

TRETOLITE

PETROLITE

16010 Barker's Point Lane • Houston, Texas 77079
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Reply to: P.O. Box 60180
Midland, TX 79711-0180

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NOV 24 1992

U. C. D.
ANALYSIS OFF

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NEW MEXICO
Lease : COMPROMISE
Well : #1 H-30-18-27
Sample Pt. : SWD TANK

Date : 10-26-92
Date Sampled : 10-20-92
Analysis No. : 2585

ANALYSIS	mg/L	* meq/L
1. pH	7.4	
2. H2S	240 PPM	
3. Specific Gravity	1.015	
4. Total Dissolved Solids	14922.8	
5. Suspended Solids		
6. Dissolved Oxygen		
7. Dissolved CO2		
8. Oil In Water		
9. Phenolphthalein Alkalinity (CaCO3)		
10. Methyl Orange Alkalinity (CaCO3)	979.0	
11. Bicarbonate	HCO3 1194.4	HCO3 19.6
12. Chloride	Cl 6721.3	Cl 189.6
13. Sulfate	SO4 2500.0	SO4 52.1
14. Calcium	Ca 1130.3	Ca 56.4
15. Magnesium	Mg 1497.5	Mg 123.2
16. Sodium (calculated)	Na 1876.9	Na 81.6
17. Iron	Fe 2.5	
18. Barium	Ba 0.0	
19. Strontium	Sr 0.0	
20. Total Hardness (CaCO3)	8988.1	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	mg/L
56 *Ca <----- *HCO3	Ca(HCO3)2	81.0	1587
----- /----->	CaSO4	68.1	2506
123 *Mg -----> *SO4	CaCl2	55.5	
----- <----- /	Mg(HCO3)2	73.2	
82 *Na -----> *Cl	MgSO4	60.2	917
----- +-----+	MgCl2	47.6	5140
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	4771
BaSO4 2.4 mg/L			

REMARKS: MALLETT - BENNETT - FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SUE CRISS

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SCALE TENDENCY REPORT

Company	: YATES PETROLEUM	Date	: 10-26-92
Address	: ARTESIA, NEW MEXICO	Date Sampled	: 10-20-92
Lease	: COMPROMISE	Analysis No.	: 2585
Well	:	Analyst	: SUE CRISS
Sample Pt.	: SWD TANK		

STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO₃ Scaling Tendency

S.I. = 1.4 at 80 deg. F or 27 deg. C
S.I. = 1.5 at 120 deg. F or 49 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

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~~2~~ S = 3700 at 80 deg. F or 27 deg C
S = 3785 at 120 deg. F or 49 deg C

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Respectfully submitted,
SUE CRISS