



Certificate of Analysis  
 Number: 2500-21120140-017A

Greeley Laboratory  
 2881 S. 31st Ave  
 Unit 6-8  
 Greeley, CO 80631

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Dec. 29, 2021

Station Name: UPRR 23 PAN AM M #3  
 Station Location: NESW S19 T1S R64W  
 Cylinder No: 2500-00585  
 Analyzed: 12/28/2021 15:40:10 by RHJ

Sampled By: Seph Farabaugh  
 Sample Of: Gas Spot  
 Sample Date: 12/17/2021 11:40  
 Sample Conditions: 59 psig, @ 60 °F  
 Method: GPA 2286

**Analytical Data**

Components	Mol. %	Wt. %	GPM at 14.73 psia
Hydrogen Sulfide	0.0000	0.0000	
Nitrogen	6.7452	8.5406	
Carbon Dioxide	1.7741	3.5290	
Methane	70.6104	51.2001	
Ethane	12.0758	16.4121	3.2399
Propane	5.6594	11.2796	1.5641
Iso-Butane	0.6594	1.7323	0.2165
n-Butane	1.5246	4.0052	0.4822
Iso-Pentane	0.3818	1.2451	0.1401
n-Pentane	0.3454	1.1264	0.1256
i-Hexanes	0.0797	0.2977	0.0311
n-Hexane	0.0224	0.0874	0.0092
Benzene	0.0052	0.0185	0.0015
Cyclohexane	0.0074	0.0280	0.0025
i-Heptanes	0.0283	0.1202	0.0117
n-Heptane	0.0168	0.0762	0.0078
Toluene	0.0145	0.0606	0.0049
i-Octanes	0.0383	0.1815	0.0170
n-Octane	0.0038	0.0194	0.0019
2,2,4-Trimethylpentane	0.0002	0.0010	0.0001
Ethylbenzene	0.0015	0.0070	0.0006
Xylenes	0.0029	0.0141	0.0011
i-Nonanes	0.0017	0.0100	0.0009
n-Nonane	0.0002	0.0013	0.0001
Decane Plus	0.0010	0.0067	0.0006
	100.0000	100.0000	5.8594

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	22.12	144.68
<b>GPA 2172 Calculation:</b>		
<b>Calculated Gross BTU per ft<sup>3</sup> @ 14.73 psia &amp; 60°F</b>		
Real Gas Dry BTU	1187.4	7830.6
Water Sat. Gas Base BTU	1166.8	7667.8
Relative Density Real Gas	0.7662	4.9955
Compressibility Factor	0.9966	

**Comments:** H2S Field Content 0 ppm

Data reviewed by: Matthew Loveley, Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.