

SPECTROGRAPHIC ANALYSIS

LAB. NO.

43534

Source: Big Sur/<sup>(Slates)</sup> Hot Springs (Men's bath)  
 Location: S of Monterey  
 21S/3E-9K1

County: Monterey  
 Temp.: 116 °F  
 pH: 9.-  
 Coll. by: Berkstresser  
 Agency: DWR-USGS Coop.  
 Date: 5-10-63  
 Inv: Springs of California  
 W.O.:

Sample No.:  
 Gk Disch: 40t, gpm  
 DO:

Drain. Basin:  
 Pt. of Coll: Disch. at spring

Geomorphic type:

Well data: Owner: Mrs. Vinnie Murphey

Appear: Clear  
 Remarks:

Use: Resort

(Quantitative results in micrograms per liter except as indicated)

Aluminum (Al) <u>18</u>	Copper (Cu) <u>&lt; 1.2</u>	Nickel (Ni) <u>1.2</u>
Antimony (Sb) _____	Gallium (Ga) <u>5.0</u>	Rubidium (Rb) _____
Barium (Ba) _____	Germanium (Ge) <u>5.0</u>	Silver (Ag) _____
Beryllium (Be) <u>&lt; 0.50</u>	Iron (Fe) <u>6.5</u>	Strontium (Sr) _____
Bismuth (Bi) <u>&lt; 0.25</u>	Lanthanum (La) _____	Thorium (Th) _____
Cadmium (Cd) <u>&lt; 1.2</u>	Lead (Pb) <u>&lt; 1.2</u>	Tin (Sn) _____
Cerium (Ce) _____	Lithium (Li) _____	Titanium (Ti) <u>&lt; 0.50</u>
Cesium (Cs) _____	Manganese (Mn) <u>&lt; 1.2</u>	Vanadium (V) <u>&lt; 0.25</u>
Chromium (Cr) <u>&lt; 1.2</u>	Molybdenum (Mo) <u>&lt; 1.2</u>	Zinc (Zn) <u>&lt; 5.0</u>
Cobalt (Co) <u>≤ 1.2</u>		

QUANTITATIVE ANALYSIS:

- > more than the amount indicated.
- < less than the amount indicated.
- ≈ equal to, but slightly more than the amount indicated.
- ≅ equal to, but slightly less than the amount indicated.

SEMI-QUANTITATIVE ANALYSIS:

- X = 1,000 to 9,000 micrograms per liter.
- .X = 100 to 900 micrograms per liter.
- .0X = 10 to 90 micrograms per liter.
- .00X = 1 to 9 micrograms per liter.

QUALITATIVE ANALYSIS:

- X present in sample
- O not present in sample

NOTES:

ANALYST Virgil H. Stone  
 DATE Oct. 9, 1963

WATER

LAB. NO. 41338

Monterey Loc. No: 21S/3E-9KA  
Region:  
Springs of California  
Big Sur (Slates) Hot Springs S. of Monterey

WELL DATA

Type : Spring  
Depth : Ft.  
Cased : Ft.  
Gravel packed:  
Use :  
Owner : Mrs Vinnie Murphy  
Remarks : Mike  
PH : 9.1

Ap. Pt. : Disch. into tub.

copy to Dennis Murphy, Big Sur Hot Spr., Big Sur, Ca

Time : (122°F)  
Temp. : 50°C  
Agency : DWR-USGS Coop.  
Remarks : Clear  
Disch. : 25-30 ppm est.  
Coll. : Berkstresser  
9/20/62 PST

CALCIUM 100 ml  
10.25  
9.50  
0.75  
MAGNESIUM  
epm TH 0.16  
epm Ca 0.15  
epm Mg 0.01

F 4.00  
Ca ppm 3.0  
Mg ppm 0.1

ALKALINITY  
HCO<sub>3</sub> 57 50 ml CO<sub>3</sub> 13  
13.90 3.50 13.90 10.40  
9.75 0.65 10.40 9.75  
4.15 2.85 3.50 0.65

TOTAL ALKALINITY as CO<sub>3</sub> 7.1  
as HCO<sub>3</sub> 8.3 as CaCO<sub>3</sub> 6.8

NITRATE 10 ml  
ml Ag<sub>2</sub>SO<sub>4</sub> 0.0  
A 1.470 mg.30  
Factor 2.081  
A sample 0.035  
BORON 5 ml  
A 1.115 mg.01  
Factor 1.794  
A sample 0.220

NO<sub>3</sub> ppm 0.7  
B ppm 0.4

PH 9.0  
COLOR 0.00  
TURB 0.01  
% E 10.3  
epm  
0.15 Ca  
0.01 Mg  
0.00 Sr  
2.87 Na  
0.01 K  
0.01 Li  
3.05 Sum  
0.43 CO<sub>3</sub>  
0.93 HCO<sub>3</sub>  
1.23 SO<sub>4</sub>  
0.23 Cl  
0.15 F  
0.01 NO<sub>3</sub>  
3.03 Sum

SILICA 2 ml  
A 0.700 mg.10  
Factor 71.43  
A sample 0.905  
IRON(dis) 50 ml  
A 2.06 mg.15  
Factor 1.456  
A sample 0.00  
IRON(total) ml  
A mg  
Factor  
A sample  
SiO<sub>2</sub> ppm 65  
Fe ppm 0.00

SODIUM 0 dil  
Sample 81.5 %T  
Curve 100  
Na ppm 66  
POTASSIUM 0 dil  
Sample 8 %T  
K ppm 0.4

SULFATE 10 ml  
7.80  
1.80  
3.00  
0.05  
2.95  
CHLORIDE 50 ml  
1 ml = 0.5 mg Cl  
2.65  
1.53  
1.15  
0.10  
1.05  
FLUORIDE 10 ml  
\* Distilled  
0.0  
Corr. ml 0.465  
0.7-2 0.605  
0.0.3 0.442  
mg Std

SO<sub>4</sub> ppm 55  
Cl ppm 10  
F ppm 2.9

SUM 249  
T/A 0.34  
DISSOLVED SOLIDS ml  
HARDNESS 50 ml  
as CaCO<sub>3</sub>  
11.00  
10.60  
0.40  
erd  
Total 3  
HCO<sub>3</sub> (0.82) 13  
Non-Carb 0  
% Na 94  
SPECIFIC CONDUCTANCE  
R (KCl) 331  
R sample 1,077  
Micromhos at 25°C 307

NH<sub>4</sub> Qual Negative

Lithium  
Sample 15% T  
Li ppm 0.06

Strontium  
Sample 2.0% T  
Sr ppm 0.2

Δ 0.02  
Σ 6.08  
3.536 x 2.87  
SAR = 10

UNPUBLISHED RECORDS SUBJECT TO REVISION

WATER

LAB. NO. 42234

Monterey

Loc. No: 21S/3E-9K3

WELL DATA

Region:

Type :

Drilled:

Springs of California

Depth :

Ft.

Dia. :

In.

Cased :

Ft.

Perf. :

Gravel packed:

S. of Monterey, California. Big Sur

Use :

Resort

Hot Springs (Slates Hot Springs)

Owner :

Mrs. Winnie Murphy

Water-bearing form: Pleist terrace depts.

Remarks :

Catchment trough. Upper Cret. Marine Seds.

Temperature :

Disch. : 40 gpm flow meter

Temp. : 116 °F.

Coll. : Berkstresser

Agency : DWR-USGS Coop.

1/18/63

Remarks : Clear, v. sl. yellow.

CALCIUM 100 ml

MAGNESIUM

19.20

e pm TH 0.12

18.60

e pm Ca 0.12

0.60

e pm Mg 0.00

4.00

2.4

2.4

0.0

Co ppm

Mg ppm

Factor 72.99

A sample 0.835

SiO<sub>2</sub> ppm 61

SODIUM 112 dil

Sample 54.0 %T

Curve 100 32.0 x 2

Na ppm 64

POTASSIUM 0 dil

Sample 13 %T

K ppm 0.9

SUM 241

T/A H 0.33

DISSOLVED SOLIDS

SO<sub>4</sub> ppm 43

CLORIDE 50 ml

1 ml = 0.5 mg Cl

12.20

10.00

2.20

0.95

2.15

SO<sub>4</sub> ppm 43

HARDNESS 100 ml

as CaCO<sub>3</sub>

0.60

0.00

0.60

Total 6

HCO<sub>3</sub> (0.82) 89

Non-Carb 0

D.S. ppm

FLUORIDE 10 ml

A sample 0.355

0.02 std 0.475

0.03 std 0.330

0.140

0.165

mg Std

F ppm 2.8

% Na 95

SPECIFIC CONDUCTANCE

R (KCl) 325

R sample 1092

Micromhos

at 25 °C 298

pH 9.4

COLOR

TURB

% E

+1.6

ALKALINITY

HCO<sub>3</sub> 27 50 ml CO<sub>3</sub> 30

32.30 3.90 32.30 28.40

26.85 1.55 26.85 26.85

5.45 1.35 3.90 1.55

TOTAL ALKALINITY as CO<sub>3</sub> 54

as HCO<sub>3</sub> 109 as CaCO<sub>3</sub> 89

NITRATE 10 ml

ml Ag<sub>2</sub>SO<sub>4</sub> 0.0

A 1.460 mg 30

Factor 20.55

A sample 0.015

NO<sub>3</sub> ppm 0.3

BORON ml

A 1.015 mg 0.1

Factor 6.970

A sample 0.170

B ppm 0.3

e pm 0.12 Co

0.00 Mg

0.00 Sp

2.78 Na

0.02 K

0.00 Li

2.92

Sum

e pm 1.00 CO<sub>3</sub>

0.44 HCO<sub>3</sub>

0.90 SO<sub>4</sub>

0.34 Cl

0.15 F

0.00 NO<sub>3</sub>

2.83

Sum

NHA qual. positive weak

Lithium

Sample 12.5% T

0-1

L ppm 0.00

Strontium

Sample 0.0

0.0

Str ppm 0.0

Δ +0.09

Σ 5.75

4.032 x 2.78

SAR = 11

Monterey Bay Analytical Services  
 121 Hitchcock Canyon Rd., Carmel Valley, CA 93924  
 (831) 659-7538

ELAP Certification Number: 2385

Esalen Institute  
 Hwy 1  
 Big Sur, CA 93920  
 Attn: Dave Nelson

Reporting Date 4/20/02  
 Laboratory # 6714  
 Sample ID Lower Hot Spring (Old)  
 Sample Collector: T. Weidner-Holland  
 Date/Time Sampled 4/9/02 1055  
 Date/Time Received 4/9/02 1055

**Report of Analytical Results**

<u>Analyte</u>	<u>Units</u>	<u>Result</u>	<u>PQL</u>	<u>Method</u>	<u>Analyzed</u>	<u>MCL</u>
Alkalinity	mg/L	83	10	SM 2320 B	4/10/02	
Calcium	mg/L	1.8	0.5	SM 3111 B	4/16/02	
Chloride	mg/L	12	5	EPA 300	4/9/02	250**
Conductivity	umhos/cm	306	1	SM 2510 B	4/10/02	900**
Corrosivity		0.25		SM 2330 B	4/20/02	
Fluoride	mg/L	3.1	0.1	EPA 300	4/9/02	2*
Hardness	mg CaCO <sub>3</sub> /L	4	10	SM 2340 C	4/20/02	
Magnesium	mg/L	ND	0.1	SM 3111 B	4/16/02	
Nitrate	mg/L	6.7	1	EPA 300	4/9/02	45*
Nitrite-Nitrogen	mg/L	ND	0.05	EPA 300	4/9/02	1*
pH	pH Units	9.5		SM 4500-H+ B	4/9/02	
Potassium	mg/L	0.6	0.5	SM 3111 B	4/16/02	
Sodium	mg/L	63	0.1	SM 3111 B	4/16/02	
Sulfate	mg/L	27	10	EPA 300	4/9/02	250**
Total Dissolved Solids	mg/L	207	10	SM 2540 C	4/13/02	500**

mg/L = Milligrams per liter (=ppm)  
 PQL = Practical Quantification Limit  
 ND = Not Detected; less than PQL  
 SM = Standard Methods, 18th Edition, 1992.  
 EPA = Environmental Protection Agency  
 MCL = Maximum Contamination Level  
 \* = Primary Standards  
 \*\* = Secondary Standards

*S. Weidner-Holland*

Sigrid Weidner-Holland  
 Laboratory Director

Monterey Bay Analytical Services  
 121 Hitchcock Canyon Rd., Carmel Valley, CA 93924  
 (831) 659-7538  
 ELAP Certification Number: 2385

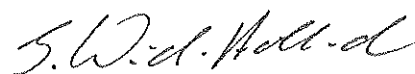
Esalen Institute  
 Hwy 1  
 Big Sur, CA 93920  
 Attn: Dave Nelson

Reporting Date 4/20/02  
 Laboratory # 6715  
 Sample ID Upper Hot Spring (New)  
 Sample Collector: T. Weidner-Holland  
 Date/Time Sampled 4/9/02 1055  
 Date/Time Received 4/9/02 1055

**Report of Analytical Results**

<u>Analyte</u>	<u>Units</u>	<u>Result</u>	<u>PQL</u>	<u>Method</u>	<u>Analyzed</u>	<u>MCL</u>
Alkalinity	mg/L	87	10	SM 2320 B	4/10/02	
Calcium	mg/L	1.7	0.5	SM 3111 B	4/16/02	
Chloride	mg/L	10	5	EPA 300	4/9/02	250**
Conductivity	umhos/cm	299	1	SM 2510 B	4/10/02	900**
Corrosivity		0.34		SM 2330 B	4/20/02	
Fluoride	mg/L	2.6	0.1	EPA 300	4/9/02	2*
Hardness	mg CaCO <sub>3</sub> /L	4	10	SM 2340 C	4/20/02	
Magnesium	mg/L	ND	0.1	SM 3111 B	4/16/02	
Nitrate	mg/L	5.6	1	EPA 300	4/9/02	45*
Nitrite-Nitrogen	mg/L	ND	0.05	EPA 300	4/9/02	1*
pH	pH Units	9.6		SM 4500-H+ B	4/9/02	
Potassium	mg/L	0.7	0.5	SM 3111 B	4/16/02	
Sodium	mg/L	61	0.1	SM 3111 B	4/16/02	
Sulfate	mg/L	23	10	EPA 300	4/9/02	250**
Total Dissolved Solids	mg/L	202	10	SM 2540 C	4/13/02	500**

mg/L = Milligrams per liter (=ppm)  
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