

GeothermEx, Inc.

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Harry Olson
Steam Reserve Corporation
Denver West Office Park
1707 Cole Blvd.
Golden, CO 80401

July 5, 1984

Dear Harry:

Enclosed is the lab analysis report for the brine and steam condensate samples collected during the June 2 test of SRC #88-11 in Fish Lake Valley, Nevada:

-ANATEC Laboratories Log. No.5485 (1-25), Series No.213/003

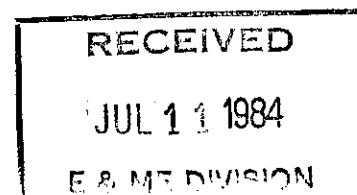
Together with the lab reports which I sent to you on July 2, you now have a complete set of the lab data from the June 2 and June 21 tests.

I'm working on re-calculating the raw data to reservoir concentrations, geothermometry, etc. today and tomorrow, and should have a report of results for you early next week.

Best wishes,



Chris Klein





ANATEC
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Mr. Chris Klein
GeothermEx, Inc.
5221 Central Ave., Ste 201
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June 28, 1984
ANATEC Log No: 5485 (1-25)
Series No: 213/003
(Part 2 of 2 parts)

Subject: Analytical Results for GeothermEx Project SRC Samples
Received June 4, 1984.

Dear Mr. Klein:

Chemical testing of the above-referenced samples is complete. All raw samples (designated by "R" on label) were filtered through 0.45-micron filters before analyses were performed. Various classical wet chemistry and atomic absorption measurements were made on the samples.

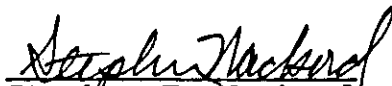
Summarized methodologies have been presented in our report for ANATEC Log No. 5557. Analytical results are summarized in Table 1 for the chloride measurements on the gas bomb residuals. The balance of analytical results are summarized in Tables 2 and 3.


Qualitative identification of the particulates in each gas bomb is pending.

If you have any questions, please call.

Submitted by:

Approved by:


Stephen F. Nackord
Project Manager


Greg Anderson, Director
Analytical Laboratories

/hs

Table 1. Chloride Content of Gas Bomb Residuals.

<u>Descriptor</u>	<u>Lab No.</u>	<u>Chloride (mg/L)</u>
GS#1	5485-1	<1
GS#2	5485-2	14
GS#3	5485-3	23

Table 2. Results for Samples Labeled "3,4,7,9,10,11 and 12".

Parameter	Descriptor, Lab No. (in parentheses), and Results (mg/L) ^a										
	3	4		7	9		10	11	12		
	Ru (-4*)	Ru (-5*)	Fd(1:10) (-6)	Ru (-7*)	Ru (-8*)	Ra (-9*)	Ru (-10*)	Ru (-11*)	Ru (-12*)	Fa (-13)	Fd(1:10) (-14)
pH (units at 25°C)	10.3	8.8	—	9.0	9.0	—	9.1	6.3	8.8	—	—
EC ^b , umhos/cm	2,800	4,300	—	4,300	4,000	—	4,400	290	3,800	—	—
EC ^c , dilute	3,100	4,400	—	4,300	4,200	—	4,400	290	3,900	—	—
<i>Talkeline</i>				206	203	190	206	159	198	191	
Calcium	66	2.9	—	1.1	1.5	36	0.95	0.62	1.1	3.0	—
Magnesium	0.01	0.11	—	0.07	0.06	11	0.07	0.11	0.04	0.35	—
Sodium	310	810	—	800	800	830	800	24	730	710	—
Potassium	290	47	—	46	46	44	45	1.7	38	39	—
Lithium	1.1	1.7	—	1.9	2.0	2.0	2.0	0.06	1.8	1.8	—
Alkalinity:											
Total (as CaCO ₃)	150	850	—	890	910	—	930	66	800	—	—
Bicarbonate (HCO ₃ ⁻)	110	890	—	760	770	—	780	81	700	—	—
Carbonate (CO ₃ ⁼)	40	70	—	160	170	—	170	0	140	—	—
Sulfate	770	360	—	280	240	—	260	6	210	—	—
Chloride	74	250	—	550	560	—	560	<10	510	—	—
Boron	2.0	11	—	16	14	—	15	2	13	—	—
Fluoride	1.0	12	—	11	11	—	11	0.6	10	—	—
<i>Total Alkal. Stearn Loss</i>	137	165 @330=198		192	190	196	192	471	188	185	
Silica (AA ^d)	110	190	33x10=330	300	290	320	300	10	280	270	31 x10=310
Silica (color ^d)	50	170	30x10=300	170	160	160	170	6	70	100	20 x10=200
<i>Total MSE</i>											
Iron (total)	0.03	0.04	—	0.04	0.05	12	0.05	0.22	<0.03	0.28	—
Sulfide	—	—	—	—	—	—	<0.05	<0.05	<0.05	—	—

^aUnless noted otherwise.

^bEC - Specific Conductance at 25°C.

^cSpecific conductance (umhos/cm) obtained from sample diluted to give conductivity in 75-150 umhos/cm region.

^dAA/color - refers to method of measurement; AA is atomic absorption and color is molybdate-reactive, colorimetric.

*Sample filtered (0.45 micron) in lab before analytical testing.

213/003, Log 5485

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Table 3. Results for Samples Labeled "15,16,17 and 18".

Parameter	Descriptor, Lab No. (in parentheses), and Results (mg/L) ^a										
	15				16					17	18
	Ru (-15*)	Rd(1:10) (-16*)	Fd(1:10) (-17)	Fa (-18)	RuBL (-19*)	RuC (-20*)	FaBL (-21)	Fd(1:10) (-22)	Fd(1:10) (-23)	(-24*)	Makeup (-25*)
pH (units at 25°C)	8.7	—	—	—	8.6	5.8	—	—	—	—	7.3
EC ^b , umhos/cm	3,900	—	—	—	3,500	190	—	—	—	—	90
EC ^c , dilute	3,800	—	—	—	3,500	190	—	—	—	—	100
Talkeline	198	—	—	199	199	81	194	—	—	—	27
Calcium	1.3	—	—	1.9	1.4	0.14	2.3	—	—	—	11
Magnesium	0.06	—	—	0.11	0.05	0.01	0.60	—	—	—	1.1
Sodium	730	—	—	710	730	4.1	730	—	—	—	6.8
Potassium	39	—	—	40	40	0.62	40	—	—	—	1.4
Lithium	1.8	—	—	1.9	1.8	0.01	1.8	—	—	—	0.01
Alkalinity:											
Total (as CaCO ₃)	810	—	—	—	800	90	—	—	—	—	50
Bicarbonate (HCO ₃ ⁻)	780	—	—	—	830	110	—	—	—	—	61
Carbonate (CO ₃ ²⁻)	110	—	—	—	70	0	—	—	—	—	0
Sulfate	200	—	—	—	190	<2	—	—	—	—	2
Chloride	510	—	—	—	490	<10	—	—	—	—	<10
Boron	14	—	—	—	14	0.2	—	—	—	—	0.2
Fluoride	10	—	—	—	10	<0.1	—	—	—	—	0.2
Tal HSL	185	—	—	192	185	185	183	192	190	—	78
Silica (AA ^d)	270	30	30 ₁₀₌₂₀₀	270	270	1.8	260	30 ₁₀₌₂₀₀	29 ₁₀₌₂₀₀	1.8	26
Silica (color ^d)	150	20	20 ₁₀₌₂₀₀	230	140	<1	240	20 ₁₀₌₂₀₀	20 ₁₀₌₂₀₀	1	20
Iron (total)	0.05	—	—	0.12	0.04	0.05	0.23	—	—	—	0.99
Sulfide	<0.05	—	—	—	<0.05	<0.05	—	—	—	—	—

^aUnless noted otherwise.

^bEC - Specific Conductance at 25°C.

^cSpecific conductance (umhos/cm) obtained from sample diluted to give conductivity in 75-150 umhos/cm region.

^dAA/color - refers to method of measurement; AA is atomic absorption and color is molybdate-reactive, colorimetric.

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