

ANALYSIS - Bone Spring
Produced Water

POGO PRODUCING COMPANY
Diamond "34" State No. 1
Section 34, T-22S, R-33E
Lea County, New Mexico

ANALYSIS REPORT

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

ANALYSIS

		mg/L		* meq/L
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	Ca(HCO3)2	81.0	0.8	65
----- /----->	CaSO4	68.1	5.2	354
341 *Mg -----> *SO4	CaCl2	55.5	834.3	46296
----- <----- /	Mg(HCO3)2	73.2		
3091 *Na -----> *Cl	MgSO4	60.2		
	MgCl2	47.6	340.6	16215
	NaHCO3	84.0		
	Na2SO4	71.0		
	NaCl	58.4	3091.1	180643

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

REMARKS: L. MALLETT -FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
L. MALLETT