

PETROLITE

WATER ANALYSIS REPORT

Company : SANTA FE Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : STERLING SILVER 34 Analysis No. : 016
 Well : BATTERY
 Sample Pt. : TANK 34-234-31e

ANALYSIS		mg/L		* meq/L
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1. pH	5.6			
2. H2S	0 PPM			
3. Specific Gravity	1.185			
4. Total Dissolved Solids		277611.5		
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	12.2	HCO3	0.2
12. Chloride	Cl	172104.0	Cl	4854.8
13. Sulfate	SO4	50.0	SO4	1.0
14. Calcium	Ca	21560.0	Ca	1075.8
15. Magnesium	Mg	3390.4	Mg	278.9
16. Sodium (calculated)	Na	80494.8	Na	3501.3
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		67800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
+-----+				
1076 *Ca <----- *HCO3	0	Ca(HCO3)2	81.0	0.2 16
----- /----->	-----	CaSO4	68.1	1.0 71
279 *Mg -----> *SO4	1	CaCl2	55.5	1074.6 59630
----- <-----/	-----	Mg(HCO3)2	73.2	
3501 *Na -----> *Cl	4855	MgSO4	60.2	
+-----+	+-----+	MgCl2	47.6	278.9 13279
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3 13 mg/L		Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L		NaCl	58.4	3501.3 204616
BaSO4 2.4 mg/L				

REMARKS:

----- ANDY MILLER

Petroliite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS