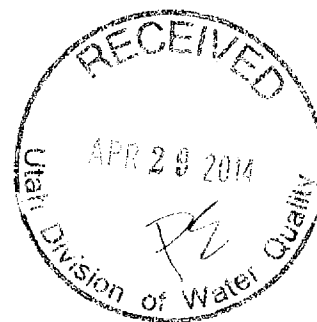


Appendix II-A



To: W.W. Walker  
From: A. Williams  
Subject: Table of Water Analysis  
Date: May 9, 1975

Attached are tables of the water analysis that were run by the U.S.G.S. on samples taken from the Wah Wah Valley wells to date.

#1 is Wah #1 sample taken during test pumping in September, 1973.

#2 is Wah #1 sample taken during test pumping in February 13, 1974.

#3 is Wah #29 sample taken during test pumping on February 16, 1975.

Document Date 4/29/2014



DWQ-2014-006055

II-A

	#1 MG/L	#2 MG/L	#3 MG/L
ALK. Tot. (as CaO <sub>3</sub> )	139	125	116
B. Carbonate	169	152	141
Baron Diss. UG/L	210	190	141
Calcium Diss.	21	23	47
Carbonate	0	0	63
Carbon Dioxide		3.9	
Chloride Diss.	32	28	63
Fluoride Diss.	1.0	1.0	0.6
Hardness Noncarb.	0	0	72
Hardness Total	79	88	190
Magnesium Diss.	6.4	7.3	17
Manganese Diss. UG/L		0	0
NO <sub>2</sub> +NO <sub>3</sub> as N Diss	0.85	1.2	2.1
Phos. Ortho Diss. as P.	0.22	0.05	0.06
Phosphate Diss. Ortho	0.57	0.15	0.18
Potassium Diss.	11	11	9.1
Residue Diss. Calc Sum.	385	349	337
Silica Diss.	58	65	9.9
Sodium Diss.	86	67	37
Sulfate Diss.	82	66	74
-----			
Conductivity	535	514	565
pH	9.3	7.8	8.1
Residue Diss. Ton/AFT	0.52	0.47	0.46
SAR	4.2	3.1	1.2
Sodium %	67	59	29
Water Temp (Deg C)		24.5°	21.5°
Iron Diss. UG/L		170	10

II-A

<u>Anions</u>	#1		#2		#3	
	(MG/L)	(MEQ/L)	(MG/L)	(MEQ/L)	(MG/L)	(MEQ/L)
B. Carbonate	169	2.770	152	2.492	141	2.311
Carbonate	0	0.000	0	0.000	0	0.000
Chloride Diss.	32	0.903	28	0.790	63	1.778
Fluoride Diss.	1.0	0.053	1.0	0.053	0.6	0.032
Sulfate Diss.	82	1.708	66	1.375	74	1.541
NO <sub>2</sub> +NO <sub>3</sub> as N D	0.85	<u>0.061</u>	1.2	<u>0.086</u>	2.1	<u>0.150</u>
Totals		5.493		4.794		5.810

<u>Cations</u>	#1		#2		#3	
	(MG/L)	(MEQ/L)	(MG/L)	(MEQ/L)	(MG/L)	(MEQ/L)
Calcium Diss.	21	1.048	23	1.148	47	2.346
Magnesium Diss.	6.4	0.527	7.3	0.601	17	1.399
Potassium Diss.	11	0.282	11	0.282	9.1	0.233
Sodium Diss	86	<u>3.741</u>	67	<u>2.915</u>	37	<u>1.610</u>
Totals		5.597		4.944		5.586

% Difference	0.93	1.54	-1.97
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## Appendix II-B

EARTH SCIENCES, INC.  
Cedar City, Utah

WATER ANALYSES

Laboratory No.:	L6672	L6673	L6674	L6675
Date Collected:	6/10/75	6/9/75	6/10/75	6/9/75
Time Collected:	9:00 AM	6:00 PM	7:40 AM	5:00 PM
Sample Point:	Wah Wah Valley C-246*	Wah Wah Valley Wah #1	Wah Wah Valley Wah #26	Wah Wah Vall. Wah #29

Physical Properties

	L6672	L6673	L6674	L6675
pH	7.2	8.1	7.7	8.0
Alkalinity as CaCO <sub>3</sub> (mg/l)	178	127	120	114
Specific Conductance (mmhos/cm @ 25°C)	2600	520	490	560

Nutrients

	L6672	L6673	L6674	L6675
Nitrate Nitrogen as N (mg/l)	< 0.05	1.1	2.2	0.10

Chemical Inorganic

	L6672	L6673	L6674	L6675
Chloride (mg/l)	254	70	45	70
Fluoride (mg/l)	0.4	0.8	0.3	0.4
Hardness as CaCO <sub>3</sub> (mg/l)	23	73	158	144
Silica as SiO <sub>2</sub> (mg/l)	26	65	55	49
Sulfate as SO <sub>4</sub> (mg/l)	1100	90	50	70

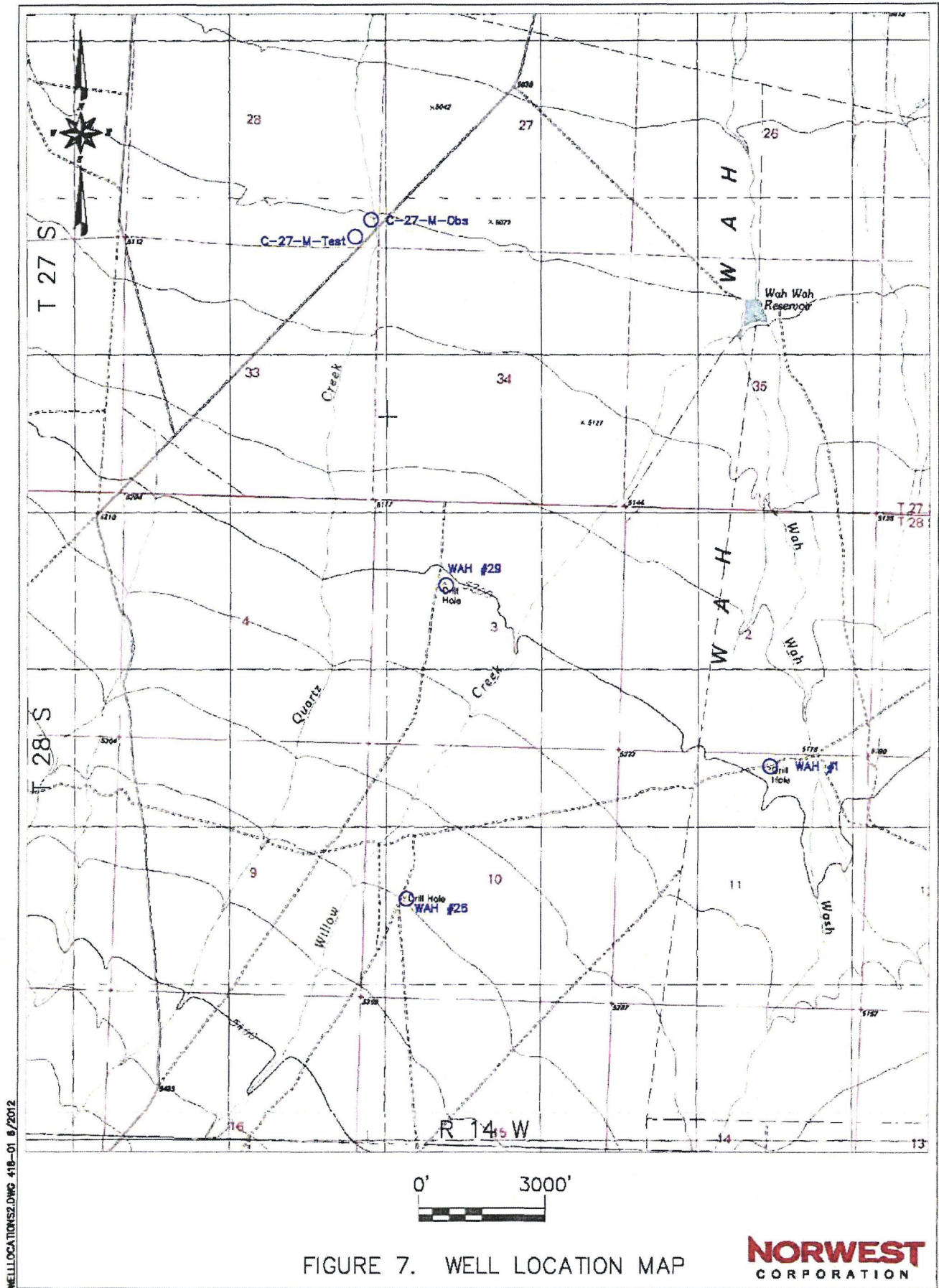
Metals

	L6672	L6673	L6674	L6675
Arsenic (mg/l)	< 0.01	0.02	< 0.01	< 0.01
Barium (mg/l)	0.20	0.1	0.1	0.1
Cadmium (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Calcium (mg/l)	8.5	19.5	43	33
Chromium, total (mg/l)	< 0.05	< 0.05	< 0.05	< 0.05
Iron (mg/l)	0.30	6.5	0.30	22
Lead (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Magnesium (mg/l)	2.7	5.5	12.5	15
Manganese (mg/l)	0.05	0.95	< 0.05	0.25
Mercury (mg/l)	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Selenium (mg/l)	< 0.005	< 0.005	< 0.005	< 0.005
Silver (mg/l)	< 0.05	< 0.05	< 0.05	< 0.05
Sodium (mg/l)	190	75	25	41

Chemical Organic

	L6672	L6673	L6674	L6675
Cyanide (mg/l)	0.02	0.03	0.02	0.03

\* - DRILLED ON THE  
MOUNTAIN



WELLLOCATIONS.DWG 418-01 8/2012

FIGURE 7. WELL LOCATION MAP

**NORWEST**  
CORPORATION

