
UNLV/FLYNN
MS-23

ID #: A:MS23
DATE: 10-09-86

POND NEAR OBSERVATION WELL #1
SAN EMIDIO / MIKE STEWART / EMPHIRE

TE 149°F

SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
Na	1432.32	1	.49	.623E-01
K	123.24	1	.61	.315E-02
Ca	153.59	1	.18	.383E-02
Mg	.25	1	.16	.105E-04
Fe	.04	1	.02	.655E-06
Al	N.D.	1	.61	< .226E-04
SiO2	212.09	1	.52	.353E-02
B	6.00	1	.05	.555E-03
Li	2.09	1	.04	.301E-03
Sr	8.86	1	.01	.101E-03
Zn	N.D.	1	.06	< .932E-06
Ag	N.D.	1	.05	< .452E-06
Au	N.D.	1	.49	< .651E-05
Cu	N.D.	1	.10	< .495E-06
Ba	N.D.	1	.30	< .222E-05
Be	N.D.	1	.00	< .135E-06
Bi	N.D.	1	2.44	< .117E-04
Cd	N.D.	1	.05	< .434E-06
Ce	N.D.	1	.24	< .174E-05
Co	N.D.	1	.02	< .414E-06
Cr	N.D.	1	.12	< .234E-05
Pb	N.D.	1	.06	< .959E-06
La	N.D.	1	.12	< .878E-06
Mn	N.D.	1	.24	< .444E-05
Mo	N.D.	1	.61	< .635E-05
Ni	N.D.	1	.12	< .208E-05
Pb	N.D.	1	.24	< .119E-05
Sn	N.D.	1	.12	< .103E-05
Sb	N.D.	1	.73	< .601E-05
Te	N.D.	1	1.22	< .955E-05
Th	N.D.	1	2.44	< .105E-04
Ti	N.D.	1	.12	< .255E-05
U	N.D.	1	6.09	< .256E-04
V	N.D.	1	1.22	< .239E-04
W	N.D.	1	.12	< .663E-06
Zn	N.D.	1	.12	< .134E-05

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TOTAL ALKALINITY AS				
HCO3	50.00	2	1.00	.819E-03
CO3	4.00	2	1.00	.667E-04
Cl	2410.00	2	1.00	.680E-01
F	5.10	5	.05	.268E-03
SO4	223.00	11	1.00	.232E-02
Br	N.A.	2	1.00	< .125E-04
I	N.A.	2	.10	< .788E-06
NO3	N.A.	9	.10	< .161E-05
S	N.A.	2	1.00	< .312E-04
PO4	N.D.	1	1.84	< .194E-04

TOTAL DISSOLVED SOLIDS

MEASURED	4466.00	4	4.00
CALCULATED	4605.18	6	
100*MEAS/CALC	96.98		
pH	8.70	7	

ADDITIONAL ANALYSIS:

EC 8000 μ MHQS/CM
Hg 0.3 PPB
Se < 0.5 PPB

ANALYTICAL METHODS:

1. INDUCTIVELY COUPLED PLASMA SPECTROMETER
2. TITRATION (LABORATORY)
3. TITRATION (FIELD)
4. GRAVIMETRIC
5. SPECIFIC ION ELECTRODE
6. METHOD OF HEM (1970, USGS Water Supply Paper 1473)
7. pH METER (LABORATORY)
8. pH METER (FIELD)
9. COLORIMETRIC
10. ATOMIC ABSORPTION
11. TURBIDIMETRIC

N.D. - NOT DETECTED
N.A. - NOT ANALYZED

	Milliequivalents/Liter
CATIONS	
Na	62.30613
K	3.15127
Ca	7.66434
Mg	.02096
Fe	.00131
Li	.30125
Sr	.20224
SUM OF CATIONS:	73.64751
ANIONS	
HCO3	.81950
CO3	.13332
Cl	67.98610
F	.26846
SO4	4.64286
SUM OF ANIONS:	73.85024
CATION-ANION BALANCE	-.20274
BALANCE DIFF. CATION + ANION	-.14

TRILINEAR DIAGRAM COORDINATES

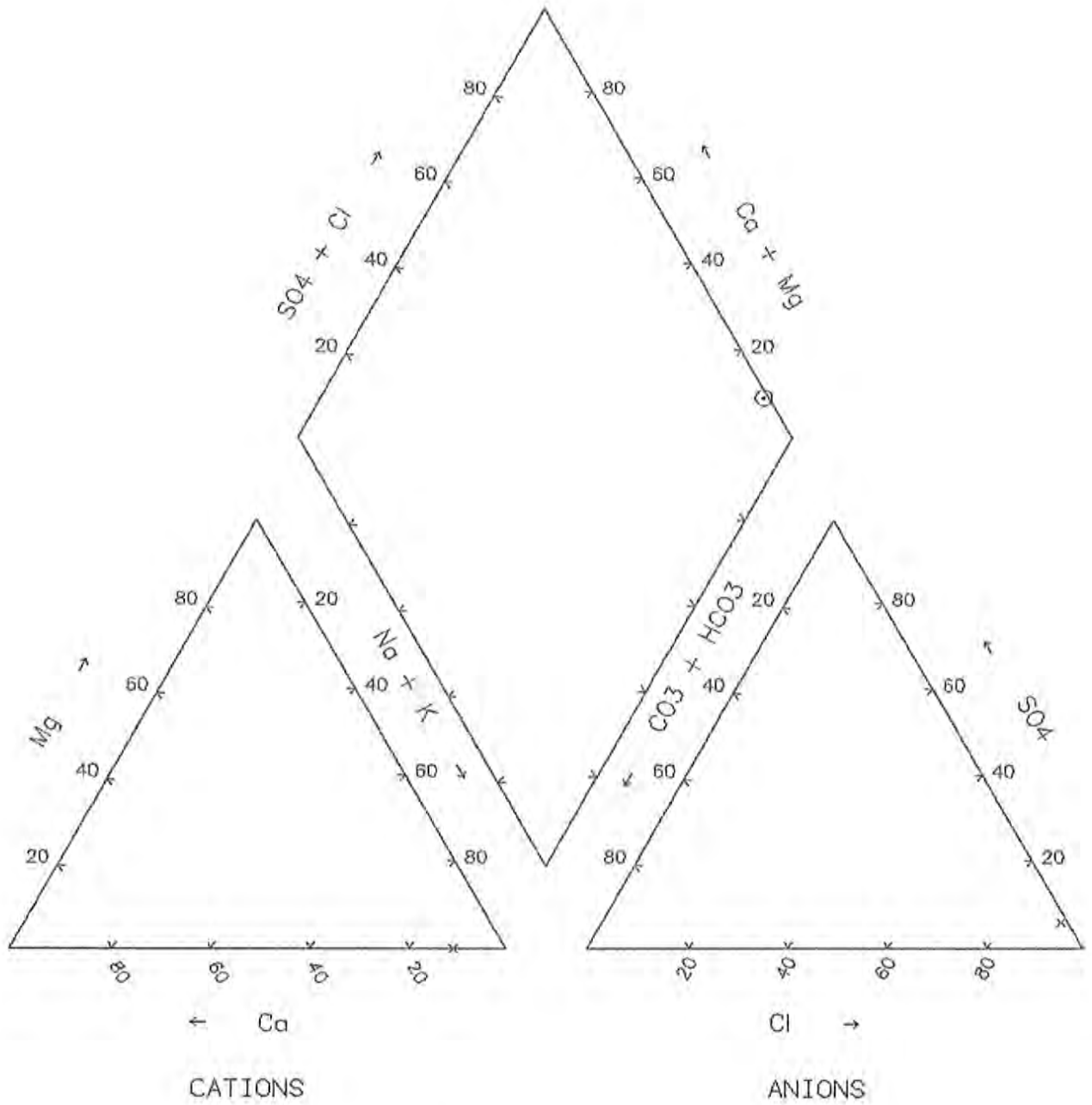
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	Meq / L	Percent (Meq / L)
CATIONS		
Na	62.30613	85.18435
K	3.15127	4.30839
Ca	7.66434	10.47861
Mg	.02096	.02865
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TOTAL	73.14270	100.00000
ANIONS		
HCO3	.81950	1.11373
CO3	.13332	.18119
SO4	4.64286	6.30980
Cl	67.98610	92.39529
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TOTAL	73.58178	100.00000

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PERCENT OF TOTAL
MILLIEQUIVALENTS PER LITER

GEO THERMOMETERS

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Geothermometer	Temp (deg C)	Reference
Quartz (no steam loss)	184.	Fournier (1981)
Quartz (maximum steam loss)	171.	Fournier (1981)
Chalcedony	163.	Fournier (1981)
alpha-Cristobalite	134.	Fournier (1981)
beta-Cristobalite	85.	Fournier (1981)
Amorphous Silica	60.	Fournier (1981)
Na/K (Fournier)	204.	Fournier (1979)
Na/K (Truesdell)	172.	Fournier (1981)
Na-K-Ca	193. beta= .33	Fournier and Truesdell (1974)
Na-K-Ca with Mg correction	148. R= .19	Fournier and Potter (1979)
Na/Li	38.	Fouillac and Michard (1981)