



Certificate of Analysis

Number: 2500-21010179-002A

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

Jessica Donahue
Ardor Environmental
11546 W. 26th Place
Lakewood, CO 80215

Feb. 04, 2021

Station Name: Clifford Causey #20
Method: GPA 2286
Cylinder No: 2500-00664
Analyzed: 01/29/2021 10:39:22 by RHJ

Sampled By: Mike Kamerzell
Sample Of: Gas Spot
Sample Date: 01/27/2021 16:18
Sample Conditions: 35 psig, @ 20 °F

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.73 psia
Hydrogen Sulfide	0.0100	0.0091	
Nitrogen	3.4007	2.5534	
Carbon Dioxide	2.1074	2.4859	
Methane	24.4451	10.5111	
Ethane	20.3393	16.3922	5.5036
Propane	31.9967	37.8168	8.9190
Iso-Butane	3.8534	6.0030	1.2758
n-Butane	8.9245	13.9030	2.8468
Iso-Pentane	1.7362	3.3575	0.6425
n-Pentane	1.5084	2.9169	0.5532
i-Hexanes	0.5537	1.2481	0.2226
n-Hexane	0.3179	0.7353	0.1324
Benzene	0.0106	0.0222	0.0030
Cyclohexane	0.1178	0.2660	0.0406
i-Heptanes	0.3657	0.8985	0.1471
n-Heptane	0.0673	0.1807	0.0314
Toluene	0.0175	0.0435	0.0059
i-Octanes	0.1632	0.4540	0.0722
n-Octane	0.0163	0.0500	0.0084
2,2,4-Trimethylpentane	0.0024	0.0075	0.0013
Ethylbenzene	0.0065	0.0185	0.0025
Xylenes	0.0105	0.0297	0.0040
i-Nonanes	0.0133	0.0425	0.0068
n-Nonane	0.0035	0.0120	0.0020
Decane Plus	0.0121	0.0426	0.0066
	100.0000	100.0000	20.4277

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	37.31	137.56
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	2069.7	7320.4
Water Sat. Gas Base BTU	2033.6	7107.4
Relative Density Real Gas	1.3032	4.7497
Compressibility Factor	0.9881	

Comments: H2S Field Content 100 ppm

Dee Bernoski

Report generated by: Dee Bernoski, Project Manager

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