

M&G			
County: San Juan State: NM Sampled at: 0 Date: OCTOBER 8, 2024	Field: 0 Location: GRAHAM 3 Formation: N/A Depth: 0		

Envision Products**Water Analysis**

	mg/L	meq/L
Sum +		
Potassium	0.0	0.00
Sodium	25.5	1.11
Calcium	148.0	7.39
Magnesium	70.5	5.80
Iron	0.2	0.01
Barium	2.0	0.03
Strontium	0.0	0.00
CATIONS	246.2	14.34

**Analysis
Balanced**

	mg/L	meq/L
Sum -		
Sulfate	2.0	0.04
Chloride	500.0	14.10
Carbonate	0.0	0.00
Bicarbonate	20.0	0.33
Hydroxide	0.0	0.00
	0.0	0.00
	0.0	0.00
ANIONS	522.0	14.47

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)

768 mg/L
 70 F
 9.04 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/m³
 0.021
 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	0.42	7					
50	0.64	9	50	0.04	20.65	-20.61	-491
68	0.84	10	68	0.04	21.46	-21.41	-510
77	0.95	10	86	0.04	22.24	-22.20	-529
86	1.05	10	104	0.04	22.59	-22.55	-538
104	1.25	11	122	0.04	22.53	-22.49	-536
122	1.44	11	140	0.04	21.53	-21.49	-512
140	1.62	11	158	0.04	20.48	-20.44	-487
158	1.80	11	176	0.04	19.39	-19.35	-461
176	1.97	11					

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

40 30 20 10 10 20 30 40

NOTE: Stiff Davis Index

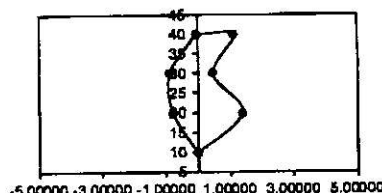
- indicates undersaturation. Scale formation negative.
- 0 indicates the water is at saturation point. Scale unlikely.
- + indicates supersaturation. A positive scaling condition exists

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
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<https://www.emnrd.nm.gov/ocd/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 412670

CONDITIONS

Operator: M & G DRLG CO INC P.O. Box 5940 Farmington, NM 87499	OGRID: 141852
	Action Number: 412670
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS 768	1/31/2025