

Pro-Kem WATER ANALYSIS REPORT

SAMPLE

Oil Co.: **BTA**
Lease: **GEM**
Well No.: **#10**
Location:
Attention:

Date Sampled: **16-August-2012**
Date Analyzed: **16-August-2012**
Lab ID Number: **Aug1612.002-10**
Salesperson:
File Name: **Aug1612.002**

ANALYSIS

1. Ph 6.500
2. Specific Gravity 60/60 F. 1.093
3. CACO3 Saturation Index @ 80F
- @140F

0.146 Mild
1.036 Moderate

Dissolved Gasses

- | | MG/L. | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | 0 | | |
| 5. Carbon Dioxide | 300 | | |
| 6. Dissolved Oxygen | Not Determined | | |

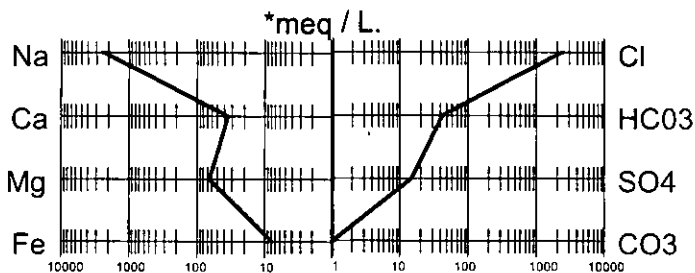
Cations

- | | | | | |
|--------------|--------------------|----------------|----------|----------|
| 7. Calcium | (Ca++) | 670 | / 20.1 = | 33.33 |
| 8. Magnesium | (Mg++) | 762 | / 12.2 = | 62.46 |
| 9. Sodium | (Na+) (Calculated) | 52,210 | / 23.0 = | 2,270.00 |
| 10. Barium | (Ba++) | Not Determined | | |

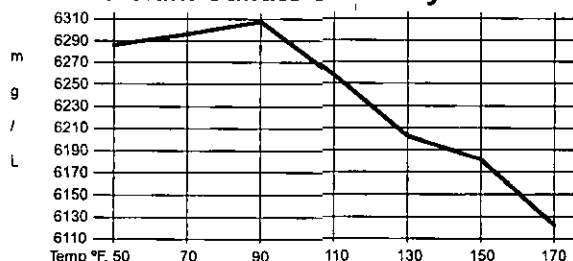
Anions

- | | | | | |
|--------------------------------------|---------|--------------------|----------|----------|
| 11. Hydroxyl | (OH-) | 0 | / 17.0 = | 0.00 |
| 12. Carbonate | (CO3=) | 0 | / 30.0 = | 0.00 |
| 13. Bicarbonate | (HCO3-) | 2,450 | / 61.1 = | 40.10 |
| 14. Sulfate | (SO4=) | 700 | / 48.8 = | 14.34 |
| 15. Chloride | (Cl-) | 81,982 | / 35.5 = | 2,309.35 |
| 16. Total Dissolved Solids | | 138,774 | | |
| 17. Total Iron | (Fe) | 134.50 | / 18.2 = | 7.39 |
| 18. Manganese | (Mn++) | Not Determined | | |
| 19. Total Hardness as CaCO3 | | 4,811 | | |
| 20. Resistivity @ 75 F. (Calculated) | | 0.050 Ohm · meters | | |

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT. =	mg/L.
Ca(HCO3)2	33.33		81.04	2,701
CaSO4	0.00		68.07	0
CaCl2	0.00		55.50	0
Mg(HCO3)2	6.76		73.17	495
MgSO4	14.34		60.19	863
MgCl2	41.35		47.62	1,969
NaHCO3	0.00		84.00	0
NaSO4	0.00		71.03	0
NaCl	2,268.00		58.46	132,587
* milliequivalents per Liter				

Tony Abernathy,

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. 6
Submitted by:
BTA OIL PRODUCERS, LLC
Hearing Date: March 21, 2013

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gem
 Well No.: # 2
 Lab No. : F:\ANALYSES\Nov2900.001

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.370
2. Specific Gravity 60/60 F. 1.101
3. CaCO₃ Saturation Index @ 80 F. -0.152
 @ 140 F. +0.738

Dissolved Gasses

MG/L EQ. WT. *MEQ/L

4. Hydrogen Sulfide 0
5. Carbon Dioxide 190
6. Dissolved Oxygen Not Determined

Cations

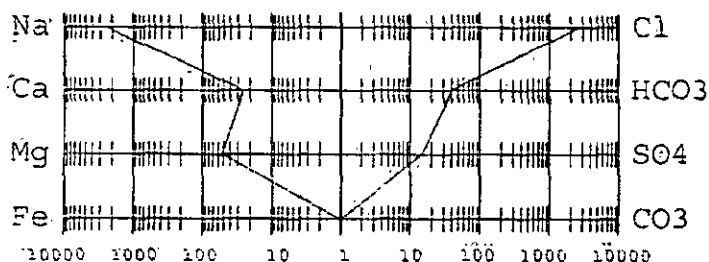
7. Calcium (Ca++) 491 / 20.1 = 24.43
8. Magnesium (Mg++) 596 / 12.2 = 48.85
9. Sodium (Na+) (Calculated) 54,607 / 23.0 = 2,374.22
10. Barium (Ba++) Not Determined

Anions

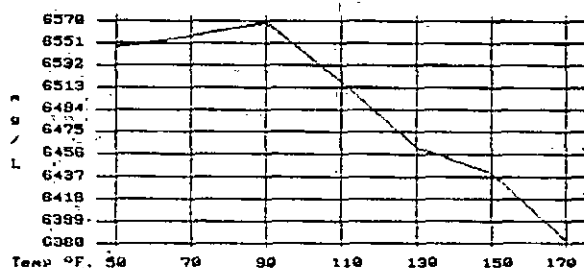
11. Hydroxyl (OH-) 0 / 17.0 = 0.00
12. Carbonate (CO₃=) 0 / 30.0 = 0.00
13. Bicarbonate (HCO₃-) 2,270 / 61.1 = 37.15
14. Sulfate (SO₄=) 700 / 48.8 = 14.34
15. Chloride (Cl-) 84,981 / 35.5 = 2,393.83
16. Total Dissolved Solids 143,645
17. Total Iron (Fe) 19 / 18.2 = 1.02
18. Total Hardness As CaCO₃ 3,681
19. Resistivity @ 75 F. (Calculated) 0.045 /cm.

LOGARITHMIC WATER PATTERN *meq/L.

PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X *meq/L = mg/L.



Calcium Sulfate Solubility Profile.



Na	Cl	Ca (HCO ₃) ₂	81.04	24.43	1,980
Ca	HCO ₃	CaSO ₄	68.07	0.00	0
Mg	SO ₄	CaCl ₂	55.50	0.00	0
Fe	CO ₃	Mg (HCO ₃) ₂	73.17	12.72	931
		MgSO ₄	60.19	14.34	863
		MgCl ₂	47.62	21.78	1,037
		NaHCO ₃	84.00	0.00	0
		NaSO ₄	71.03	0.00	0
		NaCl	58.46	2,372.05	138,670

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
 The corrosivity is increased by the content of mineral salts, and the presence of, CO₂ in solution.