

Fresh Water - T105-R37E-Lea Co, NM

Permian Treating Chemicals

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Devon Energy
Lease : CW Trainer
Well No. : Fresh Water Well
Salesman :

Sample Loc. :
Date Analyzed: 04-January-1996
Date Sampled :

ANALYSIS

1. pH 9.090
2. Specific Gravity 60/60 F. 1.003
3. CaCO_3 Saturation Index @ 80 F. +0.906
@ 140 F. +1.606

Dissolved Gases

MG/L EQ. WT. *MEQ/L

4. Hydrogen Sulfide Not Present
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

Cations

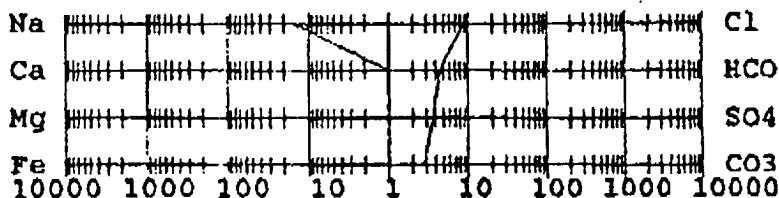
- | | | | | | |
|--------------|----------------------|--------------|---|--------|-------|
| 7. Calcium | (Ca^{++}) | 10 | / | 20.1 = | 0.50 |
| 8. Magnesium | (Mg^{++}) | 6 | / | 12.2 = | 0.49 |
| 9. Sodium | (Na^+) | 348 | / | 23.0 = | 15.13 |
| 10. Barium | (Ba^{++}) | Below 10 (6) | | | |
- (Calculated)

Anions

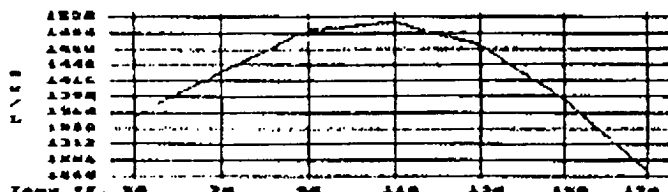
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|---------------------------------------|------------------------|------------|---|--------|------|
| 11. Hydroxyl | (OH^-) | 0 | / | 17.0 = | 0.00 |
| 12. Carbonate | (CO_3^{--}) | 77 | / | 30.0 = | 2.57 |
| 13. Bicarbonate | (HCO_3^-) | 259 | / | 61.1 = | 4.24 |
| 14. Sulfate | (SO_4^{--}) | 165 | / | 48.8 = | 3.38 |
| 15. Chloride | (Cl^-) | 300 | / | 35.5 = | 8.45 |
| 16. Total Dissolved Solids | | 1,088 | | | |
| 17. Total Iron (Fe) | | 1 | / | 18.2 = | 0.05 |
| 18. Total Hardness As CaCO_3 | | 50 | | | |
| 19. Resistivity @ 75 F. (Calculated) | | 2.963 /cm. | | | |

LOGARITHMIC WATER PATTERN

*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION			
COMPOUND	EQ. WT. X	*meq/L =	mg/L.
Ca(HCO_3) ₂	81.04	0.50	40
HCO ₃ CaSO ₄	68.07	0.00	0
SO ₄ CaCl ₂	55.50	0.00	0
CO ₃ Mg(HCO_3) ₂	73.17	0.49	36
MgSO ₄	60.19	0.00	0
MgCl ₂	47.62	0.00	0
NaHCO ₃	84.00	3.25	273
NaSO ₄	71.03	3.38	240
NaCl	58.46	8.45	494

*Milli Equivalents per Liter

This water is somewhat corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts in solution.