

WATER ANALYSIS REPORT

Company : YATES PETROLUEM Date : 10/19/95
 Address : ARTESIA, NM Date Sampled : 10/18/95
 Lease : SQUIRE "ALR" Analysis No. : 004
 Well : BATTERY
 Sample Pt. : TANK 7-24s-31e

ANALYSIS	mg/L	* meq/L
1. pH	5.5	
2. H2S	0 PPM	
3. Specific Gravity	1.200	
4. Total Dissolved Solids	297323.3	
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 48.0	HCO3 0.8
12. Chloride	Cl 184458.0	Cl 5203.3
13. Sulfate	SO4 50.0	SO4 1.0
14. Calcium	Ca 25000.0	Ca 1247.5
15. Magnesium	Mg 3611.3	Mg 297.1
16. Sodium (calculated)	Na 84152.0	Na 3660.5
17. Iron	Fe NR	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO3)	77300.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
1248 *Ca <----- *HCO3	Ca(HCO3)2	81.0 0.8	64
/----->	CaSO4	68.1 1.0	71
297 *Mg -----> *SO4	CaCl2	55.5 1245.7	69123
<-----/	Mg(HCO3)2	73.2	
3661 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6 297.1	14144
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4 3660.5	213922
BaSO4 2.4 mg/L			

REMARKS:

----- ANDY MILLER