Well: Pueblo Valley Federal 66-22A
Sample Date: 11/2/93 Sample Time: 14:00 WATER SAMPLE CHEMISTRY
Laboratory: University of Utah Research Institute

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DON MICHELS
9306

ANADARKO
PETROLEUM CORPORATION
PROPRIETARY DATA

ID #: A:8930988.DM
DATE: 11-19-93

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SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
Na	422.98	1	.51	.184E-01
K	28.36	1	.63	.725E-03
Ca	11.59	1	.19	.289E-03
Mg	1.33	1	.17	.547E-04
Fe	.88	1	.03	.158E-04
Al	N.D.	1	.63	< .235E-04
SiO2	223.82	1	.55	.373E-02
B	14.20	1	.05	.131E-02
Li	.82	1	.04	.118E-03
Sr	.56	1	.01	.639E-05
Zn	N.D.	1	.06	< .971E-06
Ag	N.D.	1	.05	< .471E-06
As	1.33	1	.51	.178E-04
Au	N.D.	1	.10	< .516E-06
Ba	N.D.	1	.32	< .231E-05
Be	N.D.	1	.00	< .141E-06
Bi	N.D.	1	2.54	< .122E-04
Cd	N.D.	1	.05	< .452E-06
Ce	N.D.	1	.25	< .181E-05
Co	N.D.	1	.03	< .431E-06
Cr	N.D.	1	.13	< .244E-05
Cu	N.D.	1	.06	< .999E-06
La	N.D.	1	.13	< .914E-06
Mn	N.D.	1	.25	< .462E-05
Mo	N.D.	1	.63	< .662E-05
Ni	N.D.	1	.13	< .216E-05
Pb	N.D.	1	.25	< .123E-05
Sn	N.D.	1	.13	< .107E-05
Sb	.80	1	.51	.657E-05
Te	N.D.	1	1.27	< .995E-05
Th	N.D.	1	2.54	< .109E-04
Ti	N.D.	1	.13	< .265E-05
U	N.D.	1	6.35	< .267E-04
V	N.D.	1	1.27	< .249E-04
W	N.D.	1	.13	< .691E-06
Zr	N.D.	1	.13	< .139E-05
NH4	N.A.	5	.12	< .665E-05
Cs	N.A.	10	.50	< .376E-05
Rb	N.A.	10	.30	< .351E-05

ANADARKO
PETROLEUM CORPORATION
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DON MICHELS
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ID #: A:8930988.DM
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SPECIES	CONCENTRATION (ppm)	ANALYTICAL METHOD	DETECTION LIMITS	CONCENTRATION (MOL/L)
TOTAL ALKALINITY AS				
HCO3	285.00	2	1.00	.467E-02
CO3	13.00	2	1.00	.217E-03
Cl	255.00	2	1.00	.719E-02
F	6.85	5	.05	.361E-03
SO4	314.00	4	1.00	.327E-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	1.92	< .202E-04
TOTAL DISSOLVED SOLIDS				
MEASURED	1440.00	4	4.00	
CALCULATED	1437.25	6		
100*MEAS/CALC	100.19			
pH	8.49	7		

ADDITIONAL ANALYSIS:

EC 2050 u mhos/cm

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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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DON MICHELS
9306

ANADARKO
PETROLEUM CORPORATION
PROPRIETARY DATA

ID #: A:8930988.DM
DATE: 11-19-93

	Milliequivalents/Liter
CATIONS	
Na	18.39963
K	.72517
Ca	.57834
Mg	.10941
Fe	.03151
Li	.11816
Sr	.01277
As	.02288
Sb	.01968
SUM OF CATIONS:	20.01754
ANIONS	
HCO3	4.67115
CO3	.43329
Cl	7.19355
F	.36058
SO4	6.53748
Br	.02002
SUM OF ANIONS:	19.21607
CATION-ANION BALANCE	.80147
BALANCE DIFF. CATION + ANION	2.04

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

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DON MICHELS
9304

ANADARKO
PETROLEUM CORPORATION
PROPRIETARY DATA

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

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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