

## Water Analysis Report

Attention: **Herb Samson**

Customer: **Ursa**

Location Code: **133430**

Region: **Piceance Field**

Sample ID: **AB59036**

Location: **Garfield County, CO**

Batch ID: **140325140357-21-CRCCSW**

System: **Production System**

Collection Date: **03/21/2014**

Equipment: **BAT 13A 17 07 95**

Receive Date: **03/25/2014**

Lab ID: **ABU-0021**

Report Date: **04/01/2014**

Sample Point: **Separator Dump Valve**

Analyses	Result	Unit
Dissolved CO2	164	mg/L
Dissolved H2S	1122	mg/L
pH	6.73	
Pressure	300	psi
Temperature	200	° F

Analyses	Result	Unit
Ionic Strength	0.24	
Resistivity	0.454	ohms - m
Total Dissolved Solids	14173.24	mg/L
Conductivity	22040	µS - cm3
Specific Gravity	1.0113	
Bicarbonate	1122	mg/L
Carbonate	Not Detected	mg/L

Cations	Result	Unit
Iron	67.22	mg/L
Manganese	0.411	mg/L
Barium	48.22	mg/L
Strontium	20.34	mg/L
Calcium	152.02	mg/L
Magnesium	22.19	mg/L
Sodium	5084.29	mg/L

Anions	Result	Unit
Chloride	7656	mg/L
Sulfate	.551	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-4.01
Barite BaSO4 SI	-0.53
Calcite CaCO3 PTB	105.4
Calcite CaCO3 SI	0.84
Celestite SrSO4 SI	-3.16
Gypsum CaSO4 SI	-4.49
Hemihydrate CaSO4 SI	-4.39
Saturation Index Calculation (Tomson-Oddo Model)	

Comments:

## Water Analysis Report

Attention: **Herb Samson**

Customer: **Ursa**

Location Code: **109658**

Region: **Piceance Field**

Sample ID: **AA75156**

Location: **Garfield County, CO**

Batch ID: **131007174809-21-CISWSD**

System: **Production System**

Collection Date: **09/30/2013**

Equipment: **BAT 23B 17 07 95**

Receive Date: **10/07/2013**

Lab ID: **ABU-0021**

Report Date: **10/16/2013**

Sample Point: **Separator**

Analyses	Result	Unit
Dissolved CO2	<b>154</b>	mg/L
Dissolved H2S	<b>Not Detected</b>	mg/L
pH	<b>6.54</b>	
Pressure	<b>300</b>	psi
Temperature	<b>200</b>	° F

Analyses	Result	Unit
Ionic Strength	<b>0.37</b>	
Resistivity	<b>0.303</b>	ohms - m
Total Dissolved Solids	<b>21194.45</b>	mg/L
Conductivity	<b>33052</b>	µS - cm3
Specific Gravity	<b>1.0170</b>	
Bicarbonate	<b>500</b>	mg/L
Carbonate	<b>Not Detected</b>	mg/L

Cations	Result	Unit
Iron	<b>40.68</b>	mg/L
Manganese	<b>0.617</b>	mg/L
Barium	<b>128.2</b>	mg/L
Strontium	<b>34.48</b>	mg/L
Calcium	<b>290.1</b>	mg/L
Magnesium	<b>37.5</b>	mg/L
Sodium	<b>7738.25</b>	mg/L

Anions	Result	Unit
Chloride	<b>12421</b>	mg/L
Sulfate	<b>3.62</b>	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	<b>-3.07</b>
Barite BaSO4 PTB	<b>1.6</b>
Barite BaSO4 SI	<b>0.46</b>
Calcite CaCO3 PTB	<b>73.3</b>
Calcite CaCO3 SI	<b>0.40</b>
Celestite SrSO4 SI	<b>-2.30</b>
Gypsum CaSO4 SI	<b>-3.54</b>
Hemihydrate CaSO4 SI	<b>-3.45</b>
Saturation Index Calculation (Tomson-Oddo Model)	

Comments: