

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	3193.5
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 <----- *HCO ₃	Ca (HCO ₃) ₂	81.0	1.6	129
	/----->	CaSO ₄	68.1	7.8	531
213	*Mg -----> *SO ₄	CaCl ₂	55.5	669.2	37136
	<-----/	Mg (HCO ₃) ₂	73.2		
3012	*Na -----> *Cl	MgSO ₄	60.2		
		MgCl ₂	47.6	212.6	10119
		NaHCO ₃	84.0		
		Na ₂ SO ₄	71.0		
		NaCl	58.4	3011.7	176003

Saturation Values Dist. Water 20 C

CaCO ₃	13 mg/L
CaSO ₄ * 2H ₂ O	2090 mg/L
BaSO ₄	2.4 mg/L

REMARKS:----- A. MILLER / FILE
RED TANK 23 SWD

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT