

TRETOLITE®

Chemicals and Services

ATTACHMENT D

"Windmill Water"



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WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NEW MEXICO
Lease : KIWI AREA
Well : UNKNOWN
Sample Pt. : UNKNOWN

Date : 03/22/93
Date Sampled : 03/22/93
Analysis No. : 081

ANALYSIS	mg/L	* meq/L
1. pH	7.4	
2. H2S	0	
3. Specific Gravity	1.000	
4. Total Dissolved Solids	-554.6	
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 146.0	HCO3 2.4
12. Chloride	Cl 127.0	Cl 3.6
13. Sulfate	SO4 25.0	SO4 0.5
14. Calcium	Ca 920.0	Ca 45.9
15. Magnesium	Mg 972.1	Mg 80.0
16. Sodium (calculated)	Na -2744.8	Na -119.4
17. Iron	Fe NR	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO3)	6300.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
46 *Ca <----- *HCO3	Ca (HCO3) 2	81.0	2.4	194
----- /----->	CaSO4	68.1	0.5	35
80 *Mg -----> *SO4	CaCl2	55.5	3.6	199
----- <----- /	Mg (HCO3) 2	73.2		
-119 *Na -----> *Cl	MgSO4	60.2		
----- +----- +	MgCl2	47.6		
Saturation Values Dist. Water 20 C	NaHCO3	84.0		
CaCO3 13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4		
BaSO4 2.4 mg/L				

REMARKS:

----- L. MALLET / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT