

Permian Treating Chemicals, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co.: **Stearns**
Lease: **Southard Windmill Tom**
Well No.: **36 SWD**
Location:
Attention:

2007 AUG 13 PM 1:10

Date Sampled: **7-July-2007**
Date Analyzed: **13-July-2007**
Lab ID Number: **Jul1307.001-4**
Salesperson:
File Name: **Jul1307.001**

SWD-1090

ANALYSIS

1. Ph **8.410**
2. Specific Gravity 60/60 F. **1.008**
3. CACO3 Saturation Index **@ 80F**
@ 140F

1.010 Moderate
1.710 Severe

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

Not Present
Not Determined
Not Determined

Cations

7. Calcium (Ca++)
8. Magnesium (Mg++)
9. Sodium (Na+) (Calculated)
10. Barium (Ba++)

73	/ 20.1 =	3.63
0	/ 12.2 =	0.00
270	/ 23.0 =	11.74
13	/ 68.7 =	0.19

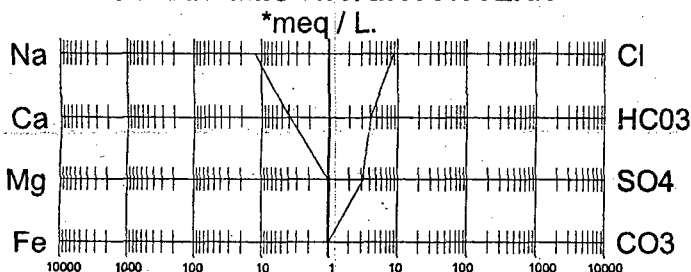
Anions

11. Hydroxyl (OH-)
12. Carbonate (CO3=)
13. Bicarbonate (HCO3-)
14. Sulfate (SO4=)
15. Chloride (Cl-)
16. Total Dissolved Solids
17. Total Iron (Fe)
18. Manganese (Mn++)
19. Total Hardness as CaCO3
20. Resistivity @ 75 F. (Calculated)

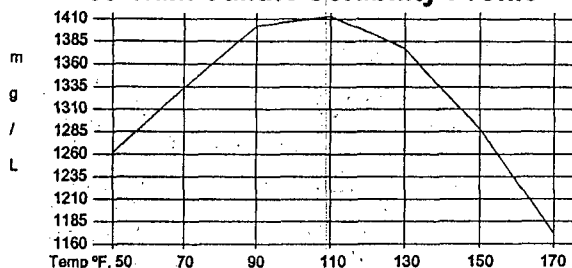
0	/ 17.0 =	0.00
12	/ 30.0 =	0.00
234	/ 61.1 =	3.83
148	/ 48.8 =	3.03
300	/ 35.5 =	8.45
1,038		
10.00	/ 18.2 =	0.55
Not Determined		
182		

2.899 Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	3.63		81.04		294
CaSO4	0.00		68.07		0
CaCl2	0.00		55.50		0
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	0.00		47.62		0
NaHCO3	0.20		84.00		17
NaSO4	2.84		71.03		202
NaCl	8.45		58.46		494

* milliequivalents per Liter

Kevin Byrne, Analyst

For STEARNS

Tom St. 36 #1 SWD