

J. E. STOVER & ASSOCIATES, INC.

2352 NORTH 7TH STREET, UNIT B
GRAND JUNCTION, COLORADO 81501
PHONE: (970) 245-4101, FAX: (970) 242-7908

MINE ENGINEERING
MINE RECLAMATION

CIVIL ENGINEERING
CONST. MANAGEMENT

January 22, 2019

Janet Binns
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: 2018 Annual Reclamation Report
Bowie Resources, LLC, Bowie No. 2 Mine
Permit No. C-1996-083

Dear Ms. Binns:

On behalf of Bowie Resources, LLC, we are submitting the following information in accordance with Rule 2.04.13, as the Annual Reclamation Report for Bowie Resources' Bowie No. 2 Mine.

(a) Permittee: Bowie Resources, LLC
Bowie No. 2 Mine
P. O. Box 1488
Paonia, CO 81428
Permit No. C-1996-083

(b)	<u>Description</u>	<u>Acres</u>
	Mine Facilities Related Disturbances (1997-2002)	
	Mine Facilities Bench	20.0
	Mine Access Road and Conveyor Corridor	43.3
	Coal Stockpile Area	9.8
	Refuse Access Road and Refuse Disposal Area	8.2
	Disturbances for New Loadout permitted under PR-03 (Downhill Conveyor)	1.2
	TR-12 Vent Shaft & Road Disturbance	1.0
	TR-17 Gob Vent Borehole Disturbance	5.5
	TR-20 Gob Vent & Coal Exploration Borehole Disturbance	21.0
	TR-21 Gob Vent Borehole Disturbance	3.3
	TR-23 Gob Vent Borehole Disturbance	2.7
	MR-23 Coal Exploration Borehole Disturbance	1.1
	MR-24 Exploration of old King Mine Workings Borehole	1.1
	PR-06 Construction of the Unit Train Loadout	34.2
	Subtotal	152.4

2003 Disturbance

TR-23 Gob Vent Borehole Disturbance	2.2
TR-25 Terror Creek Exploration Hole Disturbance	4.0
TR-27 Preparation Plant	4.8
PR-05 Gob Vent Borehole Disturbance	1.9
PR-07 B-Seam Portals	4.7
MR-29 Gob Pile Geotech Holes included in TR-30 Below	0.0
MR-32 Expand Coverfill Pile	0.2

Subtotal **17.8**

2004 Disturbance

TR-30 Coal Mine Waste Disposal Area	19.4
MR-32 Rockfall Protection Berm	1.3

Subtotal **20.7**

2005 Disturbance

MR-58 Gob Vent Borehole & Road	1.9
TR-41 Gob Vent Boreholes & Road	2.4
MR-61 Gob Vent Hole	0.5
MR-62 Gob Vent Hole	0.5

Subtotal **5.3**

2006 Disturbance

TR-30 Coal Mine Waste Disposal Area	15.2
TR-43 Coverfill Borrow Area	4.0
MR-65 3 Gob Vent Holes	1.6
MR-67 2 Gob Vent holes	1.6
Refuse Area Road & Refuse Disposal	5.7

Subtotal **28.1**

2007 Disturbance

TR-43 Covefill Borrow Area	0.6
TR-44 Gob Pile Expansion	0.6
MR-78 Seven Gob Vent Holes – Six Constructed	3.9
MR-75 Geotechnical Hole	0.6
TR-47, TR-48 Hubbard Creek Shaft	1.2
Remaining Gob Pile #1	0.8

Subtotal **7.7**

2008 Disturbance

TR-45 Gob Pile No. 3	24.8
TR-52 Drill Sites & Roads (Two Drill Pads)	13.0
TR-53 Drill Site (HC-08-01)	0.5

Subtotal	38.3
2009 Disturbance	
TR-52 Drill Sites & Roads (Three Drill Pads)	7.8
MR-105 One Drill Site (GVB8-TG)	1.0
Subtotal	8.8
2010 Disturbance	
Bowie No. 1 TR-41 BRL-1-03-1 + Section 8 Road	2.6
Bowie No. 1 TR-49 BRL1-08-03 + Pond 7-1 Road	0.9
Bowie No. 1 TR-49 BRL1-08-04 + DH-69 Road	1.2
Bowie No. 1 MR-124 DH 2010-2	0.5
Bowie No. 2 MR-116 Terror Creek Access Road	6.7
Bowie No. 1 MR-125 GVB-10A & 10 + Roads	3.1
Subtotal	15.0
2011 Disturbance	
Bowie No. 2 MR-123 & 124 GVBs 11A, 11B & 11C	3.1
Subtotal	3.1
2012 Disturbance	
MR-132 Gob Pile Upper Diversion	1.3
Gob Pile No. 4 Additional Disturbance (4.5-4.0)+(2.8-2.0)	1.3
Gob Pile No. 1 Adjusted Disturbance (14.0-13.9)	0.1
Bowie No. 2 MR-123 GVB-B12A	1.0
Bowie No. 2 MR-123 GVB-B12B + Road	1.1
Bowie No. 2 MR-123 GVB-B12C	1.0
Bowie No. 2 MR-123 GVB-B13A	1.0
Bowie No. 2 MR-123 TC Ridge Road	1.3
Bowie No. 2 MR-123 12D Road	0.4
Bowie No. 2 MR-123 13A Road	0.3
Bowie No. 2 MR-124 GVB-B12D	1.0
Bowie No. 2 TR-73 GVB-B12E	1.0
Bowie No. 2 TR-73 GVB-B13B	1.0
Bowie No. 2 TR-73 GVB-B13C	1.0
Bowie No. 2 TR-73 GVB-B13D	1.0
Bowie No. 2 TR-73 GVB-B13E (0.5 Ac Disturbance in 2010, BRL1-08-03)	0.5
Bowie No. 2 TR-73 GVB-B14A	1.0
Bowie No. 2 TR-73 SS-7	1.0
Bowie No. 2 TR-73 2012-1	1.0
Bowie No. 2 TR-73 12E Road	0.9
Bowie No. 2 TR-73 13B Road	0.3
Bowie No. 2 TR-73 14A Road	0.9
Bowie No. 2 TR-73 14C Road Partial	0.4
Bowie No. 2 TR-73 SS-7 Road	1.9
Bowie No. 2 TR-73 12-1 Road	0.3

Bowie No. 2 TR-73 GVB-B13F	1.0
Bowie No. 2 TR-73 13F Road	0.3
Subtotal	23.3
2013 Disturbance	
Bowie No. 2 TR-73 GVB-B14B	1.0
Bowie No. 2 TR-73 14B RD	0.4
Bowie No. 2 TR-73 GVB-B14C	1.0
Bowie No. 2 TR-73 14C RD Partial (1.1 - 0.4 reported in 2012)	0.7
Bowie No. 2 TR-73 GVB-B14D	1.0
Bowie No. 2 TR-73 14D RD	0.4
Bowie No. 2 TR-73 GVB-B14E	1.0
Bowie No. 2 TR-73 14E Rd	0.4
Bowie No. 2 TR-78 GVB-14F	1.0
Bowie No. 2 TR-78 14F Rd	0.2
Bowie No. 2 TR-78 GVB-15A	1.0
Bowie No. 2 MR-134 B13 Vent (TR-73Pad constructed but hole not drilled)	1.0
Bowie No. 2 MR-135 GVB-B13C-1	1.0
Bowie No. 2 MR-135 GVB-B13C-1 Road	0.4
Bowie No. 2 TR-73 Drill Pad SS-6	1.0
Bowie No. 2 TR-73 SS-6 Rd	0.9
Bowie No. 2 TR-78 SS-8	1.0
Bowie No. 2 TR-78 SS-8 Rd	0.9
Bowie No. 2 2010-1B and 2010-1SS Drill Site - Now In Permit Boundary	1.0
Gob Pile No. 3 Adjustment (24.8 - 23.5)	-1.3
Gob Pile No. 4 Adjustment (2.8 - 2.0) Reverses adjustment made in 2012	-0.8
TR-30 Gob Pile No. 2 Adjustments (34.6 - 34.4)	-0.2
TR-72 & 76 Gob Pile No. 2 (8.7 less 1.3 from MR-132 reported in 2012)	7.4
Subtotal	20.4
Total Disturbance through 2012	320.5
Total Disturbance through 2013	340.9
2014 Disturbance	
Bowie No. 2 MR-174 Drill Hole & Pad Adjustment	1.0
Bowie No. 2 TR-90 15A RD	0.3
Bowie No. 2 TR-78, MR-152 15B RD	0.4
Bowie No. 2 TR-78, MR-152 15D RD	0.4
Bowie No. 2 TR-78, MR-152 15B,C,D RD	1.0
Bowie No. 2 TR-78 15B Drill Site	1.0
Bowie No. 2 TR-78 15C Drill Site	1.0
Bowie No. 2 TR-78 15D Drill Site	1.0
Bowie No. 2 TR-78, MR-152 16A RD	0.4
Bowie No. 2 TR-78 16A Drill Site	1.0
Bowie No. 2 TR-86, MR-152 16B RD	0.4
Bowie No. 2 TR-86, B16B Drill Site	1.0

Bowie No. 2 TR-86, MR-152 16C RD	0.4
Bowie No. 2 TR-86, MR-152 16D RD	0.1
Bowie No. 2 TR-86, B16C Drill Site	1.0
Bowie No. 2 TR-86, B16D Drill Site	1.0
Bowie No. 2 TR-86, MR-152 17A RD	1.2
Bowie No. 2 TR-86, B17A Drill Site	1.0
Bowie No. 2 TR-86, B17B Drill Site	1.0
Bowie No. 2 TR-86, MR-152 17C RD	0.3
Bowie No. 2 TR-86, B17C Drill Site	1.0
Bowie No. 2 TR-86, MR-152 17D RD	0.8
Bowie No. 2 TR-86, B17D Drill Site	1.0
Bowie No. 2 TR-86, MR-152 17E RD	0.3
Bowie No. 2 TR-86, B17E Drill Site	1.0
Bowie No. 2 TR-86, MR-152 17F RD	0.5
Bowie No. 2 TR-86, B17F Drill Site	1.0
Bowie No. 2 TR-86, 2014-SS-B Drill Site	1.0
Bowie No. 2 TR-86, 2014-SS-C Drill Site	1.0
Bowie No. 2 MR-146, Pitkin Mesa Pipeline	4.0
Bowie No. 2 MR-164, 58A RD	0.5
Bowie No. 2 MR-164, 58A Drill Site	1.0
Bowie No. 2 MR-151, Coal Stockpile Expansion	1.0
Bowie No. 2 MR-125, Filter Building	0.2
Bowie No. 2 TR-91, Storage building/area near canal	0.3
Bowie No. 2 MR-141, Gob Pile No. 3	1.8
Bowie No. 2 MR-88, West Gob Pile Geotech Holes	2.6

Total Disturbance During 2014	33.6 (33.9 corrected)
--------------------------------------	------------------------------

2015 Disturbance

Addition Error in 2014 (0.3 Added into corrected acreage above)

Bowie No. 2 MR-165 Section 5 Road	1.2
Bowie No. 2 TR-89 Gob Pile No. 2 Upper Diversion Ditch	5.0

Total Disturbance through 2014	374.5 (374.8 corrected)
---------------------------------------	--------------------------------

Total Disturbance through 2015	381.0
---------------------------------------	--------------

Total Disturbance through 2016	381.0
---------------------------------------	--------------

Total Disturbance through 2017	381.0
---------------------------------------	--------------

Total Disturbance through 2018	381.0
---------------------------------------	--------------

- (c) Area back filled and graded and;
- (d) Area Topsoiled and;
- (e) Area Seeded:

Year	Description	Acres
2003	GVB-D1-A Drill Pad	0.2

2003	GVB-D1-B Drill Pad	0.2
2003	GVB-D2-A Drill Pad	0.2
2003	GVB-D2-B Drill Pad	0.3
2003	GVB-D4-A Drill Pad	0.4
2003	GVB-D4-B Drill Pad	0.5
2003	GVB-D5-A Drill Pad	0.5
2003	B Exploration North Ext	0.1
2003	B Exploration South Ext A	0.1
2003	B Exploration South Ext B	0.5
2004	GVB-6A MR-65 153 ¹	0.5
2004	Vent Spur Road MR-65 154 ¹	0.1
2004	TR-12 Vent Shaft Pad	0.6
2005	B-Burn-22 (129)	0.5
2005	B-Burn-23 (130)	0.5
2005	IP-99-16 (96)	0.5
2006	DH-57 & 57A	0.5
2006	GVB B1-C/WD-3B (Common Site)	0.5
2006	GVB WD-3A	0.5
2007	No Reclamation Performed	0.0
2008	KM-3 (MR-24 120, 125)	1.1
2008	DH-58 (TR20 70)	0.5
2008	TC-03-01 (TR-25 131)	0.5
2008	TC-03-02 (TR-25 132)	0.5
2008	GVB-WD2-A (TR-20 54)	0.5
2008	GVB-WD2-B (TR-20 53)	0.5
2008	GVB-WD2-C (PR-05 50)	0.5
2008	GVB-WD3-C (TR20 51)	0.5
2008	GVB-2C (TR17 46)	0.2
2008	GVB-D3-B (TR20 52)	0.5
2008	GVB-D4-C (TR-20 59)	0.5
2008	GVB-D5-B (TR20 60)	0.5
2008	GVB-D6-B (TR-20 65)	0.5
2008	GVB-D7-B (TR-20 66)	0.5
2008	GVB-D7-C (TR-20 75)	0.5
2008	GVB-D8-A & D9A (TR-23 94)	0.5
2008	GVB-D8-B (TR-23 90)	0.5
2008	GVB-D8-C (TR-23 87)	0.5
2008	GVB-B1-A (TR-32 141)	0.0
	Drilled in wide section of road	0.0
2008	GVB-B1-A1 (MR-58 145)	0.5
2008	GVB-B2-A aka –B2-B (MR-55 144)	0.0
	Same site as: GVB-WD-2C (PR-05 50)	0.5
2008	GVB-B2-A1 aka –B2-A (TR-41 147)	0.5
2008	GVB-B2-A2 aka – B2-C (MR-62 152)	0.5
2008	GVB-B2-B aka – B2-D (MR-61 151)	0.5
2008	GVB-B3-A2 aka – B3-A (TR-41 149)	0.5
2008	GVB-B3-A1 aka – B3-B (TR-41 148)	0.5
2008	GVB-B3-A aka –B3-C (MR-55 144)	0.0

¹ Added to list with 2012 Report. 2015 Update - Not actually reclaimed. Deleted 0.6 acres from 2015 report.

	Same site as: GVB-WD1-B (TR-21 80)	0.5
2008	GVB-B3-B aka – B3-D(MR-55 144)	0.0
	Same site as: GVB-WD1-A (TR-21 78)	0.5
2008	GVB-4A (MR-67 155)	0.5
2008	GVB-5A (MR-67 155)	0.5
2008	GVB-6B (MR-65 153)	0.5
2008	GVB-6C (MR-65 153)	0.5
2008	GVB-6D (MR-78 161)	0.5
2008	GVB-6E (MR-78 162)	0.5
2008	One West Ridge Road Segments (TR-41) ²	0.3
2009	No backfill or grading in 2009	0.0
2010	Drill Pad DH-2010-2	0.5
2010	One West Ridge Road Segment (TR-41)	0.3
2011	Terror Creek Shaft Pad (TR-47 & 48)	1.2
2011	GVB 8A & 9D (TR-52 176)	1.0
2011	GVB 8-TG (MR-105 194)	1.0
2011	Dove Gulch east road (TR-52 184)	0.9
2011	HC-08-01 (TR53 186)	0.5
2011	GVB-7A (MR-78 164)	0.5
2011	FG E Extension (MR-78 170)	0.3
2011	GVB-7B (MR-78 165)	0.5
2011	FG N Ext (MR-78 171)	0.1
2011	GVB-7D (MR-78 167)	0.5
2011	BRL-08-03 (TR-49 B1 198)	0.5
2011	Pond 7 Road (TR49 B1 201)	0.4
2011	BRL-08-04 (TR-49 B1 199)	0.5
2011	DH-69 Road (TR49 B1 202)	0.7
2011	Road NR E Branch (MR-78 168)	0.2
2011	Road NR WNW Ext (MR-78 172)	0.3
2011	GVB D9-B (TR-23 092)	0.5
2011	GVB-10E & 10U-1 (TR-52 180)	1.0
2011	Plantation Extension (TR-52 183) partial	0.1
2011	GVB-D5-C (TR-20 61)	0.5
2011	Freeman Gulch North Extension (TR-20 23)	0.2
2011	GVB-D6-C (TR-20 62)	0.5
2011	Freeman Gulch North Extension (TR-20 24)	0.2
2011	GVB D3-C (TR17 57)	0.5
2011	Freeman Gulch Northeast (TR-20 28)	0.4
2011	Freeman Gulch Northeast (TR-21 76)	0.7
2012	BRL-08-03 (TR-49 B1 198) ³	-0.5
2012	Pond 7 Road (TR49 B1 201) ³	-0.4
2012	GVB-9C (TR52 174)	1.0
2012	GVB-10D-1 & 10D-2 (TR-52 177)	1.0
2012	GVB-9E & 8B (TR-52 179)	1.0
2012	GVB-B10A (MR-125 205)	1.0
2012	GVB-B10B (MR-125 206)	1.0
2012	BRL-2012-1 (TR-73 231)	1.0

² Construction of Terror Creek access road re-disturbed 0.5 acres during 2010. Reclaimed acreage reduced from 0.8 to 0.3.

³ GVB-13E and 13F redisturbed BRL-08-03 drill pad and Pond 7 road. Reclaimed acreage reduced by 0.9 acres.

Total Area backfilled, graded, topsoiled and seeded 2012:		5.1
1.1 Acres reported for prior years, 6.2 Acre Increase over 2011		
See footnote 1.		
2013	GVB-B11C (MR-124 218) Seed Mix 3	1.0
2013	SS-7 (TR-73 229) Seed Mix 4	1.0
2013	SS-7 RD (TR-73 239) Seed Mix 4	1.9
2013	B-13 Vent (MR-134 245)	1.0
2013	Plantation Extension (TR-52 183) Seed Mix 4	0.9
Total backfilled, graded, topsoiled and seeded 2013		5.8
2014	B11A Drill Site, MR-123	1.0
2014	B11B Drill Site, MR-123	1.0
2014	B12A Drill Site, MR-123	1.0
2014	B12C Drill Site, MR-123	1.0
2014	B12D Drill Site, MR-124	1.0
2014	B12E Drill Site, TR-73	1.0
2014	B13A Drill Site, MR-123	1.0
2014	B13B Drill Site, TR-73	1.0
2014	B13C Drill Site, TR-73	1.0
2014	B14A Drill Site, TR-73	1.0
2014	B14B Drill Site, TR-73	1.0
2014	B14C Drill Site, TR-73	1.0
2014	2014-SS-B Drill Site, TR-86	1.0
2014	2014-SS-C Drill Site, TR-86	1.0
2014	SS-7 RD (TR-73 239) Claimed in 2013	-1.9
2014	Pitkin Mesa Pipeline, MR-146	4.0
2014	SS-6 Drill Site, TR-73	1.0
2014	SS-6 Rd, TR-73	0.3
2014	SS-8 Drill Site, TR-78	1.0
2014	GVB B10B Road, MR-125	0.6
2014	Gob Pile #4	4.3
Total backfilled, graded, topsoiled and seeded 2014		23.3
2015	B10A Road (MR-125 207)	0.4
2015	12D Road (MR-123 216)	0.4
2015	12E Road (TR-73 232)	0.6
2015	B13C-1 (MR-135 246)	1.0
2015	B13C-1 Road (MR-135 247)	0.4
2015	B13D (TR-73 223)	1.0
2015	B13E (TR-73 198)	1.0
2015	3E Road aka Pond 7-1 RD (TR-49 201)	0.2
2015	B13F (MR-133 243)	1.0
2015	13F Road (MR-133 244)	0.2
2015	14B Road (TR-73 235)	0.1
2015	14C Road Partial	0.2
2015	B14E (TR-73 228)	1.0
2015	B14D Road (TR-73 237)	0.3

2015	B14F (TR-78 254)	1.0
2015	14F Road (TR-78 & MR-152 248)	0.5
2015	B15A (TR-78 255)	1.0
2015	15A Road (TR-90 287)	0.3
2015	B15B (TR-78 256)	1.0
2015	B15C (TR-78 257)	1.0
2015	B15D (TR-78 258)	1.0
2015	B16A (TR-78 259)	1.0
2015	16A Road (MR-152 250)	0.4
2015	B16B (TR-86 272)	1.0
2015	B16C (TR-86 273)	1.0
2015	B16D (TR-86 274)	1.0
2015	B17A (TR-86 275)	1.0
2015	B17B (TR-86 276)	1.0
2004	GVB-6A MR-65 153	-0.5
2004	Vent Spur Road MR-65 154	-0.1
2015	Gob Pile No. 2	4.5

Total backfilled, graded, topsoiled and seeded 2015 23.9

2016	15B RD Actually Reclaimed in 2015	0.36
2016	15D RD Actually Reclaimed in 2015	0.43
2016	16B RD Actually Reclaimed in 2015	0.42
2016	16C RD Actually Reclaimed in 2015	0.37

Total backfilled, graded, topsoiled and seeded 2015, Reported in 2016 1.58

Total backfilled, graded, topsoiled and seeded 2017 0.0

Total backfilled, graded, topsoiled and seeded 2018 0.0

Seeding rates listed in the permit are drill seed rates which will be doubled for areas that must be broadcast seeded.

(f) Areas backfilled, graded, topsoiled and seeded through 2018. (Permanent) – Noxious Weed Control Was Performed during the year 98.5

(g) Vegetation Studies –None during 2018

Sincerely,

J. E. Stover

J. E. Stover, P.E.
Consulting Engineer

Colorado Division of Reclamation, Mining and Safety

Annual Reclamation Report for the Year 2018

Bowie No. 2 Mine

C-1996-083

Bowie Resources, LLC

mine name

permit #

Permittee

Address: P.O. Box 483, Paonia, CO 81428

This report, required by Rule 2.04.13, is due by February 15 of each year, or other date, as agreed upon by the Division. It should include text, discussion, and maps, at a minimum, in addition to any other reclamation monitoring data as required by the approved permit. The location of the acreage reported under each land status category and year of seeding (if applicable) should be clearly and accurately identified on a map included with the report.

Land Status Category	Last Years Cumulative Total		This Calendar Year		Cumulative Total ¹
Acres disturbed	381.0	+	0.0	=	381.0
Acres backfilled and graded	98.5	+	0.0	=	98.5
Acres topsoiled	98.5	+	0.0	=	98.5

Seeding typically begins the minimum 10-year reclamation liability period. Please report the acres for each category below. Do not include acres that have achieved final, Phase III release.

	Last Years Cumulative Total		This Calendar year		Cumulative Total ¹		10 years or less		Greater than 10 years ¹
Acres seeded*	98.5	+	0.0	=	98.5	=	91.3	+	24.3

*include, if necessary, a description of any augmented seeding or cultural practices

For the Entire Life of Mine, the total number of acres disturbed 381 and the total number of acres:
 Phase I released 95.2 Phase II released 45.33 Phase III released 4.10

For Mines in Permanent Cessation:

Total acreage in facilities subject to reclamation but yet to be completed N/A

For Government Performance and Results Act

Acreage in long-term mining or reclamation facilities ² 282.5

Acreage in active mining areas ³ -0-

¹ (exclude acres where Phase III release has been achieved)

² Includes haul and access roads; temporary dams and impoundments; permanent dams and impoundments; diversion and collector ditches, water and air monitoring sites; topsoil stockpiles; overburden stockpiles; repair, storage and construction areas; office area, repair shops, and parking; coal stockpiles, loading, and processing areas; railroads; coal conveyors; nonbackfilled and graded areas of refuse piles, coal mine waste impoundments, head-of-hollow fills, and valley fills; ventilation shafts and entryways; and noncoal waste disposal area (garbage dumps and coal combustion by-products disposal areas).

³ Includes pits, topsoil stripped areas in advance of pits, and spoil not backfilled and graded

