



Braun Environmental, Inc.

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November 21, 2018

SENT VIA EMAIL

Elliot Russell
Division of Reclamation and Public Safety (DRMS)
1313 Sherman Street, Room 215
Denver, Colorado 80203

RE: Responses to November 20, 2018 Adequacy Review Letter, Bad Boys Pit M-1996-081, Teller County, Colorado

Dear Mr. Russell:

I am attaching responses to your comments in the November 20, 2018 Adequacy Review Letter. Each comment is listed and followed by a specific response. I have included all the pages and documents which I can put together at this time. Comments 19, 23, and 28 remain open.

You and I talked at about 3:30 pm yesterday afternoon, and I received your email at about 5:00 pm last evening. In the effort to be expedient, we worked after-hours to address the comments, so that I could return responses to you quickly. Thanks for returning my call this morning.

As we discussed, we will send another letter to Mr. Burtis and see what happens. If it does not work this time we might need to rely on you to give him the proper workover. As for bonding, I think you are going to need to have some discussion with the owners. My calculations show that the original engineer's estimate is remains close to the actual cost for reclamation, with some allowance for inflation. Thus, I think the original bond amount is still sufficient and no increase should be necessary.

The owners will not even get your mailed version of your letter until sometime the middle or late next week, which will be well after today's deadline, so we were lucky that you caught me in the office yesterday afternoon. As you and I discussed, let's extend the due date and make it Friday, December 21, 2018. I am hopeful that at Christmas, we have all moved on to other projects.

Call me if you have any questions or comments.

Sincerely,
BRAUN ENVIRONMENTAL, INC.

C. A. Braun, P.E.

A handwritten signature in black ink, appearing to read "C. A. Braun". The signature is stylized with a large, sweeping "C" and a distinct "A".

cc. C. Cross
enc.

CAB/rl

Response to Elliot Russell Adequacy Review Letter Dated November 20, 2018
Permit No. M-1996-081
By: C. A. Braun, November 21, 2018

This document is formatted to present the DRMS comment (in italics) followed by the response.

Comment 19: *As required by Rule 1.6.2, please submit proof of the notice to Wallace Burtis. Proof of notice may be return receipts of a Certified Mailing (aka the green card) or by proof of personal service.*

Response: Per your advice, another notice will be sent out to see what happens this time.

Comment 20: *The Division received additional comments from the Division of Water Resources and History Colorado regarding the application. These letters are attached for your review. Please acknowledge and address any comments noted in the letters and make changes to the application as necessary.*

Response: As for the office of the State Water Engineer, there has been no change in the original operations on the site with exception of a slightly larger area affected than was originally planned. This larger area is being from the original permit date with the exception of the movement to a larger area. The operation is being brought back into the original plan and the conclusion of the original engineer still applies. The operation is not anticipated to intercept any underground water, to generate any surface flows, or to use any water, except from an appropriate supplier.

The historic District has been contacted and they have no special interest or cataloged items within the area of the permit boundary. Site 1986 is shown as, eligible but not listed, and refers to the entire Cripple Creek District. Item 149 is the Gold King and COD Mines, which were quite famous, and as reclamation specialist for this district, you should know where they are. These old properties have nothing to do with the permit area.

Comment 21: *In accordance with Rule 6.3.2(2) please provide a description of the vegetation in the area of the proposed operation.*

Response: The site is semi-open and the vegetation present on undisturbed areas consists of grasses, forbes, some shrubs and trees. The vegetation community around the relatively undisturbed portions of the site includes the following: grasses and grass-like plants: oatgrass, various wheatgrasses, smooth brome, fescue, downy brome, dry sedges, poa and squirreltail. Forbes, shrubs and trees: fringed sage, winterfat, vetch, harebell, scenecio, hairy goldenaster, gilia, waveleafthistle, mullein, yarrow, beardstongue penstemon, vetch, butter-and-eggs, woods rose, fremont geranium, sand wort, various annual forbes, currant, gooseberry, aspen and pine. Inspection of the site found that much of the reclaimed area had a good cover of smooth brome, which appears to be well suited to the area.

Comment 22: *In response to Adequacy Item #6, the Applicant submitted an updated Soil Report which shows the site only includes Soil Map Unit 82 (Quander-Bushpark). Please provide the soil unit description print out for Soil Map Unit 82.*

Response: Unit description has been printed and is attached.

Comment 23: *The Division has completed the Financial Warranty calculation for the operation based on the proposed Mining and Reclamation Plans. The reclamation cost estimate has been calculated in the amount of \$19,600.00, an increase of \$11,096.00 from the \$8,504.00 currently held by the Division. Please review the enclosed figures as soon as possible and contact our office if you have any questions or find any calculation errors.*

Response: This item will require input from the property owners and will likely take a little more time. I began responding outside of our normal work hours to your late afternoon email to me to rapidly address your comments since our remaining time on this extension is so short. Since the property owner's only way of being notified is by the U.S. Mail, your notice might take a week to reach them. I suspect that the large increase in bond will not go well with them, and this matter will need be discussed between you and them. It is also necessary for you to keep in mind (and the reason DRMS was started) is that the purpose of the bond is only to provide sufficient funds so that if the State has to step in and it can perform the reclamation, that sufficient funds are available. This site has had significant previous disturbance, and that the bond should not include any costs for reclaiming previous disturbance. It is unfortunate that the original Mined Land Reclamation people that were involved in the 1990's have moved on, and the newcomers have to be responsible for doing the right thing for their customers. To me, your proposed bond number seems high.

Comment 24: *The revised Exhibit E Map still contains an error within the Additional Notes section. The Division believes there is a typo regarding the statement that the permit boundary "includes a 30 foot wide strip in the northern portion of the Found Claim". The Division believes this should actually be the northern portion of the Florence Claim. Please update this map and re-submit it for further review.*

Response: Thanks for the detailed review. This error has been corrected.

Comment 25: *The Final Reclamation Plan Map depicts the final site configuration and remaining features after all mining and reclamation has been completed. Please remove the Current Excavation and Current Rock/Soil Storage polygons and labels from the Exhibit Map E-1 as these features will not remain after final reclamation.*

Response: Per your instruction, the words have been removed.

Comment 26: *The Division believes there is an error regarding the reclaimed slope gradient labels on the Exhibit Map E-1. The eastern label states "Slope 1(H):3(V) Typical", however based on the approved maximum reclaimed slope gradient of 3H:1V and topographic details of the map, the*

Division believes this should state “Slope 3(H):1(V) Typical”. In addition, the western label states “1(H):1.5(V)”, however this does not match the approved maximum reclaimed slope gradient of 3H:1V nor the topographic details of the map. Please revise these labels accordingly.

Response: Thanks for your detailed review. The drafting error has been corrected on the 3(H): 1(V) label, and the 1.5(H): 1(V) label has been removed. The words, “All excavated material will be backfilled into the pit as similar as possible to the pre-mining surface and this could be up to 50 feet thick.” have been added to the note section of Exhibit Map E-1.

Comment 27: In accordance with Rule 6.3.5(3)(d), please state, on the Exhibit Map E-1, the average thickness of replaced overburden/waste rock. Please note, in the response to Adequacy Item #15g, the Applicant stated the maximum depth of the excavation is 70 feet and therefore the average thickness of replaced overburden/waste rock would be 35 feet. Please revise this to reflect the maximum approved depth of 50 feet. It may be most appropriate in this case to state on the Exhibit Map E-1, similarly to the approved reclamation plan, that all excavated material will be backfilled into the pit similar to the pre-mining surface and this could be up to 50 feet thick.

Response: The wording has been added to Exhibit Map E-1.

Comment 28: Any changes or additions to the application on file with the Division, must also be reflected in the public review copy. Please submit proof that the public review copy has been updated or a copy of the response to this adequacy letter has been added to it.

Response: The updated public copy will be updated upon the resolution of Comments 19 and 23.

Teller-Park Area, Colorado, Parts of Park and Teller Counties

82—Quander-Bushpark very gravelly loams, 5 to 40 percent slopes complex

Map Unit Setting

National map unit symbol: k0xv
Elevation: 8,500 to 10,900 feet
Mean annual precipitation: 14 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Quander and similar soils: 60 percent
Bushpark and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quander

Setting

Landform: Mountains
Landform position (three-dimensional): Mountainflank, mountainbase
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and/or slope alluvium derived from trachyte

Typical profile

A - 0 to 7 inches: very gravelly loam
AB - 7 to 12 inches: extremely gravelly loam
Bt1 - 12 to 20 inches: extremely cobbly clay loam
Bt2 - 20 to 26 inches: extremely cobbly clay loam
Bt3 - 26 to 43 inches: extremely cobbly clay loam
BC - 43 to 60 inches: extremely cobbly loam

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: Skeletal Loam (R048AY377CO)

Hydric soil rating: No

Description of Bushpark

Setting

Landform: Mountains

Landform position (three-dimensional): Mountaintop, mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Slope alluvium derived from trachyte and/or
volcanic breccia

Typical profile

A - 0 to 3 inches: very gravelly loam

Bt1 - 3 to 8 inches: very gravelly clay loam

Bt2 - 8 to 16 inches: extremely gravelly clay loam

R - 16 to 60 inches: bedrock

Properties and qualities

Slope: 10 to 40 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very
low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Very low (about 0.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Ecological site: Shallow Loam (R048AY230CO)

Hydric soil rating: No

Minor Components

Adderton

Percent of map unit: 5 percent

Landform: Drainageways

Ecological site: Loamy Park (R048AY222CO)

Hydric soil rating: No

Tellura

Percent of map unit: 3 percent

Landform: Mountains

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Skeletal Loam (R048AY377CO)
Hydric soil rating: No

Platdon, frequently flooded

Percent of map unit: 2 percent
Landform: Flood plains
Ecological site: Mountain Meadow (R048AY241CO)
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Teller-Park Area, Colorado, Parts of Park and Teller Counties
Survey Area Data: Version 10, Sep 10, 2018

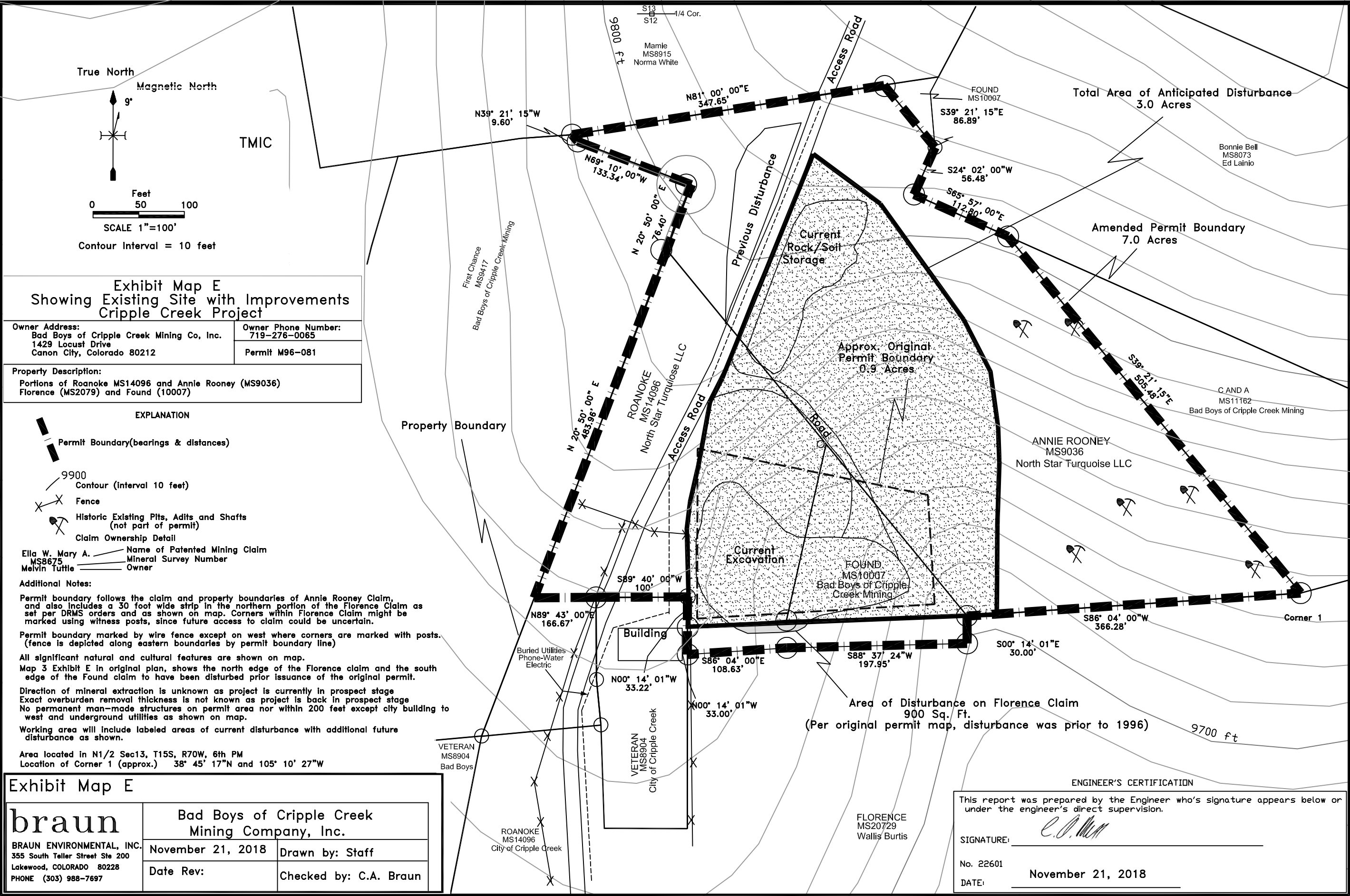


Exhibit Map E
Showing Existing Site with Improvements
Cripple Creek Project

Owner Address:
Bad Boys of Cripple Creek Mining Co, Inc.
1429 Locust Drive
Canon City, Colorado 80212

Owner Phone Number:
719-276-0065

Permit M96-081

Property Description:
Portions of Roanoke MS14096 and Annie Rooney (MS9036)
Florence (MS2079) and Found (10007)

EXPLANATION

Permit Boundary(bearings & distances)

9900
Contour (interval 10 feet)

Fence

Historic Existing Pits, Adits and Shafts
(not part of permit)

Claim Ownership Detail

Ella W. Mary A. — Name of Patented Mining Claim
MS8675 — Mineral Survey Number
Melvin Tuttle — Owner

Additional Notes:

Permit boundary follows the claim and property boundaries of Annie Rooney Claim, and also includes a 30 foot wide strip in the northern portion of the Florence Claim as set per DRMS orders and as shown on map. Corners within Florence Claim might be marked using witness posts, since future access to claim could be uncertain.

Permit boundary marked by wire fence except on west where corners are marked with posts. (fence is depicted along eastern boundaries by permit boundary line)

All significant natural and cultural features are shown on map.

Map 3 Exhibit E in original plan, shows the north edge of the Florence claim and the south edge of the Found claim to have been disturbed prior issuance of the original permit.

Direction of mineral extraction is unknown as project is currently in prospect stage

Exact overburden removal thickness is not known as project is back in prospect stage

No permanent man-made structures on permit area nor within 200 feet except city building to west and underground utilities as shown on map.

Working area will include labeled areas of current disturbance with additional future disturbance as shown.

Area located in N1/2 Sec13, T15S, R70W, 6th PM
Location of Corner 1 (approx.) 38° 45' 17"N and 105° 10' 27"W

Exhibit Map E
braun
BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988-7697

Bad Boys of Cripple Creek Mining Company, Inc.

November 21, 2018

Date Rev:

Drawn by: Staff

Checked by: C.A. Braun

ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below or under the engineer's direct supervision.

SIGNATURE: *C.A. Braun*

No. 22601

DATE: November 21, 2018

RECLAMATION NOTES:

Special Note: All areas anticipated to require reclamation within permit boundary are shown on map

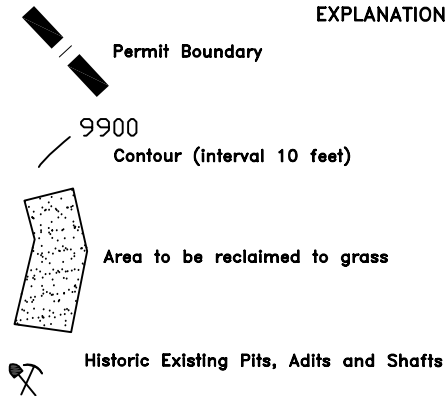
Historical Aspects - Reclamation of the disturbed areas will occur following completion of the mining operation. The area is currently zoned as A-1 (agricultural), is part of the historic Cripple Creek Mining District, with the Cripple Creek Mining Overlay District (CCMOD) located nearby to the south and east. Thus the historical flavor of the permit area must be retained. The closure of the site must consider both of its historical uses for mining and agriculture.

Reclamation Objectives - At time of closure both old and new disturbances will be evaluated for future need by the land owner, and will be reclaimed or put back in their approximate state prior to modification for prospecting and mining. Roads that are necessary for property access, including maintenance, movement of livestock, fire control, and safety will remain, as will the main access road that traverses the property from south to north. The modifications to the roads that are to remain will include: removing any MSHA mandated berms along their outsides, and installing drain bars in areas which might have steeper grades, and reduction of width to pre-mining specifications, or that desired by landowner. Roads and leveled areas that are not needed or desired for roadways will be stabilized, and vegetated with the emphasis being to maximize vegetative growth. Any excess materials generated by the work will be beneficially wasted on site with the goal of placing soils over rock to maximize flora growth and feed for the fauna.

Underground/Below Ground Access Area - At the time of final closure of the pit area, all mining equipment and structures that are not wanted by the property owner will be removed from the site. Any and all refuse generated in conjunction with the operation will be hauled away and properly disposed of. If any cut banks remain at the end of mining, they will be evaluated for stability and will be sloped accordingly so that no hazards to persons or livestock exist.

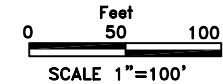
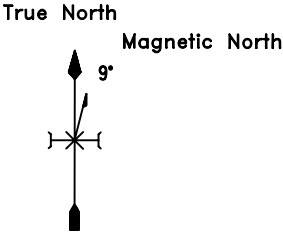
Vegetative Details - Areas to be reclaimed will be graded and top soil or growth media added where available and appropriate. Areas outside of the travelways that are to remain will receive seed bed preparation, which may include ripping, disking, and/or harrowing, and will be seeded with a suitable rangeland seed mixture chosen by engineer and approved by DRMS. The seed will be either drilled or hand broadcasted as appropriate. If broadcast, it will be covered by hand raking or by harrow methods. The seed mix will be sowed at a rate of no less than 33.4 pounds of pure live seed per acre, or per supplier's recommendations. In areas with steep hillsides, reclamation mats or netting might also be used to assist vegetation if necessary. Seed will be applied in early spring or late fall to maximize the germination rate and to increase the chances of a successful revegetation. Use of fertilizers is not anticipated to be necessary to obtain reclamation objectives. Monitoring of the site will occur until reclamation objectives have been met. The average thickness of soil within the permit area is estimated to average 6 inches. Any soil stockpiles will be placed in such a manner to minimize erosion, and will be seeded using the standard seed mix as appropriate for conditions and as specified by engineer.

EXPLANATION

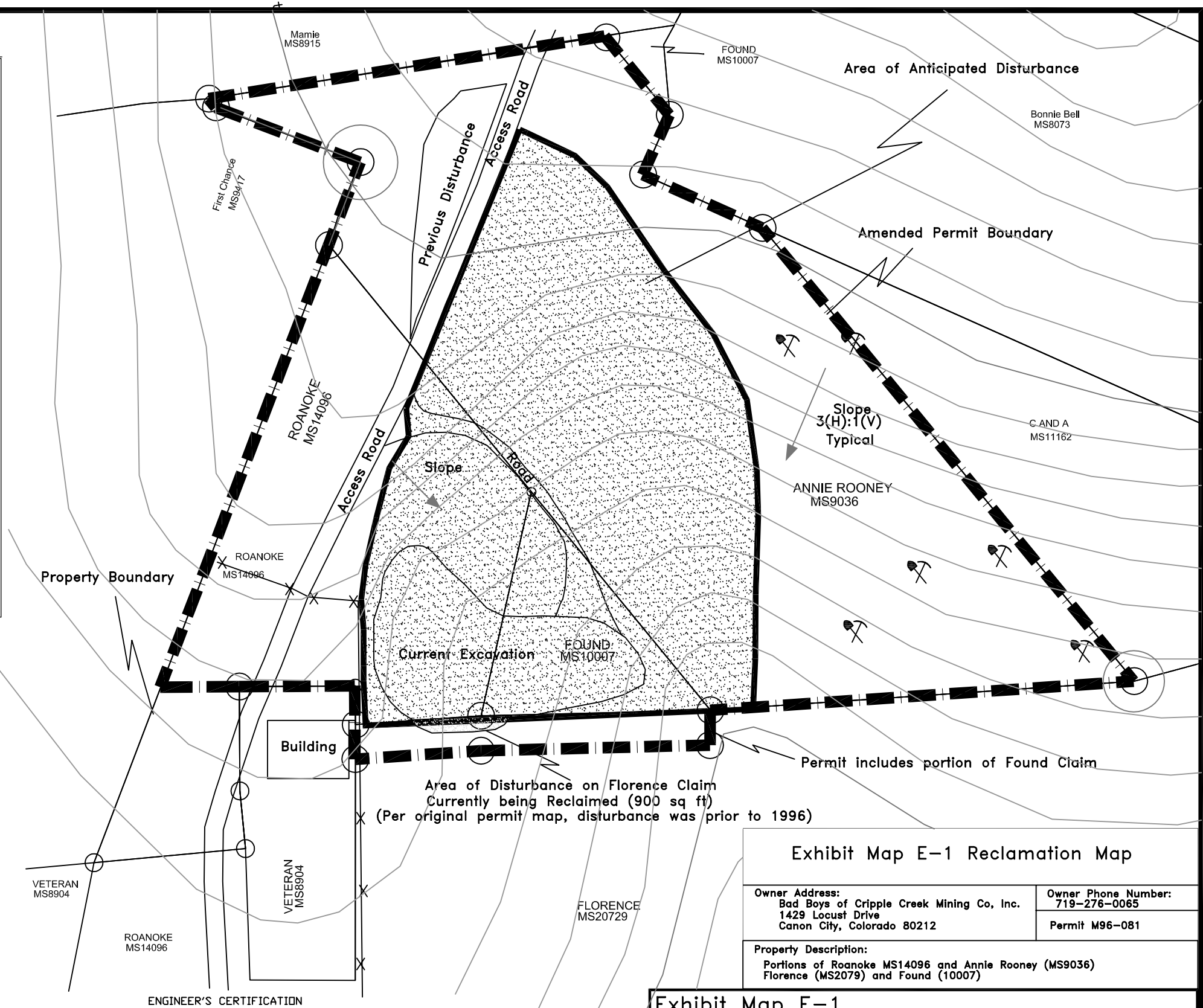


Notes:

Total Area to be Reclaimed to Grass - 3.0 Acres
Total Area within Permit Boundary 7.0 Acres
Note: Fence was moved south to property boundary after State inspection and area south of fence requiring reclamation is as shown. Per DRMS orders, permit includes a portion of Florence Claim, where permission has been received to perform reclamation.
All excavated material will be backfilled into the pit as similar as possible to the pre-mining surface and this could be up to 50 feet thick.



Contour Interval = 10 feet



ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below or under the engineer's direct supervision.

SIGNATURE: *C.A. Braun*

No. 22601

DATE: November 21, 2018

Exhibit Map E-1 Reclamation Map

Owner Address: Bad Boys of Cripple Creek Mining Co, Inc. 1429 Locust Drive Canon City, Colorado 80212	Owner Phone Number: 719-276-0065
	Permit M96-081
Property Description: Portions of Roanoke MS14096 and Annie Rooney (MS9036) Florence (MS2079) and Found (10007)	

Exhibit Map E-1

braun BRAUN ENVIRONMENTAL, INC. 355 South Teller Street Ste 200 Lakewood, COLORADO 80228 PHONE (303) 988-7697	Bad Boys of Cripple Creek Mining Company, Inc.	
	November 21, 2018	Drawn by: Staff
Date Rev:		Checked by: C.A. Braun