



STATE OF
COLORADO

Ebert - DNR, Jared <jared.ebert@state.co.us>

Adequacy Review No. 2 Response

Jodi Schreiber <jodi@arycorp.com>

Mon, May 13, 2019 at 2:57 PM

To: "Ebert - DNR, Jared" <jared.ebert@state.co.us>

Jared,

Please see attached response to the second adequacy review. I am sending this via FedEx for your review.

Thank you,

Jodi Schreiber
Chief of Operations
839 Mackenzie Ave.
Canon City, CO 81212

Office (719) 275-3264
Mobile (719) 529-0916

jodi@arycorp.com

"Be a yardstick of quality. Some people aren't used to
an environment where excellence is expected. " -Steve Jobs



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839 Mackenzie Avenue
P. O. Box 841
Cañon City, Colorado 81215

Telephone:
(Bus.) 719 - 275-3264
(Fax) 719 - 275-8897

May 13, 2019

Colorado Division of Reclamation, Mining and Safety
Attn: Jared Ebert, Environmental Protection Specialist
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Goodrich Pit, 112c Application Number 2019-005 Adequacy Review No. 2 Response

Mr. Ebert,

Thank you for your review of our application documentation. Regarding number 1, we have attached a revised Pre-mining map with the contours labeled. To answer number 7, Fremont Paving is committed to compensating the owner if any damage is done to the stock pond.

The revised blasting plan is attached for your review to answer issue 8. Also attached is the monitoring plan that we intend to use to comply with the standards.

The revised reclamation plan, stating the water will be directed into the pit has been attached for review. This should also remedy number 14. Finally, to answer item 26, we have attached an updated Exhibit C map.

If additional information is necessary to complete this request, please feel free to contact me directly.

Sincerely,

Jodi Schreiber
Chief of Operations
719-275-3264
719-529-0916
jodi@arycorp.com

6.4.5 Exhibit E

Reclamation Plan

The current use of the property is rangeland. The site will be reclaimed to rangeland. The proposed site sits on top of a mesa in rural Las Animas County. The target material on the site is quarry rock. There is virtually no overburden with limited topsoil on the site. All topsoil encountered will remain on the site for reclamation purposes.

Reclamation will occur once all mining has been completed. Blasting of the quarry will leave walls at 3H:1V. Fremont will rebuild the remaining highwall at a 3:1 ratio using dozers and loaders. Topsoil will be replaced at a depth of 6 inches. Final grade will blend with surrounding topography and water will be directed into the pit. Reclamation of vegetated areas will follow with the Las Animas Soil Conservation District's recommended seed mix. The spreadsheet is attached for review. Fremont will disc the area and then seeding will be accomplished through drilling. Fremont will crimp in straw mulch at a rate of two tons per acre.

Storm water structure will be removed during reclamation. Per the owner's request, the haul road will remain following reclamation.

Fremont will preserve all plant growth medium onsite using a loader. All topsoil onsite will also be preserved. Additional topsoil will be imported to meet the 6-inch depth necessary for reclamation.

In the event noxious weeds appear, they will be managed mechanically and/or chemically as directed by the Las Animas County Noxious Weed Coordinator and allowed by the property owner.

Jodi Schreiber

From: Melick, Phil <PMelick@sweeney.com>
Sent: Monday, May 13, 2019 8:26 AM
To: Jodi Schreiber
Subject: RE: Goodrich Pit Blasting Plan

Jodi –

Following up on my earlier email in which I mentioned that we can control ground vibration with blast design, hole diameter, bench height, pounds per delay, etc., we can still maintain a relatively high scaled distance at 2000 feet from the nearest neighboring structure. For example, based on the design specifications listed in your document:

Hole diameter = 4.5”
Blasting Agent (ANFO) density = 0.82 g/cc
Bench height = 25’
Stemming height = 8’
Pounds ANFO per hole = 97 pounds per hole (round up to 100 to include booster and possible heavier density product)

Distance to nearest structure = 2000’
Scaled distance = Distance/ $\sqrt{\text{max pounds per delay}}$
Scaled distance = 2000/ $\sqrt{100}$
Scaled distance = 200

Ground vibration prediction calculation: $V = 160 \times (\text{Scaled Distance})^{1.6}$
 $V = 160 \times (200)^{1.6}$
V = 0.033 inches per second

Widely accepted guidelines for quarry and construction blasting are 2.0 inches per second. As you can see, we would expect to be well below that limit given the blast design parameters.

I hope this helps...please let me know if you have any questions or need additional information.

Thanks,

Phil Melick
Manager – Quarry & Construction
Southwest Energy, LLC
2040 West Gardner Lane
Tucson, AZ 85705
Office – (520) 696-9495
Cell – (520) 429-4553

From: Jodi Schreiber [mailto:jodi@arycorp.com]
Sent: Wednesday, May 01, 2019 9:26 AM
To: Melick, Phil
Subject: Goodrich Pit Blasting Plan

Pre-Mining Map

80 Acres Permit

Stock Pond
Owner: Dean Goodrich

Landowner
Dean Goodrich

**Landowner
Dean Goodrich**

**Barbwire Fence
Owner: Dean Goodrich**

**Landowner
Dean Goodrich**

Barbwire Fence
Owner: Dean Goodrich

Landowner
Dean Goodrich

Contours are in 5' intervals

- Property Line

**Barbwire Fence
Owner: Dean Goodrich**

Landowner
James Donley

- Property Line



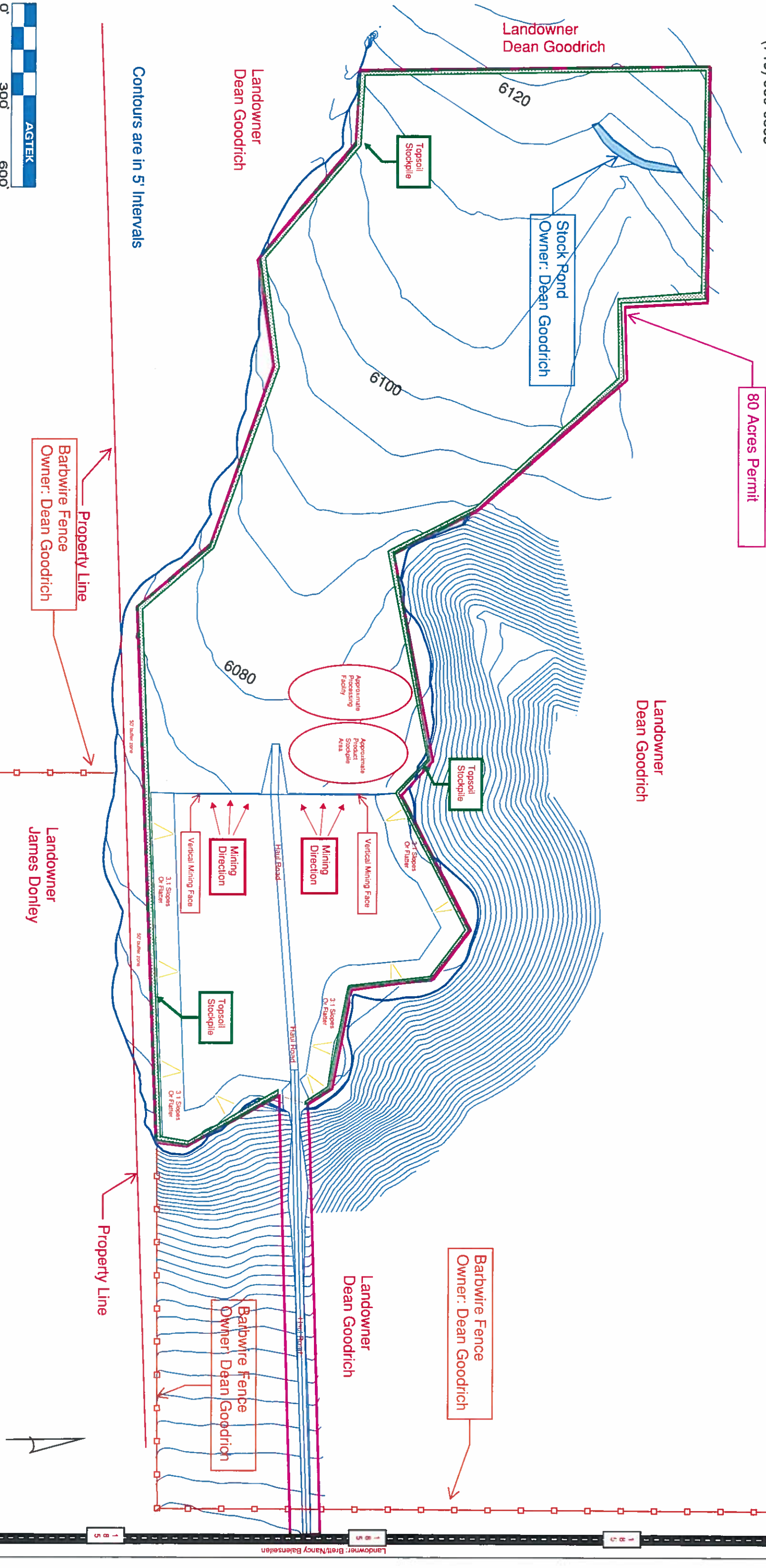
Map By James Higgs, Fremont Paving & Ready Mix

1/24/17

Goodrich Pit

Dean Goodrich
PO Box 188
Kim, CO, 81049
(719) 980-0583

Mining Map Phase 1



Mining Map Phase 2

80 Acres Permit

Stock Pond
Owner: Dean Goodrich

6120

Landowner
Dean Goodrich

Contours are in 5' intervals

Landowner
Dean Goodrich

Barbwire Fence
Owner: Dean Goodrich

**Landowner
Dean Goodrich**

Barbwire Fence
Owner: Dean Goddrich

**Barbwire Fence
Owner: Dean Goodrich**

Landowner
James Donley

- Property Line



Map By James Higgs, Fremont Paving & Ready Mix

Note: Existing vegetation is as follows: Cactus, Buffalo Grass, Sage Brush, and Juniper Trees.

1/24/17

Reclamation Map

Typical Section



***Note: There is no overburden to be encountered on site so none to be placed.**

Top of Topsoil

3:1 Slopes or Flatter

3:1 Slopes or Flatter

6 avg Depth

***Note:** There is no overburden to be encountered on site so none to be placed

6120

Pit Floor to be Determined

**Landowner
Dean Goodrich**

Barbwire Fence
Owner: Dean Goodrich

**Landowner
Dean Goodrich**

**Landowner
Dean Goodrich**

Pit Floor to be Determined

Contours are in 5' Intervals

- Property Line

Barbwire Fence
Owner: Dean Goodrich

Landowner
James Donley

- Property Line



Map By James Higgs, Fremont Paving & Ready Mix

1/24/17

