



ROCKY MOUNTAIN AREA LABORATORY
350 COLE CREEK ROAD,
EVANSVILLE, WY 82636

REPORT DATE: 7/30/2020

PARTIAL WATER ANALYSIS REPORT

CUSTOMER: HILCORP ENERGY CO
DISTRICT: FOUR CORNERS
LEASE/AREA: AZTEC
SAMPLE POINT NAME: AZTEC COM 42H
SITE TYPE: WELL SITES
SAMPLE POINT DESCRIPTION: WELL HEAD

ACCOUNT REP: JASON HARE
SAMPLE ID: 202012014016
SAMPLE DATE: 7/9/2020
ANALYSIS DATE: 7/30/2020
ANALYST: KS

HILCORP ENERGY CO, AZTEC, AZTEC COM 42H

FIELD DATA			ANALYSIS OF SAMPLE					
			ANIONS:		CATIONS:			
			mg/L	meq/L	mg/L	meq/L		
Initial Temperature (°F):	250		Chloride (Cl ⁻):	3557.0	100.2	Sodium (Na ⁺):	2053.7	89.7
Final Temperature (°F):	80		Sulfate (SO ₄ ²⁻):	22.0	0.5	Potassium (K ⁺):	188.8	4.8
Initial Pressure (psi):	100		Borate (H ₃ BO ₃):	0.3	0.0	Magnesium (Mg ²⁺):	0.5	0.0
Final Pressure (psi):	15		Fluoride (F ⁻):	ND		Calcium (Ca ²⁺):	200.0	10.0
			Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	5.5	0.1
pH:			Nitrite (NO ₂ ⁻):	ND		Barium (Ba ²⁺):	3.2	0.0
pH at time of sampling:	13.0		Nitrate (NO ₃ ⁻):	ND		Iron (Fe ²⁺):	3.5	0.1
			Phosphate (PO ₄ ³⁻):	3.9	0.1	Manganese (Mn ²⁺):	0.1	0.0
Scale Residual:	ChemUsed	Resid. PPM	Silica (SiO ₂):	2.8	0.0	Lead (Pb ²⁺):	ND	
	Total PO4	3.88				Zinc (Zn ²⁺):	5.3	0.2
Alkalinity by Titration:	mg/L	meq/L				Aluminum (Al ³⁺):	ND	
Bicarbonate (HCO ₃ ⁻):	8009.0	131.3				Chromium (Cr ³⁺):	ND	
Carbonate (CO ₃ ²⁻):	ND					Cobalt (Co ²⁺):	ND	
Hydroxide (OH ⁻):	ND					Copper (Cu ²⁺):	ND	
			Organic Acids:	mg/L	meq/L	Molybdenum (Mo ²⁺):	ND	
aqueous CO ₂ (ppm):	ND		Formic Acid:	ND		Nickel (Ni ²⁺):	ND	
aqueous H ₂ S (ppm):	ND		Acetic Acid:	ND		Tin (Sn ²⁺):	ND	
aqueous O ₂ (ppb):	ND		Propionic Acid:	ND		Titanium (Ti ²⁺):	ND	
			Butyric Acid:	ND		Vanadium (V ²⁺):	ND	
			Valeric Acid:	ND		Zirconium (Zr ²⁺):	ND	
Calculated TDS (mg/L):	14053					Total Hardness:	511	
Measured Density/Specific Gravity	ND							
Conductivity (mmhos):	18.7							
			Anion/Cation Ratio:		2.21			ND = NOT DETERMINED

Comments: _____