

Attention: **Chris.Windholz@CHAMP-TECH.com**

Customer: **Pfeifer Explorations LLC (1517360)**

Location Code: **159610**

Region: **Not Available**

Sample ID: **AH90189**

Location: **Ellis, KS**

Login Batch: **170112071723**

System: **Production System**

Collection Date: **01/10/2017**

Equipment: **Well E. Schmidt 1**

Receive Date: **01/12/2017**

Lab ID: **ABU-0055**

Report Date: **01/13/2017**

Sample Point: **Wellhead**

Analyses	Result	Unit
Dissolved CO2	317	mg/L
Dissolved H2S	51	mg/L
pH	6.9	
Pressure	25	psi
Temperature	100	° F

Analyses	Result	Unit
Bicarbonate	351	mg/L
Conductivity (Calculated)	76729	µS - cm3
Ionic Strength	0.96	
Resistivity	0.130	ohms - m
Specific Gravity	1.030	
Total Dissolved Solids	49107.71	mg/L

Cations	Result	Unit
Iron	1.141	mg/L
Manganese	0.095	mg/L
Barium	0.042	mg/L
Strontium	58.56	mg/L
Calcium	2505	mg/L
Magnesium	693.2	mg/L
Sodium	15196.67	mg/L

Anions	Result	Unit
Chloride	28236	mg/L
Sulfate	2066	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.38
Barite BaSO4 SI	-0.53
Calcite CaCO3 PTB	26.8
Calcite CaCO3 SI	0.13
Celestite SrSO4 PTB	2.6
Celestite SrSO4 SI	0.03
Gypsum CaSO4 SI	-0.25
Hemihydrate CaSO4 SI	-0.23
Saturation Index Calculation (Tomson-Oddo Model)	

Comments

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Attention: **Chris.Windholz@CHAMP-TECH.com**

Customer: **Pfeifer Explorations LLC (1517360)**

Location Code: **118380**

Region: **Not Available**

Sample ID: **AH90190**

Location: **Ellis, KS**

Login Batch: **170112072515**

System: **Production System**

Collection Date: **01/10/2017**

Equipment: **Well R & A Schmidt 1**

Receive Date: **01/12/2017**

Lab ID: **ABU-0055**

Report Date: **01/13/2017**

Sample Point: **Wellhead**

Analyses	Result	Unit
Dissolved CO2	273	mg/L
Dissolved H2S	34	mg/L
pH	6.9	
Pressure	25	psi
Temperature	100	° F

Analyses	Result	Unit
Bicarbonate	293	mg/L
Conductivity (Calculated)	77325	µS - cm3
Ionic Strength	0.99	
Resistivity	0.129	ohms - m
Specific Gravity	1.030	
Total Dissolved Solids	49489.37	mg/L

Cations	Result	Unit
Iron	1.123	mg/L
Manganese	0.165	mg/L
Barium	0.028	mg/L
Strontium	67.62	mg/L
Calcium	3183	mg/L
Magnesium	864.6	mg/L
Sodium	14318.83	mg/L

Anions	Result	Unit
Chloride	28424	mg/L
Sulfate	2337	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.25
Barite BaSO4 SI	-0.69
Calcite CaCO3 PTB	23.7
Calcite CaCO3 SI	0.14
Celestite SrSO4 PTB	11.1
Celestite SrSO4 SI	0.12
Gypsum CaSO4 SI	-0.12
Hemihydrate CaSO4 SI	-0.10
Saturation Index Calculation (Tomson-Oddo Model)	

Comments

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