

TRETOLITE DIVISION

 (505) 392-6711
 Fax (505) 392-3759

 WATER ANALYSIS REPORT

 Company : Drum Energy
 Address : Hobbs, NM
 Lease : Werta Federal
 Well : # 1
 Sample Pt. : Heater Treater

 Date : 04-07-95
 Date Sampled : 04-07-95
 Analysis No. : 44

ANALYSIS		mg/L	* meq/L
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1. pH	5.0		
2. H ₂ S	< 1 ppm		
3. Specific Gravity	1.102		
4. Total Dissolved Solids		180213.8	
5. Suspended Solids		NR	
6. Dissolved Oxygen		NR	
7. Dissolved CO ₂		75 ppm	
8. Oil In Water		NR	
9. Phenolphthalein Alkalinity (CaCO ₃)			
10. Methyl Orange Alkalinity (CaCO ₃)		115.0	
11. Bicarbonate	HCO ₃	140.3	HCO ₃ 2.3
12. Chloride	Cl	108434.1	Cl 3058.8
13. Sulfate	SO ₄	2500.0	SO ₄ 52.1
14. Calcium	Ca	3775.5	Ca 188.4
15. Magnesium	Mg	2183.0	Mg 179.6
16. Sodium (calculated)	Na	63111.0	Na 2745.2
17. Iron	Fe	69.7	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO ₃)		18416.6	

 PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
-----	-----	-----	-----
188 *Ca <----- *HCO ₃	Ca (HCO ₃) ₂	81.0 2.3	186
----- /----->	CaSO ₄	68.1 52.1	3543
180 *Mg -----> *SO ₄	CaCl ₂	55.5 134.0	7438
----- <----- /	Mg (HCO ₃) ₂	73.2	
2745 *Na -----> *Cl	MgSO ₄	60.2	
-----	MgCl ₂	47.6 179.6	8550
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0	
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4 2745.2	160427
BaSO ₄ 2.4 mg/L			

 REMARKS:

Petrolite Oilfield Chemicals Group

 Respectfully submitted,
 Greg Archer

RECEIVED

JUN 13 1995

U. S. MARSHALS
OFFICE