

Imperative Water Analysis Report



SYSTEM IDENTIFICATION

Company: Forty Acres Energy
Location: WEU 525
Sample Source: Wellhead
Account Rep: Junior Garcia

Sample ID#: W-23273

Sample Date: 03-23-2020
Report Date: 03-27-2020

WATER CHEMISTRY

CATIONS		ANIONS	
Calcium(as Ca)	5754	Chloride(as Cl)	66400
Magnesium(as Mg)	1482	Sulfate(as SO ₄)	1961
Barium(as Ba)	0.584	Dissolved CO ₂ (as CO ₂)	240.00
Strontium(as Sr)	161.10	Bicarbonate(as HCO ₃)	537.00
Sodium(as Na)	34222	H ₂ S (as H ₂ S)	120.00
Potassium(as K)	796.50	Boron(as B)	30.21
Lithium(as Li)	5.67		
Iron(as Fe)	2.26		
Manganese(as Mn)	1.06		

PARAMETERS			
Temperature(°F)	77.00	Sample pH	6.86
Conductivity	120313	Sp.Gr.(g/mL)	1.075
Resistivity	8.31	T.D.S.	117865

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (atm)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackinawite FeS		CO ₂ (mpy)	pCO ₂ (atm)
70.00	1.000	9.14	0.178	0.908	-35.22	1.35	103.61	5.79	0.307	1.03	3.04	3.21	0.153	35.92	0.213	0.0431	0.0479
130.00	10.000	7.99	0.109	1.08	21.84	1.24	63.37	1.47	0.119	0.915	-8.85	4.18	0.107	10.73	0.183	0.198	0.479
142.00	19.000	7.56	0.0988	1.19	43.87	1.27	67.64	1.14	0.0467	0.882	-12.51	4.27	0.0990	8.58	0.174	0.230	0.910
154.00	28.000	7.10	0.0893	1.33	66.84	1.30	70.47	0.895	-0.0436	0.848	-16.42	4.32	0.0909	6.85	0.165	0.283	1.34
166.00	37.000	6.61	0.0804	1.51	89.46	1.32	72.26	0.705	-0.155	0.815	-20.55	4.33	0.0830	5.47	0.154	0.324	1.77
178.00	46.000	6.11	0.0720	1.75	110.66	1.34	73.13	0.558	-0.294	0.781	-24.93	4.30	0.0755	4.36	0.142	0.325	2.20
190.00	55.000	5.61	0.0643	2.06	129.84	1.35	73.20	0.445	-0.464	0.747	-29.61	4.23	0.0683	3.47	0.128	0.175	2.63
202.00	64.000	5.10	0.0571	2.46	146.65	1.36	72.53	0.355	-0.673	0.712	-34.63	4.12	0.0615	2.76	0.111	0.154	3.06
214.00	73.000	4.56	0.0511	2.94	163.73	1.34	70.73	0.282	-0.943	0.671	-41.46	3.94	0.0560	2.13	0.0887	0.104	3.50
226.00	82.000	4.09	0.0449	3.59	176.75	1.34	68.92	0.227	-1.26	0.637	-47.39	3.78	0.0500	1.68	0.0659	0.236	3.93
238.00	91.000	3.64	0.0391	4.42	187.78	1.33	66.54	0.184	-1.65	0.604	-53.79	3.60	0.0446	1.33	0.0392	0.392	4.36
250.00	100.000	3.22	0.0337	5.49	197.11	1.31	63.56	0.149	-2.12	0.570	-60.70	3.41	0.0396	1.05	0.00776	0.552	4.79
		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels		Lbs per xSAT 1000 Barrels			

Saturation Ratios (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase.
Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.

