

Well: Pueblo Valley Federal 66-22A
 Sample Date: 11/2/93 Sample Time: 12:28
 Laboratory: University of Utah Research Institute

WATER SAMPLE

DON MICHELS
 9304

ANADARKO
PETROLEUM CORPORATION
PROPRIETARY DATA

ID #: A:8930986.DM
 DATE: 11-19-93

SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
Na	399.62	1	.52	.174E-01
K	29.69	1	.64	.759E-03
Ca	18.57	1	.19	.463E-03
Mg	7.09	1	.17	.292E-03
Fe	4.47	1	.03	.800E-04
Al	1.63	1	.64	.604E-04
SiO2	179.91	1	.55	.299E-02
B	14.59	1	.05	.135E-02
Li	1.09	1	.04	.157E-03
Sr	.91	1	.01	.104E-04
Zn	N. D.	1	.06	< .987E-06
Ag	N. D.	1	.05	< .478E-06
As	1.11	1	.52	.148E-04
Au	N. D.	1	.10	< .524E-06
Ba	N. D.	1	.32	< .235E-05
Be	N. D.	1	.00	< .143E-06
Bi	N. D.	1	2.58	< .123E-04
Cd	N. D.	1	.05	< .459E-06
Ce	N. D.	1	.26	< .184E-05
Co	N. D.	1	.03	< .438E-06
Cr	N. D.	1	.13	< .248E-05
Cu	N. D.	1	.06	< .102E-05
La	N. D.	1	.13	< .929E-06
Mn	N. D.	1	.26	< .470E-05
Mo	N. D.	1	.64	< .672E-05
Ni	N. D.	1	.13	< .220E-05
Pb	N. D.	1	.26	< .125E-05
Sn	N. D.	1	.13	< .109E-05
Sb	N. D.	1	.52	< .424E-05
Te	N. D.	1	1.29	< .101E-04
Th	N. D.	1	2.58	< .111E-04
Ti	N. D.	1	.13	< .269E-05
U	N. D.	1	6.45	< .271E-04
V	N. D.	1	1.29	< .253E-04
W	N. D.	1	.13	< .702E-06
Zr	N. D.	1	.13	< .141E-05
NH4	N. A.	5	.12	< .665E-05
Cs	N. A.	10	.50	< .376E-05
Rb	N. A.	10	.30	< .351E-05

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SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
TOTAL ALKALINITY AS				
HCO3	303.00	2	1.00	.497E-02
CO3	6.70	2	1.00	.112E-03
Cl	257.00	2	1.00	.725E-02
F	7.00	5	.05	.368E-03
SO4	316.00	4	1.00	.329E-02
Br	1.60	2	.50	.200E-04
I	N. A.	2	.10	< .788E-06
NO3	N. D.	9	.10	< .161E-05
S	N. A.	2	.20	< .624E-05
PO4	N. D.	1	1.95	< .205E-04

TOTAL DISSOLVED SOLIDS

MEASURED	1444.00	4	4.00
CALCULATED	1395.97	6	
100*MEAS/CALC	103.44		
pH	8.36	7	

ADDITIONAL ANALYSIS:

EC 2000 u mhos/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

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	Milliequivalents/Liter
CATIONS	
Na	17.38347
K	.75917
Ca	.92664
Mg	.58322
Fe	.16007
Al	.18126
Li	.15707
Sr	.02075
As	.01909
SUM OF CATIONS:	20.19074
ANIONS	
HCO3	4.96617
CO3	.22331
Cl	7.24997
F	.36848
SO4	6.57912
Br	.02002
SUM OF ANIONS:	19.40707
CATION-ANION BALANCE	.78368
BALANCE DIFF. CATION + ANION	1.98