

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : ADELINE Analysis No. : 003
 Well : BATTERY 6-24s-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		303346.6		
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	0.0	SO4	0.0
14. Calcium	Ca	25080.0	Ca	1251.5
15. Magnesium	Mg	3830.0	Mg	315.1
16. Sodium (calculated)	Na	86108.6	Na	3745.5
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		78400.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	=	mg/L
1251 *Ca <----- *HCO3	1	Ca(HCO3)2	81.0	0.6	48
/----->		CaSO4	68.1		
315 *Mg -----> *SO4	0	CaCl2	55.5	1250.9	69413
<-----/		Mg(HCO3)2	73.2		
3745 *Na -----> *Cl	5311	MgSO4	60.2		
		MgCl2	47.6	315.1	15000
Saturation Values Dist. Water 20 C		NaHCO3	84.0		
CaCO3 13 mg/L		Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L		NaCl	58.4	3745.5	218886
BaSO4 2.4 mg/L					

REMARKS:

----- ANDY MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 SHAWNA MATTHEWS