

**MILLER CHEMICALS, INC.**

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WATER ANALYSIS REPORT

Company	: YATES PETROLEUM	Date	: 11-11-05
Address	:	Date Sampled	: 11-10-05
Lease	: JUDSON "AUU"ST.COM	Analysis No.	:
Well	: #2		
Sample Pt.	: UNKNOWN		

ANALYSIS		mg/L	* meq/L
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1.	pH	6.4	
2.	H ₂ S	0	
3.	Specific Gravity	1.060	
4.	Total Dissolved Solids	88177.8	
5.	Suspended Solids	nr	
6.	Dissolved Oxygen	nr	
7.	Dissolved CO ₂	nr	
8.	Oil In Water	nr	
9.	Phenolphthalein Alkalinity (CaCO ₃)		
10.	Methyl Orange Alkalinity (CaCO ₃)		
11.	Bicarbonate	HCO ₃ 341.0	HCO ₃ 5.6
12.	Chloride	Cl 52824.0	Cl 1490.1
13.	Sulfate	SO ₄ 1250.0	SO ₄ 26.0
14.	Calcium	Ca 4360.0	Ca 217.6
15.	Magnesium	Mg 658.7	Mg 54.2
16.	Sodium (calculated)	Na 28736.7	Na 1250.0
17.	Iron	Fe 7.5	
18.	Barium	Ba nr	
19.	Strontium	Sr nr	
20.	Total Hardness (CaCO ₃)	13600.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
-----+	-----	-----	-----
218 *Ca <----- *HCO ₃ 6	Ca (HCO ₃) ₂	81.0	5.6
----- /-----> -----	CaSO ₄	68.1	26.0
54 *Mg -----> *SO ₄ 26	CaCl ₂	55.5	185.9
----- <-----/ -----	Mg (HCO ₃) ₂	73.2	
1250 *Na -----> *Cl 1490	MgSO ₄	60.2	
-----+	MgCl ₂	47.6	54.2
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0	2580
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4	1250.0
BaSO ₄ 2.4 mg/L			73048

REMARKS: resistivity- 0.1 @ 60%

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Case No. 13629 Exhibit No. 13

Submitted by:

YATES PETROLEUM CORPORATION

Hearing Date: January 19, 2006

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