

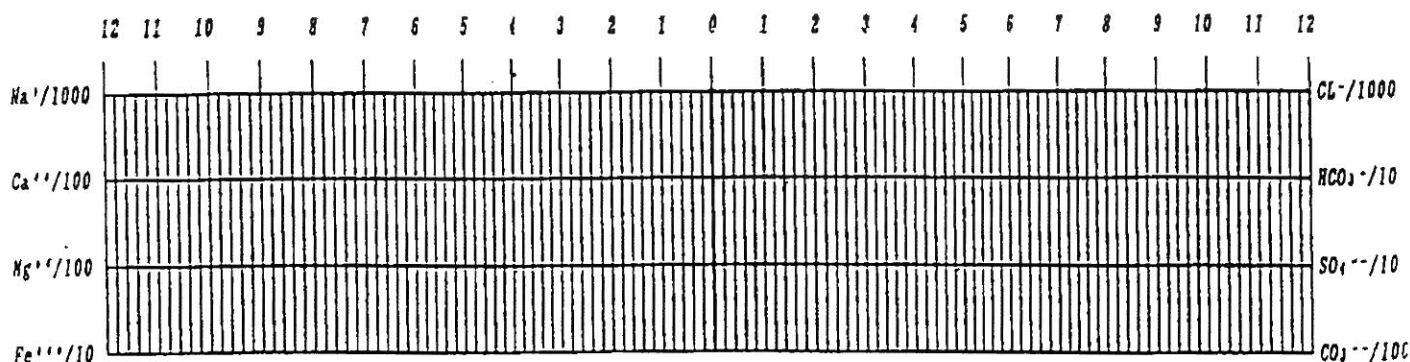
LAB NO.:	1198	COMPLETED:	02/23/94
COMPANY:	PER	SAMPLED:	01/25/95
REQ. BY:	George Fargis	RECEIVED:	02/10/94
WELL NAME:	#1 Speaker State	LOCATION:	Sec.36T.11SR.51W STATE: Colorado
COUNTY:	Kit Carson FORMATION:	DEPTH:	
SAMP.FROM:	Treater Water Dump	SAMP. BY:	Client

pH	7.53	SPECIFIC GRAVITY		1.057 @ 60 F	
		<0.008 OHM METERS @ 60 F			
RESISTIVITY (Calc.)		Mg/L	PPM	Mg/L	RV %
CATIONS					
SODIUM, Na (Calc.)		24929.9	23585.6	1084.38	42.44
CALCIUM, Ca		2485.6	2351.5	124.03	4.85
MAGNESIUM, Mg		839.2	793.9	69.07	2.70
IRON, Fe					
BARIUM, Ba					
STRONTIUM, Sr					
ANIONS					
CHLORIDE, Cl		44399.4	42005.1	1252.45	49.02
BICARBONATE, HCO3		256.8	243.0	4.21	0.16
CARBONATE, CO3		0.0	0.0	0.00	0.00
HYDROXIDE, OH		0.0	0.0	0.00	0.00
SULFATE, SO4		1000.0	946.1	20.82	0.81
TOTAL		73911.0	69925.2	2554.96	100.00

PRIMARY SALINITY	84.89 % Total Reaction Value
SECONDARY SALINITY	14.79 % Total Reaction Value
PRIMARY ALKALINITY	0.00 % Total Reaction Value
SECONDARY ALKALINITY	0.33 % Total Reaction Value
CaCl2/MgCl2 RATIO	2.29

LennTech TDS
calculation
confirmed
KOEHLER
10/24/2018

-----REACTION VALUES-----
MILLEQUIVALENTS PER LITER



REMARKS:

CC:



FORMATION WATER ANALYSIS

LAB NO.: 3957
 COMPANY: UPR
 REQ. BY: George Hargis
 WELL NAME: Speaker 3-13 LOCATION:
 COUNTY: FORMATION: Morrow DEPTH:
 SAMP. FROM: Treater Water Dump SAMP. BY: client

COMPLETED: 5/7/93

SAMPLED: 4/15/93

RECEIVED: 4/20/93

STATE:

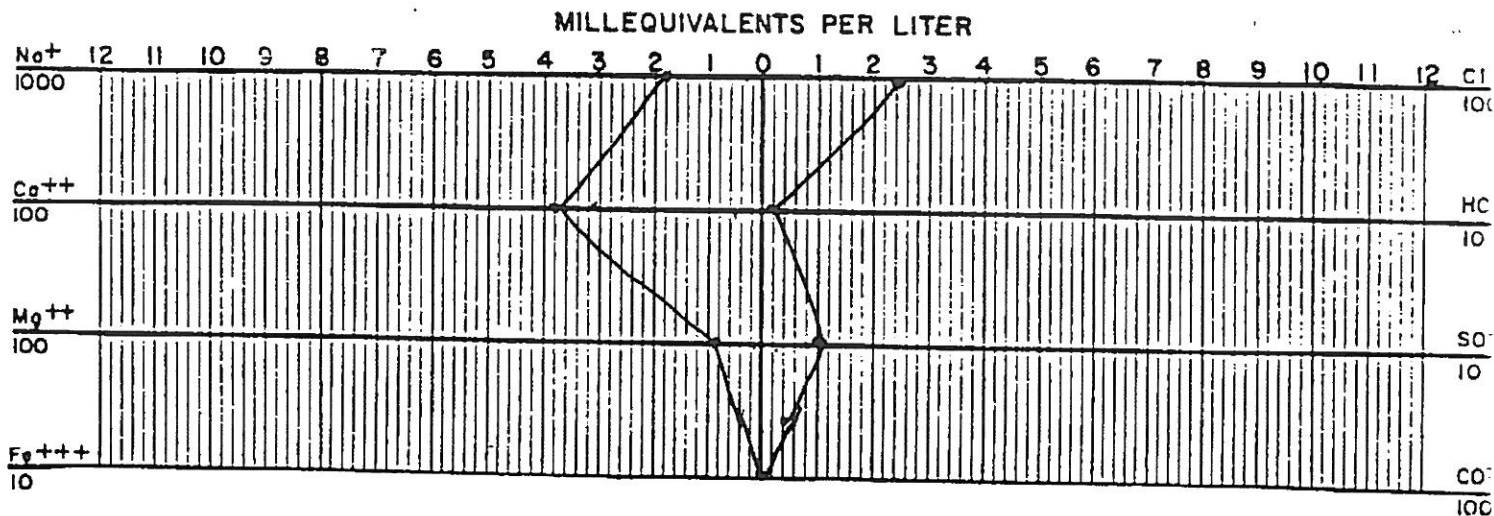
DEPTH:

SAMP. BY: client

pH	5.6	SPECIFIC GRAVITY	1.088 @ 60 F
RESISTIVITY (Calc.)	0.070 OHM METERS @ 60 F		
CATIONS	Mg/L	PPM	Me/L
SODIUM, Na (Calc.)	45092.5	41445.3	1961.40
CALCIUM, Ca	7637.2	7019.4	381.10
MAGNESIUM, Mg	1058.1	972.5	87.09
IRON, Fe			
BARIUM, Ba			
STRONTIUM, Sr			
ANIONS			
CHLORIDE, Cl ⁻	35722.7	78789.2	2418.13
BICARBONATE, HCO ₃ ⁻	88.8	81.6	1.43
CARBONATE, CO ₃ ⁻	0.0	0.0	0.00
HYDROXIDE, OH ⁻	0.0	0.0	0.00
SULFATE, SO ₄ ⁻	480.0	441.2	9.99
TOTAL	140079.2	128749.3	4859.16

PRIMARY SALINITY 80.73 % Total Reaction Value
 SECONDARY SALINITY 19.21 % Total Reaction Value
 PRIMARY ALKALINITY 0.00 % Total Reaction Value
 SECONDARY ALKALINITY 0.06 % Total Reaction Value
 CaCl₂/MgCl₂ RATIO 5.10

LennTech TDS
 calculation
 confirmed
 KOEHLER
 10/24/2018



FORMATION WATER ANALYSIS

NO.: 4716
 PANY: UPR
 BY: George Hargis
 L NAME: Christopher#6 32-1
 NTY: Cheyenne
 P.FROM: Treter Water Dump

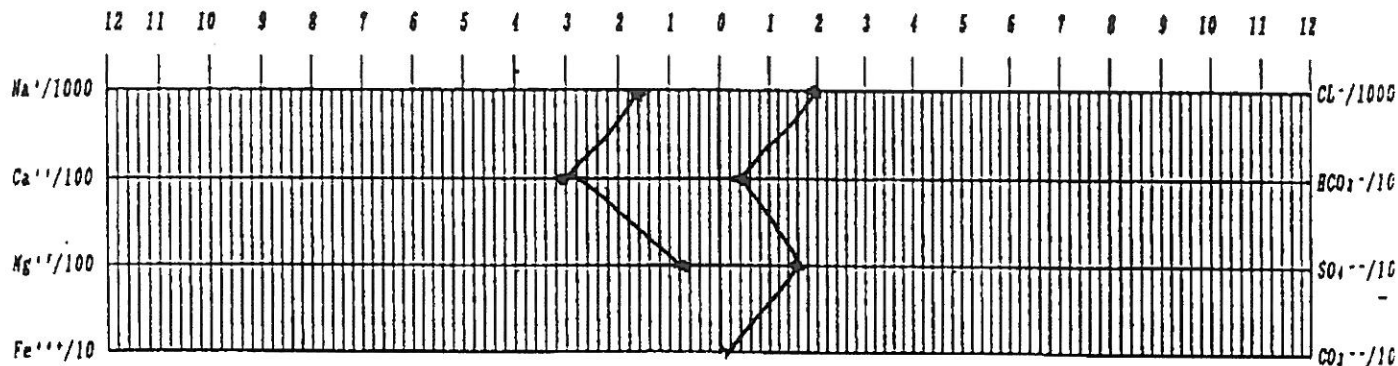
COMPLETED: 7/14/94
 SAMPLED: 6/20/94
 RECEIVED: 6/30/94
 LOCATION: Sec.1T.12SR.51W
 STATE: CO
 DEPTH: 6636-6637
 SAMP. BY: Client

pH	6.36	SPECIFIC GRAVITY		1.085 @ 60	F
RESISTIVITY (Calc.)	0.052 OHM METERS @ 60			F	
<u>CATIONS</u>	<u>Mg/L</u>	<u>PPM</u>	<u>Me/L</u>	<u>RV %</u>	
SODIUM, Na (Calc.)	37252.0	34333.7	1620.36	40.54	
CALCIUM, Ca	6093.7	5616.3	304.08	7.61	
MAGNESIUM, Mg	900.0	829.5	74.07	1.85	
IRON, Fe					
BARIUM, Ba					
STRONTIUM, Sr					
<u>ANIONS</u>					
CHLORIDE, Cl	70200.0	64700.5	1980.25	49.54	
BICARBONATE, HCO3	148.4	136.7	2.43	0.06	
CARBONATE, CO3	0.0	0.0	0.00	0.00	
HYDROXIDE, OH	0.0	0.0	0.00	0.00	
SULFATE, SO4	760.0	700.5	15.82	0.40	
TOTAL	115354.1	106317.1	3997.02	100.00	

PRIMARY SALINITY 81.08 % Total Reaction Value
 SECONDARY SALINITY 18.80 % Total Reaction Value
 PRIMARY ALKALINITY 0.00 % Total Reaction Value
 SECONDARY ALKALINITY 0.12 % Total Reaction Value
 CaCl2/MgCl2 RATIO 4.79

LennTech TDS
 calculation
 confirmed
 KOEHLER
 10/24/2018

REACTION VALUES MILLEQUIVALENTS PER LITER



REMARKS:

CC:

INVOICE

Cenref Inorganic Dept.
 ANALYST

