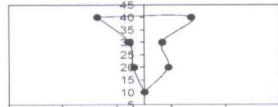


Schwerdtfeger A22

OIL CONS. DIV DIST. 3

JUN 29 2015

30-04511728

XTO Energy																																																											
#VALUE! #VALUE! #VALUE! Date: June 4, 2015			Field: Schwerdtfeger A22 Location: Schwerdtfeger A 22 Formation: Depth: 0																																																								
H & M Precision			Water Analysis Report																																																								
<table border="0" style="width: 100%;"> <tr> <td>Sum +</td> <td>mg/L</td> <td>meq/L</td> </tr> <tr> <td>Potassium</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>Sodium</td> <td>1,235.0</td> <td>53.72</td> </tr> <tr> <td>Calcium</td> <td>73.5</td> <td>3.67</td> </tr> <tr> <td>Magnesium</td> <td>30.9</td> <td>2.54</td> </tr> <tr> <td>Iron</td> <td>0.4</td> <td>0.02</td> </tr> <tr> <td>Barium</td> <td>1.0</td> <td>0.01</td> </tr> <tr> <td>Strontium</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>CATIONS</td> <td>1,340.8</td> <td>59.96</td> </tr> </table>			Sum +	mg/L	meq/L	Potassium	0.0	0.00	Sodium	1,235.0	53.72	Calcium	73.5	3.67	Magnesium	30.9	2.54	Iron	0.4	0.02	Barium	1.0	0.01	Strontium	0.0	0.00	CATIONS	1,340.8	59.96	<table border="0" style="width: 100%;"> <tr> <td>Sum -</td> <td>mg/L</td> <td>meq/L</td> </tr> <tr> <td>Sulfate</td> <td>368.0</td> <td>7.66</td> </tr> <tr> <td>Chloride</td> <td>2,000.0</td> <td>56.41</td> </tr> <tr> <td>Carbonate</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>Bicarbonate</td> <td>280.0</td> <td>4.59</td> </tr> <tr> <td>Hydroxide</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>-</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>-</td> <td>0.0</td> <td>0.00</td> </tr> <tr> <td>ANIONS</td> <td>2,648.0</td> <td>68.66</td> </tr> </table>			Sum -	mg/L	meq/L	Sulfate	368.0	7.66	Chloride	2,000.0	56.41	Carbonate	0.0	0.00	Bicarbonate	280.0	4.59	Hydroxide	0.0	0.00	-	0.0	0.00	-	0.0	0.00	ANIONS	2,648.0	68.66
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Total Dissolved Solids @180C Sample Temperature, °F Sample pH, standard units Dissolved Oxygen Carbon Dioxide Total Sulfide, (TS) Sulfide Ion, (S) Dissolved Hydrogen Sulfide, (TS-S)			3,989 mg/L 70 F 9.06 Units 0.0 ppm 0.0 mg/L 0.0 mg/L 0 mg/L 0 mg/L																																																								
Specific Gravity Resistivity, measured Ionic strength Sulfate Reducing Bacteria Aerobic Bacteria Manganese Level			1.0031 0 ohm/m³ 0.071 nd nd 0 mg/L																																																								
Scaling Tendency																																																											
CACO3 Stiff Davis		A Index	CASO4 SOLUBILITY		S Index																																																						
Temp F	Index		Temp F	Actual	Calculated																																																						
32	1.07	56	50	3.67	29.43																																																						
50	1.27	59	68	3.67	30.06																																																						
68	1.47	61	86	3.67	30.68																																																						
77	1.58	62	104	3.67	31.00																																																						
86	1.68	62	122	3.67	31.04																																																						
104	1.90	63	140	3.67	30.11																																																						
122	2.11	63	158	3.67	29.16																																																						
140	2.33	64	176	3.67	28.17																																																						
158	2.55	64																																																									
176	2.77	64																																																									
BASO4 SCALE POSSIBLE YES			Water Analysis Pattern 																																																								
NOTE: Stiff Davis Index - indicates undersaturation. Scale formation negative. 0 indicates the water is at saturation point. Scale unlikely. + indicates supersaturation. A positive scaling condition exists.			NOTE: Skillman Method Calcium Sulfate 'S' Index - indicates undersaturation. Scale formation negative. 0 indicates the water is at saturation point. Scale unlikely. + indicates supersaturation. A positive scaling condition exists.																																																								
NOTE: A Index; worst possible case. Assumes 100% precipitation. - Units = pounds of scale produced / 1000 bbls. of water. - A Index ≤ 0 Scale formation negative. - A Index > 0 Scale formation positive.			Approved: Zech Schaff 06/08/15 v4.01																																																								