



Huddleston-Berry
Engineering & Testing, LLC

2789 Riverside Parkway
Grand Junction, Colorado 81501
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May 3, 2021
Project#01349-0001

Bowie Resources, LLC
43659 Bowie Road
Paonia, Colorado 81428

Attention: Mr. Basil Bear

Subject: Construction Materials Testing
1st Quarter 2021
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 9th, 2021. 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:** 3/9/21

Project Name: Bowie Mine

Work Order No: 71567

Client Name: Bowie Resources

Authorized By: Client **Date:** 3/9/21

Placement Contractor: Bowie Resources

Reviewed By: MAB **Date:** 3/19/21

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	3000	5973.9	104.0	13.5	105.9				157.0	680.5	622.3	94.1	12.5%	91%	
2	3001	5911.1	104.0	13.5	105.3				155.5	712.8	655.3	94.4	11.5%	91%	
3	3002	5910.58	104.0	13.5	106.2				155.5	884.2	807.7	95.1	11.7%	91%	
4	3003	5909.98	95.5	14.0	101.1				154.1	695.4	636.4	90.1	12.2%	94%	
5	3004	5909.68	104.0	13.5	108.7				311.4	1016.4	943.4	97.4	11.6%	94%	
6	3005	5908.94	104.0	13.5	106.2				284.4	933.9	866.9	95.2	11.5%	92%	
7	3007	591.32	104.0	13.5	109.1				290.3	1014.6	940.1	97.9	11.5%	94%	
8	3008	5916.33	104.0	13.5	105.6				394.3	1088.8	1015.7	94.5	11.8%	91%	
9	3009	5916.14	95.5	14.0	103.6				191.0	920.7	835.7	91.5	13.2%	96%	
10	3010	5915.83	95.5	14.0	102.5				188.4	825.1	755.6	91.3	12.3%	96%	
11	3011	5915.79	104.0	13.5	106.4				190.4	808.0	743.1	95.2	11.7%	92%	
12	302	5914.19	104.0	13.5	108.9				188.5	809.1	743.4	97.4	11.8%	94%	
13	3013	5915.35	104.0	13.5	105.8				191.1	614.2	570.2	94.8	11.6%	91%	
14	3014	5917.86	95.5	14.0	103.1				188.9	787.5	722.6	91.9	12.2%	96%	
15	3015	5920.67	95.5	14.0	100.8				378.9	996.4	917.8	88.0	14.6%	92%	

Remarks: _____

Gauge Number: 2472

Density Counts: 2733

Moisture Counts: 390

Record No. 42 S

SOIL COMPACTION TEST REPORT

Task: Gob Pile Densities

Field vs. Lab Densities

Project No.: 01349 - 0001

Tested By: MS **Date:** 3/9/21

Project Name: Bowie Mine

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Client Name: Bowie Resources

Authorized By: Client **Date:** 3/9/21

Placement Contractor: Bowie Resources

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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.(%)	
16	3016	5924.8	95.5	14.0	100.3				378.8	831.8	781.5	89.2	12.5%	93%	
17	3017	5885.8	104.0	13.5	107.0				377.1	1317.4	1220.4	96.0	11.5%	92%	
18	3018	5886.7	104.0	13.5	106.6				530.6	1213.1	1135.9	94.5	12.8%	91%	
19	3019	5885.11	104.0	13.5	104.8				526.1	1237.7	1160.0	93.4	12.3%	90%	
20	3020	5884.71	104.0	13.5	106.3				536.1	1345.4	1260.4	95.1	11.7%	91%	
21	3021	5883.72	95.5	14.0	100.5				533.0	1194.4	1116.1	88.6	13.4%	93%	

Remarks: _____

Gauge Number: 2472

Density Counts: 2733

Moisture Counts: 390

Record No. 43 S

Point #	Northing	Easting	Elevation	Date
3000	17690.370934	35943.432532	5911.392640	3-9-2021
3001	17661.473240	35923.375132	5911.050635	3-9-2021
3002	17615.075957	35887.480284	5910.579227	3-9-2021
3003	17571.362819	35851.792725	5909.981306	3-9-2021
3004	17484.618679	35772.722787	5909.684561	3-9-2021
3005	17426.237211	35727.423234	5908.941840	3-9-2021
3006	17389.731579	35654.357669	5911.321011	3-9-2021
3007	17392.712633	35562.481719	5916.330926	3-9-2021
3008	17455.058889	35615.947005	5916.136038	3-9-2021
3009	17507.339928	35671.767689	5915.826724	3-9-2021
3010	17574.215832	35738.921807	5915.832511	3-9-2021
3011	17623.235202	35834.847845	5914.188952	3-9-2021
3012	17658.368082	35815.311090	5915.350084	3-9-2021
3013	17638.951330	35727.632968	5917.860786	3-9-2021
3014	17608.612932	35652.347618	5920.666236	3-9-2021
3015	17564.057730	35552.405477	5924.801514	3-9-2021
3016	17985.961455	36463.893172	5885.797844	3-9-2021
3017	18002.723516	36544.999279	5886.703158	3-9-2021
3018	18034.761372	36514.063839	5885.109198	3-9-2021
3019	18066.402890	36567.033495	5884.713368	3-9-2021
3020	18058.478405	36477.006957	5883.716385	3-9-2021



Huddlestone-Berry Engineering & Testing, LLC
640 White Avenue, Unit B
Grand Junction, CO 81501
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

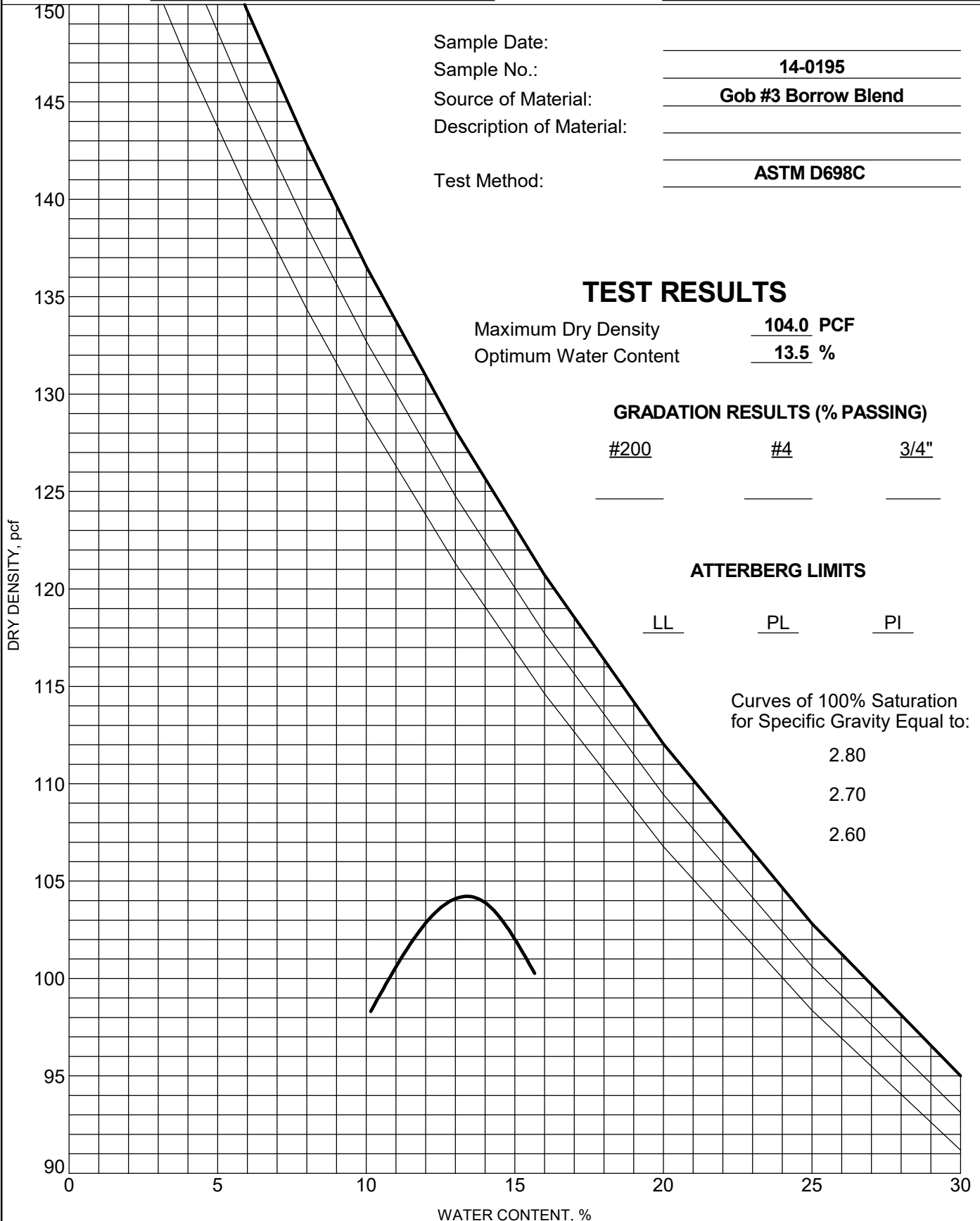
PI

Curves of 100% Saturation
for Specific Gravity Equal to:

2.80

2.70

2.60





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MOISTURE-DENSITY RELATIONSHIP

CLIENT Bowie Resources, LLC

PROJECT NAME Bowie Mine #2

PROJECT NUMBER 00489-0003

PROJECT LOCATION Paonia, CO

Sample Date: 3/28/2015
Sample No.: 15-0116
Source of Material: Gob 3 03/28/15
Description of Material: SILTY SAND with GRAVEL(SM)
Test Method: ASTM D698C

TEST RESULTS

Maximum Dry Density 95.5 PCF
Optimum Water Content 14.0 %

GRADATION RESULTS (% PASSING)

<u>#200</u>	<u>#4</u>	<u>3/4"</u>
<u>100</u>	<u>100</u>	<u>100</u>

ATTERBERG LIMITS

<u>LL</u>	<u>PL</u>	<u>PI</u>
<u>34</u>	<u>24</u>	<u>10</u>

Curves of 100% Saturation
for Specific Gravity Equal to:

2.80

2.70

2.60

