

PETROLITE

WATER ANALYSIS REPORT

Company : POGO PRODUCING
Address : MIDLAND TX
Lease : RED TANK FED.
Well : 23-1
Sample Pt. : WELL

Date : 1-23-93
Date Sampled : 1-22-93
Analysis No. : 006

ANALYSIS		mg/L	* meq/L
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1.	pH	5.9	
2.	H2S	0	
3.	Specific Gravity	1.155	
4.	Total Dissolved Solids	243572.9	
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 48.8	HCO3 0.8
12.	Chloride	Cl 151230.0	Cl 4266.0
13.	Sulfate	SO4 250.0	SO4 5.2
14.	Calcium	Ca 16840.0	Ca 840.3
15.	Magnesium	Mg 4140.2	Mg 340.6
16.	Sodium (calculated)	Na 71063.9	Na 3091.1
17.	Iron	Fe 0.0	
18.	Barium	Ba 0.0	
19.	Strontium	Sr 0.0	
20.	Total Hardness (CaCO3)	59100.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter				Compound				Equiv wt X meq/L = mg/l	
840	*Ca <-----	*HCO3	1	Ca(HCO3)2	81.0	0.8	65		
	/----->			CaSO4	68.1	5.2	354		
341	*Mg <-----	*SO4	5	CaCl2	55.5	834.3	46296		
	<-----/			Mg(HCO3)2	73.2				
3091	*Na <-----	*Cl	4266	MgSO4	60.2				
	<----->			MgCl2	47.6	340.6	16215		
+-----+				NaHCO3	84.0				
Saturation Values Dist. Water 20 C				Na2SO4	71.0				
CaCO3		13 mg/L		NaCl	58.4	3091.1	180643		
CaSO4 * 2H2O		2090 mg/L							
BaSO4		2.4 mg/L							

REMARKS: L. MALLET -FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
L. MALLET