

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Water Analysis

Upper Penn.

Company.... Nalco/Exxon Energy Chemicals
Well # IHSC #7
Lease..... MARATHON
Location... Sec. 36, T-20-S, R-24-E
Date Run... 10/13/1997
Lab Ref #.. 97-OCT-N00769

Sample Temp... 70.0
Date Sampled.. 10/13/1997
Sampled by.... Mark Hermann
Employee # ... 27-011
Analyzed by... DANIEL

Eddy County, NM

Dissolved Gasses

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide	(H ₂ S)	348.80	16.00	21.80
Carbon Dioxide	(CO ₂)	0.00	22.00	0.00
Dissolved Oxygen	(O ₂)	0.00	8.00	0.00

Cations

Calcium	(Ca++)	341.70	20.10	17.00
Magnesium	(Mg++)	85.40	12.20	7.00
Sodium	(Na+)	3,714.25	23.00	161.49
Barium	(Ba++)	0.50	59.10	0.00
Manganese	(Mn++)	0.00	27.50	0.00

Anions

Hydroxyl	(OH-)	0.00	17.00	0.00
Carbonate	(CO ₃ =)	12.00	30.00	0.40
Bicarbonate	(HCO ₃ -)	928.72	61.10	150.20
Sulfate	(SO ₄ =)	1,750.00	48.80	35.86
Chloride	(Cl-)	4,004.40	35.50	112.84
Total Iron	(Fe)	0.40	18.60	0.02
Total Dissolved Solids		11,176.87		
Total Hardness As CaCO ₃		1,200.00		
Conductivity MICROMHOS/CM		13,500		

pH 7.600

Specific Gravity 60/60 F. 1.008

CaSO₄ Solubility @ 80 F. 40.28 MEq/L, CaSO₄ scale is ^{not} likely

CaCO₃ Scale Index

70.0	0.930
80.0	1.060
90.0	1.280
100.0	1.280
110.0	1.520
120.0	1.520
130.0	1.790
140.0	1.790
150.0	2.020

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