

TRETOLITE**Chemicals and Services**

PETROLITE

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(505) 746-3580 Fax**WATER ANALYSIS REPORT**Company : YATES PETROLEUM
Address : ARTESIA, NM
Lease : LUSK
Well : #5
Sample Pt. : WELLHEADDate : 04/13/92
Date Sampled : 04/10/92
Analysis No. : 004

ANALYSIS	mg/L	* meq/L
1. pH	6.6	
2. H ₂ S	0	
3. Specific Gravity	1.130	
4. Total Dissolved Solids	204740.9	
5. Suspended Solids		
6. Dissolved Oxygen		
7. Dissolved CO ₂		
8. Oil In Water		
9. Phenolphthalein Alkalinity (CaCO ₃)		
10. Methyl Orange Alkalinity (CaCO ₃)		
11. Bicarbonate	HCO ₃ 61.0	HCO ₃ 1.0
12. Chloride	Cl 125670.0	Cl 3545.0
13. Sulfate	SO ₄ 1175.0	SO ₄ 24.5
14. Calcium	Ca 13960.0	Ca 696.6
15. Magnesium	Mg 2462.4	Mg 202.6
16. Sodium (calculated)	Na 61412.5	Na 2671.3
17. Iron	Fe 0.0	
18. Barium	Ba 0.0	
19. Strontium	Sr 0.0	
20. Total Hardness (CaCO ₃)	45000.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
697 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	1.0	81
----- /----->	CaSO ₄	68.1	24.5	1665
203 *Mg -----> *SO ₄	CaCl ₂	55.5	671.1	37241
----- <----- /	Mg(HCO ₃) ₂	73.2		
2671 *Na -----> *Cl	MgSO ₄	60.2		
	MgCl ₂	47.6	202.6	9644
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	2671.3	156109
BaSO ₄ 2.4 mg/L				

REMARKS:

----- L. MALLETT / MLAB / FILE

Petroliate Oilfield Chemicals Group

Respectfully submitted,
LEE MALLETT