

M&G			
County: San Juan State: NM Sampled at: 0 Date: OCTOBER 8, 2024	Field: 0 Location: GRAHAM 53 Formation: N/A Depth: 0		

Envision Products**Water Analysis**

Sum +	mg/L	meq/L
Potassium	0.0	0.00
Sodium	346.5	15.07
Calcium	6.0	0.30
Magnesium	2.9	0.24
Iron	0.2	0.01
Barium	2.0	0.03
Strontium	0.0	0.00
CATIONS	357.6	16.65

Analysis
Balanced

Sum -	mg/L	meq/L
Sulfate	0.0	0.00
Chloride	500.0	14.10
Carbonate	0.0	0.00
Bicarbonate	360.0	5.90
Hydroxide	0.0	0.00
-	0.0	0.00
-	0.0	0.00
ANIONS	860.0	20.00

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)

1,216 mg/L
 70 F
 7.39 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

1.0010
 0 ohm/m³
 0.018
 na
 na
 1 mg/L
 N/A ppm
 N/A ppm

Scaling Tendency

CACO ₃			CASO ₄				
Temp F	Stiff Davis Index	A Index	Temp F	SOLUBILITY Actual	SOLUBILITY Calculated	S Index	A Index
32	-1.34	-79	50	0.00	23.39	-23.39	-558
50	-1.13	-52	68	0.00	24.23	-24.23	-578
68	-0.92	-33	86	0.00	25.04	-25.04	-597
77	-0.82	-26	104	0.00	25.40	-25.40	-605
86	-0.72	-20	122	0.00	25.33	-25.33	-604
104	-0.52	-11	140	0.00	24.31	-24.31	-579
122	-0.33	-6	158	0.00	23.24	-23.24	-554
140	-0.15	-2	176	0.00	22.12	-22.12	-527
158	0.03	0					
176	0.19	2					

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

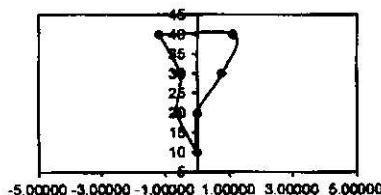
NOTE: Skillman Method Calcium Sulfate 'S' Index

- 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.

40 30 20 10 10 20 30 40


 Approved: Desirae
 10/08/24

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General Information
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Online Phone Directory
<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 412677

CONDITIONS

Operator: M & G DRLG CO INC P.O. Box 5940 Farmington, NM 87499	OGRID: 141852
	Action Number: 412677
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS1218	1/31/2025