

TRETOLITE

Chemicals and Services



16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : POGO PRODUCING
Address : MIDLAND, TEXAS
Lease : CALMON #5
Well : SWD
Sample Pt. : UNKNOWN

Date : 09/03/93
Date Sampled : 09/02/93
Analysis No. : 330

ANALYSIS	mg/L	* meq/L
1. pH	5.1	
2. H2S	0 PPM	
3. Specific Gravity	1.165	
4. Total Dissolved Solids	261670.1	
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 61.0	HCO3 1.0
12. Chloride	Cl 161880.0	Cl 4566.4
13. Sulfate	SO4 50.0	SO4 1.0
14. Calcium	Ca 16400.0	Ca 818.4
15. Magnesium	Mg 3338.4	Mg 274.7
16. Sodium (calculated)	Na 79900.7	Na 3475.5
17. Iron	Fe 40.0	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO3)	54700.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
818 *Ca <----- *HCO3	Ca(HCO3)2	81.0	1.0	81
----- /----->	CaSO4	68.1	1.0	71
275 *Mg -----> *SO4	CaCl2	55.5	816.3	45298
----- <----- /	Mg(HCO3)2	73.2		
3475 *Na -----> *Cl	MgSO4	60.2		
----- +-----	MgCl2	47.6	274.7	13075
Saturation Values Dist. Water 20 C	NaHCO3	84.0		
CaCO3 13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	3475.5	203106
BaSO4 2.4 mg/L				

REMARKS:

----- A. MILLER / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT