



CAPROCK LABORATORIES, INC.

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WATER ANALYSIS REPORT

SAMPLE

30-015-26125

Oil Co. : Shackelford Oil Co.
Lease : Eddie I R
Well No. : #1
Job No. : 0304112

Sample Loc. : Wellhead
Date Analyzed : 30-April-2003
Date Sampled :
Analysis No. : 1



ANALYSIS

1. pH 6.950
2. Specific Gravity 60/60 F. 1.013
3. CaCO₃ Saturation Index @ 80 F. +0.576
@ 140 F. +1.516

Dissolved Gases

MG/L EQ. WT. *MEQ/L

4. Hydrogen Sulfide 324
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

Cations

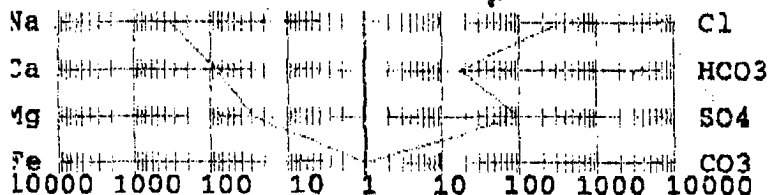
- | | | | |
|---|----------------|----------|--------|
| 7. Calcium (Ca ⁺⁺) | 1,603 | / 20.1 = | 79.75 |
| 8. Magnesium (Mg ⁺⁺) | 316 | / 12.2 = | 25.90 |
| 9. Sodium (Na ⁺) (Calculated) | 7,756 | / 23.0 = | 337.22 |
| 10. Barium (Ba ⁺⁺) | Not Determined | | |

Anions

- | | | | |
|--|------------|----------|--------|
| 11. Hydroxyl (OH ⁻) | 0 | / 17.0 = | 0.00 |
| 12. Carbonate (CO ₃ ⁼) | 0 | / 30.0 = | 0.00 |
| 13. Bicarbonate (HCO ₃ ⁻) | 1,049 | / 61.1 = | 17.17 |
| 14. Sulfate (SO ₄ ⁼) | 4,619 | / 48.8 = | 94.65 |
| 15. Chloride (Cl ⁻) | 11,699 | / 35.5 = | 329.55 |
| 16. Total Dissolved Solids | 27,042 | | |
| 17. Total Iron (Fe) | 1 | / 18.2 = | 0.05 |
| 18. Total Hardness As CaCO ₃ | 5,305 | | |
| 19. Resistivity @ 75 F. (Calculated) | 0.286 /cm. | | |

LOGARITHMIC WATER PATTERN

*meq/L.

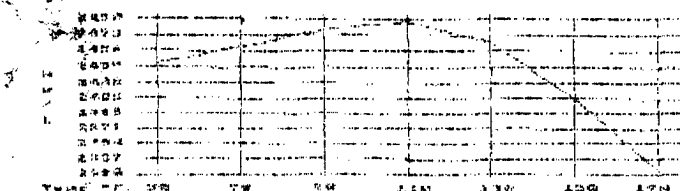


PROBABLE MINERAL COMPOSITION

COMPOUND EQ. WT. X *meq/L = mg/L.

Na	Ca	Mg	Fe	Cl	HCO ₃	SO ₄	CO ₃	Ca(HCO ₃) ₂	CaSO ₄	CaCl ₂	Mg(HCO ₃) ₂	MgSO ₄	MgCl ₂	NaHCO ₃	NaSO ₄	NaCl
				81.04	68.07	55.50	73.17	60.19	47.62	84.00	71.03	58.46	17.17	62.58	0.00	329.55
				1,391	4,260	0	0	1,559	0	0	0	1,559	0	0	438	19,265

Calcium Sulfate Solubility Profile



*Milli Equivalents per Liter

Measured R_w = 0.6 ohm-meters

Analyst