

TRETOLITE

Chemicals and Services

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(505) 746-3580 Fax**WATER ANALYSIS REPORT**Company : POGO PRODUCING
Address : MIDLAND, TEXAS
Lease : 28-3
Well : SWD
Sample Pt. : TANKDate : 10/22/93
Date Sampled : 10/22/93
Analysis No. : 370

ANALYSIS		mg/L	* meq/L
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1.	pH	5.3	
2.	H ₂ S	NR	
3.	Specific Gravity	1.140	
4.	Total Dissolved Solids	223918.2	
5.	Suspended Solids	NR	
6.	Dissolved Oxygen	NR	
7.	Dissolved CO ₂	NR	
8.	Oil In Water	NR	
9.	Phenolphthalein Alkalinity (CaCO ₃)		
10.	Methyl Orange Alkalinity (CaCO ₃)		
11.	Bicarbonate	HCO ₃ 97.0	HCO ₃ 1.6
12.	Chloride	Cl 138024.0	Cl 3893.5
13.	Sulfate	SO ₄ 375.0	SO ₄ 7.8
14.	Calcium	Ca 13600.0	Ca 578.6
15.	Magnesium	Mg 2583.6	Mg 212.6
16.	Sodium (calculated)	Na 69238.6	Na 3011.7
17.	Iron	Fe NR	
18.	Barium	Ba NR	
19.	Strontium	Sr NR	
20.	Total Hardness (CaCO ₃)	44600.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter				Compound	Equiv wt X meq/L = mg/		
679	*Ca <-----	*HCO3	2	Ca (HCO3) 2	81.0	1.6	129
-----	/----->		-----	CaSO4	68.1	7.8	531
213	*Mg ----->	*SO4	8	CaCl2	55.5	669.2	37136
-----	<-----/		-----	Mg (HCO3) 2	73.2		
3012	*Na ----->	*Cl	3893	MgSO4	60.2		
+-----+			+-----+	MgCl2	47.6	212.6	10116
Saturation Values Dist. Water 20 C				NaHCO3	84.0		
CaCO3 13 mg/L				Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L				NaCl	58.4	3011.7	176003
BaSO4 2.4 mg/L							

REMARKS:

----- A. MILLER / FILE

RED TANK 23 SWD

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT