

M&G			
County: San Juan	Field: 0		
State: NM	Location: GRAHAM 32		
Sampled at: 0	Formation: N/A		
Date: OCTOBER 8, 2024	Depth: 0		

Envision Products**Water Analysis**

Sum +	mg/L	meq/L
Potassium	0.0	0.00
Sodium	261.9	11.39
Calcium	12.0	0.60
Magnesium	5.7	0.47
Iron	0.2	0.01
Barium	5.0	0.07
Strontium	0.0	0.00
CATIONS	284.8	12.54

Analysis
Balanced

Sum -	mg/L	meq/L
Sulfate	0.0	0.00
Chloride	500.0	14.10
Carbonate	0.0	0.00
Bicarbonate	170.0	2.79
Hydroxide	0.0	0.00
	0.0	0.00
	0.0	0.00
ANIONS	670.0	16.89

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)

955 mg/L
 70 F
 9.84 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

0.0000
 0 ohm/m^3
 0.015
 na
 na
 0.5 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	1.09	10	50	0.00	22.76	-22.76	-542
50	1.31	10	68	0.00	23.61	-23.61	-563
68	1.52	10	86	0.00	24.43	-24.43	-582
77	1.62	10	104	0.00	24.80	-24.80	-591
86	1.72	10	122	0.00	24.72	-24.72	-589
104	1.92	10	140	0.00	23.69	-23.69	-565
122	2.10	10	158	0.00	22.61	-22.61	-539
140	2.28	10	176	0.00	21.48	-21.48	-512
158	2.45	10					
176	2.62	10					

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

40 30 20 10 10 20 30 40

NOTE: Stiff Davis Index

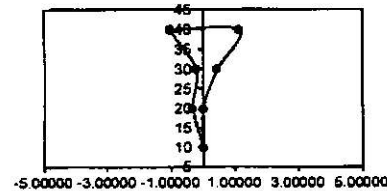
- indicates undersaturation. Scale formation negative.
- 0 indicates the water is at saturation point. Scale unlikely.
- + indicates supersaturation. A positive scaling condition exists

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

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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 434306

CONDITIONS

Operator: M & G DRLG CO INC P.O. Box 5940 Farmington, NM 87499	OGRID: 141852
	Action Number: 434306
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS 955	5/1/2025