

TRETOLI, E®

Chemicals and Services

PETROLITE

ATTACHMENT D

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WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NM
Lease : KIWI
Well : #5
Sample Pt. : WELLHEAD

Date : 08/21/92
Date Sampled : 08/20/92
Analysis No. : 123

ANALYSIS	mg/L	* meq/L
1. pH	6.0	
2. H2S	5 PPM	
3. Specific Gravity	1.175	
4. Total Dissolved Solids	273726.4	
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 122.0	HCO3 2.0
12. Chloride	Cl 169974.0	Cl 4794.8
13. Sulfate	SO4 675.0	SO4 14.1
14. Calcium	Ca 24480.0	Ca 1221.6
15. Magnesium	Mg 4533.9	Mg 373.0
16. Sodium (calculated)	Na 73941.5	Na 3216.2
17. Iron	Fe 0.0	
18. Barium	Ba 0.0	
19. Strontium	Sr 0.0	
20. Total Hardness (CaCO3)	79800.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
1222 *Ca <----- *HCO3	Ca(HCO3)2	81.0	2.0	162
----- /----->	CaSO4	68.1	14.1	957
373 *Mg -----> *SO4	CaCl2	55.5	1205.5	66893
----- <----->	Mg(HCO3)2	73.2		
3216 *Na -----> *Cl	MgSO4	60.2		
	MgCl2	47.6	373.0	17757
Saturation Values Dist. Water 20 C	NaHCO3	84.0		
CaCO3 13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	3216.2	187957
BaSO4 2.4 mg/L				

REMARKS:

----- L. MALLETT / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT