

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : PAULINE Analysis No. : 005
 Well : BATTERY 32-23g-31e
 Sample Pt. : TANK

ANALYSIS	mg/L	* meq/L
1. pH	5.5	
2. H2S	0 PPM	
3. Specific Gravity	1.200	
4. Total Dissolved Solids	304430.0	
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 36.0	HCO3 0.6
12. Chloride	Cl 188292.0	Cl 5311.5
13. Sulfate	SO4 300.0	SO4 6.2
14. Calcium	Ca 24560.0	Ca 1225.5
15. Magnesium	Mg 3198.1	Mg 263.1
16. Sodium (calculated)	Na 88043.8	Na 3829.7
17. Iron	Fe NR	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO3)	74500.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
1226 *Ca <----- *HCO3	Ca(HCO3)2	81.0 0.6	48
/----->	CaSO4	68.1 6.2	425
263 *Mg -----> *SO4	CaCl2	55.5 1218.7	67626
<-----/	Mg(HCO3)2	73.2	
3830 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6 263.1	12525
	NaHCO3	84.0	
	Na2SO4	71.0	
	NaCl	58.4 3829.7	223805
Saturation Values Dist. Water 20 C			
CaCO3 13 mg/L			
CaSO4 * 2H2O 2090 mg/L			
BaSO4 2.4 mg/L			

REMARKS:

----- ANDY MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 SHAWNA MATTHEWS