



MILLER CHEMICALS, INC.

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WATER ANALYSIS REPORT

Company : MANZANO OIL
 Address :
 Lease : DOROTHY FED
 Well : 1
 Sample Pt. :

Date : 12/08/00
 Date Sampled : 12/08/00
 Analysis No. :

ANALYSIS		mg/L	* meq/L
1. pH	6.7		
2. H2S	5		
3. Specific Gravity	1.130		
4. Total Dissolved Solids		198701.1	
5. Suspended Solids			
6. Dissolved Oxygen			
7. Dissolved CO2			
8. Oil In Water			
9. Phenolphthalein Alkalinity (CaCO3)			
10. Methyl Orange Alkalinity (CaCO3)			
11. Bicarbonate	HCO3	170.0	HCO3 2.8
12. Chloride	Cl	120771.0	Cl 3406.8
13. Sulfate	SO4	950.0	SO4 19.8
14. Calcium	Ca	10080.0	Ca 503.0
15. Magnesium	Mg	613.9	Mg 50.5
16. Sodium (calculated)	Na	66116.2	Na 2875.9
17. Iron	Fe	0.0	
18. Barium	Ba	0.0	
19. Strontium	Sr	0.0	
20. Total Hardness (CaCO3)		27700.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
503 *Ca <----- *HCO3 3	Ca(HCO3)2	81.0	2.8
/-----	CaSO4	98.1	19.8
51 *Mg -----> *SO4 20	CaCl2	55.5	480.4
<----- /	Mg(HCO3)2	73.2	
2876 *Na -----> *Cl 3407	MgSO4	60.2	
+-----+	MgCl2	47.6	50.5
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	2875.9
BaSO4 2.4 mg/L			165066

REMARKS: