

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, NM
 Lease : LUSK #6
 Well : #6
 Sample Pt. : WELLHEAD

Date : 05/15/92
 Date Sampled : 05/14/92
 Analysis No. : 037

ANALYSIS		mg/L		* meq/L
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1. pH	6.9			
2. H ₂ S	0			
3. Specific Gravity	1.100			
4. Total Dissolved Solids		159576.1		
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	158.6	HCO ₃	2.6
12. Chloride	Cl	96276.0	Cl	2715.8
13. Sulfate	SO ₄	4125.0	SO ₄	85.9
14. Calcium	Ca	16400.0	Ca	818.4
15. Magnesium	Mg	3411.3	Mg	280.6
16. Sodium (calculated)	Na	39205.2	Na	1705.3
17. Iron	Fe	0.0		
18. Barium	Ba	0.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO ₃)		55000.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
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818	*Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	2.6	211
	/----->	CaSO ₄	68.1	85.9	5846
281	*Mg -----> *SO ₄	CaCl ₂	55.5	729.9	40500
	<-----/	Mg(HCO ₃) ₂	73.2		
1705	*Na -----> *Cl	MgSO ₄	60.2		
		MgCl ₂	47.6	280.6	13360
		NaHCO ₃	84.0		
		Na ₂ SO ₄	71.0		
		NaCl	58.4	1705.3	99659

Saturation Values Dist. Water 20 C

CaCO ₃	13 mg/L
CaSO ₄ * 2H ₂ O	2090 mg/L
BaSO ₄	2.4 mg/L

REMARKS:

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

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 LEE MALLETT