

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : PRONGHORN ~~ATTO~~ AHD Analysis No. : 014
 Well : BATTERY
 Sample Pt. : TANK 6-23s-33e

ANALYSIS		mg/L	* meq/L
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1.	pH	6.0	
2.	H2S	4 PPM	
3.	Specific Gravity	1.100	
4.	Total Dissolved Solids	159486.3	
5.	Suspended Solids	NR	
6.	Dissolved Oxygen	NR	
7.	Dissolved CO2	NR	
8.	Oil In Water	NR	
9.	Phenolphthalein Alkalinity (CaCO3)		
10.	Methyl Orange Alkalinity (CaCO3)		
11.	Bicarbonate HCO3	976.0	HCO3 16.0
12.	Chloride Cl	95850.0	Cl 2703.8
13.	Sulfate SO4	1100.0	SO4 22.9
14.	Calcium Ca	4400.0	Ca 219.6
15.	Magnesium Mg	950.2	Mg 78.2
16.	Sodium (calculated) Na	56210.1	Na 2445.0
17.	Iron Fe	NR	
18.	Barium Ba	NR	
19.	Strontium Sr	NR	
20.	Total Hardness (CaCO3)	14900.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
+-----+	-----	-----	-----
220 *Ca <----- *HCO3	Ca (HCO3)2	81.0 16.0	1297
/----->	CaSO4	68.1 22.9	1559
78 *Mg -----> *SO4	CaCl2	55.5 180.7	10025
<-----/	Mg (HCO3)2	73.2	
2445 *Na -----> *Cl	MgSO4	60.2	
+-----+	MgCl2	47.6 78.2	3721
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4 2445.0	142885
BaSO4 2.4 mg/L			

REMARKS:

----- ANDY MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS