



Huddleston-Berry
Engineering & Testing, LLC

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April 21, 2022
Project#01349-0001

Bowie Resources, LLC
43659 Bowie Road
Paonia, Colorado 81428

Attention: Mr. Basil Bear

Subject: Construction Materials Testing
1st Quarter 2022
Bowie Mine No. 2
Paonia, Colorado

Dear Mr. Bear,

At your request, a representative of Huddleston-Berry Engineering and Testing, LLC (HBET) conducted field moisture and compaction testing, and laboratory moisture testing of coal mine waste materials placed at Bowie Mine No. 2 near Paonia, Colorado. Field testing was conducted on March 28th, 2022. Soil compaction test reports, test location data, and laboratory optimum moisture and density (Proctor) data are attached.

We are pleased to be of service to your project. Please contact us if you have any questions or comments regarding the contents of this report.

Respectfully Submitted:
Huddleston-Berry Engineering and Testing, LLC

A handwritten signature in blue ink that reads "Michael A. Berry". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael A. Berry, P.E.
Vice President of Engineering

SOIL COMPACTION TEST REPORT

Task: Gob Pile Densities

Field vs. Lab Densities

Project No.: 01349 - 0001

Tested By: MS **Date:** 3/28/22

Project Name: Bowie Mine

Work Order No: 78368

Client Name: Bowie Resources

Authorized By: Client **Date:** 3/28/22

Placement Contractor: Bowie Resources

Reviewed By: MAB **Date:** 4/2/22

Contractor Representative: Basil

No.	Point No.	Elevation	Max. Dry Density (pcf)	Optimum Moisture (%)	Wet Density (pcf)	Speedy Moisture (%)	Field Dry Density (pcf)	Relative Field Comp.(%)	Tare Weight (g)	Wet Weight (g)	Dry Weight (g)	Lab Dry Density (pcf)	Lab Moisture (%)	Relative Lab Comp.(%)	
1	3149	5915.43	104.0	13.5	104.1				378.8	1355.9	1252.6	93.1	11.8%	90%	
2	3150	5911.54	104.0	13.5	105.2				397.9	1424.4	1315.9	94.1	11.8%	90%	
3	3151	5903.99	104.0	13.5	103.9				392.6	1530.2	1412.2	93.1	11.6%	90%	
4	3152	5899.06	104.0	13.5	104.5				387.6	1897.4	1740.5	93.6	11.6%	90%	
5	3153	5907.81	104.0	13.5	105.6				292.1	1452.4	1343.3	95.7	10.4%	92%	
6	3154	5907.23	104.0	13.5	106.2				379.3	1549.9	1407.5	93.3	13.8%	90%	
7	3155	5903.21	104.0	13.5	105.0				378.5	1716.0	1565.9	93.2	12.6%	90%	
8	3156	5897.16	104.0	13.5	104.7				390.3	1638.0	1509.2	93.9	11.5%	90%	
9	3157	5895.88	104.0	13.5	110.5				388.4	1776.9	1629.1	98.7	11.9%	95%	
10	3158	5900.37	104.0	13.5	107.3				294.3	1549.1	1419.2	96.2	11.5%	92%	
11	3159	5905.62	104.0	13.5	104.1				404.2	2093.6	1918.3	93.3	11.6%	90%	
12	3160	5910.44	104.0	13.5	104.6				316.8	1537.5	1407.3	93.4	11.9%	90%	
13	3161	5912.89	104.0	13.5	102.3				378.4	1617.3	1511.8	93.6	9.3%	90%	

Remarks: _____

Point #	Northing	Easting	Elevation	Description
3149	18164.63526	36293.33172	5915.427579	DA
3150	18072.04909	36303.8581	5911.543485	DA
3151	17967.93165	36339.93127	5903.990736	DA
3152	17932.2611	36406.97784	5899.059218	DA
3153	18052.57628	36365.27121	5907.807806	DA
3154	18111.63994	36424.14797	5907.225554	DA
3155	18052.7714	36442.55053	5903.205372	DA
3156	17959.03498	36481.64616	5897.157362	DA
3157	17987.96659	36586.04133	5895.877892	DA
3158	18082.27046	36575.82795	5900.36725	DA
3159	18171.27513	36552.66725	5905.616017	DA
3160	18268.93981	36511.37213	5910.436981	DA
3161	18239.38429	36407.9946	5912.887934	DA



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970-255-8005
970-255-6818

MOISTURE-DENSITY RELATIONSHIP

CLIENT Bowie Resources, LLC

PROJECT NAME Bowie Mine #2

PROJECT NUMBER 00489-0003

PROJECT LOCATION Paonia, CO

Sample Date: _____

14-0195

Sample No.: _____

Source of Material: _____

Gob #3 Borrow Blend

Description of Material: _____

Test Method: _____

ASTM D698C

TEST RESULTS

Maximum Dry Density 104.0 PCF

Optimum Water Content 13.5 %

GRADATION RESULTS (% PASSING)

#200

#4

3/4"

ATTERBERG LIMITS

LL

PL

PI

Curves of 100% Saturation
for Specific Gravity Equal to:

2.80

2.70

2.60

