

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : MEDANO A Analysis No. : 006
 Well : BATTERY 16-23s-31e
 Sample Pt. : TANK

ANALYSIS		mg/L		* meq/L
1. pH		5.5		
2. H2S		0 PPM		
3. Specific Gravity		1.185		
4. Total Dissolved Solids		264143.0		
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	73.0	HCO3	1.2
12. Chloride	Cl	164010.0	Cl	4626.5
13. Sulfate	SO4	200.0	SO4	4.2
14. Calcium	Ca	20960.0	Ca	1045.9
15. Magnesium	Mg	3972.9	Mg	326.9
16. Sodium (calculated)	Na	74927.0	Na	3259.1
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		68700.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
1046 *Ca <----- *HCO3	Ca(HCO3)2	81.0	1.2	97
/----->	CaSO4	68.1	4.2	283
327 *Mg -----> *SO4	CaCl2	55.5	1040.5	57740
<-----/	Mg(HCO3)2	73.2		
3259 *Na -----> *Cl	MgSO4	60.2		
	MgCl2	47.6	326.9	15560
	NaHCO3	84.0		
Saturation Values Dist. Water 20 C	Na2SO4	71.0		
CaCO3 13 mg/L	NaCl	58.4	3259.1	190463
CaSO4 * 2H2O 2090 mg/L				
BaSO4 2.4 mg/L				

REMARKS:
 ----- ANDY MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 SHAWNA MATTHEWS