42 ± .068	<.010	<.0089
Dunton Hot Spring	9/75	44	-	N.A.	1.5 ± .18	1.1 ± 0.64	0.29 ± 0.06	<.0091	0.15 ± .041	<.035	<.023
Eldorado Springs: Spring B	9/75	25	6.7	N.A.	0.32 ± .091	<0.58	0.23 ± 0.047	<.011	0.12 ± .034	<.028	<.012
Florence Artesian Well	9/75	28	6.3	N.A.	31.0 ± .83	8.8 ± 1.1	15.0 ± 1.9	.19 ± .079	4.8 ± .67	.026 ± .023	<.011
Fremont Natatorium Hot Spring	9/75	35	6.9	N.A.	12.0 ± .52	36.0 ± 1.9	0.56 ± 0.10	<.013	0.051 ± .029	<.033	<.019
Geyser Warm Spring	9/75	28	-	N.A.	2.4 ± .23	2.3 ± 0.71	0.041 ± 0.023	<.010	0.023 ± .016	.052 ± .030	.045 ± .029
Glenwood Springs: Big Spring	9/74*	32	7.0	300 ± 38	27 ± .78	N.A.	0.19 ± 0.046	<.007	0.11 ± .035	<.012	<.0043
Hot Sulphur Springs: Spring B	9/74*	46	6.6	510 ± 51	3.2 ± .27	N.A.	0.057 ± 0.024	<.010	0.041 ± .021	<.0069	<.0085
Idaho Hot Springs: Spring A	9/74*	39	6.5	890 ± 67	17.0 ± .61	N.A.	0.77 ± 0.11	<.013	0.33 ± .065	<.018	<.016
Juniper Hot Springs	10/75	33	8.0	N.A.	0.21 ± .077	<0.62	0.025 ± 0.022	<.011	0.02 ± .019	<.028	<.012
Lemon Warm Spring	9/75	31	-	N.A.	2.8 ± .25	0.76 ± 0.59	0.077 ± 0.033	<.011	0.049 ± .022	<.024	<.022
Mineral Hot Springs: Spring A	9/74*	-	-	2100 ± 65	3.6 ± .28	N.A.	0.089 ± 0.029	<.0062	0.033 ± .018	.12 ± .069	.027 ± .027
Mt. Princeton Hot Springs Area Hortense Hot Water Well	9/74*	84	8.0	1400 ± 73	0.12 ± .057	N.A.	0.30 ± 0.055	<.0063	0.22 ± .047	.027 ± .023	<.012
Young Life Hot Water Well	9/74*	65	7.9	890 ± 57	0.14 ± .063	N.A.	1.9 ± 0.20	.064 ± .027	1.70 ± .18	<.018	<.017
Orvis Hot Spring	9/75	53	-	N.A.	1.0 ± .15	3.30 ± 0.75	0.23 ± 0.053	<.017	0.088 ± .034	.033 ± .025	<.023
Ouray Area Pool Hot Springs	9/75	70	6.7	N.A.	3.9 ± .29	2.0 ± 0.68	<0.048	<.024	0.036 ± .029	.034 ± .029	.023 ± .022
Wesbaden Vapor Caves: Spring A	9/75	53	-	N.A.	0.99 ± .15	<0.60	0.31 ± 0.061	<.0096	0.15 ± .041	<.036	<.020
Pagosa Springs: Big Spring	8/75	56	6.5	N.A.	6.6 ± .39	2.9 ± 0.73	0.052 ± 0.034	<.024	0.046 ± .036	.052 ± .033	<.016
Paradise Hot Spring	9/75	46	-	N.A.	2.2 ± .22	2.5 ± 0.72	0.16 ± 0.06	<.020	0.10 ± .049	.064 ± .032	.022 ± .021
Penny Hot Spring	9/74*	47	6.1	600 ± 51	1.5 ± .18	N.A.	0.24 ± 0.057	<.014	0.12 ± .04	<.012	<.0065
Poncha Hot Springs: Spring A	9/74*	71	7.6	1400 ± 71	0.16 ± .067	N.A.	0.041 ± 0.021	<.0084	0.034 ± .020	.022 ± .016	.02 ± .017
Pinkerton Hot Springs Spring A	9/75	32	-	N.A.	26.0 ± .77	6.9 ± 0.94	1.80 ± 0.20	.029 ± .022	0.66 ± .10	.054 ± .032	<.018
Mound Spring	9/75	30	-	N.A.	28.0 ± .79	9.8 ± 1.1	1.90 ± 0.20	.027 ± .021	0.67 ± .098	.031 ± .030	<.023
Rico Area: Geyser Warm Spring	9/75	28	-	N.A.	38.0 ± .92	11.0 ± 1.1	0.97 ± 0.12	.014 ± .014	0.55 ± .083	.16 ± .064	.46 ± .096

* Analytical results of data collected in 1974 are taken from O'Connell, M.F., and Kaufmann, R.F., 1976, Radioactivity associated with geothermal waters in the western United States--Basic data: U.S. Env. Protection Agency, Office of Radiation Programs, Las Vegas Facility, Tech. Note)RO/LV-75-8A, 25 p.

Table 3. Radioactivity associated with thermal waters in Colorado (Cont.).

Spring or Well	Date Sampled	Temp °C	pH	^{222}Rn	^{226}Ra	^{228}Ra	^{234}U	^{235}U	^{238}U	^{230}Th	^{232}Th
Routt Hot Springs: Spring A	9/74*	64	7.5	530 ± 51	0.13 ± .058	N.A.	0.039 ± 0.03	N.A.	0.034 ± .023	.019 ± .015	.026 ± .015
Sand Dunes Swimming Pool Well	9/74*	45	8.0	480 ± 34	0.17 ± .071	N.A.	<0.14	N.A.	0.18 ± .16	<.044	<.031
South Canyon Hot Springs: Spring A	10/75	48	7.6	N.A.	1.2 ± .17	0.65 ± 0.62	0.04 ± 0.027	<.0095	<0.018	<.036	<.028
Steamboat Springs: Heart Spring	9/74*	40	7.8	150 ± 29	1.8 ± .20	N.A.	0.084 ± 0.033	N.A.	0.044 ± .024	<.01	<.0047
Stinking Springs	9/75	27	-	N.A.	1.6 ± .27	1.70 ± 1.2	0.035 ± 0.028	<.011	<0.019	.076 ± .040	.046 ± .039
Trimble Hot Springs	9/75	36	-	N.A.	7.2 ± .40	<0.60	0.53 ± 0.082	<.015	0.33 ± .066	.16 ± .052	.10 ± .042
Tripp Hot Springs	9/75	44	-	N.A.	6.2 ± .37	2.9 ± 0.75	0.28 ± 0.095	<.025	0.23 ± .082	<.028	<.020
Wagon Wheel Gap: 4UR Hot Spring	9/74*	56	6.8	72 ± 15	3.6 ± .28	N.A.	<0.074	N.A.	<0.052	<.018	<.035
Waunita Hot Springs: Spring A	9/74*	79	7.7	140 ± 21	0.083 ± .056	N.A.	0.11 ± 0.035	N.A.	0.078 ± .03	.023 ± .023	<.018
Wellsville Warm Spring	9/74*	31	7.0	580 ± 43	0.23 ± .075	N.A.	4.6 ± 0.36	N.A.	2.2 ± .20	.023 ± .019	<.010

N.A.-- Indicates no analysis.
Rn--Radon
Ra--Radium
U--Uranium
Th--Thorium

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