PETROLITE

TRETOLITE DIVISION

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File

January 11, 1994

Scott Ritchie III
Ritchie Exploration
125 N. Market #1000
Wichita, KS. 67202

Subject: O'Brien A-5

Enclosed you will find a water analysis, from the O'Brien A-5, after the recent pulling job and a scale sample report taken form the pump.

No foreign water was found. Iron count and scaling tendencies are high. Water quality was bad and bacteria counts were very high. Upon inspection of the rods a severe corrosion problem has occurred and is mainly due to bacteria.

I recommend squeezing 1 drum of "X-cide" **XC307** mixed with 10 bbls. of water and pumping it down the tubing. Then flushing it with 17 bbls. After running the pump and setting I recommend flushing the annulus with 10 bbls and leaving the well down for 24 hours before resuming production.

For a corrosion inhibitor, I recommend using **WCW142** which is a combination compound of corrosion inhibitor and scale inhibitor with a gas scavenger in it. Treating rates and schedule is included on the attached recommended treating program.

If you have any questions or comments please feel free to call me. Thank you for the opportunity to serve you.

Respectfully,

Bill Daily
Sales Engineer

cc: Sam Keister Kent Noah
Bennie Dills Brad Seib

BD/ag

PETROLITE

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WATER ANALYSIS REPORT

Mid-Continent Region
Technical Services
5801 West 10th Street
Great Bend, Kansas 67530
(316) 792-7728

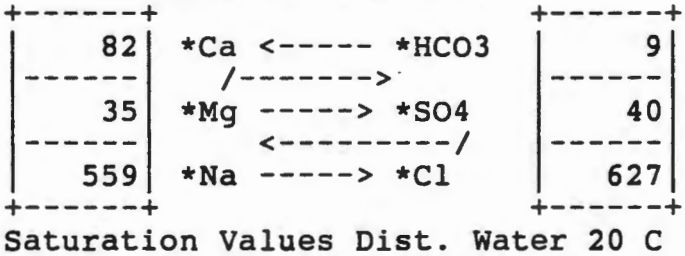
Company : Ritchie Exploration
Address :
Lease : O'Brien
Well : A-5
Sample Pt. :

Date : 01/04/94
Date Sampled : 01/04/94
Analysis No. :

	ANALYSIS		mg/L		* meq/L
1.	pH	6.8			
2.	H2S	Positive			
3.	Specific Gravity	1.022			
4.	Total Dissolved Solids		39854.5		
5.	Suspended Solids				
6.	Dissolved Oxygen				
7.	Dissolved CO2				
8.	Oil In Water				
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)		455.0		
11.	Bicarbonate	HCO3	555.1	HCO3	9.1
12.	Chloride	Cl	22242.3	Cl	627.4
13.	Sulfate	SO4	1925.0	SO4	40.1
14.	Calcium	Ca	1643.3	Ca	82.0
15.	Magnesium	Mg	427.9	Mg	35.2
16.	Sodium (calculated)	Na	12860.9	Na	559.4
17.	Iron	Fe	200.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		5865.3		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter



Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	9.1	737
CaSO4	68.1	40.1	2728
CaCl2	55.5	32.8	1821
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	35.2	1676
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	559.4	32692

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

REMARKS: Bill Daily
Sales Engineer

Petrolite Oilfield Chemicals Group
Mid-Continent Region
5601 Northwest 72nd, Suite 324
Oklahoma City, OK 73132

Respectfully submitted,

R. Rush Blaz