

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, N.M.
 Lease : KIWI 'AKX' STATE
 Well : 1
 Sample Pt. : WELLHEAD

Date : 5-28-92
 Date Sampled : 5-27-92
 Analysis No. : 467

ANALYSIS		mg/L	* meq/L	
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1.	pH	5.8		
2.	H ₂ S	0		
3.	Specific Gravity	1.120		
4.	Total Dissolved Solids	191043.8		
5.	Suspended Solids	NR		
6.	Dissolved Oxygen	NR		
7.	Dissolved CO ₂	NR		
8.	Oil In Water	NR		
9.	Phenolphthalein Alkalinity (CaCO ₃)	450.0		
10.	Methyl Orange Alkalinity (CaCO ₃)	549.0	HCO ₃	9.0
11.	Bicarbonate	118396.1	Cl	3339.8
12.	Chloride	900.0	SO ₄	18.7
13.	Sulfate	8865.7	Ca	442.4
14.	Calcium	5780.9	Mg	475.6
15.	Magnesium	56315.1	Na	2449.5
16.	Sodium (calculated)	237.0		
17.	Iron	0.0		
18.	Barium	0.0		
19.	Strontium	45941.3		
20.	Total Hardness (CaCO ₃)			

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound Equiv wt X meq/L = mg/L		
+-----+		-----		
442	*Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	9.0 729
	/----->	CaSO ₄	68.1	18.7 1276
476	*Mg -----> *SO ₄	CaCl ₂	55.5	414.7 23009
	<-----/	Mg(HCO ₃) ₂	73.2	
2450	*Na -----> *Cl	MgSO ₄	60.2	
		MgCl ₂	47.6	475.6 22641
+-----+		NaHCO ₃	84.0	
Saturation Values Dist. Water 20 C		Na ₂ SO ₄	71.0	
CaCO ₃	13 mg/L	NaCl	58.4	2449.5 143151
CaSO ₄ * 2H ₂ O	2090 mg/L			
BaSO ₄	2.4 mg/L			

REMARKS: L.MALLET

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 ROZANNE JOHNSON