

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : CONTINENTAL Analysis No. : 011
 Well : BATTERY 28-23s-32e
 Sample Pt. : TANK

ANALYSIS		mg/L		* meq/L
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1. pH	6.6			
2. H2S	1 PMM			
3. Specific Gravity	1.025			
4. Total Dissolved Solids		33026.7		
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	366.0	HCO3	6.0
12. Chloride	Cl	19383.0	Cl	546.8
13. Sulfate	SO4	625.0	SO4	13.0
14. Calcium	Ca	1080.0	Ca	53.9
15. Magnesium	Mg	219.6	Mg	18.1
16. Sodium (calculated)	Na	11353.1	Na	493.8
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		3601.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
+-----+	+-----+			
54 *Ca <-----	*HCO3 6	Ca(HCO3)2	81.0	486
/----->		CaSO4	68.1	886
18 *Mg ----->	*SO4 13	CaCl2	55.5	1935
<-----/		Mg(HCO3)2	73.2	
494 *Na ----->	*Cl 547	MgSO4	60.2	
+-----+	+-----+	MgCl2	47.6	860
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3 13 mg/L		Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L		NaCl	58.4	28859
BaSO4 2.4 mg/L				

REMARKS:

----- ANDY MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS