

WATER ANALYSIS REPORT

COMPANY Gulf Oil Exploration & Prod. Co. ADDRESS Hobbs, NM Ref: Item VII of C-108
 DATE: 10/30/81
 SOURCE YH State Battery DATE SAMPLED 10/30/81 ANALYSIS
 Analysis Mg/L NO. Meq/L

1. pH	<u>5.4</u>		
2. H ₂ S (Qualitative)	<u>Pos.</u>		
3. Specific Gravity	<u>1.125</u>		
4. Dissolved Solids	<u>167,705</u>		
5. Suspended Solids	<u>-0-</u>		
6. Phenolphthalein Alkalinity (CaCO ₃)	<u>-0-</u>		
7. Methyl Orange Alkalinity (CaCO ₃)	<u>250</u>		
8. Bicarbonate (HCO ₃)	HCO ₃ <u>305</u> ÷ 61	<u>5</u>	HCO ₃
9. Chlorides (Cl)	Cl <u>102,178</u> ÷ 35.5	<u>2878</u>	Cl
10. Sulfates (SO ₄)	SO ₄ <u>1500</u> ÷ 48	<u>31</u>	SO ₄
11. Calcium (Ca)	Ca <u>6800</u> ÷ 20	<u>340</u>	Ca
12. Magnesium (Mg)	Mg <u>2430</u> ÷ 12.2	<u>199</u>	Mg
13. Total Hardness (CaCO ₃)	<u>14,000</u>		
14. Total Iron (Fe)	<u>-</u>		
15. Barium (Qualitative)			
16. Strontium			

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

340	Ca	←	HCO ₃	5	Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
199	Mg	←	SO ₄	31	Ca (HCO ₃) ₂	81.04		5		405
2375	Na	←	Cl	2878	Ca SO ₄	68.07		31		2110
					Ca Cl ₂	55.50		304		16,872
					Mg (HCO ₃) ₂	73.17		-0-		-0-
					Mg SO ₄	60.19		-0-		-0-
					Mg Cl ₂	47.62		199		9476
					Na HCO ₃	84.00		-0		-0-
					Na ₂ SO ₄	71.03		-0-		-0-
					Na Cl	58.46		2375		138,842

Saturation Values Distilled Water 20°C
 Ca CO₃ 13 Mg/L
 Ca SO₄ • 2H₂O 2,090 Mg/L
 Mg CO₃ 103 Mg/L

REMARKS cc: Mr. R. Worley

M. Hill, G. Knorr

Respectfully submitted
TRETOLITE COMPANY

Ron Matthews