20 August 2013

Ms. Kate Pickford, Environmental Protection Specialist
Colorado Division of Reclamation Mining and Safety
691 CR 233, Suite A-2
Durango, CO 81301

VIA E-mail

SUBJECT: M2013-031 New Hay Camp Pit, McStone Aggregates Commitment

Dear Ms. Pickford:

This letter memorializes the e-mail correspondence (see references, below) regarding the adequacy review.

Commitment

McStone Aggregates considers this to be a firm commitment on its part to limit the maximum length and height of all highwalls which might require backfill, at any one time, to 624 feet and an average height of 25 feet. McStone Aggregates also considers this to be a firm commitment on its part to limit the maximum affected land area requiring backfill, grading, placement of soil/bedding material, and seeding (with associated other work necessary for revegetation) to 11.9 acres. There may be additional land which has been reseeded but which has not had adequate growth to be released.

Regarding maps:

I found that the title block on maps C-1, C-2, F-1, F-2, and S-1 have some confusing information. Please find attached maps which have that information corrected, and which have a graphical scale added and some more marginal information. The maps as originally submitted are drawn with a scale of 1"=660', as required, but the marginal info was confusing. I apologize for that. Please let me know if this clarifies matters. I believe that all of those maps (and other maps) have legends, title, date, north arrow, scale, and other required information. Please let me know if I have overlooked that on any of the maps. Some of the maps in various exhibits are showing a larger area beyond the permit area, and therefore area a different scale.

Regarding reclamation:

I apologize that in trying to provide *enough* detail, I may have inadvertently made matters more confusing, perhaps by providing too much.

"Two phases at one time:" The only reference I can recall or find in Exhibit D that this might refer to is in the last paragraph of Exhibit page 13, where it is stated: "At least one face will be operated, however, it is expected that two faces may be used because of the location and type of materials on-site. ... A single work area will be used, but may be divided into various areas depending on material, equipment, and operations underway." It is not that there are "two phases" at one time, but that one area may have two separate working faces. An example is Map C-2, where area D has both an uphill and a downhill face. It was also not intended to give an impression that two work

areas, each of 3 or so acres, would be done, but that a single area (such as C or D) might be done in two or more pieces, instead of all at once.

A mining depth of up to 50 feet (as stated on Exhibit page 12) is not intended to imply that the highwall will be 50 feet high, but simply that at some points the total distance between the original ground surface and the bottom of the excavation may be up to 50 feet. This is stated because the south slope of Hay Camp Mesa has quite variable depths of the sand and gravel deposit being mined. There is a very small possibility that there might be a small stretch of highwall that approaches fifty feet. Although this is unlikely, we are willing to use that (as stated in the exhibits) as a maximum height, but it certainly is not in any way an average height of highwalls.

Height of highwall: As stated in the memo from me to you on 31 July 2013, the average height of the highwall at any given time is 25 feet and not 50 feet. However, I have broken down the anticipated height in more detail.

The table in the footnote (and the first table in the exhibit) breaks the areas of the mining area into three parts:

- The major part of the pit floor, which may require some backfill and grading to produce a smooth base on which to spread soil and revegetate with grass, but not the amount of work necessary for sloping the highwalls on the perimeter. The size of this will vary, but (as explained in note 7) will be a maximum of four acres at any one time.
- The pit floor immediately adjacent to and including the highwalls on the uphill edges of the mining area. This maximum of 1.7 acres at any one time is the 614 feet of highwall discussed in paragraph 2 of the 31 JUL 13 memo, with a 50-foot highwall (a worst-case assumption, NOT what we anticipate).
- The pit floor immediately adjacent to and including the highwalls on the downhill side (and the permanent post-reclamation features there) of the mining area. The maximum of 1.6 acres at any one time is based on the downhill side of reclamation area N, and is based on an average highwall height of 25 feet (again, a worst case assumption as it is expected that the downhill highwall height will be about five feet, as discussed in the memo).

Highwall length: None of the maps are intended to give an impression that a total of 3520 feet of highwall of any height will require sloping at some point (that is, at any one time). As discussed above and in the memo of 31 July, the maximum length of highwall which might require sloping at any time is 624 feet (in the NE or NW corners of the site). This is elaborated on below. The highwalls to be sloped and the maximum areas to be reclaimed at any one time are detailed in Exhibits D and L.

Acreage needing reclamation at any one time: The maps are not intended to indicate that as much as 22.5 acres of disturbed, unreclaimed land will exist at some given time (any one time): the correct number as stated in Exhibit L is 11.9 acres (worst case, year 3-4). The first table in Exhibit L shows the reclamation by task AND area: the bottom line is not a sum or total. 22.5 is the total disturbed land within the mining area which is not on the perimeter (that is, not requiring work to slope and grade the highwalls).

- *Note 1 below the table states that the upper number in the "area(acres)" column is the total for the life of the mine, and the lower number is the maximum acreage which requires reclamation at any one time.
- *Note 1 also explains that the four right-hand columns show the maximum acres at any one time during the life of the pit for which the four tasks are necessary.
- *Therefore, the correct maximum area needing revegetation at any one time is the sum of the lower number in the right-hand "seeded" column, or 10.9 acres. A maximum of 4 acres of the pit floor (not along the perimeters/highwalls) will be disturbed and requiring reclamation at any one time.

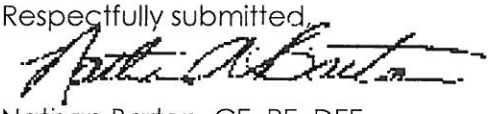
Revegetation is to be accomplished (as with other reclamation tasks) in phases, as the mining progresses, and is *not* to be done only at the end of the mining operation. For the actual mining area itself (the pit), note 7 and footnote 7 at the bottom of Exhibit Page 36 has a table that shows the breakout of the areas to be open at any one time.

As stated on Exhibit page 36, note 7: "The largest area to be in active operations (mining and reclamation) is 7.3 acres with an exterior perimeter of 1740 linear feet (3.3 acres), of which 1.6 acres is the south (lower edge) and 1.7 acres is the north/west perimeter. This is expected to be in year 3-4; with less land disturbed before and after."

In addition to this 7.3 acres, up to another 4.6 acres outside the actual mining area (plant and associated areas) would be disturbed at any one time, for a maximum of 11.9 acres, and 624 linear feet of highwall.

Therefore, as stated in the table at the top of Exhibit page 37, the maximum area which would need to be revegetated (have soil placed and be seeded) is 11.9 acres. As stated in the table at the bottom of that page, costs over the past ten years for seeding (and reseeding, as necessary) mined land on Hay Camp Mesa has been about $750/acre (or less). It is my professional opinion that the average cost at this site will be less, because much of the area to be reseeded is the plant area located on the formerly-cultivated land in the southeast corner of the permit area, which is much easier to prepare and seed than the pit floor and sloped highwalls.

Respectfully submitted,

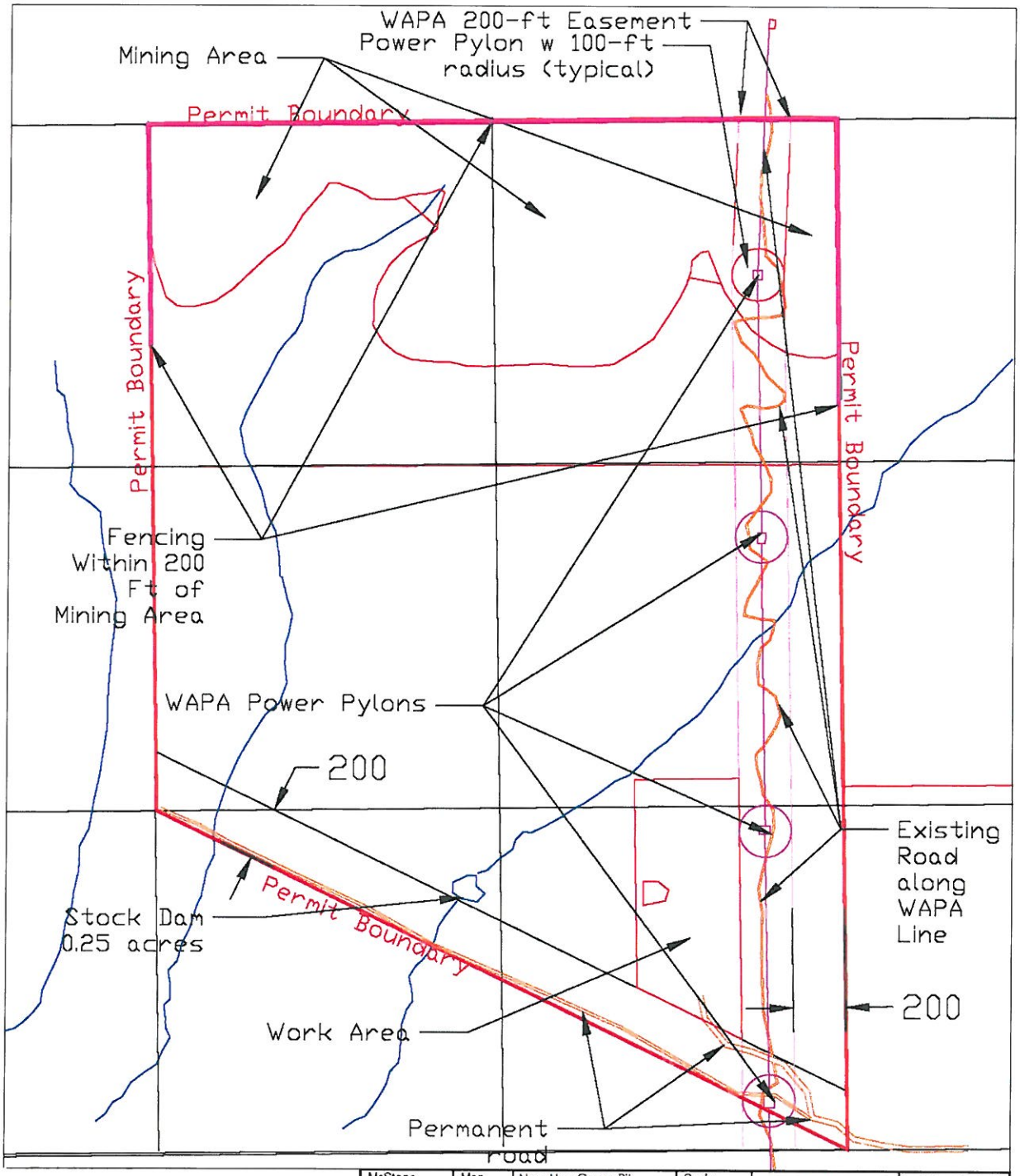


Nathan Barton, CE, PE, DEE
Environmental Engineer

References:
Email of 08 AUG 2013, Nathan Barton (NAB) to Kate Pickford, Subject: Second Adequacy Review (Fwd: Message from KMBT_C220)
Email of 09 AUG 2013 (#1), NAB to Kate Pickford, response to above e-mail (Maps attached)
Email of 09 AUG 2013 (#2), NAB to Kate Pickford, further response to above e-mail
Email of 09 AUG 2013, Kate Pickford to NAB, receiving responses and delay in review
Email of 10 AUG 2013, NAB to Kate Pickford, question on commitment
Email of 16 AUG 2013, Kate Pickford to NAB, commitment

Attachments (sent separately): Corrected maps. C-1, C-2, F-1, F-2, and S-1

MAP S-1 Manmade Structures

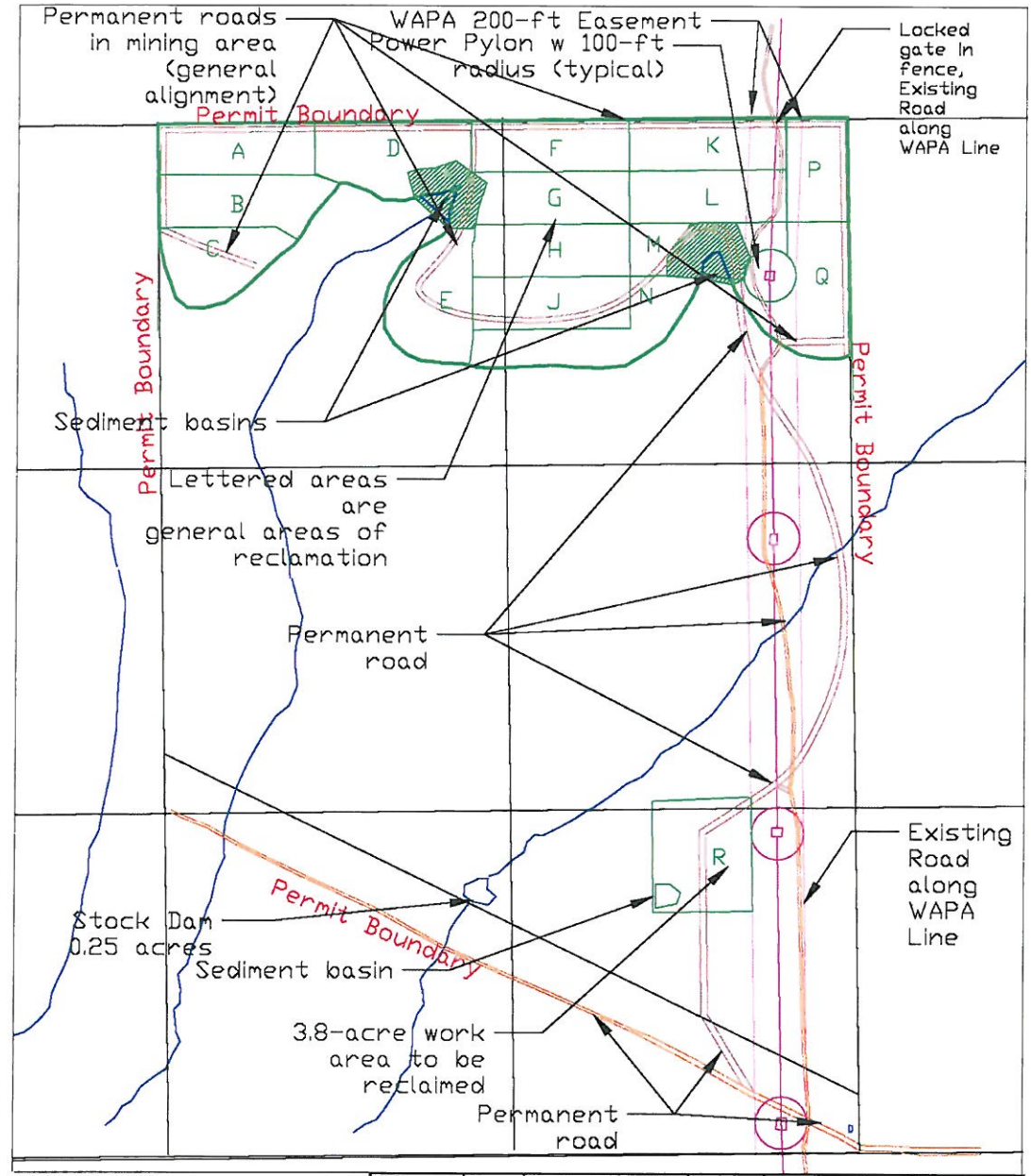


McStone Aggregates LLC PO Box 1425 Dolores, CO 81323	Map Title	New Hay Camp Pit Significant Manmade Structures	Scale	1 inch = 1/8 mile	North Date: 28FEB13
	Source of Map	USGS and field data, aerial photography	Permit No. & Name	M2013-031 New Hay Camp Pit	Drawn by NAB Checked by NAB
Legend	Labeled as necessary.		Prepared by N. A. Barton, PE, DEE, #27342		File No. S-1

0 660 ft 1320 ft

1 inch = 1/8 mile

MAP F-1: Entire site showing phases of reclamation



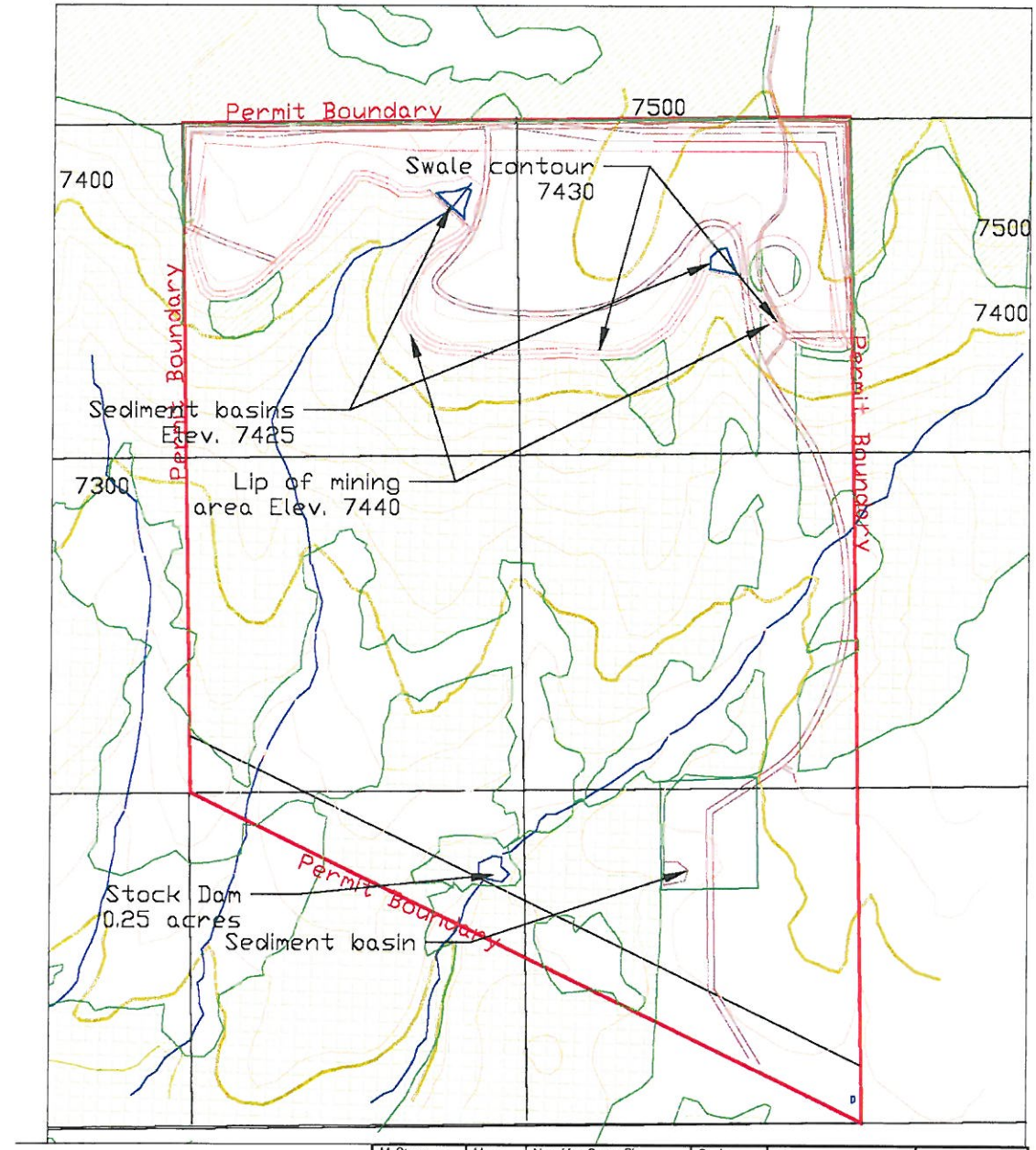
Boundaries of areas of reclamation shown in green, sediment basins hatched. Permanent roads (after reclamation) shown in brown.

0 660 ft 1320 ft

1 inch = 1/8 mile

McStone Aggregates LLC PO Box 1425 Dolores, CO 81323	Map Title	New Hay Camp Pit Reclamation Plan (Area)	Scale	1 inch = 1/8 mile	North Date: 28FEB13
	Source of Map	USGS and field data, aerial photography	Permit No & Name	M2013-031 New Hay Camp Pit	Drawn by NAB Checked by NAB
	Legend	Labeled as necessary.	Prepared by N A. Barton, PE, DEE, #27342		File No. F-1

MAP F-2: Entire site showing estimated final contours.



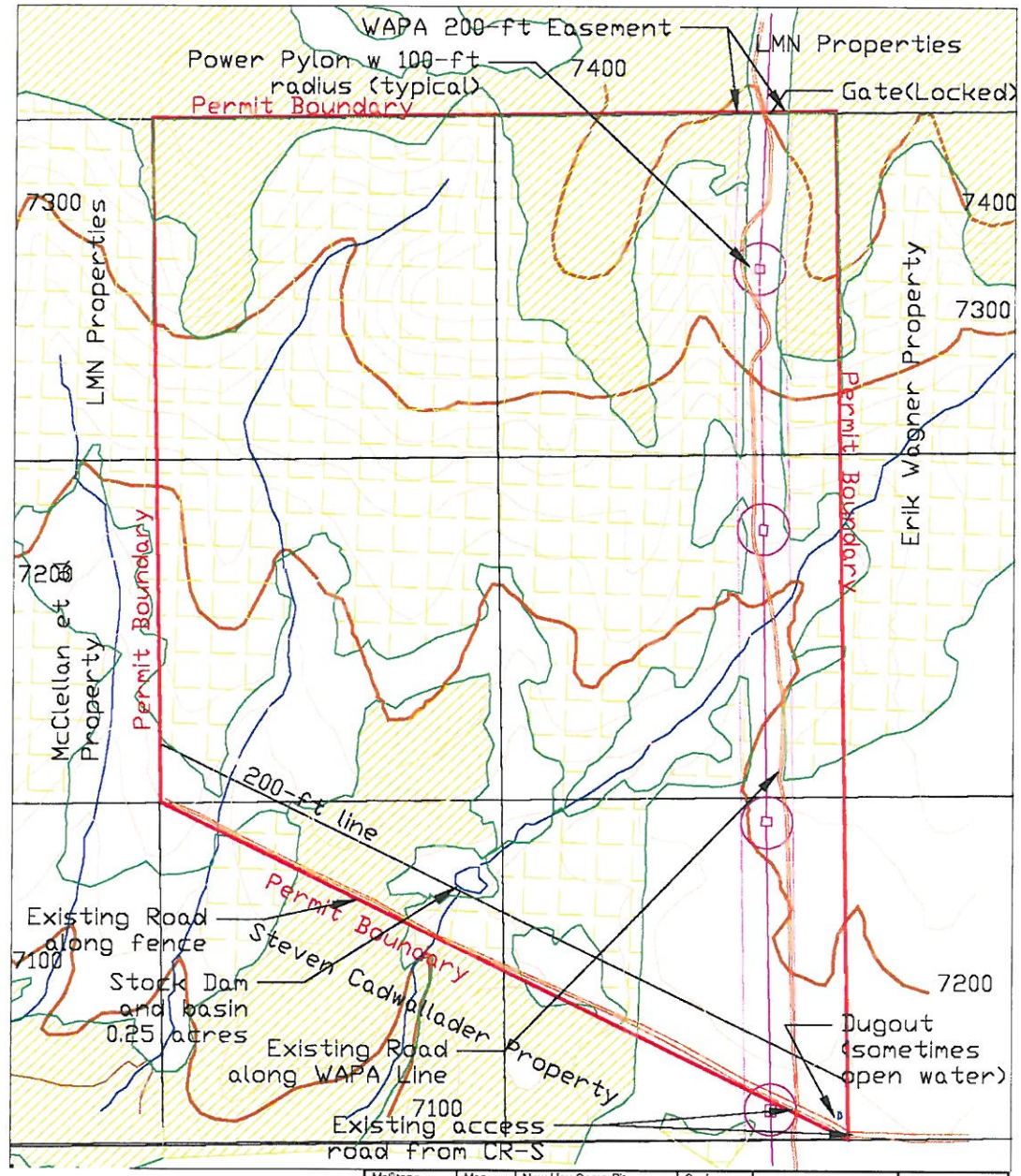
Green hatched areas indicate areas with pinion-juniper vegetation left after mining and reclamation; other areas in grass.

0 660 ft 1320 ft

1 inch = 1/8 mile

McStone Aggregates LLC PO Box 1425 Dolores, CO 81323	Map Title	New Hay Camp Pit Reclamation Plan (Contours and Features)	Scale	1 inch = 1/8 mile Contour interval 20 feet	North Date: 28FEB13
	Source of Map	USGS and field data, aerial photography	Permit No. & Name	M2013-031 New Hay Camp Pit	Drawn by NAB Checked by NAB
Legend	Labeled as necessary. Contour interval 20 feet		Prepared by N. A. Barton, PE, DEE, #27342		File No. F-2

MAP C-1: Entire site showing present contours and roads.



Green dense hatching is dense pinon-juniper
Green grid is pinon-juniper savannah
White is grassland and cropland

0 660 ft 1320 ft
1 inch = 1/8 mile

McStone Aggregates LLC	Map Title	New Hay Camp Pit Existing Conditions	Scale	1 inch = 1/8 mile	North Date: 28FEB13
PO Box 1425 Dolores, CO 81323	Source of Map	USGS and field data, aerial photography	Permit No. & Name	M2013-031 New Hay Camp Pit	Drawn by NAB Checked by NAB
Legend	Labeled as necessary.		Prepared by N. A. Barton, PE, DEE, #27342		File No. C-1

MAP C-2: Entire site showing proposed mining and facilities, and sequence