

M&G			
County: San Juan		Field: 0	
State: NM		Location: GRAHAM 35	
Sampled at: 0		Formation: N/A	
Date: OCTOBER 8, 2024		Depth: 0	

Envision Products**Water Analysis**

	mg/L	meq/L
Sum +		
Potassium	0.0	0.00
Sodium	147.4	6.41
Calcium	284.0	14.17
Magnesium	135.2	11.13
Iron	0.2	0.01
Barium	3.0	0.04
Strontium	0.0	0.00
CATIONS	569.8	31.76

Analysis
Not Balanced

	mg/L	meq/L
Sum -		
Sulfate	0.0	0.00
Chloride	500.0	14.10
Carbonate	0.0	0.00
Bicarbonate	30.0	0.49
Hydroxide	0.0	0.00
-	0.0	0.00
-	0.0	0.00
ANIONS	530.0	14.59

System Parameters

Total Dissolved Solids @180C
 Sample Temperature, °F
 Sample pH, standard units
 Dissolved Oxygen
 Carbon Dioxide
 Total Sulfide, (TS)
 Sulfide Ion, (S)
 Dissolved Hydrogen Sulfide, (TS-S)

1,100 mg/L
 70 F
 7.76 Units
 0.0 ppm
 0.0 mg/L
 0.0 mg/L
 0 mg/L
 0 mg/L

Specific Gravity
 Resistivity, measured
 Ionic strength
 Sulfate Reducing Bacteria
 Aerobic Bacteria
 Manganese Level
 Chemical
 Amine

1.0011
 0 ohm/m²3
 0.036
 na
 na
 1 mg/L
 N/A ppm
 N/A ppm

Scaling Tendency

CACO3			CASO4				
Stiff Davis			SOLUBILITY				
Temp F	Index	A Index	Temp F	Actual	Calculated	S Index	A Index
32	-0.48	-30	50	0.00	20.26	-20.26	-483
50	-0.27	-13	68	0.00	20.98	-20.98	-500
68	-0.06	-2	86	0.00	21.69	-21.69	-517
77	0.04	1	104	0.00	22.02	-22.02	-525
86	0.14	5	122	0.00	21.99	-21.99	-524
104	0.34	9	140	0.00	21.05	-21.05	-502
122	0.54	12	158	0.00	20.07	-20.07	-478
140	0.74	14	176	0.00	19.05	-19.05	-454
158	0.93	15					
176	1.12	16					

BASO4 SCALE POSSIBLE**NO****Water Analysis Pattern**

40 30 20 10 0 20 30 40

NOTE: Stiff Davis Index

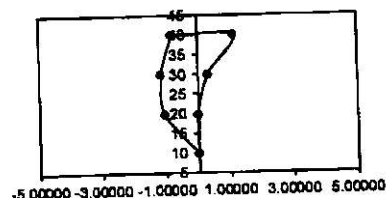
- indicates undersaturation. Scale formation negative.
- 0 indicates the water is at saturation point. Scale unlikely.
- + indicates supersaturation. A positive scaling condition exists

NOTE: Skillman Method Calcium Sulfate 'S' Index

- indicates undersaturation. Scale formation negative.
- 0 indicates the water is at saturation point. Scale unlikely.
- + indicates supersaturation. A positive scaling condition exists

NOTE: A Index; worst possible case. Assumes 100% precipitation.

- Units = pounds of scale produced / 1000 bbls. of water.
- A Index < 0 Scale formation negative.
- A Index > 0 Scale formation positive.



Approved: Desirae
 10/08/24

Sante Fe Main Office
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General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 412675

CONDITIONS

Operator: M & G DRLG CO INC P.O. Box 5940 Farmington, NM 87499	OGRID: 141852
	Action Number: 412675
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS 1100	1/31/2025