



Certificate of Analysis

Number: 2500-22010071-001A

Greeley Laboratory

2881 S. 31st Ave

Unit 6-8

Greeley, CO 80631

Jeff Braden
WSP USA
4600 W 60th Ave
Arvada, CO 80003

Jan. 21, 2022

Station Name: J Clark 7N
Sample Conditions:

Sampled By: Jeff Braden
Sample Of: Liquid Spot
Sample Date: 01/10/2022 13:00

Analytical Data

Test	Method	Result	Units	Detection Limit	Lab Tech.	Analysis Date
Total Sediment and Water	ASTM D-4007	0.025	vol%		RHJ	01/17/2022
Sulfur Content by X-ray	ASTM D-4294	0.023	wt%		RHJ	01/17/2022
Viscosity - Kinematic @ 104°F	ASTM D-445	1.823	cSt		AC	01/21/2022
Viscosity - Kinematic @ 104°F	ASTM D-445	32.0	SUS		AC	01/21/2022
API Gravity @ 60° F	ASTM D-5002	48.87	°		RHJ	01/17/2022
Specific Gravity @ 60/60° F	ASTM D-5002	0.7845	—		RHJ	01/17/2022
Density @ 60° F	ASTM D-5002	0.7837	g/ml		RHJ	01/17/2022
VP of Crude Oil: V/L = 4:1 @ 37.8 °F	ASTM D-6377	5.99	psi		RHJ	01/17/2022
RVPE (D323 Equivalent) @ 37.8 °F	ASTM D-6377	4.99	psi		RHJ	01/17/2022
Initial Boiling Point	ASTM D-86-IBP	95.9	°F		AC	01/21/2022
Pour Point	ASTM D-97	-23	°C		RHJ	01/18/2022

Data reviewed by: Ryleigh Jacobs, Laboratory Analyst
Methods: ASTM D-4007, ASTM D-4294, ASTM D-5002, ASTM D-6377, ASTM D-97

Data reviewed by: Matthew Loveley, Laboratory Manager
Methods: ASTM D-445, ASTM D-86-IBP

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