
UNLV/FLYNN
MS-24

ID #: A:MS24
DATE: 10-09-86

Irrigation Well #1
Empire Farms T=68°F

SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
Na	465.31	1	.49	.202E-01
K	12.03	1	.61	.308E-03
Ca	69.85	1	.18	.174E-02
Mg	15.87	1	.16	.653E-03
Fe	N.D.	1	.02	< .437E-06
Al	N.D.	1	.61	< .226E-04
SiO2	51.86	1	.52	.863E-03
B	.85	1	.05	.785E-04
Li	.04	1	.04	.549E-05
Sr	1.35	1	.01	.154E-04
Zn	N.D.	1	.06	< .933E-06
Ag	N.D.	1	.05	< .452E-06
As	N.D.	1	.49	< .651E-05
Au	N.D.	1	.10	< .496E-06
Ba	N.D.	1	.31	< .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	< .235E-05
Cu	N.D.	1	.06	< .960E-06
La	N.D.	1	.12	< .878E-06
Mn	N.D.	1	.24	< .444E-05
Mo	N.D.	1	.61	< .636E-05
Ni	N.D.	1	.12	< .208E-05
Pb	N.D.	1	.24	< .118E-05
Sn	N.D.	1	.12	< .103E-05
Sb	N.D.	1	.73	< .601E-05
Te	N.D.	1	1.22	< .956E-05
Th	N.D.	1	2.44	< .105E-04
Ti	N.D.	1	.12	< .255E-05
U	N.D.	1	6.10	< .256E-04
V	N.D.	1	1.22	< .239E-04
W	N.D.	1	.12	< .664E-06
Zr	N.D.	1	.12	< .134E-05

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TOTAL ALKALINITY AS				
HCO3	178.00	2	1.00	.292E-02
CO3	N.D.	2	1.00	< .167E-04
Cl	730.00	2	1.00	.206E-01
F	.43	5	.05	.226E-04
SO4	125.00	11	1.00	.130E-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	1514.00	4	4.00
CALCULATED	1560.11	6	
100*MEAS/CALC	97.04		

pH 8.13 7

ADDITIONAL ANALYSIS:

EC 3100 μ MHDS/CM

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	20.24090
K	.30762
Ca	3.48527
Mg	1.30565
Li	.00549
Sr	.03083
SUM OF CATIONS:	25.37575
ANIONS	
HCO3	2.91742
Cl	20.59330
F	.02264
SO4	2.60250
SUM OF ANIONS:	26.13585
CATION-ANION BALANCE	-.76010
BALANCE DIFF, CATION + ANION	-1.48

TRILINEAR DIAGRAM COORDINATES

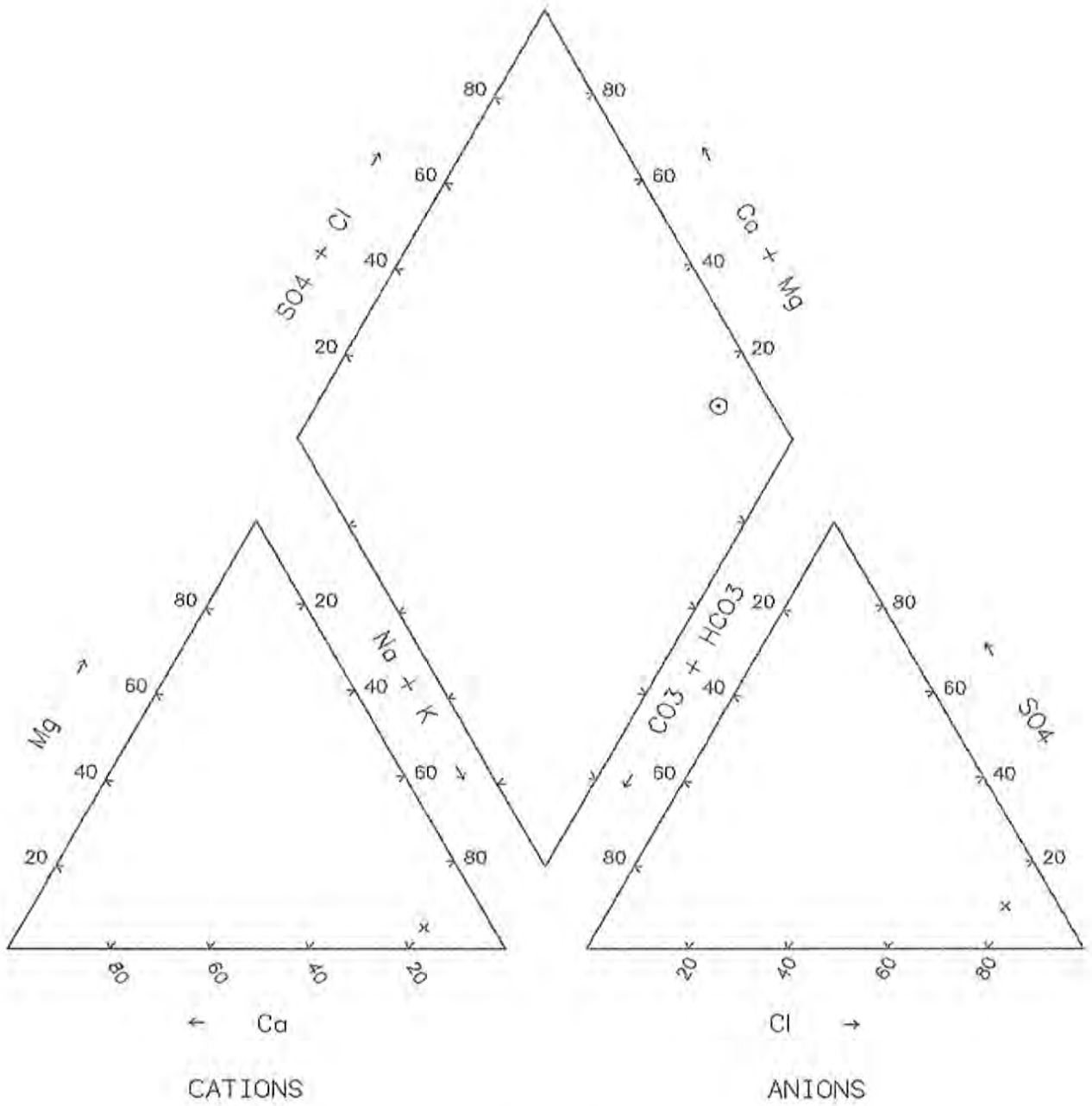
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	Meq / L	Percent (Meq / L)
CATIONS		
Na	20.24090	79.87907
K	.30762	1.21399
Ca	3.48527	13.75432
Mg	1.30565	5.15263
<hr/>		
TOTAL	25.33943	100.00000
ANIONS		
HCO3	2.91742	11.17220
CO3	.00000	.00000
SO4	2.60250	9.96622
Cl	20.59330	78.86159
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TOTAL	26.11322	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)	104.	Fournier (1981)
Quartz (maximum steam loss)	104.	Fournier (1981)
Chalcedony	74.	Fournier (1981)
alpha-Cristobalite	53.	Fournier (1981)
beta-Cristobalite	6.	Fournier (1981)
Amorphous Silica	-13.	Fournier (1981)
Na/K (Fournier)	123.	Fournier (1979)
Na/K (Truesdell)	77.	Fournier (1981)
Na-K-Ca	95. beta=1.33	Fournier and Truesdell (1974)
Na-K-Ca with Mg correction	73. R=25.61	Fournier and Potter (1979)
Na/Li	-49.	Fouillac and Michard (1981)