

SUBMITTAL OF 07 AUGUST 2018
BY C&J GRAVEL PRODUCTS, INC.
MONTOKA PIT M1980-146
(GRANDVIEW PIT)

CONTENTS

Memorandum to Lucas West, DRMS	14 pages
Memorandum to Helen Mary Johnson, US BLM	17 pages
EXHIBITS REVISION	61 pages
Map Portfolio (For Exhibits C & F) (cover for the portfolio is page 61 of exhibits)	9 pages

Please confirm that you were able to download this from Google Docs.

Call Nathan A. Barton at 605-939-0650 or email WASTELINE.84532@gmail.com.

FROM: C&J GRAVEL PRODUCTS, Inc.

DATE: 07 August 2018

Memorandum for Mr. Lucas West, Environmental Protection Specialist, Colorado Division of Reclamation, Mining, and Safety

SUBJECT: Response to Adequacy Review of 06 July 2018, M1980-146 AM-06

Dear Sir:

Please find in this letter our responses to the adequacy review comments. Responses are in red, and may reference new Exhibit pages. This response is delayed as these new Exhibit pages also include changes made at the request of the US Bureau of Land Management in their review of 11 July 2018. Although their comments were received after the close of the comment period, since they manage the land, we are addressing all BLM comments. A copy of our response to the BLM review is provided at Attachment 2.

This letter also responds to the comments filed by the Colorado Division of Parks and Wildlife and information and discussions on 07 August 2018 between John Gilleland and you.

There are several general items to be addressed.

- A. The requirement that all drawings, maps, aerial photographs, and figures comply with the provisions of Section 6.2.1(2) is a change in Division policy. We have attempted to comply with that requirement. We do wish to note:
 - a. In past applications, these have applied to Exhibits C and F, but the Division has previously not required those in other exhibits with specialized maps and drawings to meet those requirements.
 - b. Since many of these drawings and figures are obtained from public sources (USGS, County GIS departments, BLM, other public agencies, or are based on aerial or satellite photos, the professional engineer, surveyor, or geologist (if there was one) which prepared the base maps is not known and not able to be requested to provide a signature.
 - c. The dates that such maps were prepared by 3rd parties is also often not known.
 - d. For a PE, PLS, or PG to sign off on work (such as base maps or photographs or maps from public sources) is a grave violation of professional ethics and often is a violation of Colorado law governing those professions, which would subject the preparer to disciplinary action, as they were not in "responsible charge" of the work done to prepare the map.
- B. The requirement for detailed, fixed, locations and details on fuel and other water-priority (hazardous) materials located on-site has not previously been required by the Division. Again, we have attempted to comply with this requirement to the best of our ability. While it is possible (with difficulty) to provide such information in the detail apparently now required, these details are subject to change, often on short notice as required by other regulations, and now will apparently require either a technical

revision or amendment application to be acceptable to the Division and therefore not in violation of the reclamation permit. These are addressed further below.

- C. Storm water/surface water management plans (SWMP): It is difficult, if not impossible, to provide details of location and design of the best management practices and control measures for erosion, sediment, and control of contaminants in storm water which comes in contact with industrial activities, and which is regulated by the Clean Water Act and must meet conditions of the Colorado Discharge Permit System storm water discharge permits. The exact location and necessary size for both temporary and permanent (post-reclamation) measures cannot be specifically identified because the quantities and quality of storm water discharges cannot be accurately predicted, and because the discharge permits are reissued (usually every five years) and may require different measures than those originally and currently proposed. In addition, these SWMP are lengthy documents and fall under the jurisdiction of CDPHE Water Quality Control Division and/or US EPA.
- D. Spill Prevention Control and Countermeasures Plans (SPCC Plans), like SWMP, are large and complex documents and expected and required to change and be modified as conditions and regulatory requirements change. (And indeed have changed significantly in the past decade alone.) They are also under federal (US EPA and other) requirements and usually also fall under jurisdiction of CDLE's Oil and Public Safety division. In addition, the quantities and types of materials stored, transported, and dispensed at a location are subject to change. (A fairly recent example of this is the requirement for Diesel Exhaust Fluid (DEF), itself a water-priority chemical which must be addressed in sites which meet de minimus requirements for an SPCC Plan.) Again, the Division has not required submission of such documents and design of such facilities prior to amendments in the past, or even of new applications.
- E. We have attempted to address the review items concerning these topics to the best of our ability, but are concerned that we are unable to meet the new requirements.
- F. Past applications for amendments to the Montoya Pit have been reviewed and accepted by the Division although referencing (incorporating by reference) the same information provided either in the original (conversion) application or previous applications for technical revision and amendment, or separate documents (such as environmental assessments produced in accordance with the National Environmental Protection Act and other federal legislation and regulations. We understand that this is no longer allowed, and again have attempted to comply as much as possible with the comments provided.
- G. In several cases, although the Division's rules have not (to our knowledge) changed, the interpretation of those Rules have changed. We were not aware of any guidance explaining these changes, and only somewhat made aware through discussions. And in many cases, the Division's past practice and guidance has varied from the instructions and standards contained in the Act and Rules. For example, it has always been the practice to include land ownership information in Exhibit O, but now it is required to duplicate that information in Exhibits A, C, and D. In the past, seeding information has always been provided in Exhibit J (Vegetation) and referenced in Exhibit E (Reclamation Plan). We now understand that it must be provided ONLY in Exhibit E but are not sure

when this was changed, as previously having the information in Exhibit J was apparently acceptable.

1. Application Packet:

a. Question 3 on Page 1 of the application form lists the permit acreage to be 100.8 acres. According to AM-04 the total permit acreage 219 Acres. Please clarify the total number of acres that are currently permitted, and the total affected acreage including the pending expansion area.

This is a typo which was overlooked, and for which I apologize. The total permit area is indeed 219.0 acres. The affected area as of the 2017 annual report was 83.6 acres, and has increased to 90.0 acres. The pending expansion area is 18.3 acres, resulting in a planned total affected area of 108.3 acres assuming the amendment is approved. This is now correctly stated in Exhibits A and C. This 108.3 acres does not include an additional 26.4 acres included in the referenced BLM 2018 Environmental Assessment, which would require future contracts for sale of construction materials with the BLM.

Question: Do we need to provide a new corrected page of the application?

2. Exhibit A- Legal Description

a. Please provide the legal description for the proposed expansion area within the permitted area.

Due to the nature of the 2018 18.3-acre expansion, it is necessary to use metes-and-bounds, which has been added to Exhibit A. We have also included a copy of the metes and bounds description of the entire permitted area.

3. Exhibit C- Pre-mining and Mining Plan Map(s) of Affected Lands

All maps in this exhibit appear to have been shrunk to fit the page making the scale bars inaccurate and some features of the map unreadable. Please provide a new set of maps that are of appropriate size and meet the requirements of Rule 6.2.1(2). The Division suggests an 11" x 17" or larger size. All maps should also clearly identify the Permit and Affected Lands Boundaries and should either be labeled or reflected in the legend.

You are correct that the maps were shrunk to add the header and footer for each page. To resolve this, I am returning to the older practice of providing a "map portfolio" so that page numbers and other marginal/header/footer information can be placed as convenient and protecting the size. We do not currently have the ability to print 11x17. We can provide PDFs with a native format of 11x17.

a. A map of all adjoining surface owners was not included in this exhibit. It was however submitted as a part of Exhibit O. The Map included in Exhibit O was clear and well defined. It does not however meet the requirements of Section 6.2.1(2). Please submit a new copy of the map, that is full size and meets the map requirements including an accurate scale bar and signature by the preparer. This map should also depict the permit boundary. Please also duplicate this map in Exhibit O.

I must apologize as I did not realize that the requirements had changed. Please see discussion on pages 1 and 2 of this letter. In the past, ownership information for Montoya Pit has always been provided in Exhibit O.

My signature block for those maps/photos which I did not prepare, but only annotated, now states that.

Other problems have been corrected and are contained in the Map Portfolio. Again, I apologize: in attempting to make review simpler both for DRMS and the BLM, I clearly failed and created more work.

b. Map Specific Items: The following is a list of the specific items requiring attention for the maps in Exhibit C.

- Map C-1: Incorrect Scale, the scale bar should measure 1" = 500' but the scale bar measures 7/8".
- Map C-2: Incorrect Scale, the scale bar should measure 1" = 500' but the scale bar measures 7/8", the image is distorted making the Topographic contours difficult to read.
- Map C-3: No Scale bar, North Arrow or title, map not signed.
- Map C-4: Incorrect scale bar, scale should measure 1" but the bar is 1 5/8", map not signed.
- Map C-5: Incorrect Scale, The scale bar only measures 7/8" and the images are so distorted the labels are unreadable, map not signed.

The above errors have been corrected, and additional information as requested elsewhere and by BLM have been placed on these maps. Additional maps have been added to meet other comments and provide information in a clearer format.

Note: maps related directly to storm water are located in Exhibit M.

4. Exhibit D- Mining Plan

a. Section 3 briefly mentions the establishment of storm water management controls in the expansion area. Please provide more details including specifics on the type of structures, their location and please include their location on one of the revised maps in Exhibit C.

As you pointed out elsewhere, the maps have some overlap of labels and other information which makes them difficult to read. Therefore, storm water information is provided in additional maps in Exhibit G (Water). Exhibit D now references other Exhibits and maps appropriately.

Mr. Wally Erickson provided additional information to clarify this issue in an email on 30 JUL 2018: Under adequacy issue 4a the Division requested additional descriptions of storm water management structures, and that such structures be illustrated and labeled on Exhibit C map(s). Pursuant to Rules 3.1.5(3), (5), (10), and 3.1.6(1) and (3), and C.R.S. 34-32.5-116(4)(c), (h), (i), and (j) the application must demonstrate how the operation will control erosion and sedimentation, minimize disturbances to the hydrologic balance, and be protective of surface water resources. Such requirements are often addressed with storm water control

structures. Please provide additional details and descriptions of the proposed operation, which demonstrate how these requirements will be addressed.

This addresses the above item, but does not address Item 5.c. (Reclamation Plan), which was the major part of our phone conversation. Please see the responses below.

I believe that (as in past applications) adequate information is provided that demonstrates compliance with the applicable requirements of the various performance measures cited by Mr. Erickson. In the past this has been done by a commitment to meet the permit conditions and regulatory requirements for Storm Water Discharge Permits (issued by the CDPHE WQCD and/or EPA), as well as contractual requirements with the BLM as manager of the Public Lands, and has been deemed adequate by the Division.

b. A Redi-Mix plant and or asphalt hot plant are mentioned in section 4 however details are not provided.

We have provided considerably more information on maps in Exhibit C and in Exhibit M.

These facilities are mentioned because such portable facilities have been located at and operated in Montoya Pit for many years. At least the most recent applications for amendments have specifically included the statement that such plants would be located in and operate on Montoya Pit. To my knowledge, details have never been provided in applications or requested or required to be provided in a request for a technical revision or application for a permit amendment. Montoya Pit has been inspected over the years by many DRMS inspectors while such facilities were present and operating, and such a presence was not ever (to my knowledge) determined to be an issue, nor was detailed information requested to be provided.

More details cannot be provided because the plants which are located at the Montoya Pit are generally there on a temporary basis and are portable facilities. They are located at the Pit for specific projects of limited duration and often the specific plant to be located here is not known until just weeks or days before arriving and being set up. We now have the designated locations for these types of plants provided on Sheet C-1 and C-3. However, circumstances may require these areas to be slightly different size, based on plant size, configuration, stockpile locations, traffic and other patterns. We can provide a generic layout inside these designated areas, however. In some ways, this is analogous to providing details for portable crushing and screening trains and their conveyors and supporting equipment (i.e., fuel tanks and generating sets). This equipment changes fairly frequently to meet new requirements and to replace old, worn-out equipment. We are no more able to predict whether or not the next HMA plant to need to locate to Montoya Pit is a CEI or an Astec, than we can predict whether the next front-end loader is a Cat or a John Deere.

Please clarify if these processing facilities are or are not to be included. If they are to be included please submit a narrative detailing the design, construction and features of the plants. As well as a map showing their location within the permitted area. Please also identify what

other permits will be required with the addition of the facilities and update Exhibit N (is Exhibit M and not M meant here – I am not sure how this involves a right to enter). accordingly. We have provided much additional information in Exhibit M. Again, these facilities are mentioned because the Montoya Pit has hosted such facilities in the past and expect to need to do so in the future. Therefore, these facilities are to continue to be included, as they have for the past several decades. We assume that as in the past, these plants will continue to be located on the Montoya Pit for various construction projects. We cannot be certain of that, as it depends on who wins contracts and where the materials come from. Hosting ready-mixed concrete plant, hot-mix asphalt facility, and other plants on this site continues a long-standing policy and have been located on the site on and off (temporarily) for many years, to meet customer needs. The additional information in Exhibit M touches on designated locations (See maps in Exhibit C also), design, environmental protections, and permits.

If the plants are intended to be added at a later time, those will need to be addressed through the Technical Revision process prior to the construction.

We do not believe that such is feasible. Please provide a copy of the Division's policy change letter that explains what must be provided, and the timeframe for doing so. We have never had to submit a Technical Revision request to locate a portable plant of any type on this site (or any other 110c, 111, or 112c operation I have done work with), unless the potential presence of such facilities was not included in the original application (and the statement that such might be located and would comply with all appropriate regulations was sufficient, without detail as to capacity, design, layout, environmental protections or related matters). We need to know exactly what is required, because this process may seriously jeopardize future contracts and materials sales, due to the time required and the short time often available for highway and other construction products.

If that is the case please clarify this.

Please provide the information and basis of requiring technical revisions before a portable plant may temporarily operate on a reclamation-permitted site. Again, we do not believe that is feasible, and requiring such would prevent smaller (and even large) firms depending on portable facilities from obtaining construction contracts, and also potentially create significantly greater negative environmental impacts off-site.

Again, Mr. Erickson provided additional details in the e-mail of 30 July 2018: Under adequacy issue 4b the Division requested additional details of the propose redi-mix plant and/or asphalt hot plant, and that such facilities be located and labeled on the mine plan map(s), and that Exhibit N be updated to list any/all permits associated with the redi-mix and/or asphalt plants. However, if such details exceed the scope of the current amendment, the Operator may elect to withdraw these facilities from AM-05 and introduce them at a later time through a subsequent permit action (TR or AM). Regardless, the proposal to include a redi-mix and/or asphalt plant(s) must demonstrate compliance with the applicable requirements of the performance standards of Rule 3.1 and C.R.S. 34-32.5-116, and the Exhibit requirements of Rules 6.2.1(2), 6.4, and C.R.S 34-32.5-112.

He did not address the major item of the phone discussion, which is that this change in policy requiring that specific details of ready-mixed concrete plants, hot-mixed asphalt facilities, and other plants including their exact type, configuration, layout, and sizes/capacities, together with the requirement to obtain Division or Board approval for such plants/facilities only through the TR or AM process makes it impossible to meet project deadlines for construction projects, and therefore create severe problems, and make it very likely that C&J Gravel Products and other operations will never again be able to compete to provide materials for such projects.

Again, I believe that (as in past applications) adequate information is provided that demonstrates compliance with the applicable requirements of the various performance measures cited by Mr. Erickson.

c. In addition to the hazardous chemicals associated with an asphalt hot plant, please identify any hazardous materials to be stored on site including but not limited to; bulk fuel storage, lubricants, oils, Etc. Please specify their storage location and estimated quantities, as well as provide details on their secondary containment structures with Spill Prevention Containment and Control (SPCC) plans associated with them.

Mr. Erickson again responded in the email of 30 July 2018:

Under adequacy issue 4c the Division requested a list of any toxic or hazardous substances, including petroleum products, to be stored and/or utilized on site, and that the estimated quantities and storage location(s) of these substances be identified. Additionally, the Division requested a description of any secondary containment structures for all toxic or hazardous substances, as may be required under the SPCC plan. This information will assist the Office in assessing spill seriousness, pursuant to Rule 3.1.13. Additionally, pursuant to Rules 3.1.5(5), (10), (11), 3.1.6, 3.1.7, and C.R.S. 34-32.5-116(4)(c), (d), (e), and (h), the application must demonstrate how the operation will minimize disturbances to the hydrologic balance and be protective of surface and groundwater resources. Please provide additional details and descriptions of the proposed operation, which demonstrate how these requirements will be addressed.

That information has been added to Exhibit M, summarizing the SPCC Plan and related documents. Again, while we hope enough detail is provided, we do ask that the quantities and configuration of such support activities do not become permit conditions which require a technical revision or permit amendment to change. Especially as we attempt to remain in compliance with other regulatory requirements for these materials.

This information has not, to my knowledge, ever been required in such detail for the Montoya Pit or other operations with which I am familiar, in order to determine impact. While Mr. Erickson's additional information seems to clarify that the full SPCC Plan is NOT required to be submitted, this is still much more detail than requested or provided in the past, and would seem to establish additional requirements and limits which previously have not been in the jurisdiction of the Division. As with other items, please provide current guidance regarding the

Division's and the Board's position on what does and does not require detailed information and which agency's requirements are to have priority.

5. Exhibit E- Reclamation Plan

a. The reclamation plan outlines that portions of the private properties located within the permitted area are intended to change the post mining land use to Industrial / Commercial while the lands administered by the BLM will be reclaimed to support a post mining land use of Wildlife Habitat. Please submit a new map in compliance with Rule 6.2.1(2) that clearly depicts which areas will be Wildlife Habitat and which will be Industrial Commercial. These features could be included on the revised final topography map, Map F-1.

That information is already provided in Map C-1, which has been further annotated. All Private Lands are to be Industrial/Commercial, and all BLM-managed Lands are to be Wildlife Habitat and Recreation. We have attempted to clarify this in several other maps and exhibits as well.

b. In the "assumptions" section it is discussed that access roads used during the mining operations will remain post reclamation at the request of BLM. Please clarify which roads will remain and include them on the revised reclamation plan map.

That cannot be done at this time, as the BLM has not determined what (if any) routes (access roads and trails) will be necessary to allow construction and maintenance of wildlife and recreation features, as well as access for inspection and maintenance of storm water controls, after reclamation release. That is not the decision of C&J. We can possibly show the general location, but not in any detail. As you are aware, the Colorado DPW also has raised objections to having parking (and therefore access roads for that parking) on public lands, and the issue is far from resolved.

c. The modification of storm water structures is discussed with the intention of them being left as permanent structures. Please discuss which structures will be left, where they are and how they will be modified to achieve a post reclamation configuration. Please also include the location of the storm water management structures that are to remain post reclamation on the revised reclamation plan map.

As discussed above, not all storm water controls will be permanent, and the precise ones that will be left permanently cannot be determined at this time, as we do not know the topography of the shale bedrock on the floor of the pit, the final requirements of BLM for what can be allowed, and whether or not the remaining 24.4 acres to the west of the 2018 Expansion Area will be mined. In addition, temporary storm water controls used during active mining may require modification during active reclamation, and again may need to be modified into permanent features once reclamation is completed, in order to meet standards for prevention of erosion and sediment discharge, and to meet DWR water rights requirements. BLM has requested that all storm water controls not require any maintenance, indefinitely, but that is likely not possible (at least not with controls that are suitable for wildlife and recreation habitat). We can show the general location and type of controls (on Map C-7) and if necessary duplicate that in Exhibit F. But that must be caveated lest additional technical revisions or permit amendments are necessary.

We anticipate and intend to try and have very few storm water best management practices remain after reclamation, as that is certainly contrary both to the wishes of the landowners (and managers) and the spirit of storm water requirements and objectives. Ultimately, it may be necessary to leave certain permanent features, such as culverts or armored outfalls, or even basins, but we cannot predict the configuration, capacity, or features of such at this time.

In addition, WQCD requirements for termination of storm water permit coverage are not fully compatible with DRMS requirements, and it may be necessary (to meet WQCD requirements and contractual obligations with BLM) to continue to maintain temporary storm water controls past the reclamation release date. This is especially true of industrial/commercial areas (which usually must have storm water discharge permits and SWMP).

d. The revegetation section of the reclamation plan is detailed in the seed mix, seeding method and mulching tasks, however the total number acres to be revegetated is missing. Please specify the total number of acres in the expansion area that are to be revegetated. Please also include the total acreage within the permitted area that still require revegetation. This information should also be included and match the information provided in Exhibit L.

That information is provided in the tables in Exhibit L. That information has been added to the end of Exhibit E.

At present all BLM land currently affected is expected to be revegetated, of which about 85% have not yet been revegetated. (BLM and C&J are working out exactly how much of the 10 acres revegetated so far meet BLM standards.) As stated in previous applications, existing affected BLM-managed areas will be revegetated unless BLM specifically authorizes trails and roads which shall not be – at the time final reclamation is done. For estimating purposes, it is assumed that the entire BLM-managed area will be revegetated.

All of the 18.3-acre 2018 expansion area is anticipated to be revegetated, except for any roads/trails to remain as discussed above, and potentially small areas of storm water controls which need to be armored to prevent erosion. Due to the climate, it is anticipated that most if not all of the floor (bed) of storm water detention basins will be revegetated, but that is dependent on the final configuration of both temporary and permanent storm water controls (structures). In addition, WQCD requirements for termination of storm water permit coverage are not fully compatible with DRMS requirements, and it may be necessary (to meet WQCD requirements and fulfill contractual obligations with BLM) to continue to maintain temporary storm water controls past the reclamation release date.

Much of the private fee lands will be revegetated, but not all, to accommodate post-mining land use for industrial and commercial activities. At present, a total of 19.6 acres of 26.4 acres of Private Land are planned to be revegetated. (The remaining 6.8 acres is paved or graveled parking, storage areas, and roads, which the landowner wishes to remain for use after mining is completed.) This will not change with this 2018 expansion. The 19.6 acres remaining to be revegetated would be the maximum, but additional areas may be left unvegetated at the end of mining activities. The exact configuration cannot be identified at this time, as that will depend on post-mining use of the land, access issues, and other items are resolved, including the permanent access from the 160/550 interchange. In addition, then-current County (and/or

City) requirements are expected to be different than current standards. This will no doubt require a Technical Revision at the time of final closing of mining activities at Montoya Pit.

e. The use of wildlife / livestock exclusion fencing is discussed. Please clarify where that fencing will be used and how many linear feet will be required. Similarly in the BLM document titled "Decision Record", page 7 outlines that the use of wildlife friendly fencing will be required between the active mining area and the undisturbed areas. Please provide details and clarifications on that fencing. If any of the fencing is to remain as a permanent feature post reclamation, please identify them as a permanent man made structure.

No permanent, post-reclamation fencing is proposed. BLM does not currently lease grazing lands for livestock. Wildlife and livestock exclusion fencing MAY be required, to protect in-progress reclamation, if (a) a problem with wildlife develops and (b) if BLM leases grazing rights. The exact location and quantity of all fencing cannot be provided at this time, as it will be based on the circumstances, exact status and areas of reclamation in progress, which in turn is based on assumptions as to the acreage being actively mined, backfilled, and in other stages of reclamation. In addition, this will change frequently as mining and reclamation proceed.

Information about the temporary wildlife-friendly fencing to be used to isolate post-reclamation recreation features (the bicycle skills trail area, etc.) is now included in Exhibit C and shown on Map F-1. It is assumed that this fencing will be installed after reclamation release of the trails area, and will be removed after mining operations cease, before final release. The estimated length of that fencing, if required for the 2018 expansion area, is 1,440 feet.

If other fencing is required for the post-mining use of the private lands, or for other uses of the Public Land, that would be installed after reclamation release.

f. If it is understood that reclamation will be ongoing during the mining operations. However no general timeline was provided. Please clarify a plan or schedule indicating when reclamation will be implanted. (implemented?) Such plan or schedule shall not be tied to any specific date but shall be tied to implementation or completion of different stages of the reclamation.

Question: not sure what is being asked here – tied to progress of mining?)

That information had originally been included in the drafts of Exhibits C, D, E, and F, but was removed at the request of BLM. In addition, the exact sequence will be modified based on the potential for further expansion into the 24.4-acre area to the west (which may or may not be authorized by BLM), demands for work areas for stockpiles, plants, and traffic areas, and other factors. Notes have been added to maps in Exhibits D and E to give a general idea of the timetable.

The 18.3-acre 2018 expansion area will be mined over a 5-6 year period (5-year BLM contract with potential 1-year extension) and will be done generally from the south to the north at a rate of about 3 acres per year. Exact acreage being actively mined and stripped is based on many factors, as explained elsewhere. Reclamation around the north and east perimeters of the entire affected area will continue as in the past, generally working to the west along the north edge, with final grade and placement of topsoil, followed by seeding, done at a rate lagging initial disturbance by one-two years (based on demand and quality), or approximately 3 acres more or less, per year. As relocation of stockpiles, plant areas, traffic ways and safety

zones allow, various portions of the floor of the pit (the shale bedrock) will have soil placed and reclamation commenced. This will vary from year to year, ranging from 1 acre to as much as 4-5 acres per year (in addition to reducing the highwalls).

g. Figure E-1 appears to reference a map with areas such as C-3,C-4, FW, etc. That map was not submitted with this application. Please submit the map that corresponds with Figure E-1.

Figure E-1 should probably have been labeled as Table E-1. Again the confusion was unintentional. These areas are identified on Map C-1. The lettered areas are shown in the table in the upper right corner: the number indicates the specific part of those areas, including identifying BLM and Private land. The numbers are now added to Map C-1.

6. Exhibit F- Reclamation Plan Maps

All maps in this exhibit appear to have been shrunk to fit the page making the scale bars inaccurate and some features of the map unreadable. Please provide a new set of maps that are of appropriate size and meet the requirements of Rule 6.2.1(2). The Division suggests an 11" x 17" or larger size. All maps should also clearly identify the Permit and Affected Lands Boundaries and should either be labeled or reflected in the legend. The revised Reclamation Plan Map should also include all items outlined in the applicable above listed adequacy items.

Please see the response to Exhibit C maps.

Map Specific Items: The following is a list of the specific items requiring attention for the maps in Exhibit F.

- Map F-1: Incorrect scale, the scale bar measures 7/8", the image is distorted and the topo lines are difficult to read.
- Map F-2: Incorrect scale, the scale bar measures 1 5/8", Map not signed.
- Map F-3: Incorrect Scale the scale bar measures, 1/2", the image and labels are distorted and unreadable, Map not signed.

Please see also the discussion above regarding signing of maps not prepared by the preparer of the application, or under that person's direction. As much as possible, such maps are now figures within Exhibits D and E, rather than part of the maps in Exhibits C and F.

7. Exhibit G – Water Information

a. Item number 4 discusses that the BLM Environmental Assessment (EA) already addressed the surface flow concerns from the mining impacts in the upper portion of Sale Barn Canyon. Please include that information as well as summarize the details your storm water management plan in this Exhibit.

Overall, the EA concluded (as we understand it) that the hydrologic balance of the area (surface and ground water) will not be negatively and significantly impacted by mining of the 18.3-acre and 44.7-acre areas. Part of the watershed of Sale Barn Canyon is now cut off directly from the lower portion of Sale Barn Canyon and now either infiltrates into the backfill on the highwalls or flows into and ponds on the pit floor where it evaporates. However, this was not deemed to have a significant downstream impact, and neither the US Army Corps of Engineers nor the Colorado Division of Water Resources provided any objections to the configuration.

As discussed above, the storm water management summary, including map (modified to meet DRMS standards) is now an attachment to Exhibit M, with general information provided in Exhibit G. This information had previously been provided both to the EA preparer, BLM, and the Division. It has been modified already due to changes in the pit, and will continue to be changed as necessary as conditions change, to meet regulatory requirements of the Clean Water Act and implementing regulations, and the CPDS storm water discharge permit issued by CDPHE. Those permits are generally re-issued on a five-year cycle, and are next due in 2020.

8. Exhibit H – Wildlife Exhibit

a. While the Division understands that the BLM's EA process covers much of the same information for this and many other exhibits, that information is still required to be included in their respective Exhibits. Please submit a new Exhibit H that meets the requirements of the information required by Rule 6.4.8. Please also discuss exactly what measures will be taken to minimize the impacts to wildlife as required by the conditions of the BLM sales contract.

A wildlife evaluation, incorporating previous statements and material from La Plata County, the 2018 BLM EA, and US FWS is now provided. This also specifically addresses comments in the DPW letter received on 03 August 2018.

b. Figure H-1 was included with this Exhibit. This figure has no description, legend or notations that describe the color gradient or what they represent. Please submit a new Figure H-1 that clearly describes the features and colors that are depicted on the map. This figure should also meet the basic map requirements as outlined in Rule 6.2.1(2).

This map has been removed. Again, this map was not prepared by C&J or its agents, but as stated, comes from La Plata County.

Please note that BLM has required additional information to be provided in Exhibit J Vegetation Information. We wish to make it clear that (just as in the past) under their regulations and contracts, BLM can change the seed mix and seeding procedures at any time. We wish to make that clear in this application so that we do not have to undergo a constant round of Technical Revisions to the permit each time a change is made. The seed mix used on private land, as required by law, will be in conformance with NRCS/Conservation District requirements, but will be similar to that used on Public Land for the period in which it is actually planted. BLM is requesting that shrubs and other vegetation which can be removed during stripping be transplanted to areas undergoing reclamation (that is, to areas which have soil placed on them). Since this is based on availability, we are not including that task and costs in the reclamation plan and estimates. (If C&J Gravel Products is unable to do the reclamation and the financial warranty is forfeited so that a third-party can do the work, those plants would not be available for use.)

9. Exhibit L - Reclamation Costs

a. Please note that changes to the mining and reclamation plans as required by this or any other subsequent adequacy reviews may impact the estimate provided in Exhibit L. When necessary please update Exhibit L to reflect the changes made to other Exhibits.

We understand, and have done so. The BLM review did trigger changes, and the opportunity has been used to verify and improve estimates of areas and volumes based on recent mapping (using drones), and based on conservative assumptions used. BLM also asked us to provide the basis for some of the costs, which were taken from recent DRMS estimates. We have suggested that they contact the Division directly to obtain that data and its basis, since at least some of that is (as we understand) proprietary in nature.

b. The summary paragraph at the end of Exhibit L states that the total reclamation costs for all affected lands totals \$246,299.00. (As calculated from the actual numbers provided.) This is contradictory to the tables provided in this exhibit, according to the tables provided the total amount to reclaim should be \$254,602.00. Please clarify the total estimate to reclaim all affected lands, including a breakdown of the cost to reclaim lands administered by the BLM and private lands located within the permit area.

This is a math error, as the wrong value was used for the Private Lands. All the reclamation amounts have been recalculated. We continue to provide a breakdown between Public Lands and Private Fee Lands.

10. Exhibit S – Permanent Man-made Structures

a. While the permanent Man-made Structures are addressed in other Amendments as well as the BLM EA, please provide a list of all permanent structures within 200 feet of the affected land boundaries.

None of the existing buildings, including houses, office, shop, storage, or other structures on the Private lands are considered “significant, permanent, man made structures.” This includes roads, gates, fencing, utilities, signage, and all other structures.

Access roads and trails on and off the permit area and inside/outside the affected lands, both current and proposed (the 18.3-acre 2018 Expansion Area), are expected to be rebuilt as needed to handle the heavy traffic and meet changing standards. Many structures (such as the houses near the current entry road) will be demolished or removed over the next two years. All structures on the private fee land belongs to the owner/operator and associated companies and firms and are not considered permanent nor significant. Structures will be demolished or relocated prior to reclamation release and termination of the reclamation permit.

There are no permanent manmade structures on the Public Lands administered by BLM to be affected or which are located within 200 feet of the current affected lands or the additional areas proposed to be added to the affected lands.

To our knowledge, there are no permanent manmade structures located on the Crader Pit or other privately-owned property within 200 feet of Montoya Pit affected lands.

Please submit your response(s) to the above listed issue(s) by **Tuesday, August 07, 2018** in order to allow the Division sufficient time for review. The Division will continue to review your application and will contact you if additional information is needed. Please note that if you should require additional time to respond to this adequacy review an extension request to the response date as well as the decision date will be required.

If you require additional information, or have questions or concerns, please contact me at the Division's Grand Junction Field Office, by phone at (970)-243-6368 or by email at lucas.west@state.co.us.

Submitted by Nathan A. Barton and John Gilleland, 07 August 2018, with:

Enclosure 1: the response to BLM comments.

Enclosure 2: the entire package of Exhibits, including revised versions of Exhibits A, B, C, D, E, F, G, H, J, L, M, and S. (There were no changes to I, K, N, O, P, Q, and R, except for headers and footers (and page numbers). The Affidavit of Publication (submitted separately) is now in Attachment 3. Please note that the maps of Exhibits D and E are now in a Map Portfolio (Attachment 4) at the end of the document.

We will provide a copy of this entire set of exhibits to be available at the La Plata County Clerk and Recorder, and to BLM (Mary Helen Johnson, Tres Rios Office).

Prepared by Nathan A. Barton, 07 August 2018.

From: C&J Gravel Products, Inc.

Date: 07 AUG 2018

Memorandum for Ms. Helen Mary Johnson, Bureau of Land Management Tres Rios Office
Subject: Response to Comments on Montoya Pit Reclamation Plan, received 28 May 2018, BLM COC 64651, as provided to C&J Gravel on 6 July 2018.

Dear Ms. Johnson,
Thank you for meeting with us on Monday the 16th.

Please find below, **in red**, our responses to the letter with the BLM's comments. The BLM changes are merged, in the revised Application and Exhibits, with responses to the DRMS comments and requirements.

What is identified as a "Reclamation Plan" above is actually the Amendment Application, including Exhibits, submitted to Colorado DRMS. This Application Package does include two exhibits specifically identified as E – Reclamation Plan and F – Reclamation Plan Map.

All design features, that C&J has committed to, were described in the environmental analysis prepared by the BLM (Section 2.1.5). Those The mine reclamation plan should be updated to properly reflect these.

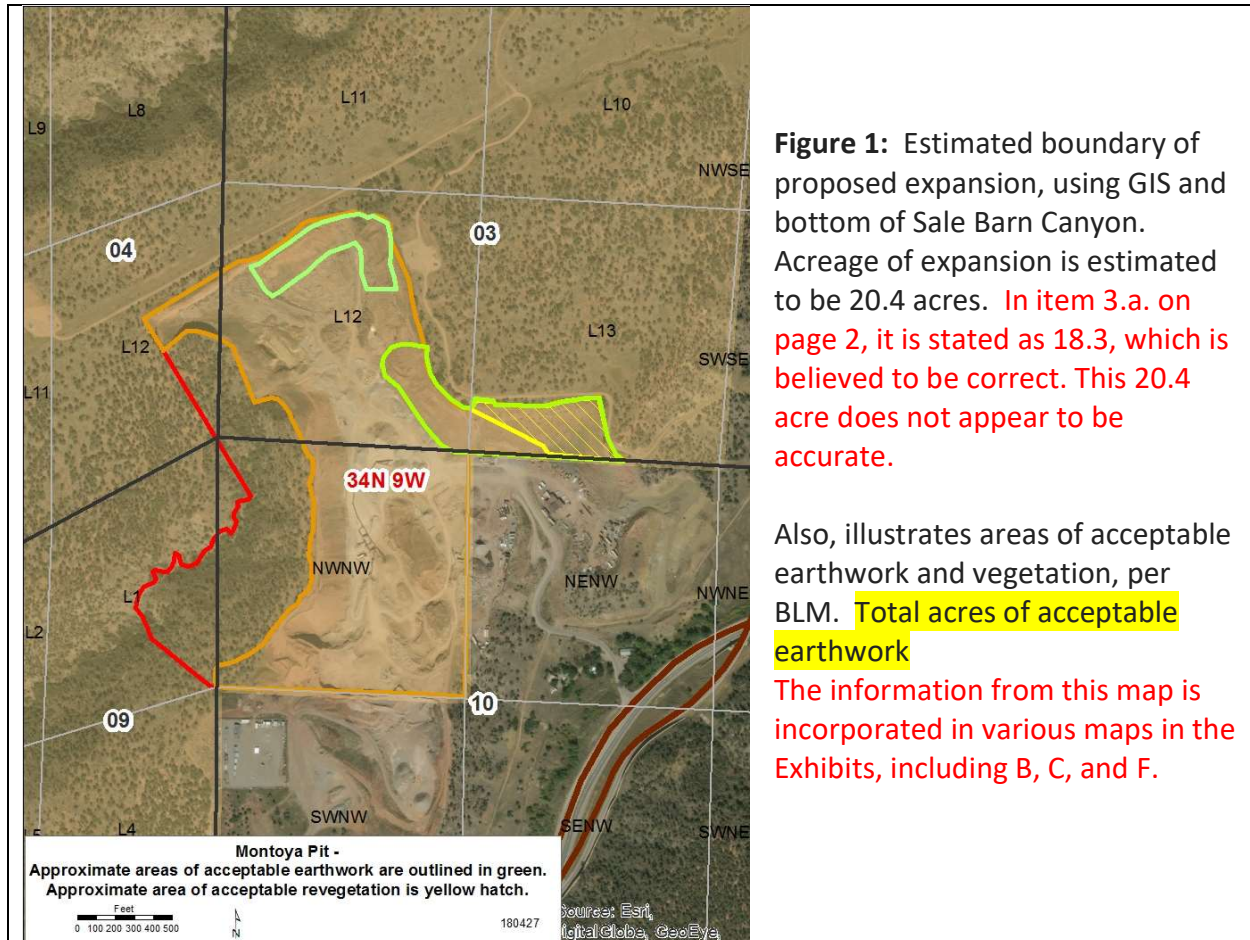
Please keep in mind that the DRMS Exhibits apply to ALL affected lands within the permit boundary and not just to the 18.3-acre 2018 Expansion Area. Thus, many exhibits do refer to features or situations not found in either the 18.3-acre or 44.7-acre area used for the 2018 BLM Environmental Assessment.

We believe that all the design features from the BLM 2018 EA and the Record of Decision are included in both the Mining Plan and Reclamation Plan, and cited as needed in the other Exhibits.

1. Application Packet: (Application Form)

- a. #5.1 C&J produced ~270,000 tons in 2012, ~460,000 tons in 2016. It is likely that C&J's production will continue to increase as the economy of the region improves and expands. **NO CHANGE made: the item in 5.1 is the estimated tonnage of INCIDENTAL MATERIALS and not the total tonnage of sand and gravel produced.**
- b. #9. The legal description of the portion on BLM is as follows (see Figure 1):
SOME CHANGE made: The information provided in 9 is the approximate CENTER of the permit area, and not a legal description. The center would include both the BLM and private fee land portions of the permit area.
New Mexico Principal Meridian
T. 34 N., R. 9 W., North of the Ute Line
Section 3, Lot 12;
Section 4, Lots 11 and 12;
Section 9, Lots 1 and 2;
Section 10, NW/NW. **(This description is not completely accurate.)**

The permit boundary (as established during the last DRMS Amendment and approved by BLM at that time) remains unchanged, and includes both private fee lands and BLM-managed lands. A metes and bounds legal description of the 18.3-acre 2018 Expansion Area is now included in Exhibit A together with a legal description of the permit area.



- c. #12. Post-mining land use for lands on BLM will be wildlife habitat and recreational use. **NO CHANGE made:** This form must address ALL lands within the permit boundary. The “Primary” use is of the private fee land which was the original permitted area in 1980. There is already a note immediately below stating that portions will be used for recreation and wildlife habitat. This is emphasized again and discussed in more detail in Exhibit E (Reclamation).
- d. #16. There should be some specifics, such as a change in the storm water plan and that a trail will be incorporated into a part of reclamation. **NO CHANGE made:** The specifics are provided in the Exhibits, which cover all appropriate changes. The storm water management plan is referenced in the amendment application, and is not a DRMS jurisdictional matter, so would not be addressed in this very brief

summary any more than CDOT traffic access, air permits, or registration/permitting for MSHA, OSHA, or other agencies. Storm water is addressed with other water use in the appropriate exhibits, per DRMS guidance.

The trail is a contractual obligation of C&J to the BLM and is not a part of the STATE (DRMS) reclamation requirement.

2. Exhibit B

- a. Figure B-2; The map misrepresents the area that BLM intends to authorize for development at this time. The area should only include that as represented in Figure 1, above. In the future, the BLM will consider whether to authorize additional development in this area through a competitive process, depending on conditions at that time. **NO CHANGE made: There is no intent to misrepresent anything. This map is the same map provided for the last permit amendment (AM-05) in 2008-11). This map shows and is labeled to show the 112c PERMIT BOUNDARY and not the status of areas within the permit boundary, for which C&J has a right to enter or which are affected or proposed affected area. The permit boundary established in AM-05 was approved by BLM, and it is clearly stated in multiple locations and on various maps that only some areas inside the permit boundary are to be affected and for which C&J has a right-to-enter.**

3. Exhibit C

- a. All maps in Exhibit C should correctly reflect the 18.3 acre acre for this expansion. **NO CHANGE made. This value does not match the 20.4 acres stated in Figure 1. We believe this is the correct value.**
All the maps in Exhibit C show the same “Expansion Area” as shown in Figure 2.1 (page 14) of the Final Environmental Assessment, dated February 2018. To clarify the situation, these maps will be modified to ALSO show the 18.3 acres of the 2018 contract, as part of the 44.7-acres addressed in the EA.
- b. Exhibit C-3; The re-route of the Sale Barn Trail is to be constructed before the existing trail is removed. **The statement below map C-3 has been modified to show this.**

Orange: current affected land including access road. Green: proposed (BLM) expansion of area to be affected. Purple line is proposed skills trail to be built after reclamation. Yellow trail is proposed relocation of trails for access ~~after~~ **before** trails in green area are removed.

- c. Exhibit C-5; Note, C&J Gravel may apply to the BLM for an extension of an additional year. **We have added this note.**

Montoya Pit 2018 expansion area (18.3 acres) using aerial photo of 27 July 2017. Arrow shows general direction of mining from southeast corner north. This map shows only the initial 5-year period of the BLM sales contract (which may be extended by one year, and which limits production to 3 million tons). Note: soil stockpile as shown in photo was approximately 77,000 CY and is now (February 2018) reduced to approximately 27,000 CY.

4. Exhibit D

a. Conditions:

- i. The boundary description is not accurate. The boundary should describe the area where operations will be active, thus the eastern boundary should be the east highwall of the existing pit. The northern boundary is south of the gas pad access road. The northern part of the western boundary will extend to the north of Sale Barn Canyon. As drawn in Map C-5, the southern boundary does not extend across the width of Sale Barn Canyon.

Entire section has been rewritten and much removed. As stated in the task, the description here was only of the 18.3 acres to be included in the current contract as shown on the various maps, which is now stated. As discussed above, the permit boundary, as approved by BLM and DMRS for the past several amendments, is different than the affected land boundary. What you describe above is the boundary of the affected land for the life of the project, on BLM land, and not just the 18.3-acre 2018 Expansion area. Since extraction operations have all but ceased in the current (2018) affected areas, this concentrates on the 18.3-acre Expansion area. However, related activities in other portions of the affected land under the DRMS reclamation permit are also discussed.

- ii. Provide location and design information to show how storm water prevention will be adequate to meet Colorado requirements.

CHANGE made. There is no way to prevent storm water. We have added information in Standards and Performance measures specifically calling out storm water management.

Storm water must be dealt with, by detention (not retention) and evaporation/infiltration, in accordance with Colorado Water Law (which does not allow retaining water for more than 72 hours). This information is already provided or referenced in Exhibit G Water and Exhibit M Other Permits.

Location and design information are included in this surface/storm water management plan (SWMP) which is a separate document and referred to but not incorporated into the DRMS application and permit amendment. (A three-page summary of the SWMP was prepared in February 2018, and an additional copy of that (revised to be current) can be furnished to BLM if desired.)

It is necessary (as required by the permit) to modify the SWMP after events which indicate more controls are needed or controls need to be modified. If the SWMP were incorporated into the Amendment Application Exhibits, and had to be modified due to issuance of a new general permit by CDPHE, or to address needed changes due to problems with storm water, it would require that the DRMS permit be either amended or changed through a technical

revision. (The next general permit is expected to be issued before the end of the BLM sales contract period.)

- iii. Describe what steps will be taken to ensure that facilities such as an asphalt plant, will be taken to prevent contamination to the surrounding resources. Additional information has been added in Exhibit M. That information (usually in the form of various environmental protective plans, such as spill response, dust and emissions control etc.) varies significantly from plant to plant, and cannot be adequately addressed in this exhibit without greatly restricting the types of plants than can be hosted on-site, and greatly increasing the length of the exhibit(s). However, that is addressed in the permits issued by the state and county for air emissions, water discharges, storage of petroleum products, and other related permits, for each individual plant while it is located on this site. We have added notes in Standards and Performance Measures specifically calling out operating of plants, as well as addressing this in Exhibit M.

In general, asphalt, ready-mix, specialized crushing and screening, washing, and other plants or facilities do not contaminate surrounding resources, if they are operated in accordance with air, water, and other state or federal regulations and permits. If the environmental protection plans were incorporated into the Amendment Application Exhibits, and had to be modified due to specific permit conditions for the various plants, or to address needed changes due to problems and site/time-specific conditions, it would require that the DRMS permit be either amended or changed through a technical revision. The lead time on such changes to the DRMS permit might prevent such plants from even operating, due to construction project time limits.

- iv. Describe whether any solid wastes or hazardous materials will be present and how they will be handled as part of. Describe how BLM will be informed in the case of any spills.

Please see Exhibit M. As stated above, emergency response plans and waste/material handling plans are not included in DRMS application exhibits, except in very general terms, as separate plans are required by various agencies which address these materials. We have added notes in Standards and Performance Measures specifically calling out solid wastes and hazardous materials, and have provided additional details in Exhibit M.

At various locations in the exhibits information is provided on the handling and disposal of solid wastes. Separate plans as required by MSHA also address handling of these materials. Exhibit M specifically states procedures for notification of BLM in case of any releases. As with the above two items, incorporating such plans and procedures into the DRMS exhibits would require the permit be amended or changed (by a technical revision), with significant administrative and other restrictions.

There is no plan to store hazardous materials or solid wastes, including municipal solid waste (MSW), universal wastes, or hazardous wastes on BLM-managed land: such materials will be stored on the private land in the shop and support area, in accordance with all applicable regulations and good engineering practice.

As stated previously, hazardous materials such as POL, solvents, and water priority chemicals will be stored in stationary containers only on the private lands. However, such items may be contained in vehicles and equipment as needed for that equipment to operate. All required procedures and methods, including best practices, will be used to prevent release and to mitigate all side effects. Such materials have been stored and used at the Montoya Pit since 1980.

- b. Assumptions: The contract would be for 3 million tons. BLM would not limit the amount of tonnage that may be removed in any one year. Truck traffic would be limited, per CDOT's requirements. **CHANGE MADE. This information has been added at various places in the exhibits, including Assumptions. Traffic information is provided in Exhibit M.**
- c. Performance Measures;
 - i. 2.3; Allow for the possibility of a 1-year extension. **CHANGE MADE. This is already stated in assumptions in Exhibits D and E, and has been added in other locations.**
 - ii. 3.a; Include a description of C&J's commitment to construct reroutes before removing the original trail. Also, that any changes in trails will be such as to never end in a dead end at any time. **CHANGE MADE. Language has been modified to state that new trails will be built before old trails are removed. As this is a specific contract requirement and located outside the affected area, DRMS does not (as I understand it) have any authority to regulate or enforce that contract provision. C&J has or will commit by contract to these requests.**
 - iii. 3.d; Shrubs and small trees, that may contribute to wildlife habitat, will be transplanted from areas that are to be stripped to areas where earthwork is considered to be acceptable. **CHANGE MADE. This has been added.**
 - iv. 3.e; Overburden and topsoil is to be revegetated with a temporary mix of plants to minimize dust. **CHANGE MADE. This is already a requirement for the CDPHE-APCD air quality permit for the operation. Item 3.h has been added to clarify this.**
 - v. 3.f; BLM will require a map and cross-section for evaluation. **Those items will be provided in advance prior to construction. Maps are already provided in**

Exhibit F, together with some limited cross-sections to show requirements for backfill and final exterior grades/profiles.

- vi. 4.d; Application, #15 describes washing materials for ready-mix concrete and asphaltic cement concrete. It does not describe installation of hot-mix asphalt or ready-mix plants on-site. **NO CHANGE MADE to form. This is generally not discussed on the application form itself, but in the attachments.**

It is assumed that such facilities will NOT be “installed” but will be portable plants operating temporarily on-site. Details of their erection, operation, and removal are addressed at the time that planning and approval for their temporary operations on the site, in accordance with permits and standard operating procedure. It is not possible to predict up to six years out where, what kind, and what size plants (and associated stockpiles, traffic lanes, etc.) will be on-site. However, additional information has been added to better describe what may be done.

C&J has hosted numerous portable hot-mix asphalt, ready-mixed concrete, and other plants on the site, generally but not always on the private lands within the permit boundary, for varying periods of time. These have all varied in configuration, equipment, production capability, storage capacity and other features. All had permits for their operations and complied with those permits.

- vii. 4.i; I am not clear as to what is being said here. What will slopes be on working faces to west and north of current proposal (to bottom of Sale Barn Canyon)?

Please refer to Exhibit E (Reclamation Plan). The current highwalls to the north of the 18.3 acre expansion area will be reduced during mining to their permanent, post-mining and reclamation planned contours: the slopes at the bottom of Sale Barn Canyon are expected to be much flatter than 3:1 due to the slope of the shale floor of the deposit being mined.

How will the difference in elevation on the south, between BLM and County lands, be handled?

As already addressed and approved in previous amendments and other documents: both sides will be excavated and reclaimed to the pit floor, and a relatively flat grade, similar to other areas in both pits. Again, this will be at least 2:1 or flatter, probably flatter than 3:1, with the north facing slope presumably (and initially) on BLM-managed lands, to minimize changes to storm water management.

Where will storm water facilities be located?

CHANGE MADE. Please see attachments to Exhibit M. Storm water controls

(measures) are shown on the SWMP and various maps. However, the exact location will change as mining and reclamation proceeds, and to comply with any changes in regulations and permit conditions.

What does highwall to the east have to do with the expansion to the west?

The highwall discussed here is on the east side of the expansion area: the existing western highwall of the previously mined area. As stated above, it will be reduced during mining of the 18.3-acre Expansion area.

The highwall on the east edge of the total (current) affected area is for the most part already reduced, although BLM has identified an area of approximately 500 feet in length, currently reduced to 2:1, which may be required by BLM to be further flattened to 3:1 in order to adequately establish vegetation. Material for that flattening would either come from off-site, existing stockpiles, or the 18.3 acre Expansion area (overburden).

- viii. 4.k; How will asphaltic cement concrete and Portland cement concrete plants be designed to meet CO design-requirements and standards for soils, water, and air? In accordance with federal and state law, regulations, and permits. To our knowledge, there are no special requirements established as yet for emissions of CO (or CO₂, if that is what is meant). These plants are manufactured to meet federal and state regulatory requirements and standards, and erected (installed) at their operating locations. They are also tested by state environmental agencies to determine that they are in compliance. Permit conditions sometimes also require additional testing by the operators. It is assumed that all such facilities are temporary (portable) in nature and cannot be moved to and set up on this site unless they already have required Colorado permits and are in compliance with those.
- ix. 5; What steps will be taken to ensure that materials are inert and that no rebar is included in the fill material? What steps will be taken to prevent potential settling or slope failure?

Customers are provided with written information on requirements, which are based on federal and state law. There is, to our knowledge, no prohibition on rebar in clean, inert material. However, that will be verified and the information provided to you. Rebar is generally considered to be an inert material and is accepted at federally and state permitted landfills as such, either for disposal or recycling.

Settling and slope failure are the result of improper placement and compaction, and poor drainage management. Bad practices such as these can lead to erosion on the surface and erosion within the body of the placed materials, especially if there are large voids. Slope failure can also be caused by lack of plant and other materials to stabilize the slopes long-term. State and other regulations are intended to ensure that good engineering practice is used in placing and compacting all backfill materials, properly placing soil, and correctly vegetating final slopes and grades to protect against wind and

water erosion. These are enforced by internal and external inspections and assessments.

d. Volume and Other Data;

- i. 3; Provide detailed information that supports these estimates.

CHANGE MADE. See Exhibit L for that information, used to provide cost estimates. Some of the data used for calculations in Exhibit L is found in drawings in Exhibit E (Reclamation). Based on discussions on 16 July 2018 and comments in this letter, this has been reorganized, updated, and clarified. That information will be verified by DRMS and is, therefore, subject to change at this time. DRMS has the final say on cost data and cost estimates. Volumes are obtained by use of surveying techniques (including use of unmanned aerial vehicle photography), and by test drilling and excavation. Since the exact configuration of the sand and gravel deposit, its quality, and the exact nature of the shale basement is unknown, these are of necessity estimates based on good engineering judgment.

- ii. 4; BLM would issue a contract for up to 20 acres. In the future, the BLM may decide to open the remaining lands to competitive bid, depending on conditions. This information was based on the 44.7 acres included in the 2018 EA. The expansion area currently is 18.3 acres. This has been added to the discussion in several places.

e. Previous Mining Plan

- i. #3. Show how water requirement to control dust will be adequate in unusually dry conditions. If needed to comply with CDPHE requirements, how will dust from stockpiles be controlled?

Please note that as discussed in more detail below, this “previous mining plan” is provided to give information and demonstrate continuity of operations from what has been successful in the past.

CDPHE permits for fugitive emissions (as from stockpiles and loading) requires that one of several methods be used to control dust, both on-site and outside the site boundaries. These include using water spray (when there is less than 1/10 inch of precipitation on a working day), stockpiling material which is wet (2% moisture), using crusting and other dust control agents (such as magnesium chloride brine, lignin sulfate or polyacrylate polymer. Other techniques may be used, such as loading out from the leeward side of stockpiles, screening on conveyors and drop points, and use of berms and bunkers. The exact methods are left to the operator based on demonstrated compliance (measured by observation according to EPA standards). Since most of Colorado is (by national norms) “unusually dry” especially during summer/construction season, statewide standards make this assumption. More detail on this subject is provided in Exhibit M.

- ii. #4. (of the Previous Mining Plan page)
 - 1. This should agree with the mine plan in Exhibit D. The mine plan indicates stripping will be limited to 3± acres at a time.
This “Previous” section is part of Exhibit D, but information on previous practice is included to compare to previous amendments. Those older amendments assumed mining in 5-acre parcels. All estimates of areas to be mined in a single year are of course, just that: estimates and may vary based on depth of material, depth of overburden, demand, and quality. In addition, based on terrain and these factors, areas already stripped a previous year may be mined (construction material extracted) in a different year.
 - 2. Total time that BLM will authorize at time is 5 years, plus may consider a 1-year extension, if requested.
That is stated elsewhere. This is information on previous practice is included to compare to previous amendments.
 - 3. Discuss C&J’s commitment to transplant small shrubs and small trees from areas to be stripped to reclaimed areas.
Please see previous responses and Exhibit E. Additional information has been added in various locations to ensure that this is not overlooked.
 - 4. What steps will be taken to conduct concurrent reclamation along slopes and elsewhere in the pit?
Please see previous responses and Exhibit E.

5. Exhibit E – Reclamation Plan

- a. Conditions
 - i. #1. BLM has determined that approximately 4.3 acres (immediately east of the office) meets both earthwork and vegetation standards for reclamation. The remaining pit walls do not meet either 3:1 slopes, or a stable slope with vegetation that is determined to be successful.
Thank you for providing that information here and in the map at Figure 1. Please note that, as stated, neither BLM nor DRMS has been requested by C&J to release any reclaimed area. Therefore, those conditions are subject to verification, review, and approval at the appropriate time by BLM (and DRMS). This Exhibit does not constitute a release request. The target for slopes is 3:1 but past applications and this one indicate that the state minimum of 2:1 will be met in some areas, and vegetation must be established successfully on any slope (other than engineered vertical walls) to be eligible for release. Other portions of the Montoya Pit with 2:1 slopes have been successfully reclaimed and revegetated, as based on DRMS and BLM inspections.

- ii. #2. Remove any discussion of oil and gas facilities as there none within the proposed contract boundary.
NO CHANGE made. Although there are not any such facilities in the proposed contract boundary, such do exist within the permit boundary and within or nearby affected areas (including private fee land).
 - iii. #4. The high walls in the N and NW sides of the existing pit, and in common with the Crader Pit to the south, have not been reduced to an acceptable level. **This has been clarified. Maps in Exhibits C and F indicate the current status of all highwalls, as well as anticipated status of future working faces.**
 - iv. #5.
 - 1. What is significance of 27.7 acres?
It is one of the pieces of data used to calculate reclamation requirements and costs. It includes previously affected land (both BLM and private). It is measured from surveying, aerial photography, and maps.
 - 2. Period could extend from 2018 to 2024, if an extension is requested by C&J and authorized by the BLM.
Clarified, as in other locations.
- b. Standards; Reclamation should meet standards as described in the BLM EA (DOI-BLM-CO-S010-2017-0019-EA) and related Decision Record.
Added. We used the standard CEQ term of art “Record of Decision” or ROD. More detail has been provided in Exhibits D and E, and elsewhere.
- c. Assumptions
 - i. 5th bullet; BLM has provided a new recommendation for seed mix (4.27.18) (see Attachment 1). C&J may want to consider this as it provides options that may be less expensive.
Thank you for that clarification. This does refer to the new recommendations, and this bullet has been clarified to include that.
 - ii. 7th bullet; C&J is currently selling material from the stockpile described. Provide a map indicating location of stockpiles of available soil and overburden. Include dimensions and estimated volumes.
Yes, material from some of the stockpiles has been sold, and other used for on-going reclamation. Any map would be at best a snapshot in time of a constantly changing situation. C&J can provide the map with dimensions and volumes, with the understanding it may change daily. That would not be part of the DRMS application and exhibits, but a separate document strictly for the BLM. Therefore, it is not being included in the revisions, but is noted for operational use.
 - iii. 9th bullet; Is this referring to maximum volume required for final reclamation? Show how C&J will ensure that there is enough materials from overburden and imported material to ensure this will occur. What is the

maximum length of pit walls at the working face or elsewhere that this will not be applicable?

That information is included in Exhibit L for use in calculating reclamation costs for bonding (based on information in Exhibit E).

I do not understand the second question. C&J tracks production and stockpile volumes in order to match material available on site to material necessary to reclaim to standard at any time. Since only a few acres at a time of the expansion area will be mined, and the west edge of the expansion area is not to have a highwall, but will instead be excavated to grade, the total length of highwall exposed at any point is expected to decrease fairly continuously during the five or six year period. We have attempted to clarify that in several Exhibits.

1. The reclamation cost estimate should be such that funds are available to purchase any fill materials that may be required to supplement the backfilling of any pit walls.

As stated above, one of the objectives of the reclamation plan is to maintain a continuous situation during mining in which there is adequate material available on-site to meet all requirements for backfill. No outside materials should be required to be purchased. In addition, C&J does not buy clean inert material from off-site, which it accepts from customers (as a value-added benefit to the customers). A third-party reclamation contractor would also be reasonably assumed to not have to pay for such materials, based on current and anticipated economic activity in La Plata County for the next decade.

- iv. 11th bullet; All stockpiles and plants will be removed from BLM-managed lands at the end of the contract. Facilities and equipment needed in order to complete final reclamation will remain for a reasonable time, until reclamation activities are completed.

That is understood and stated in several places. Is this referring to bullet #10 or #11? DMRS is not concerned with where equipment is (on BLM-managed or private land), just by its presence anywhere on the affected lands. They require that it is relocated as the first stages of reclamation (except for that necessary for reclamation). The requirement to remove stockpile(s) and plant(s) is a contractual obligation and not under DRMS jurisdiction.

- v. 12th bullet; BLM will maintain authorized trails on federal lands. Any roads on federal lands should be reclaimed.

This was stated in this manner because it is assumed that access is needed to build and maintain the bicycle trails skill area to be constructed after reclamation is done. Ensuring that DRMS does not require reclamation of roads which then have to be reestablished by BLM (or volunteers) reduces costs after mining ceases. Also note that this is conditional on BLM agreement and approval of leaving roads, and does not state that ALL roads are to be left.

- vi. 14th bullet Describe how will any facilities, such as storm-water control features, be designed so as to not require any maintenance. If maintenance is likely to be required at some time in the future, describe how maintenance will be funded.

There is not, to my knowledge, any kind of storm water controls, either active or passive, which can operate indefinitely without some maintenance. Maintenance of permanent storm water controls is the responsibility of the landowner, subject to any contractual obligations between the operator and the landowner, of course. It is therefore not in the jurisdiction of DRMS, as we understand it. It is important to recognize that the requirements for final stabilization of disturbed areas under storm water regulations and permit conditions are somewhat different from reclamation standards of DRMS, and that all agency's standards must be met.

- d. Performance Measures (Please note that the original automatic numbering was in error.)

- i. #7; (#1) What would be the maximum extend of highwall that does not meet the 2:1 or flatter surface at any one time?

The maximum extent of highwalls (horizontal and vertical) cannot be quantified with any degree of accuracy since the thickness of the construction material deposit, overburden, and quality is not known. These all are factors in doing such a calculation. However, we have estimated them to the best of our ability. These are shown in Exhibits E and L. Since the exact area to be mined each year is unknown, we cannot state categorically what the maximum extent is. The cost of reclamation is based on reasonable assumptions regarding a conservative situation.

- ii. #8; Include a description of how C&J will identify and seed any stockpiles and areas that will be inactive for at least 2 years, in order to minimize dust and erosion, as committed to the BLM (DOI-BLM-CO-S010-2017-0019-EA, 2018).

We do not anticipate any stockpiles or areas (not in final reclamation) being inactive for two years. Colorado DPHE-APCD and WQCD requires that seeding (or other techniques to stabilize stockpiles and inactive areas against wind and water erosion within 12 months, while also demonstrating prevention of erosion. As stated previously, C&J inspects and measures (using Kespry drones) the sizes of stockpiles on a regular basis, and therefore is able to track the period of time that any given stockpile remains inactive. That said, one management objective is to rotate materials in stockpiles quickly to reduce haul distances and do concurrent reclamation to reduce financial warranty costs.

iii. #10 Seeding;

- iv. 1.a BLM standards are that plants must be natives and of a density that is similar to undisturbed nearby areas of similar conditions. BLM has recently provided C&J a seed mix for their consideration. The mix includes species that have either been observed to be present and/or successfully seeded in the area (Attachment 1).

Thank you for that information. We have tried to clearly state that the reclamation seed mix (and temporary seed mixes for stabilization) can be reviewed and revised annually, as required by BLM. BLM standards (as stated in BLM regulations and the contract) may vary from DRMS standards: C&J assumes that the more stringent requirement be met.

- v. 1.c. Does C&J not intend to leave hydromulch, using their equipment, as an option?

DRMS generally allows hydromulching (or any other technique considered equal or better) to be used at the Operator's discretion. This language is taken from the US NRCS recommendations, which does not specifically include (or exclude) hydromulching. Since hydromulching is generally more expensive than the traditional methods, and is usually not cost-effective on relatively flat areas, and the reclamation cost estimate must include those increased costs, it is usually not included in Exhibit E.

- vi. 2. Instructions for seeding; Is there any intent by C&J to possibly use hydromulch as a form of distributing and protecting seeds?

Please see the response immediately above. C&J will use hydromulching (with DRMS/BLM approval, of course) where it is cost-effective.

- vii. 2. 2nd bullet; Seeding could also be done in the late winter/early spring to take advantage of snow melt and early rains.

Again, this is stated based on US NRCS guidance provided, as required by DRMS.

- e. #11 Weed control; The plan should be amended to reflect C&J's voluntary commitment to BLM to treat for weeds 2ce/year.

That commitment would be covered in the general statement, "in accordance with established ... requirements." That level of detail is not included in this or other exhibits, as the County-approved weed plan is subject to change based on State and County conditions and requirements.

- f. #12 Storm water management;

- i. How will post-mining storm water management be designed to not require any further maintenance, or if so, how this will be funded. Construction may not begin until BLM has approved the plans.

This appears to be a duplicate of item c.vi. above. There is not, to my knowledge, any kind of storm water controls, either active or passive, which can operate indefinitely without some maintenance. Maintenance of permanent storm water controls is the responsibility of the landowner, subject to any contractual obligations between the operator and the

landowner, of course. It is therefore not in the jurisdiction of DRMS, as we understand it. It is important to recognize that the requirements for final stabilization of disturbed areas under storm water regulations and permit conditions are somewhat different from reclamation standards of DRMS.

- g. Need to provide a copy of Figure E-1.

Figure E-1 is the table provided on Page 19. There is no image or graph. This discussion as always refers to the maps in Exhibit F. It probably should have been labeled as Table E-1, and we apologize for the confusion.

6. Exhibit G – Water Information

- a. #3 water wells; This needs to be clarified with regards to any water wells in the area (there are none), and expected disturbance/destruction of such wells. There are 3 gas wells, one of which is located within the pit on private land. The gas wells are outside of the proposed expansion area.

The statement about the three wells is taken from Colorado State Engineer and La Plata County GIS data, which was incomplete (hence the statement about assuming that they are under BLM control). It is very common to have incomplete and inaccurate data, especially on older wells. If evidence of a well is found when clearing, grubbing, and stripping an area to be mined, C&J will cease work and immediately notify the landowner (BLM) then wait for instructions. There are existing water wells on nearby properties, and C&J proposes to drill a well on its own property within the permit boundary. See Exhibits G and M.

- b. #4 – surface runoff. The EA does not analyze this in detail. It acknowledges that the plan will be updated to minimize sedimentation into naturally occurring drainages. C&J must submit a plan for the present area to be mined to the BLM for consideration. They also need to submit a post-mining plan for storm-water management.

We understand and will comply with those requirements. It is not possible at this time to prepare anything more than a general plan for after mining, as the surface of the shale is not fully known and drainage patterns will be dictated by the terrain after mining.

7. Exhibit J – Vegetation Information - This appears to be a general description of the Colorado Plateau. The description of physiographic features, geology, elevation, and vegetation is not site-specific.

As is normally done, this information is taken from published USGS and EPA sources, which specifically identified this as the middle Animas Valley and the uplands on either side of the river, including Grandview Mesa. Elevations, local relief, and vegetation information is site specific for the Montoya pit and verified by on-site reconnaissance. We have added additional site-specific information. Please explain what (if any) additional information you wish to have, which is not already in the EA, and we will provide that separately to the BLM.

8. Exhibit L – Reclamation Costs

- a. Where are the maps that are referred to in the tables?

The map C-1 is located in Exhibit C, as stated in the notes for each table. The Map column indicates the Affected Area as shown in the table and on the map itself, broken out into smaller areas (A1, A2, etc.) based on land status (BLM-managed versus private fee land). This has been clarified both in the text and on the maps and tables.

- b. I need more information in order to determine whether the cost estimate is reasonable. As such, I am asked to take the reported volumes and cost/LCY for granted. I have previously noted that I need data to show how volumes of backfill and stockpiles is determined, and distance between stockpiles and backfill areas. I also need to know how equipment productivity was determined, mob/demob costs, etc. Any # that is reported, need to have additional information to show how that # was derived.

Except for the highwalls, the volumes are calculated using the acreage of the various map areas, and the assumptions as to soil depth and other factors as stated in Exhibit E. Highwall volumes are calculated from the information in the tables (length and height) and using slopes as stated. The various assumptions as far as productivity, mob/demob and other costs are taken from DRMS cost estimates, which are prepared using proprietary software, and which in turn use various published sources (Means Data, Cat Handbook, etc.). You will need to request some of the information you need from DRMS.

DRMS will take the information provided in Exhibit L and other parts of the packet, and enter that data into the software to produce a detailed estimate. Either DRMS or C&J will provide that estimate to BLM when it is available. Volumes were calculated using information from the maps in Exhibits C and F. Estimates are based on conservative engineering judgment: for example, 3:1 final slopes are assumed even though 2:1 slopes are acceptable. Push (haul) distances are averages, again based on estimated distances to borrow sources (either in-bank or stockpile). Please let us know if other information is needed before the DRMS official estimate is finalized.

- c. On the otherhand, thank you for separating #s for tasks on BLM and private lands.
You are welcome.

9. Exhibit M – Other Permits and Licenses

- a. #1; Explain why there is no increase in the permitted area. The current permit area, as shown in Map B-2, was established by the last permit amendment (AM-05) and

included all lands identified for expansion (both the current 18.3 acres and the 44.5 acres identified in the 2018 EA).

- b. #2; The only ponds in the area are the storm water management ponds. BLM has given no direction, and to the best of my knowledge, C&Js does not supply water to these ponds.

In the past, BLM has requested and C&J has agreed to maintaining small ponds for wildlife, and then C&J has provided water for them. I understood this practice had and would continue, to improve wildlife habitat. Some of these ponds may have provided some benefit for storm water control, of course.

In the interests of brevity, we have omitted Attachment 1 from the original BLM review.

Prepared and submitted by Nathan A. Barton, 07 AUG 2018.

For further questions, please contact him by e-mail at WASTELINE.84532@gmail.com or (605)939-0650.

REVISED 07 AUGUST 2018

Exhibits to 112c Permit Amendment Application

M-1980-146 (AM-05)

Filed with Colorado Division of Reclamation, Mining, and Safety

Montoya Pit

27661 Highway 160-E

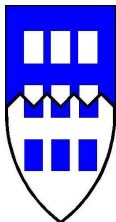
Durango, La Plata County, Colorado

Operated by:



27661 Hwy 160-E, Durango, CO 81301

(970) 385-4112



Prepared by:

WASTELINE, INC.

PO Box 3471, Rapid City, SD 57709-3471

PO Box 88, Cortez, CO 81321-0088

198 North 200 East Unit 1, Moab, UT 84532

Table of Contents

INTRODUCTION	3
EXHIBIT A – Legal Description and Boundaries.....	4
EXHIBIT B – Index Maps.....	6
EXHIBIT C – Pre-mining and Mining Plan Maps	8
EXHIBIT D – Mining Plan.....	10
EXHIBIT E – Reclamation Plan.....	17
EXHIBIT F – Reclamation Plan Maps	23
EXHIBIT G – Water Information.....	24
EXHIBIT H – Wildlife Information	25
EXHIBIT I – Soils Information	32
EXHIBIT J – Vegetation Information	33
EXHIBIT K – Climate.....	34
EXHIBIT L – Reclamation Costs.....	35
EXHIBIT M – Other Permits and Licenses.....	40
EXHIBIT N – Source of Legal Right to Enter	49
EXHIBIT O – Owners of Record	50
EXHIBIT P – Municipalities Within Two Miles.....	52
EXHIBIT Q – Proof of Mailing Notices to BOCC and Conservation District	53
EXHIBIT R – Proof of Filing with County Clerk and Recorder.....	55
EXHIBIT S – Permanent Manmade Structures	56
RULE 1.6.2.(1)(b) ADDENDUM 1 (NOTICE REQUIREMENTS)	57
ATTACHMENT 1. BLM Environmental Assessment and Associated Documents	58
ATTACHMENT 2. Sales Contract.....	59
ATTACHMENT 3. Affidavit of Publication.....	60
ATTACHMENT 4. Map Portfolio	61

INTRODUCTION

This application for amendment (AM-05) to the existing reclamation permit, file number M-1980-146, is submitted to the Colorado Division of Reclamation, Mining, and Safety for the following purposes:

1. To include additional affected areas within the existing permit boundaries as authorized and anticipated to be authorized by the US Bureau of Land Management (BLM), for the period 2018 and beyond, including an initial 5-year lease;
2. To reflect current requirements as established by BLM for mining of sand and gravel on US Government property;
3. To revise certain features of reclamation as currently authorized in the permit, including final reclaimed slopes, post-reclamation land use, and drainage;
4. To bring reclamation and post-reclamation uses of some portions of the property into line with current master-planning and other actions of La Plata County;
5. To identify current conditions and update information within the permit area;
6. To incorporate changes in information and requirements currently required of 112c mining operations; and
7. To correct errors, clarify and consolidate information now contained in a variety of documents pertaining to the permit; including the 2018 BLM environmental assessment

Where suitable, information contained in previous permit applications, technical revisions, and amendments AM-01 through AM-04, is duplicated in these exhibits, for convenience in review and compliance. Some older documents such as lease agreements, purchase contracts, reviews and comments by other agencies, and damage compensation agreements are not duplicated in these exhibits, but are referenced using the “name” and “entry number” of the Laserfiche archive as provided by the Division.

In addition, this application references and incorporates (as Attachment A) the National Environmental Policy Act (NEPA) 2018 Environmental Assessment (2018 EA) and associated documents required by the BLM. This 2018 EA contains much information that would otherwise be duplicated in this application. The 2018 EA covers a total of 44.7 acres (the BLM lease expansion area) of which 18.3 acres is included in the initial five-year contract period.

This revision addresses adequacy requirements made by DRMS in the letter of 06 July 2018, and BLM Tres Rios Office comments in the letter of 11 July 2018.

EXHIBIT A – Legal Description and Boundaries

EXISTING PERMITTED AREA, UNCHANGED UNDER THIS AMENDMENT:

A parcel of land in Sections 3, 4, 9, and 10, Township 34 North, Range 9 West, N.M. (10th) P.M., La Plata County, Colorado, county parcel numbers 566904400062, 566903300005, and 566909100066, being more particularly described as shown on Sheet A-3 (Legal Description), 219.0 acres more or less. Property corners are marked with standard survey markers; corners which might be disturbed by mining activities will also be marked with witness markers and delineators.

All or portions of Government Lot 12 of Section 3, Government Lots 11 and 12 of Section 4, Government Lots 1 and 2 of Section 9, and the NW ¼ of Section 10, all in Tier 34 North Range 09 West, 10th (New Mexico) Principal Meridian, being more particularly described as:

Beginning at the West quarter-corner of Section 10, Tier 34 North Range 10 West, 10th (NM) Principle Meridian,

Thence a distance of 89.138 feet at a bearing of S 89° 8' 17"E (segment# Q)

Thence a distance of 87.72 feet at a bearing of S 87° 43' 12"E (segment# R)

Thence along the ROW of SH-160 (arc of radius 2364.66, SA 32.90 and EA of 50.47) for a distance of 725.06 feet (segment# A)

Thence a distance of 180.446 feet at a bearing of N 0° 26' 46"W (segment# B)

Thence a distance of 268.5 feet at a bearing of N 88° 30' 0"W (segment# C)

Thence a distance of 177.728 feet at a bearing of N 2° 16' 19"E (segment# D)

Thence a distance of 267.183 feet at a bearing of N 87° 10' 59"W (segment# E)

Thence a distance of 269.231 feet at a bearing of N 89° 13' 52"W (segment# F)

Thence a distance of 178.814 feet at a bearing of N 1° 11' 10"E (segment# G)

Thence a distance of 268.814 feet at a bearing of N 88° 48' 50"W (segment# H)

Thence a distance of 178.814 feet at a bearing of N 1° 11' 10"E (segment# I)

Thence a distance of 268.66 feet at a bearing of N 88° 39' 36"W (segment# J)

Thence a distance of 292.07 feet at a bearing of S 67° 55' 48"W (segment# K)

Thence a distance of 2.917 feet at a bearing of S 2° 55' 1"E (segment# L)

Thence a distance of 356.44 feet at a bearing of S 3° 33' 36"W (segment# M)

Thence a distance of 120.033 feet at a bearing of N 59° 58' 1"E (segment# N)

Thence a distance of 359.347 feet at a bearing of S 0° 39' 11"W (segment# O)

Thence a distance of 108.783 feet at a bearing of N 71° 13' 1"E (segment# P),

To the point of beginning, 219.0 acres more or less.

LEGAL DESCRIPTION OF 18.3-acre Expansion Area (2018 Expansion)

Beginning at the WNW quarter-quarter-corner of Section 10, T34N, R09W,

Thence a distance of 493.76 feet, at a bearing of N 74° 36' 1"W (Segment #1),

Thence a distance of 97.95 feet, at a bearing of N 18° 26' 6"E (Segment #2),

Thence a distance of 98.37 feet, at a bearing of N 2° 30' 24"E (Segment #3),

Thence a distance of 68.58 feet, at a bearing of N 17° 31' 14"W (Segment #4),

Thence a distance of 101.74 feet, at a bearing of N 18° 36' 40"E (Segment #5),

Thence a distance of 71.04 feet, at a bearing of N 47° 51' 44"E (Segment #6),

Thence a distance of 42.05 feet, at a bearing of S 72° 38' 45"E (Segment #7),

Thence a distance of 120.37 feet, at a bearing of N 71° 25' 6"E (Segment #8),

Thence a distance of 87.28 feet, at a bearing of N 47° 38' 33"E (Segment #9),

Thence a distance of 79.69 feet, at a bearing of N 51° 45' 58"E (Segment #10),

Thence a distance of 53.15 feet, at a bearing of N 34° 49' 28"W (Segment #11),

Thence a distance of 151.80 feet, at a bearing of N 1° 25' 56"E (Segment #12),

Thence a distance of 187.75 feet, at a bearing of N 29° 40' 23"E (Segment #13),
Thence a distance of 261.42 feet, at a bearing of N 96° 14' 54"W (Segment #14),
Thence a distance of 659.42 feet, at a bearing of N 132° 5' 7"W (Segment #15),
Thence a distance of 136.89 feet, at a bearing of N 55° 23' 37"E (Segment #16),
Thence a distance of 161.24 feet, at a bearing of S 84° 38' 39"E (Segment #17),
Thence a distance of 104.74 feet, at a bearing of S 54° 31' 5"E (Segment #18),
Thence a distance of 285.62 feet, at a bearing of S 34° 17' 11"E (Segment #19),
Thence a distance of 138.36 feet, at a bearing of N 81° 24' 59"E (Segment #20),
Thence a distance of 193.48 feet, at a bearing of S 44° 38' 23"E (Segment #21),
Thence a distance of 235.53 feet, at a bearing of S 4° 11' 24"E (Segment #22),
Thence a distance of 445.82 feet, at a bearing of S 1° 19' 37"E (Segment #23),
Thence a distance of 227.83 feet, at a bearing of S 1° 1' 5"W (Segment #24),
Thence a distance of 145.32 feet, at a bearing of S 39° 0' 11"W (Segment #25),
Thence a distance of 63.89 feet, at a bearing of S 25° 29' 28"W (Segment #26),
Thence a distance of 213.23 feet, at a bearing of S 27° 53' 8"W (Segment #27),
Thence a distance of 197.09 feet, at a bearing of S 20° 6' 25"W (Segment #28),
To the point of beginning, 18.3 acres plus or minus.

HISTORY OF THE PIT (from DRMS file documents)

Originally permitted as a 110-permit in 1980 (8.0 acres)

Converted to a 112-permit in 1986 and expanded by 6.8 acres to 14.8 acres (15.0 acres according to some documents).

Amendment #01 expanded permit boundary and affected area in 1989 by 5 acres to 19.8 acres.

Amendment #02 expanded permit boundary and affected area in 1990 by 4 acres to 23.8 acres.

Technical Revision #01 in December 2000 revised mining and backfill for reclamation in part of the permit area.

Amendment #03 expanded permit boundary and affected area in 2001 by 40 acres to 63.8 acres (listed in application as 64 acres).

Technical Revision #02 in December 2001 removed a commitment to reclaim 10 acres prior to mining additional acreage and also delineated the next phase of mining within the AM-03 area.

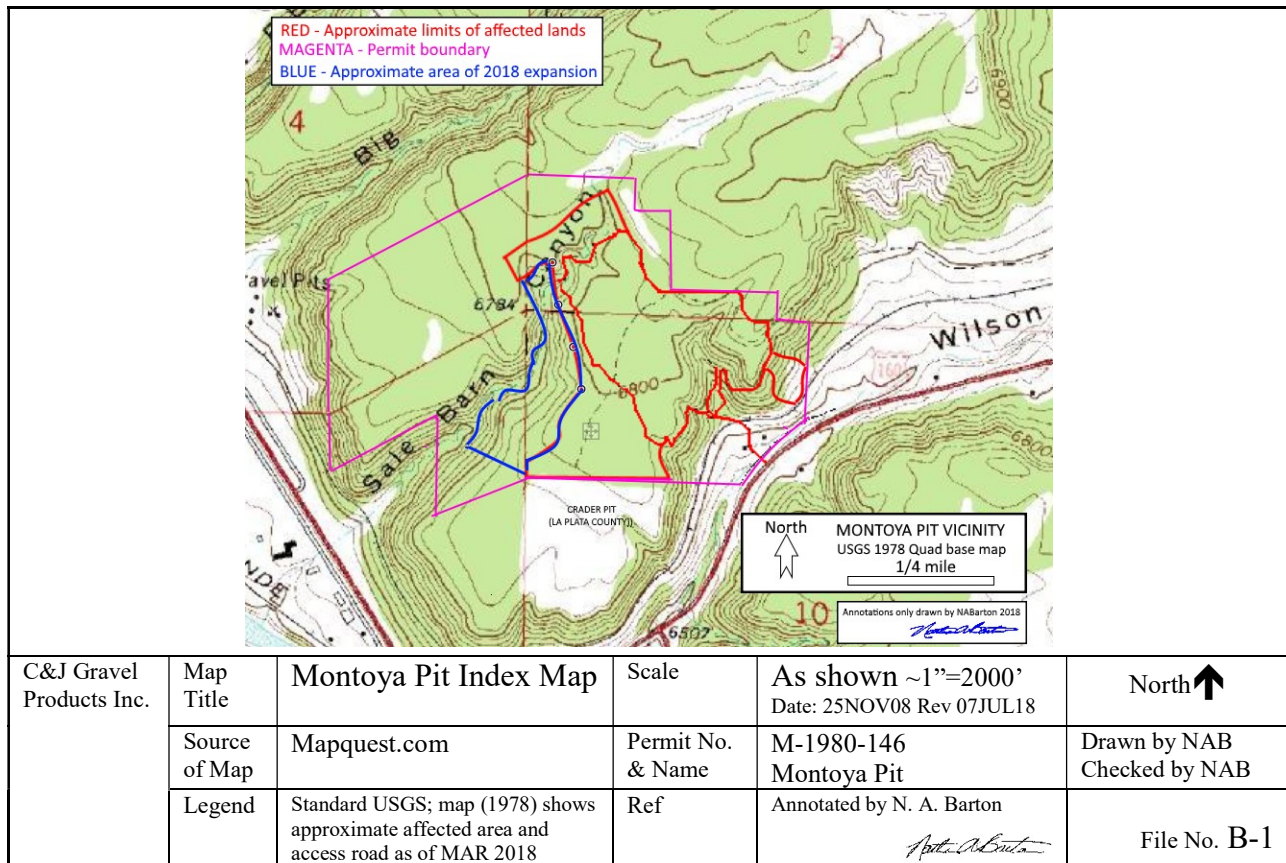
111 Special Permit M-2008-048 was approved in 2008.

Amendment #04 expanded permit boundary and affected area in 2011 to 219.0 acres more or less, including increased affected areas, including the area previously in M-2008-048.

An agreement approved by the Division in 2014 for both Montoya Pit and Crader Pit (M1981-114) to daylight the two operations.

EXHIBIT B – Index Maps

MAP B-1. MONTOYA PIT AREA MAP



CURRENT MAIN ENTRANCE TO MINE SITE (Intersection with US-160E): MP 89

UTM 13 247673E 4123644N (NAD83/WGS84)

37° 13.51'N, 107° 50.64'W (NAD83/WGS84)

POSSIBLE NEW ENTRANCE: UTM 13S 247887E 4123981N (NAD83/WGS84)

(To be located on east edge of permit to be connected to frontage road/interchange for US-160E.)

(Note: CDOT legal issues have placed this new entrance on indefinite hold.)

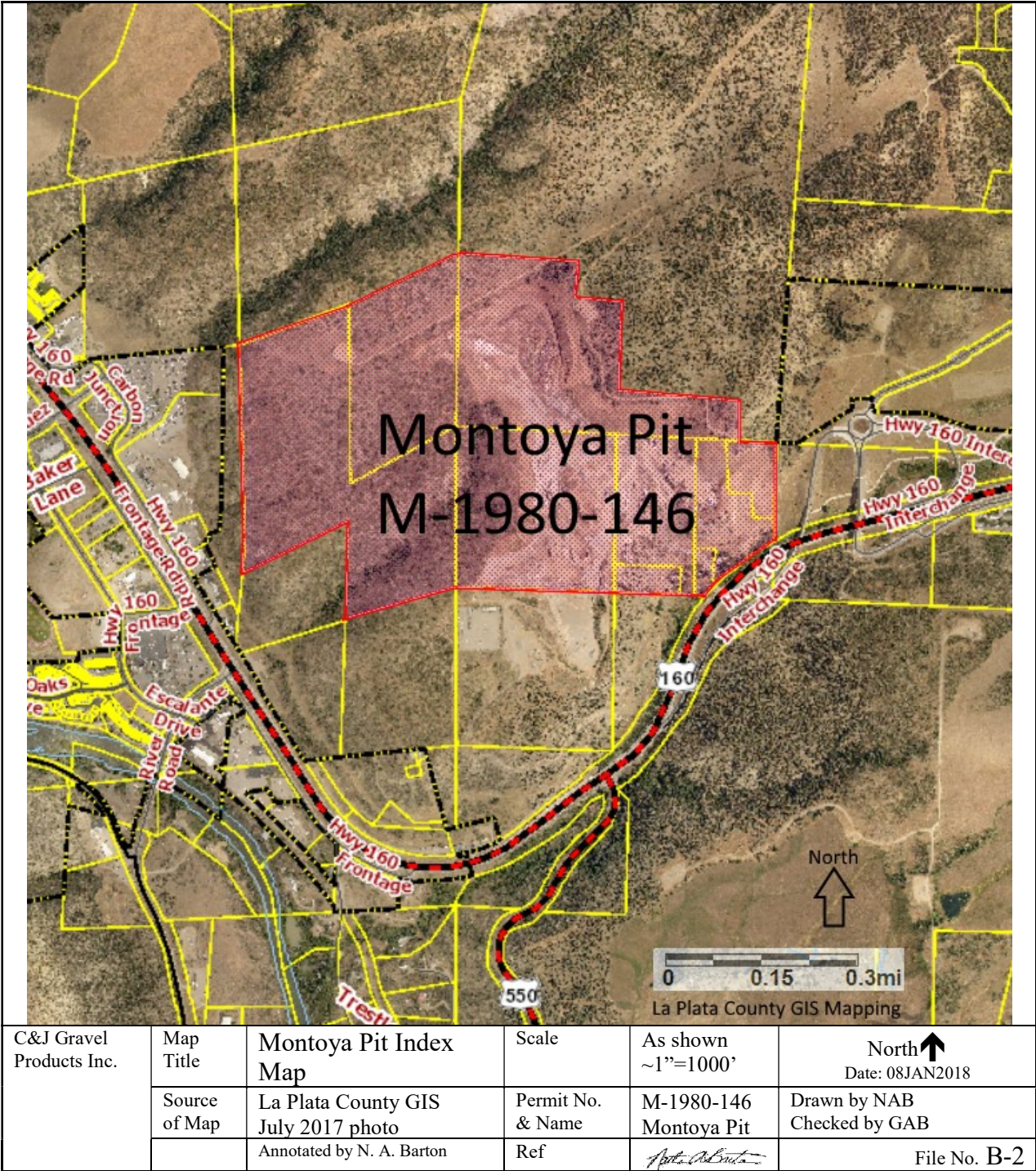
Current Street address: 27661 Highway 160E, Durango.

Located west of Grandview, CO.

Map is circa 1978: some features have changed. Red outline shows disturbed area in 2007 and 2018.

Change in entrance and address is dictated by change in configuration and legal access to SH-160, made by CDOT.

MAP B-2 OPERATION LOCATION MAP: MONTOYA PIT AREA PHOTO




Note: City of Durango Municipal Limits are shown on this map with this symbol: 
Red hatched area is the permit area which in turn contains the area to be affected by mining.

EXHIBIT C – Pre-mining and Mining Plan Maps

The maps are located in a separate portfolio. Maps are in native 8.5x11 format and also available in 11x17 format. These maps attempt to clearly identify conditions and operations as existing in 2018, and are based on the assumption that additional leases of BLM land will be awarded to C & J. The BLM proposed Expansion Area is shown in two parts: the entire 44.7 acres included in the 2018 BLM Environmental Assessment (EA), and the 18.3-acre 2018 Expansion Area as per the sales contract of 2018 between BLM and C&J Gravel.

Sheet C-1: Existing 2018 areas of site showing status and land ownership.

Sheet C-2: Existing 2018 Topography.

Sheet C-3: Concept of mining.

Sheet C-4: Concept of mining with existing topography.

Sheet C-5: General cross-sections of excavation and highwalls.

Sheet C-6: Land ownership

General Notes:

1. BLM (manager of public lands in permit area) has not accepted revegetation in all areas shown as “reclaimed” and no reclamation release or reduction in bond for vegetation has been requested.
2. Sheet C-3 shows sequence of six areas (about three acres each) in the 18.3-acre 2018 Expansion Area authorized by BLM sales contract.
3. Stockpile sizes and shapes vary from those shown on topographic maps as conditions change. Quantities vary; stockpiles include clean, inert material brought from off-site for processing and use on-site.
4. Current affected areas will continue to be reclaimed with portions to be used for plant, stockpile, and access. (Locations will change as operations progress.)
5. Anticipated mining of 18.3-acre 2018 Expansion area to be done in five-six phases. Exact areas to be mined in each phase will depend on quality, quantity, and demand. This is based on an initial 5-year period of the BLM sales contract (which may be extended by one year, and which limits production to 3 million tons).
6. Locations of selected features, including designated areas for temporary plants (ready-mixed concrete and hot-mixed cement) are shown on some maps.
7. Storm water information is located in Exhibit M.

TABLE C-1. SURFACE OWNERS OF RECORD (Refer to Map C-6)

All real property within the current and proposed permit boundaries as shown has three owners: the US Government, Gilleland Enterprises LLC, and Gilleland Family Limited Partnership, both of which are owned by the owners of C&J Gravel Products, LLC. The following is the list of all adjacent and nearby properties:

Map	County Parcel	Brief Description	Owner
A	566904400062	SECT,TWN,RNG:4-34-9 DESC: LOTS 8, 9 & 12, 93.14 Ac	US Government (BLM)
B	566903300005	SECT,TWN,RNG:3-34-9 DESC: S/2 NW/4, SW/4, LOTS 3 & 4? 306.78 Ac	US Government (BLM)
C	566903400018	SECT,TWN,RNG:3-34-9 S/2 N/2 SE/4 40.97 Ac	Moreno, Thomas L & Elizabeth 3016 E 7 th Ave Durango, CO 81301
D	566903400034	SECT,TWN,RNG:3-34-9 DESC: TR IN SW/4SE/4, SE/4SE/4 WITH L&E 41.188 Ac	Crader Properties LLC 28481 Hwy 160 Durango CO 81301
E	566909100066	SECT,TWN,RNG:9-34-9 DESC: E/2 NE/4 & NW4 NE/4 (AKA LOTS 1, 2 & 4) SECT,TWN,RNG:4-34-9 DESC: LOTS 10 & 11 147.87 Ac	US Government (BLM)
F	566910200019	SECT,TWN,RNG:10-34-9 DESC: NW/4 NW/4 40.91 Ac	US Government (BLM)
G	566910200016	SUB: MONTROYA S/D LOT: B 17 Ac formerly owned by: Community of Christ, Jones, Stephen M Trustee, 1001 W Walnut St., Independence, MO 64050, previously Estelle Montoya	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301
H	566910200007	SECT,TWN,RNG:10-34-9 DESC: E/2 NE/4 NW/4 10.9 Ac	Gilleland Family Ltd Partnership, 514 CR 509 Ignacio CO 81137
I	566910200024	10-34-9 NE/4 NW/4 5.01 Ac	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301
J	566910100025	SECT,TWN,RNG:10-34-9 DESC: NW/4 NE/4 17.28 Ac	Colorado Department of Transportation 3803 N Main Ave Durango CO 81301
K	566910200015	SUB: MONTROYA S/D BLK: 0 LOT: A 3.0 Ac, formerly owned by Community of Christ, 1001 W Walnut St., Independence, MO 64050	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301
L	566910200020	SECT,TWN,RNG:10-34-9 TR IN E/2 NE/4 NW/4? 1.33 Ac, formerly owned by Montoya, James Richard, Steevson, Joyce Trustees, 27659 Hwy 160 E Durango, CO 80301	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301
M	566910200010	SECT,TWN,RNG:10-34-9 DESC: NE/4 NW/4 0.79 Ac	Colorado Dept of Transport. 3803 N Main Ave Durango CO 81301
N	566910100008	SECT,TWN,RNG:10-34-9 ALL TH PT NW/4 NE/4 SEC 10 LYG S R/W HWY 14.53 Ac	Joy F Knaggs PO Box 1241 Durango, CO 81302
O	566910200021	SECT,TWN,RNG:10-34-9 SW/4 NW/4 42.5 Ac	La Plata County 1060 2 nd Ave Durango, CO 81301
P	566911200039	SECT,TWN,RNG:10-34-9 DESC: SE/4NE/4, SW/4NE/4, SE/4NW/4, W/2SE/4, E/2SW/4, SW/4SW/4 WITH L&E SECT,TWN,RNG:11-34-9 DESC: NW/4SW/4, S/2NW/4, NE/4SW/4 WITH L&E 585 Ac	Webb, Marie J Ranch LLC & M J Mesa LLC 25146 Lyncastle Lane Farmington Hills, MI 48336

Information from La Plata County Assessors Office, Website: accessed/updated 30APR18. No change since 2009.

Please note that the Durango municipal limits have changed in the area and are correctly shown in Map B-2. This table is also found in Exhibit O. For Site Addresses, see Exhibit O.

EXHIBIT D – Mining Plan

C&J GRAVEL PRODUCTS – MONTOYA PIT – M1980-146 – PERMIT AMENDMENT AM-05 (2018)

TASK	Mine and Reclaim Sale Barn Canyon 2018 18.3-acre Expansion to the Montoya Pit
CONDITIONS	<p>Including that area immediately west of the existing mining operations and the bottom of Sale Barn Canyon, and remaining edges of current affected land boundary (Figure D-1), with further detailed conditions as stated below.</p> <ol style="list-style-type: none"> 1. The total area is 18.3 acres of the total 44.7 acres in the proposed BLM lease expansion (see maps (Exhibit C) and Environmental Assessment (Att D-1)) 2. The eastern boundary is the existing western highwall, which is partially covered and buttressed by stored soil 3. The northern point is the existing unaffected head of Sale Barn Canyon 4. The western boundary is just east (left bank facing downstream) of the creekbed in the bottom of Sale Barn Canyon 5. The southwestern boundary is a SE-NW line approximately 600 feet in length across the eastern side of the canyon floor and slope <p>The area is presently undisturbed, and consists of a mixed savannah, draining to the southwest, with various trails, rock outcrops, and ephemeral drainage. Soils are Zyme (clay loam)-Rock outcrop complex, with 12-65 percent slopes. Extraction will cease in the affected land areas to the east of this expansion area. Other mining-related activities including reclamation, stockpiling (soil, overburden, products), processing (screening and crushing), transportation and maintenance will continue in that portion of the affected area. There will be no extraction from the remainder of the BLM expansion area (26.4 acres in the 2018 BLM EA) until after five years (six, if the contract is extended), due to limits on BLM sales contracts.</p>
STANDARDS	<p>Perform mining and reclamation to standards set by BLM contract COC 64651 as stated in the "Proposed Method of Operation" submitted to BLM prior to the signing of the above contract, during contract term. Mine in accordance with all applicable federal and state standards for mining of sand and gravel, to ensure safety (both on- and off-site), protect the environment (including water, air, biosphere (plant and animals), cultural resources, and other aspects, while minimizing costs of mining and reclamation, while operating plants and handling materials (including storm water, solid waste and hazardous materials in accordance with applicable laws, regulations, and permit conditions. Reclaim concurrently with increase in affected areas.</p>
ASSUMPTIONS	<ul style="list-style-type: none"> • A total of 3.5 million cubic yards (in-place) will be excavated during the five-year period 2018-2022, to produce not more than 3.0 million tons of material (per BLM contract). There is about 3.7 million cubic yards (estimated) in the 18.3-acre expansion area. The five-year BLM contract can be extended by one year. • The pH of this soil in this expansion area is neutral and there are no salts present that will affect plant growth. Depth of the overburden ranges from 0' to 20', and is usually zero in the expansion area. The glacial gravel deposit is about 50' deep. • The base of the gravel and sand deposit in this area is on the general slope and sloping slightly to the east (as with areas already mined), on top of the shale. (There is a rise in elevation of the shale floor near the southwest corner of the present affected areas where extraction is underway in 2018.) • Cultural resources have been identified and no significant resources are known to exist in the expansion area. • Vertical working faces are stable during actual mining operations, including seasonal delays, and post-mining slopes of 2:1 and 3:1 are stable.

- Final (post-mining) grade of this expansion area is to match the final (post-reclamation) grade of already-affected areas to east and of the Crader Pit to SE.

PERFORMANCE MEASURES

1. Continue mining operations in the same manner as done from 1980 to 2017; in accordance with established practices and as required by the US BLM, MSHA, and DRMS, both on the expansion area and in all areas in private ownership and under BLM management.
2. General concept:
 - (1) Mine the 18.3-acre expansion area, working from the southeast to south corner then moving north, generally east to west.
 - (2) Expand existing working area to east of the Expansion area, while mining the Expansion Area to final grade (but not placing soil), to use for traffic, plant and stockpile areas. (Only crushing and screening plants are to be located on public land.)
 - (3) Mine this expansion area over a period of five-six years. This time will vary based on demand, quality and thickness of the material extracted (depth to shale).
 - (4) As space allows, shift plant areas and the soil stockpiles (currently in the affected land just to the east) onto the expansion area. (Past this 18.3-ac Expansion, excavation will continue to the west in the remaining 26.4-acre area if allowed by BLM.)
 - (5) Daylight in the bottom of Sale Barn Canyon (to just east of creek bed) in excavating raw materials to shale floor, so no highwall will be created on the western edge of the 18.3-ac Expansion area.
 - (6) Slope working face as needed on southwest and north edge to match reduced highwall (area C) and Crader/Montoya boundary slope, using imported clean materials.

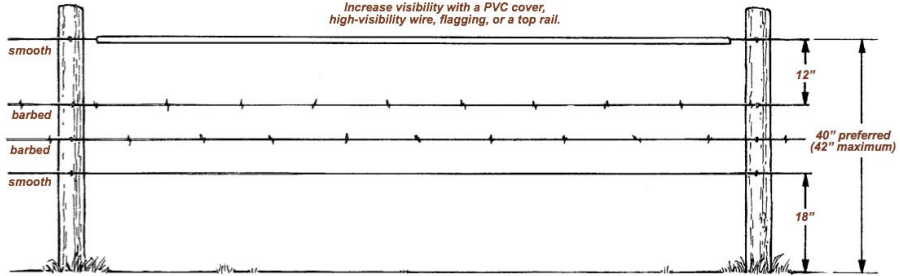
Figure D-1. General Setting of 18.3-acre 2018 expansion area.



This figure uses a 27 July 2017 aerial photomosaic. Arrow shows general direction of mining. This figure shows only the initial 5-year period of the BLM sales contract (which may be extended by one year, and which limits production to 3 million tons). Note: soil stockpile as shown in photo was approximately 77,000 CY and is now (February 2018) reduced to approximately 27,000 CY as it is used for reclamation and projects.

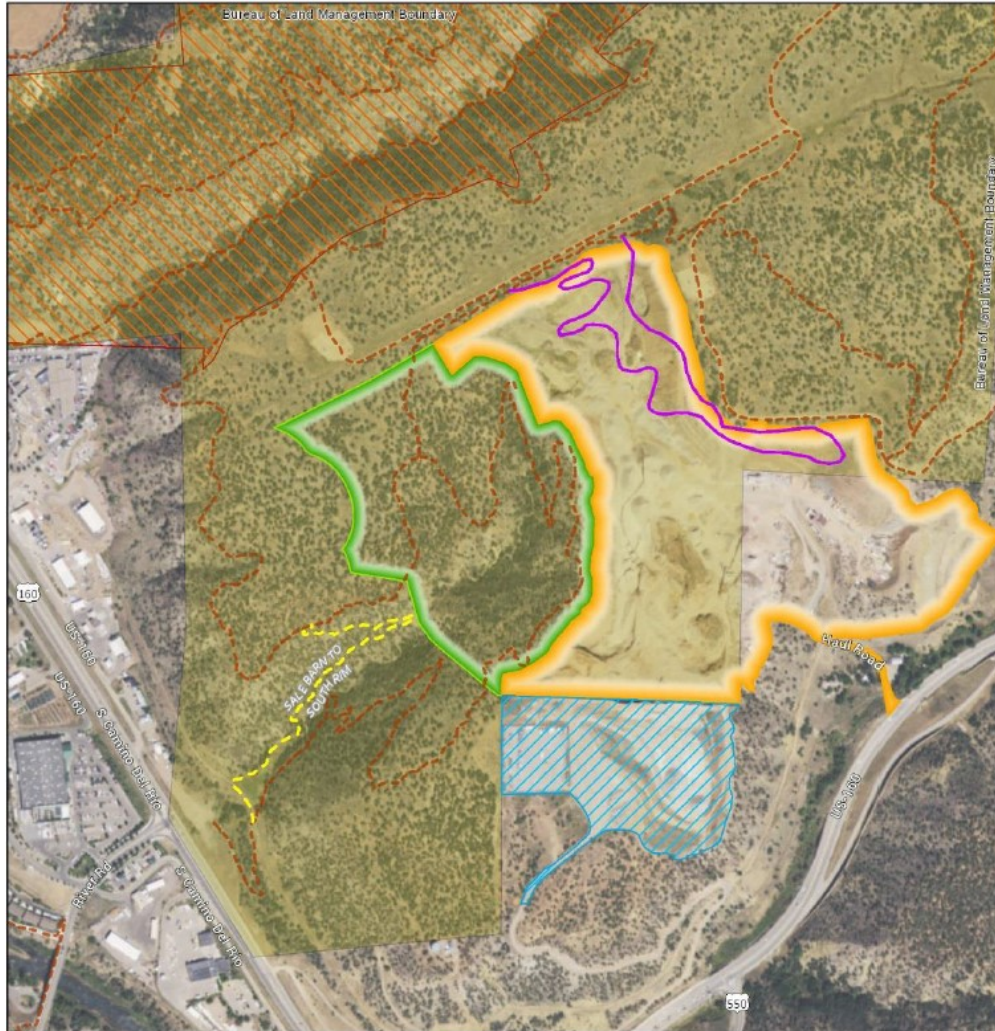
3. Prepare site, in small increments (3 acres \pm at a time):

	<ul style="list-style-type: none"> a. Relocate and/or close trails as necessary. b. Install warning signs, fencing, and barricades as necessary to control access. c. Establish storm water controls (best management practices) to prevent erosion and control sediment. (See separate Storm Water Management Plan (SWMP).) d. Ensure that vegetation clearance is done during periods of year allowed by BLM. e. Clear trees, shrubs, and other vegetation to preserve or salvage for immediate or later use in reclamation, and remove from the area to be excavated. f. Strip soil and overburden (when present) with a dozer or scraper. Immediately use for backfill and placing of soil, or stockpile for future use as such. g. Use original soil or overburden amended as feasible, to meet minimum soil thickness of four inches. (Little soil is expected to be salvaged, as sand and rock are exposed on the surface of much of the site. h. Locate all stockpiles in Area E2 (affected area to the east.) <ul style="list-style-type: none"> 1) Establish storm water controls in the expansion area during excavation and related activities. Include overburden/soil if necessary to (a) slope southeast edge working face to 2:1 or flatter, 2) create up to 600 feet of berm with basins on the east side of the creekbed, 3) backfill southwest edge of the expansion area and 4) backfill other areas which may discharge into the expansion area. i. Relocate on-site processing plants (as mining progresses) close enough to the working face to allow the FEL to tram directly to the plant (when room is available). j. Control dust by revegetation and water/dust control application in accordance with CDPHE-APCD APEN and permits, and other permits.
4.	<p>Excavate raw materials, transport, process, and transport/use: (See Mining Plan map)</p> <ul style="list-style-type: none"> a. Excavate gravel material using dozer and FEL. b. Move excavated material by FEL to crushing/screening plants, located on the pit floor. (If necessary due to distance, use pit trucks to move from working face to plant.) Processed construction materials may then be either shipped off-site, or used to produce ready-mixed concrete, asphalt surfacing materials, or washed products on-site which are then shipped off-site. c. Once processed, move construction materials from plant to primary stockpiles by conveyers. d. Transport construction materials from primary stockpiles. Use FEL either to load over-the-road trucks directly, move to an on-site plant (such as a wash plant or hot-mix asphalt plant or ready-mix plant which may be temporarily located in the Montoya Pit on private fee land), or move to secondary stockpiles on-site for later use/loading. e. Control dust with water, both by applying to traffic and excavation areas and in processing plants. (Dust control uses multiple spray bars at the source of dust (drop points and outfeed points on screening and crushing plants), and requires about 1000 gallons per day.) Water uses vary significantly seasonally and based on customer requirements. A 4,000-gallon water truck delivers water to various points on the site and provides water spray for dust control on roads, traffic areas, the pit floor and sides of stockpiles as needed, particularly in hot, dry weather. f. Mine 3 acres ± at a time, starting from the existing highwall near the southeast corner of the expansion area, working to the south and then north for full width of the area. g. Relocate crushing, screening, and wash plants to process materials into the expansion area as soon as sufficient space is available. (Initially, material will be hauled on the existing pit floor (Area E2) to the plants as currently located.) h. Maintain safe temporary highwalls within the area (based on observation of the

	<p>stability of the deposit), from 1:1 to vertical. Based on anticipated depth of the deposit, the height of highwalls will diminish significantly from those currently existing, to daylight (no highwall) at the west edge of the Expansion area. As necessary, bench working face (maximum height and minimum width 20 feet).</p> <p>i. Maintain 2:1 or flatter slopes on the outer edges (southwest, west) of the expansion area. Mining the 18.3-acre Expansion area removes the existing highwall (to the east of that area. (Material left in the slopes on the west edge of the 18.3-ac Expansion area will be extracted during mining of 26.4-ac area to west (if authorized).)</p> <p>j. Use material mined to produce CDOT class 6 and class 2 roadbase, aggregate for asphaltic cement concrete (ACC) and Portland cement concrete (PCC), and other construction use, including structural fill, landscaping, filtering, etc.</p> <p>k. Continue to process and use products to produce ACC and PCC (using portable plants) temporarily on-site, based on customer needs. See Map C-1 and C-3 for locations.</p> <p>l. Maintain all areas of the pit in clean, safe condition by excavating, operating plants and managing solid waste, hazardous materials, storm water, and other materials in accordance with approved plans, procedures, permits, regulations, and laws.</p>
5.	<p>In coordination with BLM, install and maintain 1,440 foot long wildlife-friendly wire fence to isolate mining activities from the skills trail area to be built after reclamation in the northeast corner of the permit area, to restrict access to mining operations by users of the skills area.</p>  <p>Figure D-2. Wildlife-friendly fence. Fence post spacing 14.5 feet. (This fence will be removed at the end of mining and reclamation operations on the BLM-managed public land.)</p>
6.	Backfill and smooth, as necessary, areas excavated to the shale floor of the pit on the exterior edge of the total planned pit (northwest and southwest areas) with clean imported material (from customer construction sites off the permit area).
7.	Reclaim mined area: see Exhibit E Reclamation Plan for detailed planning.
VOLUME AND OTHER DATA	
1.	Total material estimated to be available in the expansion area: 3.7 million CY (in-place).
2.	Total material anticipated to be mined in initial five-year period (2018-c. 2022): 3.5 million CY (135 pcf/3645 pcy/1.8 tcy).
3.	<p>Total backfill needed for slopes: (see Exhibits E and L for more detailed information)</p> <p>a. Before mining expansion: 125,500 BCY (in-place) 150,600 LCY (loose)</p> <p>b. Change after expansion: Decrease by 8,600 BCY 10,300 LCY</p> <p>c. After doing A5, C & Ds are done in 2018-19, total reduced to 60,200 BCY 72,300 LCY</p>
4.	<p>Total acres in BLM Environmental Assessment: 44.7 acres</p> <p>Total acres in initial 5-year BLM sales contract: 18.3 acres</p> <p>Remaining (future) expansion: 26.4 acres</p>
5.	PLEASE NOTE: Mining in the remaining 26.4-acre area will be done in the same manner as detailed above for the 18.3-acre initial 5-year phase. It is anticipated that this will take two additional phases, due to contract limits. At this time, the “right to enter” has been given by BLM only for the 18.3 acre area.

6. These figures are provided from BLM documents, and are not intended to be maps complying with DRMS criteria. They are provided to clarify the situation. The BLM does not recognize the permit boundary and did not show it. These maps were not prepared by a licensed professional engineer or land surveyor, to our knowledge.

7. FIGURE D-3. BLM Planning showing 2017 status, trails, and proposed trails.

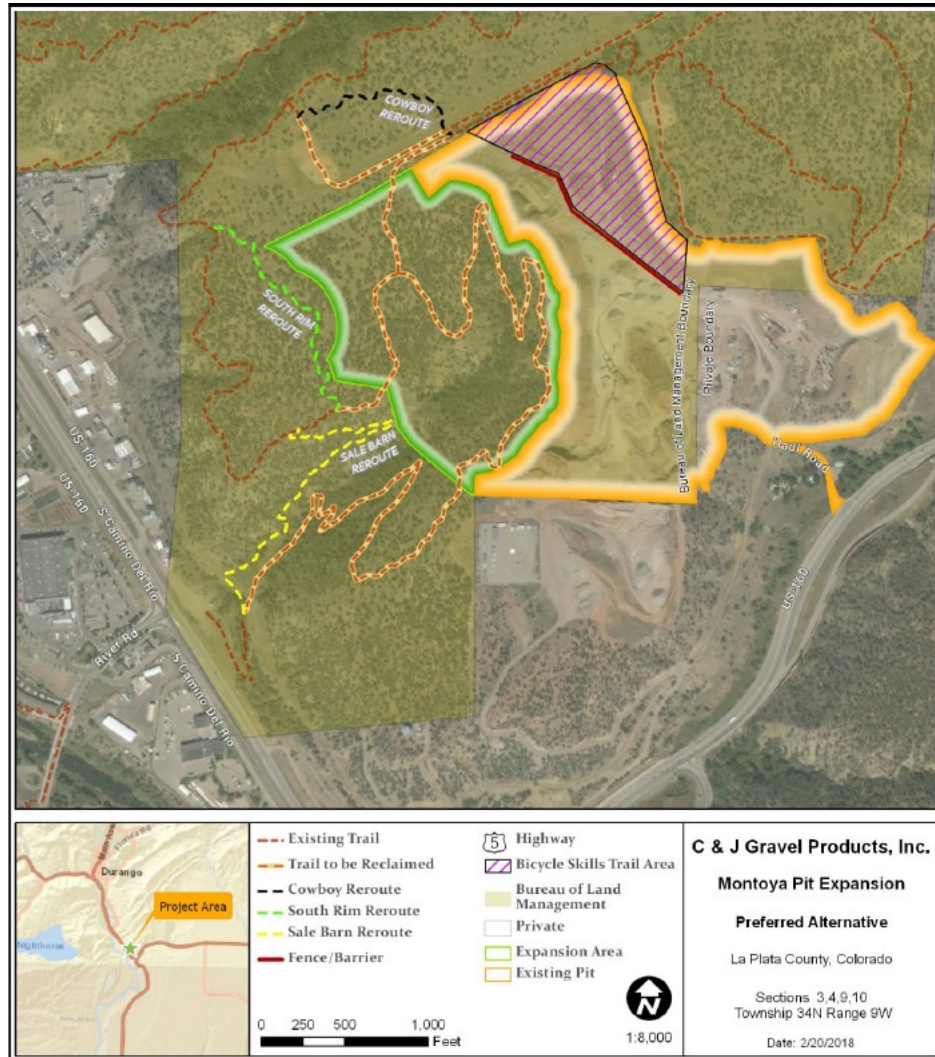


This map does NOT have a scale or north arrow and was NOT prepared by a professional engineer or surveyor. The scale and north arrow below are provided for convenience and may not be precise.



Orange: current affected land including access road. Green: proposed (BLM) expansion of area to be affected, as per BLM 2018 EA (44.7 acres). (The 2018 18.3-acre expansion is only a portion of that and is omitted from this figure for clarity.) Yellow trail is proposed relocation of trails for access before trails in green area are removed. Purple line is one concept of proposed skills trail to be built after reclamation.

8. FIGURE D-4. BLM Map from 2018 Environmental Assessment showing trails, proposed trails, and post-reclamation bicycle skills trail area.



Skills trail area as shown above is approximately 16 acres in size.

Orange: current affected land including access road. Green: proposed (BLM) expansion of area to be affected, as per BLM 2018 EA (44.7 acres). (The 2018 18.3-acre expansion is only a portion of that and is omitted from this figure for clarity.) Yellow trail is proposed relocation of trails for access before trails in green area are removed. Purple line is one concept of proposed skills trail to be built after reclamation.

9. Areas shown in Exhibit C for plant locations do not include locations of primary processing (screening and crushing) and are approximate locations subject to adjustment based on plant size, traffic controls, and quantities to be produced during a given period. Approximate sizes (dimensions in feet) for well is 10x10, ready-mixed concrete plant is 110x110, wash plant (with basins) 150x200, and HMA facility 110x220. Capacity of basins for wash plant is 1.27 acre-feet.

PREVIOUS MINING PLAN (FROM AM-3) RESTATED WITH CHANGES:

1. Mining operations will continue in the same manner as done from 1980 to 2018 ~~2008~~; in accordance with established practices and as required by the US BLM.
2. Surface material (topsoil where present, and overburden) will be stripped with a dozer or scraper, and stockpiled for use as backfill (overburden) and as soil (original soil as available, otherwise overburden amended as feasible). The gravel material will be mined using dozer and loaders, and transported to crushing/screening plants, with processing to be done on the floor of the pit. Plant products will then either be transported to an on-site plant (such as a hot-mix asphalt plant or ready-mix plant) or shipped directly off-site by trucks.
3. Water is used in the operation for dust control and for washing of products and equipment, but is not used for scrubbing or other industrial processes. Dust control uses multiple spray bars at the source of dust (drop points and outfeed points on screening and crushing plants), and requires approximately 1000 gallons per day. Other uses vary significantly seasonally and based on customer requirements. A 4,000-gallon water truck delivers water to various points on the site and provides water spray for dust control on roads, traffic areas, and the pit floor and sides of stockpiles as needed, particularly in hot, dry weather. See also Exhibit G for detailed water use information.
4. We plan to mine each area as described: the permitted area starting at the southern boundary going west and then north. We will mine in 3- to 5-acre increments. We anticipate it will take about 1-2 years to mine each area. Before mining the gravel deposits we will salvage stumps and trees and stockpile these along the boundary for reclamation use. We will then strip a minimum of 6" topsoil (growth medium) and stockpile adequate amounts along the length of the south and west boundaries. We will then strip overburden material and stockpile at the south and west boundaries separate from topsoil stockpiles. We will take approximately 12-157 years to complete the mining of this entire area. Slope reclamation should be completed within 10 years. We will maintain 2H:1 V slope highwalls while mining.
5. Mining and reclamation will be performed to standards set by the current BLM contract GOC-64654 and in the ~~attached~~ current "Proposed Method of Operation" submitted to BLM prior to the signing of the ~~above~~ current contract in effect.
6. The soils in this area are classified as Ustollic Haplargids, fine-silty, mixed mesic. Basically these soils are deep, well drained soils which overlay the gravel deposits. The pH of this soil is neutral and there are no salts present that will affect plant growth. Depth of the overburden ranges from 10' to 20'. The gravel deposit under the overburden runs approximately 50' deep with shale deposit beneath.
7. The primary and secondary commodities to be mined are Class 6 roadbase and Class 2 roadbase. Other types of gravel will also be extracted as needed. These materials will be used primarily for roadbase. Secondary use is asphalt and concrete aggregate, structural fill, landscaping, filtering, etc.

EXHIBIT E – Reclamation Plan

C&J GRAVEL PRODUCTS – MONTOYA PIT – M1980-146 – PERMIT AMENDMENT AM-05 (2018)

TASK	Reclaim Montoya Pit, including the Sale Barn Canyon expansion to the Montoya Pit
CONDITIONS	<p>Given,</p> <ol style="list-style-type: none"> 1. Pre-2018 affected areas on private and public (BLM) land, consisting of about 90 acres (see Table E-1 and maps in Exhibit F) including about 26.4 acres private fee land and 63.6 acres public land managed by BLM). 2. No permanent structures are located on public or private land (other than oil and gas production and transportation facilities). 3. Existing roads and associated structures are temporary and will be replaced by permanent infrastructure in the future. 4. C&J is buying material from BLM via a five-year contract, to come from the 2018 18.3-acre Expansion area (west of the current affected area). 5. All highwalls in the current affected area have been reduced, except for the those shown on Map C-1 and other maps, 6. The highwall on the eastern edge of the 2018 18.3-acre Expansion area shall be reduced during mining of the 2018 18.3-acre Expansion area, and 7. Mining (extraction) is proceeding, concurrent with reclamation activities, on up to 27.7 acres total (all public land), over the period of 2018 to 2022/23.
STANDARDS	<p>Reclaim affected expansion area to standards set by BLM 2018 Record of Decision and BLM contract COC 64651 as stated in the "Proposed Method of Operation" submitted to BLM prior to the signing of the above contract. Reclaim area to a stable, sustainable terrain and ecosystem, in accordance with all applicable federal and state standards for mining of sand and gravel, to ensure safety (both on- and off-site), protect the environment (including water, air, biosphere (plant and animals), significant structures, and other aspects, with stable slopes of not less than 2:1 (target 3:1) and matching exterior slopes.</p> <p>Reclamation tasks to be accomplished (in order): backfill to final elevations/rough grading (BF), finish grading (FG), place soil (PS), vegetate (VE), and revegetate (RV) (if necessary). Allow one to two growing seasons (as usually required) before applying for release. Establish conditions suitable for proposed future land use.</p> <p>Establish permanent drainage to protect downstream water rights, prevent retention of storm water, erosion and sedimentation beyond historic levels, and provide for future land uses, while minimizing maintenance requirements and costs, particularly on public land.</p> <p>Remove all temporary structures. Prepare 16-acre "bicycle skills trail area" in northeast corner of permit area for post-reclamation-release construction in coordination with BLM.</p>
ASSUMPTIONS	<ul style="list-style-type: none"> • Mining of the 2018 18.3-acre Expansion area to be done in a 5-year contract (with 1-year extension possible) • Shale surface below gravel deposit is similar in slope and elevation to the pit floor to the east, sloping to the east and away from the floor of Sale Barn Canyon. • Shale may require ripping before placement of soil to provide rooting zone. • Drainage from the north, east and south of Sale Barn Canyon (including drainage from previously mined and reclaimed land) may ultimately flow through this area. • Follow current revegetation seed mix and seeding/care procedures (as established in past contracts). BLM retains power to change that seed mix at will.

	<ul style="list-style-type: none"> • Minimal soil/overburden available in 2018 18.3-acre Expansion area (but any available will be salvaged and stockpiled) • Stockpiles of soil and overburden already present to east will be available for use in reclamation, and additional off-site material will also be used as available. • Mining plan (Exhibits C and D) will be followed • As mining proceeds and highwalls are created in expansion area, existing highwalls will be eliminated or backfilled as mining progresses, limiting total length and volume to 50% of potential maximum • Backfill of highwalls A5 and C will require pushing material uphill • Backfill of highwalls B3 and Dw (if not eliminated by mining) will be done pushing material downhill • Backfill of highwall Ds will be done pushing material downhill • All product stockpiles and plant(s) will be relocated from current locations in Area E2 to parts of the expansion area at the end of the extraction phases • BLM will use affected land (after reclamation) for recreation and wildlife habitat, but will maintain access on roads and trails, including those constructed for mining use, as determined by BLM at some time in the future • Sufficient water is NOT available to allow irrigation for purposes of establishing vegetation for reclamation • Permanent storm water controls shall remain after reclamation, while minimizing work and cost needed to maintain those controls • Future use of private fee land for commercial/industrial use will be approved by appropriate authorities, allowing permanent structures to remain • Extraction of petroleum (oil and gas) may continue at existing wellheads in and adjacent to the permit area, together with access to those sites
PERFORMANCE MEASURES	
1.	Backfill highwalls during 2018-2019, in Area A5 (if needed, flatten from 3:1 to 2:1), C, and Ds (boundary with Crader). This requires between 26,800 and 109,400 loose CY (depending on success of vegetation of A5). This material will come from off-site, reject, and overburden.
2.	While grubbing and clearing the 2018 Expansion area, salvage individual specimens of woody species and transplant to presently affected areas at final grade and with soil placed.
3.	<p>Excavate to the top of the shale bedrock, while mining 18.3-acre 2018 Expansion area, day-lighting just east of creekbed in Sale Barn Canyon bottom. On working faces at north and south extremes of 2018 18.3-acre Expansion area (Ex-S and Ex-N), slope to final grade of 2:1 or flatter (goal 3:1) or where necessary to match terrain and ensure proper drainage. On those areas where backfill is needed, use (as available) off-site clean fill, overburden, and reject material. Along anticipated permanent exterior of the affected land (e.g. canyon floor), some very small areas with steep working faces (up to vertical, depending on the depth of overburden and depth to shale along the bottom of the canyon) shall be backfilled to 2:1 (or flatter) within one year of extraction of minerals in that phase.</p> <p>The expansion will eliminate 2,930 feet of highwall, and the need for 41,200 loose CY of backfill. It will create two areas (Ex-S (515 feet long) and Ex-N (240 feet long)) requiring 31,000 loose CY, to be filled with off-site, reject, and overburden during mining in the six phases. Ex-S will be done by end of the 3rd phase or sooner, and Ex-N will be done at end of the 6th phase (if additional extraction is not permitted). Ex-N will be the last remaining wall.</p>
4.	Leave surface (pit floor) at the planned elevations and grades during extraction, OR backfill with off-site clean material, overburden, and/or reject material. (Note: do not place topsoil and revegetate on areas needed for plants, stockpiles and traffic, until the end of the mining (when entire expansion area has had materials extracted.)

	<p>Place soil and revegetate permanent slopes (including those made by highwall reduction) as they are backfilled to final grade.</p> <p>Backfill of the pit floor is not required for reclamation, except for very small amounts (estimated at 10,000 loose CY) to improve drainage. Exact amount cannot be determined until the shale floor is exposed. By the end of phase 6 of the 2018 Expansion, no more than 10,400 loose CY of backfill will be needed (for Ex-N). All off-site material used for backfill will be inert, clean, and meet State of Colorado requirements.</p>																																													
5.	<p>Place soil across entire expansion area during and immediately after mining (including side slopes and swales) at minimum 4-inch, average 6-inch depth. Total area to have soil placed is 32 acres (all public land under BLM management), requiring 26,000 CY; as of February 2018 at least 27,000 CY is available in stockpile east of expansion area, and approximately 13,000 CY more will be generated during mining. In addition, other suitable clean soil may be brought by customers from off-site. (This includes up to 2,000 CY soil needed if highwall A5 is reduced.) Place soil and revegetate on side slopes of the pit as areas of one-half acre (e.g., 100x200) are at final grade. Place soil and revegetate on pit floor as areas are no longer needed for traffic, stockpile, and plant areas, generally as areas of three or more acres at a time.</p>																																													
6.	<p>Revegetate by seeding with approved seed mix/instructions (BLM and NRCS requirements).</p> <p>TABLE E-1 SEED MIX FOR RECLAMATION:</p> <table><tr><th>Species</th><th>Variety</th><th colspan="2">Type/Season</th><th># PLS/ Acre</th></tr><tr><td>Indian ricegrass</td><td>Paloma</td><td>Native</td><td>Cool</td><td>2.00</td></tr><tr><td>Western wheatgrass</td><td>Arriba</td><td>Native</td><td>Cool</td><td>4.00</td></tr><tr><td>Yarrow, white</td><td></td><td>Native</td><td></td><td>1.00</td></tr><tr><td>Flax, Lewis blue</td><td></td><td>Native</td><td></td><td>0.15</td></tr><tr><td>Bitterbrush, Antelope</td><td></td><td>Native</td><td></td><td>2.00</td></tr><tr><td>Chokecherry</td><td></td><td>Native</td><td></td><td>2.00</td></tr><tr><td>Sagebrush, mountain or big</td><td></td><td>Native</td><td></td><td>0.15</td></tr><tr><td>TOTAL</td><td></td><td></td><td></td><td>11.3</td></tr></table> <p>a. Seed mix taken from BLM area reclamation estimate and plan, 2011 (DRMS)</p> <p>b. Assumes seed will be drilled or hydroseeded.</p> <p>c. If seed is broadcast, quantities per acre will be doubled.</p> <p>d. Seed will be protected by crimped clean, weed-free straw mulch (2 tons per acre) or pinned aspen excelsior (95 percent coverage).</p> <p>e. This seed mix may be revised annually by BLM for all public land, in the vicinity, and DRMS will be notified (either in advance or with annual report) of changes.</p> <p>Instructions for seeding:</p> <ul style="list-style-type: none">• Cover seed 1/4" to 1/2" deep using a harrow, drag bar or chain.• Seeding should be done between September 1 and December 1 to take advantage of late summer and fall precipitation.• Distribute any stockpiled woody debris evenly over the disturbed area.	Species	Variety	Type/Season		# PLS/ Acre	Indian ricegrass	Paloma	Native	Cool	2.00	Western wheatgrass	Arriba	Native	Cool	4.00	Yarrow, white		Native		1.00	Flax, Lewis blue		Native		0.15	Bitterbrush, Antelope		Native		2.00	Chokecherry		Native		2.00	Sagebrush, mountain or big		Native		0.15	TOTAL				11.3
Species	Variety	Type/Season		# PLS/ Acre																																										
Indian ricegrass	Paloma	Native	Cool	2.00																																										
Western wheatgrass	Arriba	Native	Cool	4.00																																										
Yarrow, white		Native		1.00																																										
Flax, Lewis blue		Native		0.15																																										
Bitterbrush, Antelope		Native		2.00																																										
Chokecherry		Native		2.00																																										
Sagebrush, mountain or big		Native		0.15																																										
TOTAL				11.3																																										
7.	<p>Control weeds in accordance with established BLM, DRMS, and County requirements, and customer requirements (Existing weed control plan filed with DRMS)</p>																																													
8.	<p>Modify storm water controls (best management practices) to (a) provide for prevention of erosion and sedimentation during all phases and after reclamation release, and (b) allow as much infiltration of runoff as is feasible. This work will include placement of permanent outfalls, rock check dams, and berms, and removal of temporary BMP used during mining and initial reclamation. Prevent retention of surface water in accordance with State Engineer rules. Design and install to minimize requirements and costs of maintenance</p>																																													
9.	<p>Protect area from traffic and livestock use until reclamation is released, by fencing, barricades, barriers, berms, and signage. This includes wildlife-friendly fencing (1,440 LF) between area designated for bicycle skills trail and continuing mining activities</p>																																													

10	Remove unnecessary signage, barricades, fencing and other access control and warning features (temporary items) when reclamation is released, in coordination with BLM
11	<p>Comply with the following USBLM requirements for vegetation and reclamation, as restated and clarified as necessary from the 2018 BLM Record of Decision:</p> <ol style="list-style-type: none"> 1. Grade and texture all growth-medium [soil], overburden stockpiles, and reclaimed slopes to facilitate the retention of surface run-off, stabilize soils to minimize erosion, and retain seeds. Vary slopes of final reclamation both vertically and horizontally, to blend with the natural topography 2. Seed all growth-medium [soil] and overburden stockpiles with a BLM-approved seed mix to maintain a healthy soil and minimize erosion. 3. Initiate interim reclamation of [all BLM-managed public lands] in areas where activities are expected to temporarily cease for at least five years. Stabilize slopes and seed with a seed mix that is approved by the BLM. 4. When possible, salvage small shrubs (such as antelope bitterbush or mountain mahogany) and/or trees from [any BLM-managed public lands being cleared and grubbed] for deer and elk winter habitat use. Place these on final recontoured [reclaimed to final grade with soil placed]. Set live root balls into small terraces on the slope to aid in precipitation catchment [to slow runoff and allow infiltration] and to maintain stable slopes. Thoroughly water all transplanted live plant material [immediately] upon transplanting. 5. [As feasible,] salvage woody material from stripped [cleared and grubbed] areas, and some boulders, and place these items on the recontoured surfaces as part of final reclamation to create catchments for surface water runoff, soil, seeds, and to mitigate visual impacts. 6. Seed reclaimed surfaces with a BLM-approved seed mix. Revegetation will be considered complete [by BLM] when a permanent, reproducing perennial plant community has been established that meets post-mining uses and provides adequate cover to ensure soil stability. This community will be comprised of native grasses, forbs, and shrubs that provide representative cover and benefit wildlife. 7. Post a performance bond to cover the cost of all reclamation of the pit. BLM will determine the amount which will be redeemable by BLM if the operator does not or cannot complete reclamation objectives. Meet BLM specifications for reclamation before the reclamation bond is released. 8. Retain existing natural slopes adjacent to the Highway 160 corridor to minimize effects to visual resources. 9. Limit clearing of vegetation to that necessary for gravel mining operations and associated design criteria [e.g., new trail construction] to maintain the natural character of the area to the maximum extent possible, maintain soil condition, minimize effects to cultural resources, minimize invasion of non-native and noxious plant species, and provide visual screening. 10. Place berms or other structures and retain natural features along the top of the pit wall where practicable to minimize noise and visual effects. 11. Vary the profile of existing and proposed berms to appear more natural.
12	Proposed water well and associated features to be placed on private fee land to be left in place and operational for post-reclamation commercial/industrial use.

Table E-2 Highwalls and backfill requirements

(This table is duplicated in Exhibit H.)

Area	Length	Avg Ht	Feature	Notes	CY backfill	CY Loose
A5	330	32	2:1 slope	Reduce to 3:1 if needed Push 293 ft @+2%	68,800	82,560
B3	1255	35	Highwall	Expansion will eliminate Push 50 ft @-66%	19,666	23,599
C	540	30	Highwall	NW corner - now 40-ft bench Push 240 ft @ -10%	19,500	23,400
Dw	1675	30	Highwall	Expansion will eliminate Push 50 ft @ -66%	14,734	17,681
Ds	1247	20	Highwall	Boundary w Crader Pit Push 20 feet @-65%	2,800	3,360
				Total	125,500	150,600
Ex-S	515	30	Highwall	In 2nd phase on SW edge Push 20 feet @+10%	17,167	20,600
Ex-N	260	30	Highwall	In 6th phase of NW edge Push 30 feet @+10%	8,667	10,400
				Total	25,833	31,000

- Notes:
1. Length in feet measured from topo. Height in feet average measured from topo.
 2. Loose CY = 1.2 CY bank/placed. Volume= Avg Htx2xAvg Ht*length/2/27
 3. Average height for A5 is maximum thickness to be placed to flatten from 2:1 to 3:1
 4. CY = 27 cf (cubic yards, cubic feet)
 5. Since backfill of B3, Dw, and Ds involves pushing, average height is half of total height for calculation purposes.
 6. See profiles of highwalls.
 7. West side of Area C already at 2:1 slope.
 8. Areas Ex-S and Ex-N will not be open highwalls until phase shown.

Figure E-1 Highwall Ds (Crader Pit Boundary)

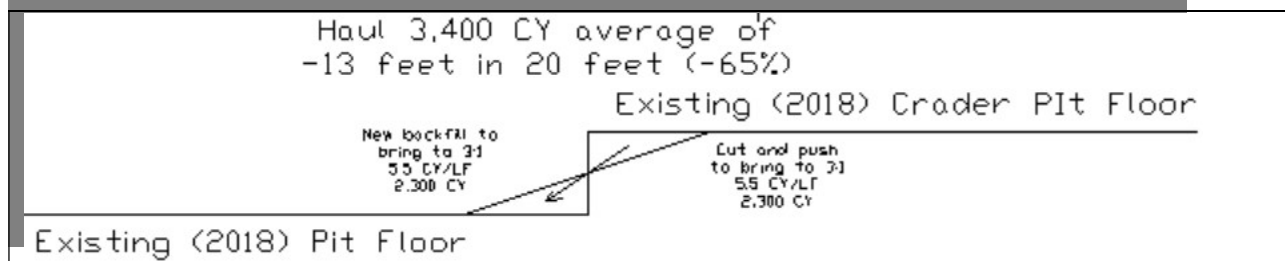


Figure E-2 Highwall C (Northwest Corner)

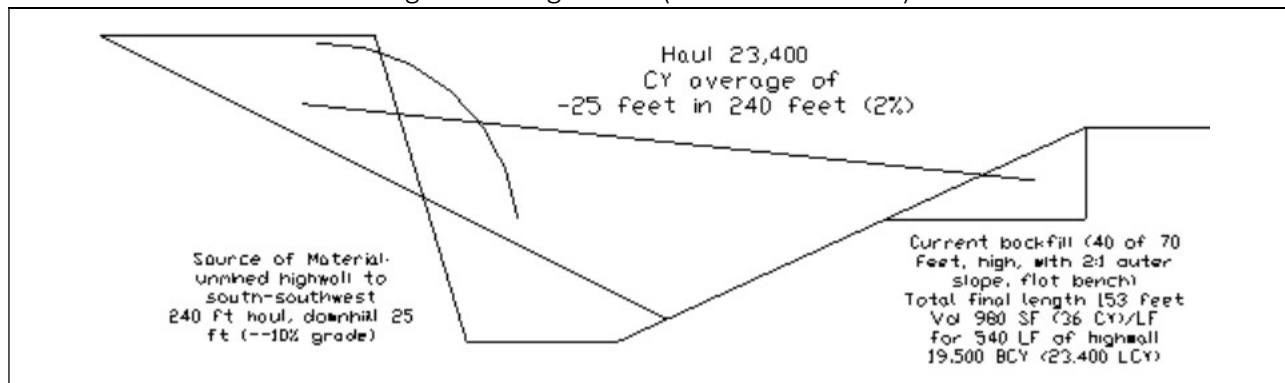


Figure E-3 Highwalls B3 & Dw (West Side of Existing Affected Area)

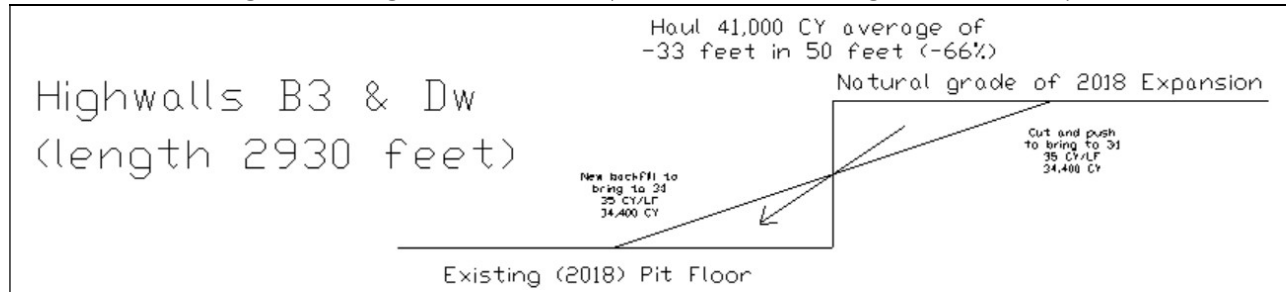


Figure E-4 Highwall A5 (Portion of Northeast Side of Existing Affected Area)

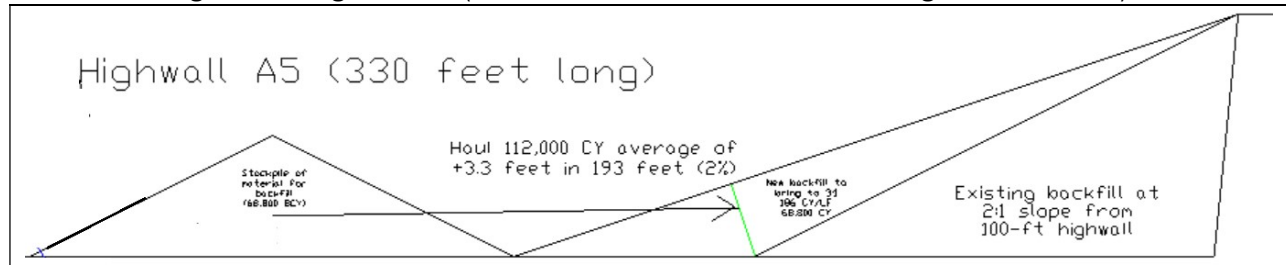


Figure E-5 Index Map of Highwall Locations

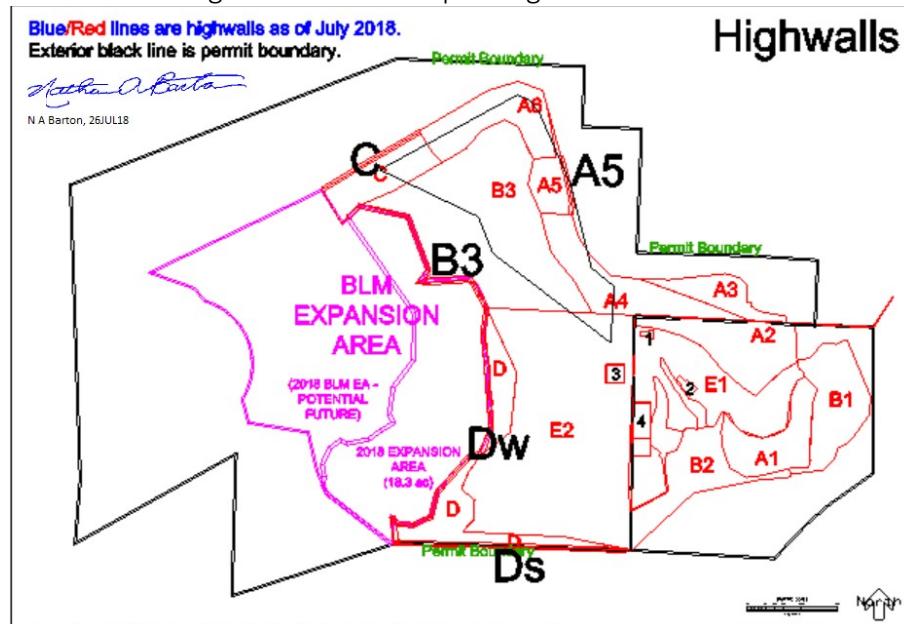


EXHIBIT F – Reclamation Plan Maps

The maps are located in a separate portfolio. Maps are in native 8.5x11 format and also available in 11x17 format. These maps attempt to clearly identify conditions and operations as existing in 2018, and are based on the assumption that additional leases of BLM land will be awarded to C & J in five to six years. The BLM proposed Expansion Area is shown in two parts: the entire 44.7 acres included in the 2018 BLM Environmental Assessment (EA), and the 18.3-acre 2018 Expansion Area as per the sales contract of 2018 between BLM and C&J Gravel.

Sheet F-1: Proposed contours for reclamation including contours for reclaimed areas (not yet released) in 2018.

Sheet F-2: Permanent major post-reclamation features.

Sheet F-3: Details of 18.3-acre 2018 Expansion Area authorized by BLM sales contract.

NOTES:

1. Refer to Map C-1 for current site conditions, including areas which are at final grade, which have had soil replaced, and which have been revegetated. Note: not all areas shown as revegetated have been accepted by the BLM (landowner) as ready for reclamation release. No release of land or reduction in financial warranty has been requested for vegetation.
2. Sheet F-1 includes contours for reclaimed areas (not yet released) in 2018. Slopes shown as between 2:1 and 3:1. Exact height of slopes and elevations of final floor depends on the elevations of the shale floor of the pit. The contours of area A5 may change as discussed in Exhibit E.
3. Information on the bicycle skills trail area and the wildlife-friendly fence are shown for information only and are not intended to be part of reclamation. These will be constructed only after reclamation of the 16-acre area is completed.

EXHIBIT G – Water Information

1. Refer to BLM Environmental Assessment, previous amendments, and original application for all information. The proposed operation does not anticipate exposing groundwater. Exposure of groundwater must not occur during or after mining. The shale floor of the pit is not an aquifer.
2. Water for dust control, processing (including washing of product), and other industrial and commercial use will continue to be obtained from off-site from source(s) already permitted for commercial and/or industrial water use, until such time as a water well permit is obtained, a well is drilled, and put into service in accordance with Colorado Water Law. Peak use is anticipated to be 500 gpm and average 150 gpm (during operating hours). Annual use not to exceed 4.25 acre-feet, with average daily use from 30,000 to 100,000 gallons, averaging 48,000 per operating day.
3. C&J Gravel Products Inc. has filed a well-drilling application for water rights for industrial and commercial use on the private fee lands (southeast corner of the Permit Area), which is presently being processed by the State Engineers Office. If the well does not yield sufficient water for makeup for basins, off-site source(s) will continue to be used as well. See Exhibit M, and Sheet C-3.
4. Except for three wells on BLM land and apparently belonging to or under the control of the BLM, there are no additional recorded water wells located within 660 feet of areas proposed to be disturbed; these three wells are located within the area identified by BLM as “mineral emphasis” and impacts are or will be addressed in the BLM environmental assessment before those wells are disturbed or destroyed. The BLM may impose additional limitations at such time as mining is allowed (assuming leases are granted) that will be followed by the operator. At this time, BLM has no knowledge of these wells, listed in the records of the Colorado State Engineer, and assumed to be under BLM management because of their location.
5. The impact of mining the upper portion of Sale Barn Canyon (which is a middle part of its watershed) and therefore preventing surface water flow (runoff) from those (and upstream) portions has been addressed in the 2018 EA prepared by BLM and in the conditions of the BLM sales contract for the expansion area. There is no significant impact on downstream water users expected, due to the relatively small size of the watershed and the very low runoff generated from the area.
6. Storm water. See Exhibit M: Storm water management. The primary method of preventing pollution due to storm water which has come in contact with industrial activities is to control and prevent surface discharge of all such storm water.
7. Industrial waste water: There shall be no discharge of industrial or municipal (sanitary) sewage or waste water from the site. See Exhibit M.
8. Consumptive use of water. Because of the use of water for dust control and washing of construction material, most consumptive use will be evaporation from those processes and from the surface of basins used to recycle and store that water. Water will also be consumed by being shipped with product, both sand and gravel and ready-mixed concrete. Small quantities will be used for domestic purposes: sanitation, drinking, washing. Depending on types of plants on-site, water may be used in other air pollution equipment. See Exhibit M: Water rights and water use.
9. Protection of water from contamination. See Exhibit M: Spill Response/Hazardous Materials, and Storm water management. Surface water plan addresses both storm water associated with industrial activity and potential for wash water and process water to be discharged, with methods for treating water for reuse or discharge.

EXHIBIT H – Wildlife Information

Requirements for this Exhibit (from Rules): The Operator/Applicant shall include in this Exhibit, a description of the game and non-game resources on and in the vicinity of the application area, including:

- (a) a description of the significant wildlife resources on the affected land;
- (b) seasonal use of the area;
- (c) the presence and estimated population of threatened or endangered species from either federal or state lists; and
- (d) a description of the general effect during and after the proposed operation on the existing wildlife of the area, including but not limited to temporary and permanent loss of food and habitat, interference with migratory routes, and the general effect on the wildlife from increased human activity, including noise.

In addition, the Operator has been asked to respond to comments by the Colorado Division of Parks and Wildlife.

(a) Significant wildlife resources on the affected land:

None. The area is similar to adjacent areas and has some potential use for winter range for grazing (forage) and nesting. The 2018 EA, as with previous EAs, identifies the Montoya Pit as being on the edge of winter habitat for both elk and mule deer. However, the size of the proposed expansion area, past mining and other activities in the currently affected lands, adjacent human activities generating noise, vibration, and light; and availability of better-quality resources indicates that there is no significant resources located. BLM requires mitigation measures for migratory bird species, terrestrial wildlife, and vegetation, including periods annually when land (vegetation) clearing activities cannot be conducted.

Migratory Bird Species

Although the project area includes woodland habitat, the existing affected area and 2018 18.3-acre Expansion on BLM-managed land has been cleared by BLM in consultation with the U.S. Fish and Wildlife Service (USFWS). This consists primarily of shrub habitat with scattered small piñon and juniper trees. The mining would remove some habitat that could be utilized by bird species protected under the Migratory Bird Treaty Act (MBTA). The USFWS maintains a list of Birds of Conservation Concern (BCC). These are non-game avian species which the USFWS has identified as conservation priorities, but which are currently not federally listed as threatened or endangered. The BCC for Region 16 (Southern Rocky Mountains/Colorado Plateau) (Table 1 below) with potential to occur in the project area include: golden eagle (*Aquila chrysaetos*), American peregrine falcon, gray vireo (*Vireo vicinior*), pinyon jay (*Gymnorhinus cyanocephalus*), black-throated gray warbler (*Dendroica nigrescens*), Virginia's warbler (*Vermivora virginiae*) and Lewis's woodpecker (*Melanerpes lewis*).

Although the project area consists of pinyon-juniper woodland, the existing habitat has been thinned within the last ten years. The thinning treatments have created a more open stand with a less-developed understory. These conditions limit the project area's suitability as breeding habitat for a number of avian species including BCC species such as Virginia's warbler and black-throated gray warbler. The open stand conditions are more favorable as foraging habitat for raptors, including BCC species such as golden eagle and peregrine falcon. Known peregrine falcon nesting occurs at Perrin's Peak, approximately 5 miles northwest of the project area (CDOW unpublished). Known nesting for golden eagle occurs at Carbon Mountain approximately 1.5 miles away (Bureau of Reclamation unpublished). However, because of the continued intensive noise and human activity associated with the adjacent active mining pit, the analysis area is considered only marginally suitable for raptor foraging.

Table 1. USFWS Birds of Conservation Concern – Region 16 (Southern Rockies/Colorado Plateau).

SPECIES	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN THE ANALYSIS AREA
Black swift (<i>Cypseloides niger</i>)	Vertical rock faces, near waterfalls or in dripping caves.	No vertical rock faces, waterfalls or caves in the analysis area.
Black-throated gray warbler (<i>Dendroica nigrescens</i>)	Almost exclusive to mature pinyon-juniper woodlands.	Potential foraging and breeding habitat occurs in project area.
Ferruginous hawk (<i>Buteo regalis</i>)	Winter migrant only; grasslands and semi-desert shrub.	No open grasslands or desert-scrub habitat in the analysis area.
Flammulated owl (<i>Otus flammeolus</i>)	Open ponderosa pine forests; dry montane conifer or aspen forests, often with dense saplings.	No ponderosa pine or mixed conifer forests in the analysis area.
Golden eagle (<i>Aquila chrysaetos</i>)	Open habitats including grasslands, sagebrush, farmlands or tundra.	Analysis area contains no potential nest sites. Analysis area and vicinity contains potential foraging habitat; however, intense human activity in the active gravel pit would likely preclude foraging use.
Gray vireo (<i>Vireo vicinior</i>)	Mesas, steep hillsides, canyons and wide valleys where junipers grow spaced apart and grasses, sagebrush and desert scrub flourish.	Potential foraging and breeding habitat occurs in the project area.
Grace's warbler (<i>Dendroica graciae</i>)	Ponderosa pine with scrub oak understory.	No ponderosa pine forests in the analysis area.
Gunnison sage grouse (<i>Centrocercus minimus</i>)	Sagebrush grasslands.	No sagebrush grasslands in the analysis area.
Lewis' woodpecker (<i>Malenarpes lewis</i>)	Open pine forest, riparian and piñon-juniper woodlands.	Project area contains no potential nest trees (ponderosa, cottonwood), but it does contain foraging habitat
Northern harrier (<i>Circus cyaneus</i>)	Grasslands, agricultural lands, open sagebrush and marshes; require abundant cover.	No grasslands or marshes in the analysis area.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	Cliffs; and often in association with riparian areas.	Analysis area contains no potential nest sites. Analysis area and vicinity contains potential foraging habitat; however, intense human activity in the active gravel pit would likely preclude foraging use.
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)	Thrive in piñon-juniper woodlands.	Breeding and foraging habitat occurs in and adjacent to the project area.
Prairie falcon (<i>Falco mexicanus</i>)	Cliff faces in open country; compete with peregrines and	No cliff faces, open grasslands or deserts in the analysis area.

SPECIES	HABITAT DESCRIPTION	POTENTIAL TO OCCUR IN THE ANALYSIS AREA
	golden eagles for nest sites.	
Sage sparrow (<i>Amphispiza belli</i>)	Large, low elevation stands of big sagebrush or mixed big sagebrush and greasewood.	No large stands of big sagebrush or mixed big sagebrush/greasewood in the analysis area.
Short-eared owl (<i>Asio flammeus</i>)	Open habitats including grasslands, marsh edges, shrub steppe and agricultural lands.	No grasslands or marshes in the analysis area.
Swainson's hawk (<i>Buteo swainsoni</i>)	Arid grassland, desert and agricultural areas with scattered trees and shrubs.	No arid grassland or agricultural areas in the analysis area.
Virginia's warbler (<i>Vermivora virginiae</i>)	Dense shrublands and scrub forests associated with mesa slopes foothills, open ravines and valleys.	Potential foraging habitat and limited nesting habitat occurs in habitat within the project area.
Western burrowing owl (<i>Athene cunicularia</i>)	Rodent burrows; grasslands, shrublands deserts.	Analysis area contains no grasslands, deserts or prairie dog colonies.
Wilson's phalarope (<i>Phalaropus tricolor</i>)	Open water adjacent to moist sedge and rush meadows; nest in sedge and rush meadows with low plant height.	No riparian area in the analysis area.
Williamson's sapsucker (<i>Sphyrapicus thyroideus</i>)	Conifer forests; often mixed with aspen from 7,000-10,700 feet; aspen is an essential element.	No mixed conifer forest or aspens in the analysis area.
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Riparian; gallery cottonwoods with dense understory.	No riparian gallery forests area in the analysis area.

Source: USFWS 2002.

Environmental Consequences for Migratory Bird Species

The 2018 Expansion Area would remove approximately 18.3 acres of pinyon-juniper woodland that could be utilized by bird species protected under the MBTA. Vegetation removal would result in low to moderate, long-term bird habitat loss and fragmentation. Direct impacts to these species would be expected to be greater if mitigation measures are not implemented, and construction/mining occurs during the breeding seasons when nest destruction is possible. Human disturbance may cause some nest abandonment in adjacent areas if construction occurs during the breeding season. Because project construction would utilize existing access roads, no additional edge habitat would be created, and fragmentation would be minimized. Since the project area does not contain any potential nesting habitat for BCC raptors golden eagle and peregrine falcon, impacts to these species are expected to be low.

Mitigation for Migratory Bird Species

Vegetation clearing activities will be limited to periods as designated by BLM (contract and Record of Decision), annually, to avoid direct impacts to nesting birds. If vegetation clearing cannot avoid the migratory bird breeding season, pre-clearing nest surveys will be conducted in order to avoid incidental destruction of bird nests. The Record of Decision (BLM, 2018) specifically requires:

1. Vegetation-clearing activities will not occur from May 1 through June 30 to avoid direct effects to nesting migratory birds. If vegetation clearing cannot avoid this 60-day period, surveys for

bird nesting activity will be conducted by a qualified biologist and the operator will obtain an exemption from the BLM prior to any vegetation-clearing activities.

2. A raptor survey will be necessary prior to any vegetation removal scheduled between March 15 and July 31. The proponent [C&J] will contact the BLM two weeks prior to anticipated ground clearing activities to conduct clearance surveys.

Wildlife – Big Game Species The major big game species of interest are elk and mule deer. Based on the cumulative effective habitat loss analysis, the proposed project area, as well as a 600-meter buffer (e.g., the estimated area of effective habitat loss expected from gravel mining) is located entirely within an area that has been previously affected from past or present actions (that is, past mining at Montoya and Crader Pits, recreation use, and proximity to highways, oil and gas development and power line operations. The proposed project would not cumulatively contribute to big game effective habitat loss, because it is in an area that has already been affected from development or human land use.

Mitigation for Wildlife in General All construction and mining activities will be confined to the proposed project area to prevent any unnecessary or additional habitat destruction. BLM is recommending no additional mitigation measures for federally-listed threatened or endangered species, but is requiring the following measures (Record of Decision, 2018):

1. No vegetation clearing will occur from December 1 to April 15, at the discretion of the Authorized Officer, to minimize effects to wintering mule deer and elk. If conditions warrant, this timing restriction may be extended to April 30.
2. [Seasonal trail closures not germane to C&J operations.]
3. Fencing between the [skills] trail [when constructed after reclamation release of that portion of the affected land] and active mining area will be wildlife friendly.

Correspondence and discussions with BLM indicate that:

1. The Authorized Officer is currently Helen Mary Johnson of the Durango BLM office.
2. Fencing between trail and active mining area may be replaced by a berm.
3. “Wildlife friendly fencing” is similar to that found on some CDOT rights of way in wildlife hazard areas, and will be temporary in nature since mining activity will cease.

BLM has determined a finding on the Public Land Health Standard for threatened and endangered species is that the project is achieving the standard and will continue to do so. Project area habitats are sustaining healthy native plant and animal communities. All indicators associated with the plant and animal communities’ standard apply and substantiate this finding.

Private fee lands are not designated for wildlife habitat.

Invasive, Non-Native Species The BLM Record of Decision requires:

1. All vehicles and heavy machinery will be cleaned to remove seed and soil prior to and after clearing vegetated surface areas.
2. The operator will spray for noxious weeds semi-annually. All noxious and invasive species that occur on site will be treated using materials and methods approved in advance by the BLM.

In addition, control will also include mechanical means, and chemicals, as approved by La Plata County and as stated in the Montoya Pit Noxious Weed Control Plan, which is updated at least every two years.

(b) Seasonal use of the area (in and around the permit area)

As stated above, there is potential use in and around the permit area by migratory bird species for seasonal nesting, and by wintering deer and elk. Otherwise, there is no significant use.

Environmental assessments (BLM 2018) identify potential for seasonal use but indicate there is no significant impact provided that reasonable mitigation measures are implemented as stated above. C&J will comply with these measures.

(c) Presence and estimated population of threatened or endangered species from either federal or state lists

Following the guidelines of the Endangered Species Act (ESA) of 1973, as amended, a search was made for federally threatened, endangered, proposed or candidate fauna with potential to occur in La Plata County, Colorado. The United States Fish and Wildlife Service (US FWS) identifies eight Federal threatened, endangered, or proposed species that have the potential to occur within the vicinity of the Montoya Pit. none have potential to occur in the project area. In the 2018 BLM EA, all eight species were considered and eliminated from further analysis: (FE: federally endangered, ST: state threatened, FT: federally threatened, SE: state endangered.)

1. New Mexico meadow jumping mouse (*Zapus hudsonius luteus*), FE (ST)
2. North American wolverine (*Gulo gulo*), Proposed FT (SE)
3. Mexican spotted owl (*Strix occidentalis lucida*), FT (ST)
4. Southwestern willow flycatcher (*Empidonax traillii extimus*), FE (SE)
5. Yellow-billed cuckoo (Western distinct population segment, *Coccyzus americanus occidentalis*), FT
6. Colorado pikeminnow (*Ptychocheilus lucius*), FE (ST)
7. Razorback sucker (*Xyrauchen texanus*), FE (SE)
8. Knowlton's cactus (*Pediocactus knowltonii*), FE

In addition to Federally-listed species, the State of Colorado may have other species identified not counting those that are both federally- and state-listed. CPW (Colorado Division of Parks and Wildlife) was contacted but could not provide a current listing for species specifically in La Plata County. A review of the statewide listing did not find any species which have potential habitat on or in the immediate vicinity of the Montoya Pit.

The habitat in the analysis area was evaluated for threatened, endangered and sensitive plants in 2007 and 2017. No federally-listed plants have potential habitat in the analysis area.

The primary reason for elimination is the lack of habitat for these species. There is no designated critical habitat for threatened or endangered species located in the existing affected area or expansion area. A field survey conducted in May 2017 made the finding (supported by analysis of habitat types present within the Montoya Pit permit boundary that there is no potential habitat for any federally listed threatened, endangered, or proposed species within the project area. Therefore, mining activities are expected to have no effect on any federally listed species or designated critical habitat. None of the listed species have potential to occur in the project area based on evaluation of habitat associations and field surveys. The Proposed Action is not expected to have any direct, indirect, or cumulative impacts on federally listed species.

Mitigation Despite this, the Record of Decision and BLM sales contract restrict certain activities during specific periods of each year, and make certain other requirements, to include:

- a. No clearing of vegetation 31 December to 15 April with possible extension to 30 April for protection of winter forage and range
- b. No clearing of vegetation 01 May to 30 June for protection of nesting avians [including migratory species]
- c. Installation of wildlife-friendly fencing around mining activities

(d) a description of the general effect during and after the proposed operation on the existing wildlife of the area, including but not limited to temporary and permanent loss of food and habitat, interference with migratory routes, and the general effect on the wildlife from increased human activity, including noise.

Based on operations and observations since 1980, and especially since mining activity began on Public Lands managed by the BLM, indicate that wildlife in the area has adapted to impacts from operations,

and do inhabit portions of both the working areas of the Montoya Pit and those areas under reclamation, as well as unaffected land within and outside the permit area. Other operations and activities in the area (including the partially-built SH-160/SH-550 interchange, business activities to the west, heavy highway traffic to the south, and recent development activities underway and planned to the east, as well as oil and gas operations, all contribute to impacts on wildlife, but are not significant, according to analysis including the BLM EAs of 2007, 2011, and 2018. Areas under reclamation (but not yet released) have signs of the presence of, and use by, wildlife. Noise from operations are limited both daily and seasonally.

BLM, in the Record of Decision, has required mitigation to minimize noise and visual effects by placing natural features, berms, or other structures along the top of the pit wall. At the same time, all mining structures or facilities (other than pit boundary features) will be located on the pit floor and avoid interrupting natural horizon lines (no skylining). The nature of the terrain and planned mining will limit direct paths for sound.

Comments by the Colorado Division of Parks and Wildlife. CPW has stated the following concerns:

1. Cumulative effects of ongoing fragmentation of severe winter range and winter concentration habitat types in the Grandview Mesa Area.
2. Post-mining land use of the site including a bike skills park and potential parking lot.
3. Desire for full vegetative reclamation to pre-mining conditions (including species composition) and use.
4. Preference for post-reclamation land use to include no additional human impacts to the area.

Response:

1. While the proposed 18.3-acre 2018 expansion area and the changes in post-mining use in other portions of Public Land previously affected by mining does temporarily reduce wildlife range, it does not fragment the range, as it is located on the very edge of the identified ranges. In addition, oil and gas operations and infrastructure in the area, as well as the SH-160/550 corridors' impact to the area has already fragmented range, and changes in a 16-acre area to continue recreation and wildlife use do not appear to have a significant negative cumulative impact.
2. The 16-acre skill trails area is designed and intended to be used as both wildlife habitat and low-impact recreation, by BLM, and BLM will close the area to public use seasonally to reduce or eliminate any impacts on wildlife. It is located in an area which has already been affected by mining.
3. The Operator will comply with BLM and NRCS requirements for revegetation. In addition, mining and reclamation to DRMS and BLM standards will improve the quality of habitat by reducing unproductive areas (such as exposed rock), and is designed, long-term, to create an ecosystem with native species conducive to wildlife use year-round.
4. The entire 18.3-acre 2018 expansion area will, post-reclamation, have no additional human impacts. It is located contiguous to areas already affected, to the east.

References:

La Plata County Biological Assessment (2003) (https://cnhp.colostate.edu/wp-content/uploads/download/documents/2004/LaPlata_County_Biological_Assessment.pdf, accessed most recently on 14 July 2018)

Threatened and Endangered Species Listing for La Plata County (unknown date) (<https://www.waterinfo.org/taxonomy/term/2761>, accessed most recently on 11 December 2017)

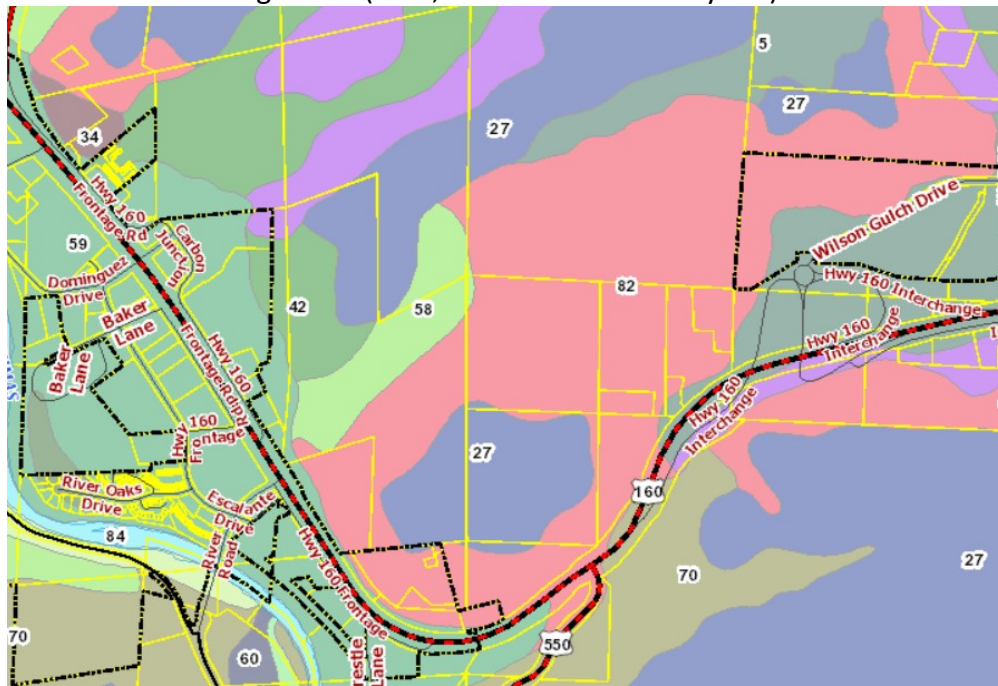
Colorado Parks & Wildlife Threatened and Endangered List (<https://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx>, accessed most recently on 11 December 2017)
<https://cpw.state.co.us/learn/Pages/KMZ-Maps.aspx>

EXHIBIT I – Soils Information

Refer to BLM Environmental Assessment, previous amendments, and original application for additional information.

The area to be added to the permitted area is very similar to the areas in AM-04. The soils in this area are classified as Ustollic Haplargids, fine-silty, mixed mesic. Basically these soils are deep, well drained soils which overlay the gravel deposits. The pH of this soil is neutral and there are no salts present that will affect plant growth. Depth of the overburden ranges from 10' to 20'. The gravel deposit under the overburden runs approximately 50' deep with shale deposit beneath.

Figure I-1 (Soils, from La Plata County GIS)



Refer to NRCS Soil Survey for referenced soil numbers.

EXHIBIT J – Vegetation Information

1. Physiographic region: Colorado Plateau
2. Level III Ecoregion: Colorado Plateaus
3. Level IV Ecoregion: Semiarid Benchlands and Canyonlands
4. Physiographic Features: Benches, mesas, cuestras, alluvial fans, hillslopes, cliffs, arches, and canyons. A few isolated peaks. Areas of low relief alternate with areas of high relief.
5. Typical Geology: Quaternary alluvium and colluvium. Tertiary and Cretaceous siltstone, sandstone, claystone, oil shale, and marlstone. In deep canyons and cliffs: areas of Permian siltstone, sandstone, and shale, and Pre-Pennsylvanian Paleozoic shale, limestone, and sandstone.
6. Elevation: 5400 to 9200 feet (Site is approximately 6800)
7. Local relief: 100 to 1000 feet (Site has approximately 200 before mining)
8. Natural Vegetation: Pinyon-juniper woodland, Gambel oak woodland, and sagebrush steppe with black sagebrush, winterfat, Mormon tea, fourwing saltbush, shadscale, galleta grass, and blue grama. As indicated in previous reports, pre-mining vegetation is predominantly Pinon and Juniper trees. There is also Western Wheatgrass, Cheatgrass, Indian Rice grass, Squirrel Tail, Snowberry, Mountain Mahogany and Sand Dropseed.
9. Land use and land cover: Woodland and shrubland. Rangeland, recreation, industrial/commercial, oil and gas production. Other nearby areas used for coal mining and oil shale extraction. State Highways 160 and 550 are high-volume arterials used for both local and regional traffic, and emissions, noise, dust, and other elements have potential impact on vegetation.
10. Limits on vegetation: Soil quality is very poor and has a direct impact on the ecosystem. Natural precipitation is relatively low, extremely variable, and drought is common. Wind and water erosion and impacts on plants from wind reduce the quality of resources available for plant life.
11. SEED MIX FOR RECLAMATION: (and seeding instructions) See Exhibit E.
12. Also refer to BLM Environmental Assessment, previous amendments, and original application for all information.
13. The Montoya Pit, including the 2018 18.3-acre Expansion area occurs within a mixed-age pinyon-juniper woodland dominated by pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*). The forest stand structure is a relatively open mosaic of patches of trees and shrubs interspersed with open areas. Evidence of past thinning operations such as coarse woody debris was observed at points throughout the expansion area, and existed in currently affected areas before mining. In addition, forest stand structure has been impacted by Ips beetle (*Ips confusus*) infestations, which have resulted in the presence of numerous snags in the area. Dryland shrubs and herbaceous species dominate forest openings within the 2018 Expansion area.
Dominant shrub species observed during the BLM contractor's EA field survey included mountain mahogany (*Cercocarpus* spp.), Gambel oak (*Quercus gambelii*), big sagebrush (*Artemisia tridentata*), rubber rabbitbrush (*Ericameria nauseosa*), cliff fendlerbush (*Fendlera rupicola*), and antelope bitterbrush (*Purshia tridentata*). Dominant herbaceous species observed included scarlet globemallow (*Sphaeralcea coccinea*), scarlet gilia (*Gilia aggregata*), field pennycress (*Thlaspi arvense*), trailing fleabane (*Erigeron flagellaris*), buckwheat (*Eriogonum* spp.), blue grama (*Bouteloua gracilis*), squirreltail (*Elymus elymoides*), muttongrass (*Poa fendleriana*), brome (*Bromus* spp.), and Indian ricegrass (*Achnatherum hymenoides*). Average pre-mining shrub cover was estimated at 20 percent and herbaceous cover was estimated at 40 percent.

EXHIBIT K – Climate

Temperature/Moisture Regime: Mesic, Frigid, Aridic, Ustic:

Precipitation for Ecoregion: 10-18 inches per annum (typical) (Site: 16 in/year)

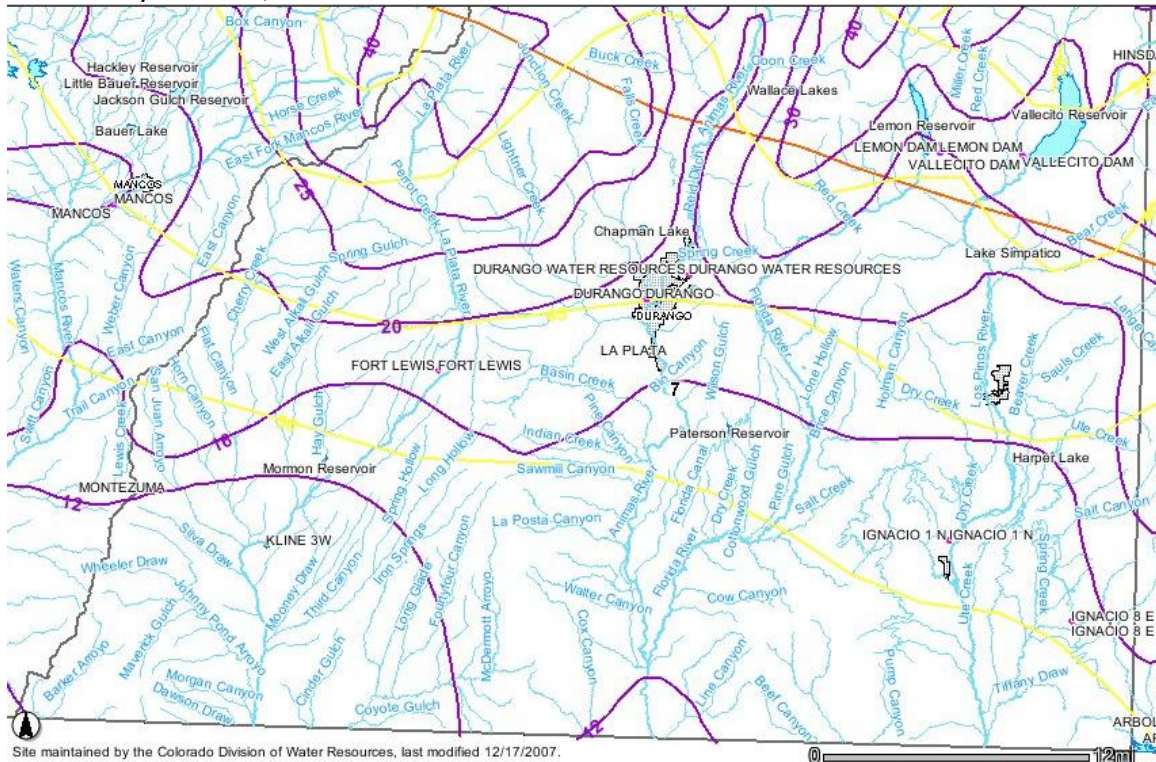
Evaporation: 45 inches/year

Frost free mean annual days: 60-120

Mean temperatures:

Jan min 8F, max 40F

July min 48F, max 88F



Note: Montoya Pit is located immediately north of the junction of Wilson Gulch with the Animas River. Refer to BLM Environmental Assessment, previous amendments, and original application for additional information.

EXHIBIT L – Reclamation Costs

C&J MONTOYA PIT – M1980-146 – PERMIT AMENDMENT (2018)

This information is provided for use by DRMS to calculate official estimates of cost for the reclamation as of approval of this amendment (entry into 2018 18.3-acre Expansion area) The DRMS estimates replace cost figures included in this exhibit, which are based on DRMS factors.

TABLE L-1. EXISTING PERMIT AREA (Refer to Map C-1)

<u>Map</u>	<u>By Acres</u>			<u>Description</u>	<u>Actions Needed</u>
<u>C-1</u>	<u>Private</u>	<u>BLM Old</u>	<u>Total</u>		
A1	3.3	0.0	3.3	Reclaimed and adequate vegetation	Release
A2	4.4	0.0	4.4	Reclaimed and adequate vegetation	Release
A3	0.0	1.9	1.9	Reclaimed and adequate vegetation	Release
A4	0.0	4.6	4.6	Reclaimed, vegetation not adequate	Wait and release
A5	0.0	1.5	1.5	Reclaimed see Notes	See Notes
A6	0.0	4.0	4.0	Reclaimed, vegetation not adequate	Wait and release
A	7.7	12.0	19.7	Reclaimed	
B1	4.2	0.0	4.2	At final grade with soil	Revegetate
B2	4.0	0.0	4.0	At final grade with soil	Revegetate
B3	0	15.0	15.0	At final grade with soil	Revegetate
B	8.1	15.0	23.1	At final grade with soil	
C	0.0	3.0	3.0	Being backfilled and graded	Final grade, soil, revege
D	0.0	5.5	5.5	Currently being mined	Rip, soil, revege
E1	8.6	0.0	8.6	Plant/stockpile area (at grade)	Rip, soil, revege
E2	0.0	22.3	22.3	Plant/stockpile area (at grade)	Rip, soil, revege
E	8.6	22.3	30.9	Plant/stockpile area (at grade)	Rip, soil, revege
Total	33.0	77.0	110.0	Totals by land ownership	

- Notes
- 1 Current highwalls not fully reduced are in Areas A5, B3, C, and D.
 - 2 Currently, backfilling underway in Area C. Anticipated to be complete in 2018. Area B3 & D highwalls to be reduced during mining of 2018 18.3 acre BLM Expansion.
 - 3 Expansion.
 - 4 Assuming expansion floor of pit elevation 6700 sloping up to west.
 - 5 No demolition of structures required: See Exhibit D.
 - 6 Total affected area of 110 acres estimated as of July 2018.
 - 7 19.7 acres ready or near-ready to request release. Net affected of 91.3 acres.
 - 8 Area A5 may require additional fill to flatten from 2:1 to 3:1 for revegetation.

TABLE L-2. EXISTING PERMIT AREA TASKS SUMMARY

<u>Map</u> <u>C-1</u>	<u>Revege</u>		<u>Soil</u>		<u>Rip</u>		<u>Final Grade</u>	
	<u>Private</u>	<u>BLM</u>	<u>Private</u>	<u>BLM</u>	<u>Private</u>	<u>BLM</u>	<u>Private</u>	<u>BLM</u>
A1								
A2								
A3								
A4	0.0	4.6						
A5	0.0	1.5	0.0	1.5				
A6	0.0	4.0						
A	0.0	10.1	0.0	1.5				
B1	4.2	0.0						
B2	4.0	0.0						
B3	0.0	15.0						
B	8.1	15.0	0.0	0.0				
C	0.0	3.0	0.0	3.0			0.0	3.0
D	0.0	5.5	0.0	5.5			0	5.5
E1	8.6	0.0	8.6	0.0	8.6	0.0		
E2	0.0	22.3	0.0	22.3	0.0	22.3		
E	8.6	22.3	8.6	22.3	8.6	22.3		
	<u>Revege</u>		<u>Soil</u>		<u>Rip</u>		<u>Final Grade</u>	
Tot x	16.7	55.8	8.6	32.2	8.6	22.3	0.0	8.4
own								
Pit								
Total	72.5		40.8		30.9		8.4	

See notes between Tables L-1 and L-2

TABLE L-3. HIGHWALLS AND BACFILL REQUIREMENTS

(This table duplicates Table E-2 Highwalls and backfill requirements)

<u>Area</u>	<u>Length</u>	<u>Avg Ht</u>	<u>Feature</u>	<u>Notes</u>	<u>CY backfill</u>	<u>CY Loose</u>
A5	330	32	2:1 slope	Reduce to 3:1 if needed Push 293 ft @+2%	68,800	82,560
B3	1255	35	Highwall	Expansion will eliminate Push 50 ft @-66%	19,666	23,599
C	540	30	Highwall	NW corner - now 40-ft bench Push 240 ft @ -10%	19,500	23,400
Dw	1675	30	Highwall	Expansion will eliminate Push 50 ft @ -66%	14,734	17,681
Ds	1247	20	Highwall	Boundary w Crader Pit Push 20 feet @-65%	2,800	3,360
				Total	125,500	150,600
Ex-S	515	30	Highwall	In 2nd phase on SW edge Push 20 feet @+10%	17,167	20,600
Ex-N	260	30	Highwall	In 6th phase of NW edge Push 30 feet @+10%	8,667	10,400
				Total	25,833	31,000

- Notes:
1. Length in feet measured from topo. Height in feet average measured from topo.
 2. Loose CY = 1.2 CY bank/placed. Volume= Avg Htx2xAvg Ht*length/2/27
 3. Average height for A5 is maximum thickness to be placed to flatten from 2:1 to 3:1
 4. CY = 27 cf (cubic yards, cubic feet)
 5. Since backfill of B3, Dw, and Ds involves pushing, average height is half of total height for calculation purposes.
 6. See profiles of highwalls.

7. West side of Area C already at 2:1 slope.

8. Areas Ex-S and Ex-N will not be open highwalls until phase shown.

TABLE L-4. RECLAMATION TASKS

Owner	Task	Acres	Volume	Prod Rate	Hours	Cost/Hr	Private\$	BLM\$	Total \$
BLM	Grade	8.4	56,789	750	76	\$270	0	\$20,520	\$20,520
BLM	Rip	21.2	34,203	950	36	\$270	0	\$9,720	\$9,720
Private	Rip	10.4	16,779	950	18	\$270	\$4,860	0	\$4,860
BLM	Soil	31.8	25,652	1000	15	\$270	0	\$4,050	\$4,050
Private	Soil	10.4	8,389	1000	5	\$270	\$1,350	0	\$1,350
Owner	Task	Acres				Cost/Ac			
BLM	Revege	57.9	--	--	--	\$920	0	\$53,268	\$53,268
Private	Revege	18.5				\$920	\$17,020	0	\$17,020
BLM	Reduce	High	Walls	(Table L-3)		--		\$75,904	\$75,904
TOTAL							\$23,230	\$163,462	\$186,692

Notes:

1 All work assumed done with D10 dozer. Production rate in LCY/hour.

2 Volume of grading assumes average 4 foot depth. Depth of ripping is 1 foot. Depth of soil replacement average 4 inches, maximum 6 inches. Volumes in CY.

3 Costs from DRMS reclamation estimates: Revegetation (Revege) includes no fertilizing, includes disc harrow (\$130/ac), Weed control spray (\$70/ac), and specified seed mix (\$400/ac), hydromulch/seeding (\$320/ac), total \$920/ac.

TABLE L-5. OTHER COSTS AND TOTAL COSTS FOR CURRENT AFFECTED LAND

<u>Task/Cost Factor</u>	<u>Calculation</u>		<u>Total</u>	<u>BLM</u>	<u>Private</u>
Task Cost			\$186,692	\$163,462	\$23,230
Mobilization	Durango source	4 hrs	\$ 2,000	\$ 1,000	\$ 1,000
Insurance	% of direct	2.02	\$ 3,771	\$ 3,302	\$ 469
Performance Bond	% of direct	1.05	\$ 1,960	\$ 1,716	\$ 244
Supervision	200 hrs @ \$60/hr		\$ 12,000	\$ 9,816	\$ 2,184
Profit	% of direct	10	\$ 18,669	\$ 16,346	\$ 2,323
Total Overhead/Profit			\$ 38,400	\$ 32,180	\$ 6,220
Total Contract Amount			\$ 225,092	\$ 195,642	\$ 29,450
Financial Warranty Processing	Each area		\$ 1,000	\$ 500	\$ 500
Engineering	Estimated		\$ 1,500	\$ 1,000	\$ 500
Reclamation management	5% of contract amount		\$ 11,255	\$ 9,782	\$ 1,473
Total			\$ 227,592	\$ 197,142	\$ 30,450

TABLE L-6. EXPANSION AREA (18.3 ACRES) – ALL PUBLIC (BLM) LAND

<u>Map</u>	<u>Length</u>	<u>Area</u>	<u>Description</u>	<u>Actions Needed</u>	<u>Revege</u>	<u>Soil</u>	<u>Reduce</u>
G1	556	2.1	Highwalls either undisturbed or reduced	Assume soil & revege	2.1	2.1	
G2	556	2.1	Highwalls requiring reduction	Backfill, soil, revege	2.1	2.1	2.1
G3	na	14.0	Floor of Pit at final grade	Rip, soil, revege	14.0	14.0	
					18.3	18.3	2.1

This is based on certain assumptions and the mining and reclamation plans.

1. Expansion area will be affected only as mining progresses over the five years and not all at one time.
2. Existing highwalls B3 and Dw will be eliminated in the first year of expansion, and will not be replaced by new highwalls, as the west side of the Expansion area will match existing grades. As each portion of the Expansion area (1-6, Map C-3) is mined the full width of the Expansion area and operations move to the north,
3. Terrain eliminates highwalls on the west edge of the Expansion area, leaving a small highwall in the southwest (Gs) corner, created in the second phase, which will taper to the west and be backfilled during the third phase. The notch in

the existing northwest corner of the current (and proposed) affected area will be matched by the area mined and backfilled in the 5th or 6th phase.

4. Area will be mined to final grade as mining progresses, with the floor of the pit used to relocate plant and stockpile areas from their present (2018) locations (allowing reclamation of those areas, as stated above).
5. No permanent roads or trails will be left in the area. There may be a need for trails or roads (to be determined by BLM) for access to recreation trails outside the affected area, and storm water controls.
6. The estimate is based on the maximum work necessary during the five-year period, to include:
 - (a) 25% of highwalls will need to be reduced (after existing highwalls have been reduced);
 - (b) Except for highwalls not yet reduced (and the 3:1 toe area to be backfilled), the entire area will be at final grade and require no backfill or rough grading.
 - (c) Entire floor will require ripping, placement of soil, and revegetation. Slopes of any reduced highwalls will require only placement of soil and revegetation.
7. There will be no permanent structures, and permanent storm water (sediment/erosion control) measures are built as mining progresses.

TABLE L-7 EXPANSION AREA HIGHWALL REDUCTION

Map	Length	Avg Ht	Feature	Notes	LCY backfill	Push ft	Push -%	Cost/LCY	Total Cost
C	561	53	Highwall	Northwest corner New	26,000	100	20%	\$ 0.30	\$ 7,800.00
D/B2	1106	59	Highwall	Southwest corner New	64,000	100	20%	\$ 0.30	\$ 19,200.00
Reduced by 50% for work done as mining progresses (see assumptions)									\$ 13,500.00

TABLE L-8 EXPANSION AREA RECLAMATION TASKS

Owner	Task	Acres	Volume	Prod Rate	Hours	Cost/Hr	Cost
BLM	Grade	2.1	16,262	750	21.7	\$ 270	\$ 5,854
BLM	Rip	18.3	35,429	950	37.3	\$ 270	\$ 10,069
BLM	Soil	18.3	17,714	1000	17.7	\$ 270	\$ 4,783
Owner	Task	Acres				Cost/Ac	Cost
BLM	Revege	18.3	--	--	--	\$ 920	\$ 16,836
Reduce Highwalls (from Table L-7)							\$ 13,500
							TOTAL \$ 51,043

Assumptions are the same as used for Table L-4.

TABLE L-9 EXPANSION AREA SUPPORT COSTS AND TOTAL COSTS

Task/Cost Factor	Calculation	Basis	Total
Task Cost			\$ 51,043
Mobilization	Durango source already included in existing	4 hrs	\$ -
Insurance	% of direct	2.02	\$ 1,031
Performance Bond	% of direct	1.05	\$ 536
Supervision	50 hrs @\$60/hr		\$ 3,000
Profit	% of direct	10	\$ 5,104
Total Overhead/Profit			\$ 9,671
Total Contract Amount			\$ 60,714
Financial Warranty Processing	(If not included in overall project)		\$ 500
Engineering	Estimated		\$ 500
Reclamation management	5% of contract amount		\$ 3,036
Total			\$ 64,750

There is, of necessity, some overlap in costs between the existing affected area estimate and the expansion area estimate. This is primarily due to the reduction of highwalls that will take

place very quickly once mining begins in the expansion area. This can reduce the total estimate by at least \$28,640 in direct costs, and a share of support costs.

TABLE L-10 SUMMARY OF RECLAMATION TOTAL COSTS

	<i>BLM lands</i>	<i>Private lands</i>	<i>Total Montoya Pit</i>
<i>Existing (2018) Reclamation</i>	<i>\$ 197,142</i>	<i>\$ 30,450</i>	<i>\$ 227,592</i>
<i>Reclamation in 2018 18.3-acre Expansion Area</i>	<i>\$64,750</i>	<i>0</i>	<i>\$64,750</i>
<i>Total estimate based on maximum 2018-2023/24</i>	<i>\$ 261,892</i>	<i>\$ 30,450</i>	<i>\$ 292,342</i>
<i>Reduced cost for highwall reduction to expand</i>	<i>-\$ 28,640</i>	<i>0</i>	<i>-\$ 28,640</i>
<i>Proposed reclamation financial warranty</i>	<i>\$233,252</i>	<i>\$ 30,450</i>	<i>\$ 263,702</i>

Completion of earthwork in Areas A5 and C will further significantly reduce work for which a warranty is required, well in advance of the usual five-year cycle.

In case of an unplanned closure of the mining operation, any temporary structures (all located on private fee land), together with water well and associated features, are assumed to remain on site for future industrial and commercial activities by successors of operating companies or when sold, together with equipment remaining on-site.

It is understood that DRMS calculations will govern, and the Operator will work with DRMS to provide additional information and accurately estimate the cost of reclamation. It is also understood that this estimate shall be updated at least every five years, or following significant changes in operations and site conditions.

Estimate prepared by Nathan A. Barton 06 August 2018.

EXHIBIT M – Other Permits and Licenses

C&J MONTOYA PIT – M1980-146 – PERMIT AMENDMENT (2018)

Refer to BLM Environmental Assessment, previous amendments, and original application for additional information. Issues are listed alphabetically. Information on these permits and licenses is also contained in other exhibits.

AIR EMISSIONS (FUGITIVE DUST CONTROL PLAN): Apply all necessary control measures in Construction Permit 99LP0697F as issued by Colorado Department of Public Health and Environment, Air Pollution Control Division. Major features of the dust control plan for the operation are: (a) speed limits (b) restriction of traffic (limiting areas where traffic is allowed), (c) application of water to traffic areas (d) application of water to materials being crushed and screened and (e) rapid reclamation/stabilization of affected areas and stockpiles when not being further disturbed, and (f) paving and sweeping of high-traffic areas. Use of dust control chemicals is possible but will be limited as much as possible, and may include mag water (magnesium chloride brine), lignan sulfite, or other approved agents. Sodium chloride will not be used. For other emissions (plant, processing, etc.) see item M-13 below.

AIR EMISSIONS (EQUIPMENT/PLANTS): All equipment used to process raw (pit run) material to produce construction materials, and all equipment (plants/facilities) which use construction materials produced at Montoya Pit, which actually operate on Montoya Pit currently (as in the past) will have valid, current APEN (air pollution emission notices) and current air emissions permits, as required by CDPHE-APCD rules.

These facilities will also comply with applicable County permits or notifications, and MSHA ID numbers, in order to operate on the Montoya Pit and will comply with all applicable permit conditions and regulatory requirements.

The equipment includes (but is not limited to): non-road and stationary compression- and spare-ignition internal combustion engines (Diesel and gasoline), crushers, screens, conveyors, hoppers, bins, ready-mixed concrete plants, hot-mixed asphalt facilities (both batch and continuous-production), grinders and shredders (used for mulching wood materials), parts-washers, aggregate wash plants, equipment cleaners, and pumps.

Emissions of dust (including PM-10, PM-2.5, and TSP), other criteria pollutants (including NO_x, SO_x, CO, CO₂, and HAP), and opacity will comply with permit limits. Such pollutants will be monitored in accordance with EPA/APCD requirements. Exceedences of any emissions will be reported to APCD, and if taking place on BLM-managed lands, to BLM.

Control measures, including but not limited to integral pollution control devices (e.g., recirculation, temperature and pressure operating ranges), fuel (ultra-low-sulfur Diesel fuel), pollution control devices (baghouses, water sprays, scrubbers), restrictions on operating rates and hours, fugitive emissions controls (including watering, dust-control chemicals, speeds, surfacing) will be used as required by regulations and permit conditions. Equipment, including pollution control equipment, will be maintained as per operating and maintenance manuals and plans. Note: wash plants without screening and/or crushing components are not required to obtain permits or submit APENs for their operation. In addition, some off-road engines are not required to submit APENs or obtain permits if emissions are below regulatory thresholds.

COUNTY ZONING: The 2009 Statement from La Plata County Community Development and Planning Office (original submitted directly to MLRB) is still applicable, as there is no increase in the permitted area:

TO: Colorado Mined Land Reclamation Board
SUBJECT: Montoya Pit, M-1980-146, Location: Sections 3, 4, 10, T 34.0N R9.0W, 10th (N.M.) PM.
Pursuant to Section 34-32-115(4)(e), C.R.S., if a permit is granted, the proposed mining operation would not be in violation with city and county zoning or subdivision regulations or contrary to a master plan for extraction adopted pursuant to Section 34-1-304, C.R.S., as amended.
Pursuant to Section 34-32-108(8), C.R.S., the operator's (C&J Gravel Products, Inc.) reclamation plan is consistent with all adopted plans by La Plata County and the City of Durango.

CULTURAL RESOURCES PROTECTION: Refer to previous applications and amendments and 2018 BLM environmental assessment. All Section 106 requirements have been met. Miner training for personnel clearing, grubbing, and stripping includes training to follow company procedures for dealing with cultural resources, including requirements as stated in the Record of Decision.

HAZARDOUS MATERIAL: Any hazardous materials such as fuel and oils (Petroleum, Oils, and Lubricants (POL), solvents, hydraulic fluid, coolant, etc. are located within containment berms as required by DRMS, CDLE, and MSHA, and in accordance with Federal Oil Pollution Act (OPA) requirements for Spill Prevention, Control and Countermeasures Plan (SPCCP).

Storage, use, and generation of hazardous materials shall obtain necessary EPA (RCRA) and other registrations and submit reports. (Currently, quantities do not meet regulatory thresholds, except for reporting of POL under SARA Title III. All hazardous materials will be stored offsite of BLM permit areas on private portions of the permit area (in the shop area located in the southeast corner of the permit area). Otherwise, hazmat will be located only on-board mobile or stationary equipment (fuel tanks, hydraulic and lubricant systems and reservoirs) operating in the pit. Separate fuel tanks for stationary equipment (such as generating sets or processing equipment) will have secondary containment. Releases of any hazardous materials to air, water, or soil, shall be reported in accordance with SPCCP and federal, state, and local requirements.

PLANNING FOR STORAGE/USE OF HAZARDOUS MATERIALS: All hazardous substances regulated by the Federal Oil Pollution Act and implementing regulations are included in a certified SPCCP and/or Emergency Response Plan (ERP) as applicable. The amount of fuel and other oil products stored, transferred, and consumed on the Montoya Pit can vary significantly seasonally and based on production, presence of temporary processing plants, and other factors.

REGISTRATION OF STORAGE TANKS: All above-ground stationary storage tanks for oil and other hazmat will be registered as required by the CDLE Oil and Public Safety section, and shall comply with all applicable regulations.

REPORTING OF RELEASES: Any accidental spills of hazardous material onto BLM land will be reported within one working day and clean up will be under the direction of the BLM; otherwise applicable state/federal law will be followed for reporting and response. *Note: "Hazardous Material" as defined by BLM does NOT necessarily meet the definition as established by other*

agencies, including the DRMS. Refer to Attachment M-1 for summary of the facility's Spill Prevention, Control and Countermeasures (SPCC) Plan and Emergency Response Plan (ERP).

NOISE CONTROL: Noise control is regulated by the Mine Safety and Health Administration (MSHA) for miners only. All test results are kept on file and will be made available to BLM as needed. *State regulations limit noise to 55 dBA at the property edge. Terrain and mine configuration limit exposure to noise at off-site receptors. As much as possible, activities and equipment generating noise will be masked by berms, highwalls, and stockpiles.*

OPERATIONS SAFETY PLAN: C&J Gravel operates under the regulation of and in complete accordance with MSHA regulations: MSHA 30 CFR, Part 46, Subpart B-E and Part 56.

SAFETY TRAINING: C&J maintains MSHA Part 46 training plans for Montoya Pit and for its crushing and screening trains and other mining operations.

PROCESSING PLANTS: C&J Gravel will have operate, or have a customer/contractor operate, one or more processing plants operating in the Montoya Pit. These include:

(1) Crushing and Screening Plants. Equipment of these temporary, portable plants (trains) includes primary and secondary crushers, primary and secondary screens, hoppers, feeders, conveyors (including stacking conveyors), diesel engines, electrical generating sets, fuel tanks, and control vans. Configuration will vary from time to time, as will layout and throughput. These plants will move from time to time for efficient movement of raw materials from the working face to the plant and then to product stockpiles and loadout areas. Materials: fuel, aggregates (including dust, sand, gravel/crushed rock), lubricants, water. Quantities vary from plant to plant. To control point-source and fugitive dust emissions, plants will use water sprays, wet materials, enclosures and wind barrier materials on equipment such as conveyors when appropriate. APENs/Permits required for most equipment.

(2) Hot-mixed asphalt facilities. Equipment includes storage tanks for asphalt cement (AC) oil (heated), diesel fuel or propane for fuel (including heating AC oil, aggregates, and asphalt paving materials); burners, rotary drums, conveyors, lime silos, heated APM silos, truck prep areas, recyclable drop points, load-out points, baghouses and/or scrubbers, scrubber water basins, hoppers, ramps, generating sets (diesel engines), and control van. An area is designated (in the southeast portion of the permit area) for these temporary, portable facilities approximately 210 x 110 feet in size, with possible adjacent area for scrubber basins and secondary containment. Materials include AC oil, diesel fuel, soap, lime, cement (powder), lubricants, aggregates. Quantities vary from plant to plant. Emissions from burners, drums, transfer, and storage silos will be controlled by approved pollution control devices such as scrubbers, baghouses, and electric precipitators. Permit required.

(3) Ready-mixed concrete plants. Equipment of these portable, relocatable, and/or temporary facilities includes storage silos and pigs for Portland cement, storage containers for admixtures and colorants, bins for aggregates, conveyors, mixers, transfer vents and hoppers, washout and recycling points, water tanks, electrical generating sets with diesel engines, fuel tanks, fuel tanks, and control vans/units. An area is designated in the southeast corner of pit for these

facilities, approximately 110 x 110 feet in size. Materials including Portland cement, admixtures, colorants, muriatic/hydrochloric acid, diesel fuel, form oil, aggregates, fly ash, and water. Quantities vary from plant to plant. Emissions from transfer, mixing, and load-out will be controlled using baghouses, cyclones, and other approved pollution control devices.

(4) Aggregate Washing Plant and Basins. Equipment of these portable, relocatable and/or temporary plants for the washing of aggregates includes sand-screws, generator sets, pumps, mixing systems, conveyors, hoppers, and load-out points. An area is designated near the Montoya Pit office for these plants, of approximately 200 x 150 feet in size, and including sediment and evaporation basins for recycling of wash water. Anticipated washwater flow is 500 gallons/minute (gpm) maximum, average 150 gpm to wash 100 tons/hour of material free from fines. Actual consumption will vary based on weather, quality of construction materials, and other factors.

Materials used in the wash plant include flocculants, aggregates, fines, diesel fuel (for pumps and electrical power generation). Quantities may vary. Emissions are very low, as wet materials prevent significant releases of dust. Procedures include frequent cleaning of equipment to remove fine particles which may be airborne if dry. APEN and permits are generally not required for wash plants, provided there is no crushing or screening. Plant to be located in an area with no potential for discharge with 10-year frequency or lesser storm event. Removal of fines from settling basins will be performed in a manner necessary to prevent dust generation and tracking of wet or dry fines. Fines removed from basins will be mixed with other clean materials and used for backfill.

Basins associated with the wash plant are to have a total capacity of at least 1.27-acre feet including freeboard and fines, will be incised (no dam or dike) with depth varying from 0 to 10 feet (not including fines in the floor of the basin), with a total surface area of 7,600 SF.

(5) General Plant Needs/Issues. All plants will have required permits for water, discharges and air emissions, and will comply with conditions to prevent violation of air and water quality limits.

All water priority materials and hazardous materials will be stored with secondary containment in accordance with permit and regulatory requirements and good engineering practice. There will be no uncontrolled discharge or discharge without treatment of any water which has contact with any water-priority chemicals or sources of sediment. Sites will be curbed and/or bermed as necessary to prevent run-on or run-off of storm water or discharges. All plants will have traffic patterns and controls in place and enforced, together with other MSHA-standard safety features, to prevent negative environmental and safety impacts. Plants will be portable and can be relocated if necessary based on market conditions, demand, and requirements to remain in compliance with all applicable regulations and standards.

SANITARY AND INDUSTRIAL WASTE WATER (SEWAGE): The office and shop area are served by an existing on-site wastewater treatment system (septic system), with portable plants having portable (chemical) latrines as required. There is no discharge of treated or untreated sanitary

or industrial waste water. When latrines and the septic system are pumped, waste water is disposed of at a licensed waste water treatment plant by a licensed hauler. There is no discharge of waste water from washing and cleaning, and floor drains in shops are not connected to a sanitary sewer system. Wash water (as from a wash plant or concrete washout) is recycled on-site. Scrubber water (as from a hot-mixed asphalt plant) is recycled on-site.

SOLID WASTE: Do not dispose of municipal/putrescible/hazardous solid waste on-site, whether generated by C&J Gravel Products, contractors or customers. Dispose of solid waste through the permitted transfer station or permitted landfill(s) in La Plata County. Reuse, reduce, and recycle all suitable materials, including metals. Use recycled materials diverted from the waste stream in accordance with applicable local, state, and federal requirements, for demonstrated beneficial use in accordance with regulations. C&J will accept and process materials removed by customers from construction sites, provided it is clean and free from deleterious materials. Examples include: clean earth, soil, base course, rock, concrete, asphalt surfacing materials, wood (such as branches, roots, twigs), and other clean, non-putrescible materials which can be used for producing new materials, for backfill or for mulching/soil amendments as described in Exhibit E and elsewhere. C&J will inspect on a regular basis for any illegal dumping of solid waste, including litter, in the permitted and affected areas and at entrances. BLM and (as appropriate) DRMS will be notified of significant problems with solid waste.

STORM WATER MANAGEMENT PLAN (SWMP): Implement plan as required by CDPHE Water Quality Control Division permit, including review and update at least annually. Do any maintenance or corrective action as needed (reported annually). Sediment, detention and retention basins are located on the permit area. These are a result of gravel mining and are inspected frequently by operator, DRMS, and BLM as part of the storm water management plan. See Figures M-2 and M-3 for SWMP summary. See also Exhibit G, Water.

TRAFFIC ACCESS PERMIT: Comply with current permit issued by CDOT, still valid and to remain in place until resolution of legal and other issues to allow access through the SH-160/SH-550 interchange. At that time, the permit will be revised as necessary. Reclamation release on portions of reclaimed land in the southeast corner of the permit area is not being requested, in order to allow any work necessary to meet new CDOT requirements to be done. Access road realignment and improvement may further impact currently affected lands.

WATERS OF THE US/USACE (404) PERMITTING: No waters of the United States are to be impacted in any way; no activities requiring permitting by USACE have been identified. Neither Wilson Gulch nor Sale Barn Canyon are perennial streams and do not have established high-water marks nor delineated floodplains or wetlands.

WATER RIGHTS: There is presently no water well on Montoya Pit owned or operated by C&J Gravel Products. There are no ponds or surface water diversion points on Montoya Pit. Storm water detention basins are/will be designed to limit detention of surface water for not more than 72 hours before infiltrating or evaporating under normal weather conditions after storm events. Freeboard for water basins supporting plants will be kept to a minimum to reduce

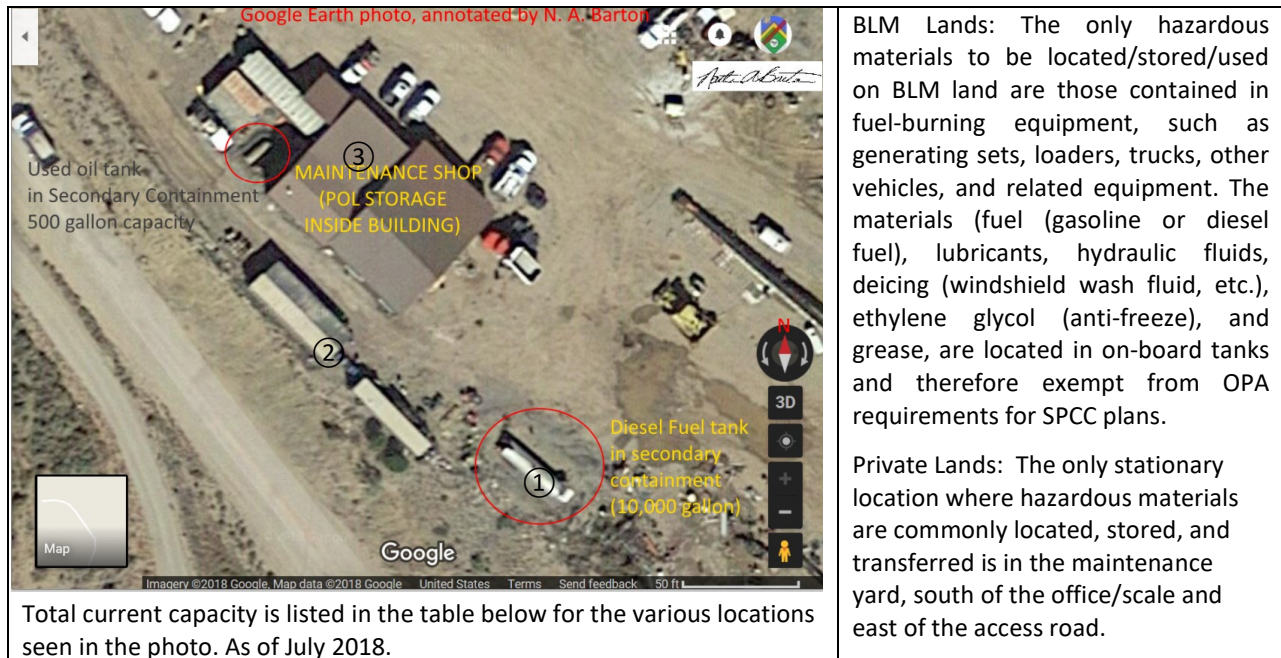
potential for retention of storm water. Therefore, there are no known established water rights or use permits and none required for operations.

C&J Gravel Products Inc. has applied for a well permit from the State Engineer (Division of Water Resources) on 25 May 2018, receipt number 3686521, for up to 4.25 acre-feet to be used for industrial purposes. C&J also may obtain water from well 274647 before the new well is drilled and put into service, and to supplement the new well as necessary. The application is presently being reviewed by DWR. This water will be used for washing, for dust control, and (if of suitable quality and quantity), for scrubbing of air emissions, production of concrete, vehicle cleaning, and other purposes related to mining activities. Consumptive use of water will include evaporation, shipment in product (construction materials), and other industrial use. If future requirements require retaining storm water, water rights will be obtained as required by Colorado Water Law.

WEED CONTROL: All growth medium and overburden stockpiles will be seeded with approved BLM seed mix to help control dust. These same stockpiles will also be subject to C & J gravel's weed control plan as approved by La Plata County (filed with DRMS and substantially unchanged since 2009), and in accordance with BLM contract conditions and mitigation as described in the Decision of Record. C&J's goal continues to be to eradicate all noxious weeds from the mine. When used, pesticides will be applied by certified pesticide technicians and all use recorded.

WILDLIFE: There is currently no water source on the Grandview ridge mesa other than the basins and water found in detention/evaporation basins after storm events, and/or supplied by C&J Gravel under the direction of BLM. Wildlife will use existing basins and supply water via water truck to the ponds during the dry season or as needed. No taking of wildlife has been identified requiring any permits. Basins likely to have contaminated water (such as washout basins or basins for scrubber water) will be fenced against wildlife and livestock access.

Figure M-1. Spill Prevention, Control & Countermeasures Plan (SPCCP) Summary



If external tanks are used (for example, a tank for diesel fuel for a plant or generating set, these are placed within secondary containments, Because AC oil has a freezing point well above ambient temperatures, it is not considered a water-priority or hazardous material for spill planning.

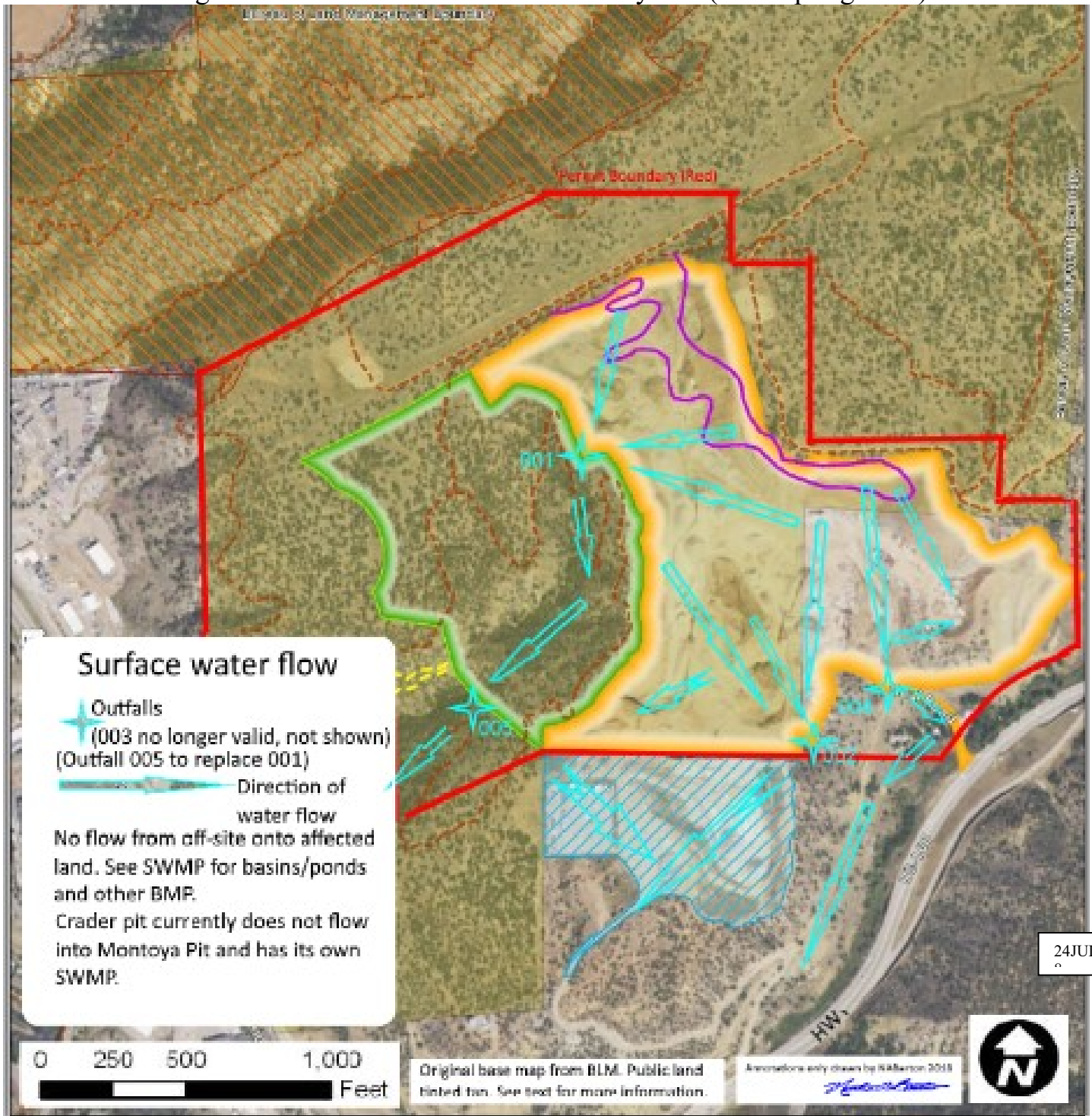
Source	Identification Number	Location (Map)	Type	Major Type of Failure	Other Types of Failure	Total Quantity Stored (gals)
Diesel Tank (1 ea)	1	1	AST	Tank failure	Line failure	10,000 max
Gasoline Tank (1 ea)	2	1	AST	Tank failure	Line failure	500 max
New Oil Containers(v)	3 a – x	2	Drums	Tank failure	Error	2,850 max
Used Oil Tanks (2 ea)	4a, 4b	3	AST	Tank failure	Error	1,500 max
DEF Tote	5	3	Tote	Tank failure	Error	300 gal
Hyd fluid Tank	5	3	Tote	Tank failure	Error	250 gal
Antifreeze drum (2 ea)	5 a-x	3	Drums	Tank failure	Error	110 gal

Normally, the maximum amount of Diesel fuel stored is 4,000 gallons. In addition, POL may be stored on equipment (both mobile and portable) used on the site, and quantities vary. In addition, there are storage tanks which are not in service which may be stored on the private land. There is no POL storage (above-ground stationary tanks) on BLM land not directly associated with equipment. Total maximum stored outside of secondary containments (ID 3 and 5) is 3,510 gallons. Up to 8,000 gallons of AC Oil and 8,000 gallons of Diesel or fuel oil may be stored in tanks for HMA facilities temporarily on site, with temporary secondary containments.

Secondary containments are designed and built in accordance with established regulatory and engineering practice, and feature impermeable liners, ability to hold precipitation from a 10-year frequency storm, 110% capacity of the largest container in the containment, 50% of total capacity of all containers, and standard methods for dealing with drainage, and other issues. These are usually constructed of earth or gravel with an impervious liner (HDPE, PVC, or other material), with provision for inspecting and discharging any clean storm water to adjacent areas to evaporate, after removal of any petroleum products from the water (film).

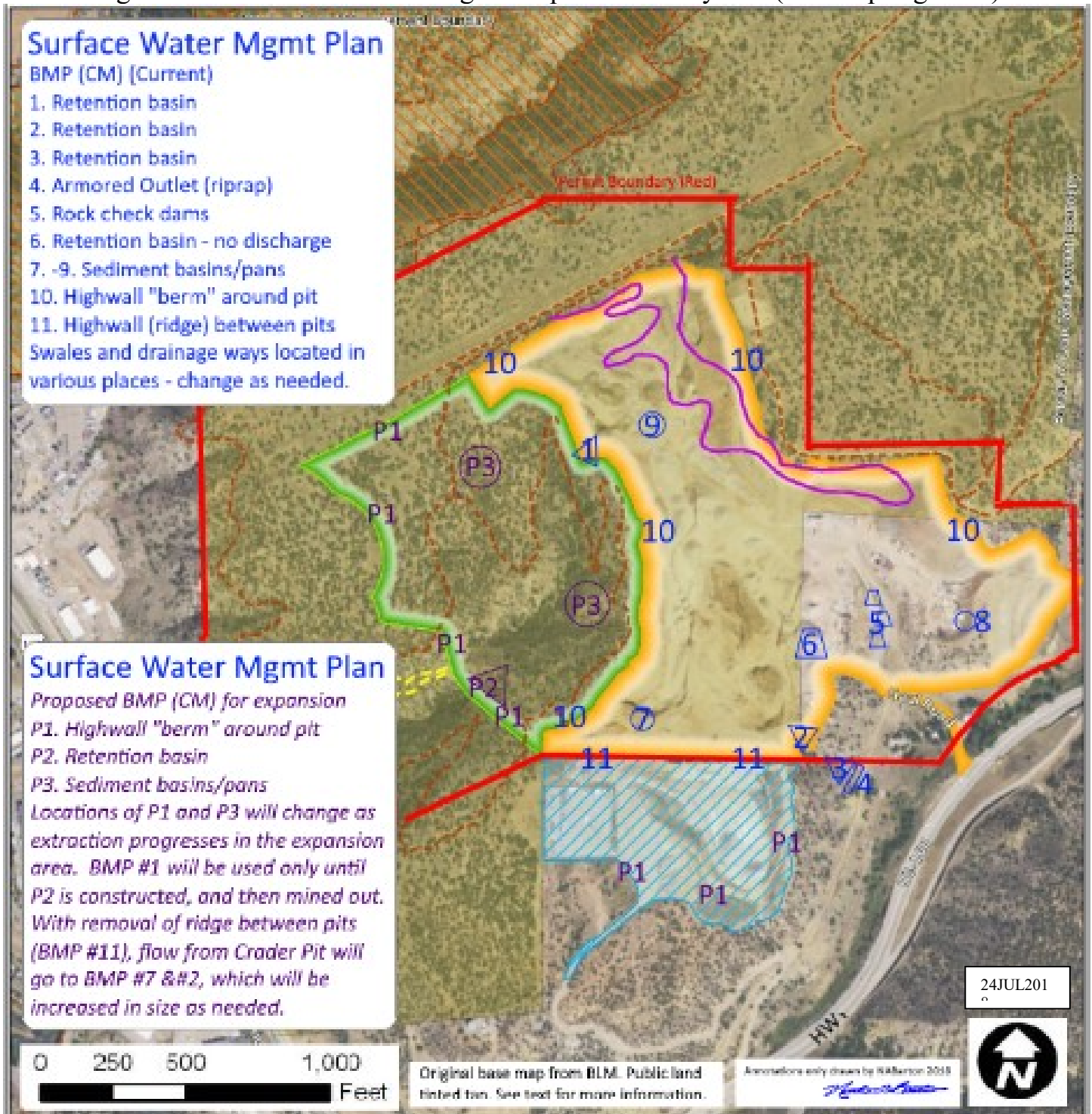
It must be noted that these quantities, as well as the containers and containment used may be changed based on technology, equipment needs, demand, and other regulatory requirements.

Figure M-2. Surface water flow – Montoya Pit (as of Spring 2018)



Surface water flow as shown above subject to change as excavation/extraction and reclamation proceed. Most if not all precipitation falling onto the affected lands either infiltrates or evaporates and does not result in surface discharge of water. There are no perennial streams on or adjacent to the site. As mining proceeds, the direction of flow of storm water onto and through the site is primarily determined by the natural slope of the shale basement material (floor of the pit) and backfill placed in the pit floor. Backfill of highwalls around the edge of the pit is generally very permeable and so most water from outside pit infiltrates into the backfill material. When pit floor is exposed in the 18.3-acre 2018 Expansion area, floor flow will be to the east and not down Sale Barn Canyon.

Figure M-3. Surface water management plan – Montoya Pit (As of Spring 2018)



This is current but subject to change in accordance with permit conditions and changes in site conditions related to excavation and reclamation work, as well as location of traffic ways and processing plants. Refer to full SWMP. Primary objectives are to prevent any surface discharge of water which has come in contact with any industrial activities and which may be carrying sediment. Various best management practices (storm water, sediment, and erosion controls) are used temporarily internal to the pit to control flow, reduce problems, and prevent surface discharge. Storm water infiltrates or evaporates, either on surface or in detention basins.

EXHIBIT N – Source of Legal Right to Enter

All previous rights to enter remain in effect. (See original and previous amendment applications.)

All real property within the current and proposed permit boundaries as shown has three owners: the US Government, Gilleland Enterprises LLC, and Gilleland Family Limited Partnership, both of which are owned by the owners of C&J Gravel Products, LLC. Please see Exhibit O.

SECTION N-1. Agreement between private landowners and operator

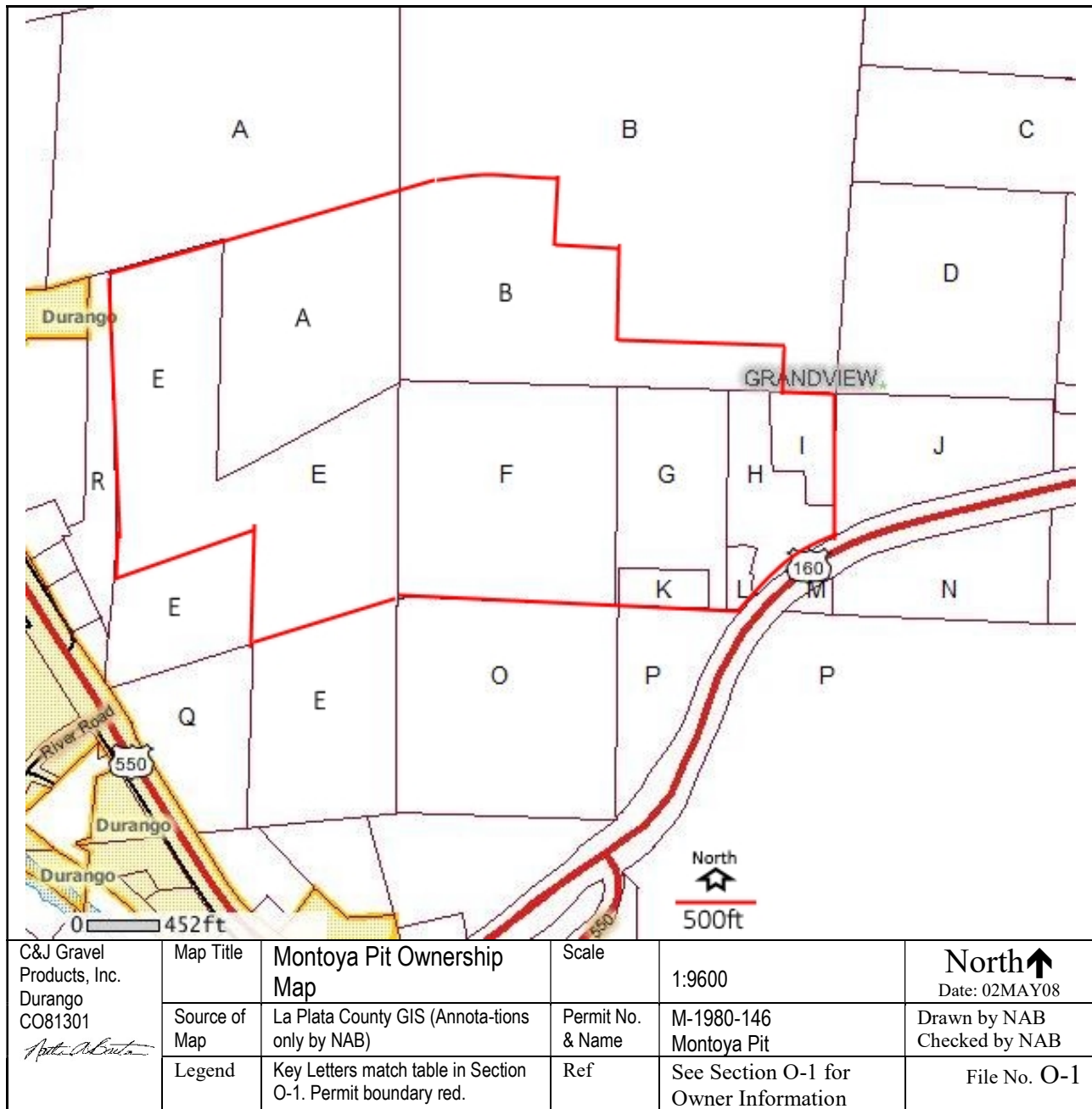
No change: Previously submitted and in file for M-1980-146 AND M-2008-048.

SECTION N-2. Agreement between BLM and operator

Contract to be submitted separately. The new 2018 BLM sales contract applies only to the 18.3-acre parcel, and not the entire 44.7-acre affected lands expansion area as identified in the 2018 Environmental Assessment.

EXHIBIT O – Owners of Record

MAP O-1. MONTOYA PIT AREA MAP



SECTION O-1. SURFACE OWNERS OF RECORD

All real property within the current and proposed permit boundaries as shown has three owners: the US Government, Gilleland Enterprises LLC, and Gilleland Family Limited Partnership, both of which are owned by the owners of C&J Gravel Products, LLC. The following is the list of all adjacent and nearby properties:

Map	County Parcel	Brief Description	Owner	Address
A	566904400062	SECT,TWN,RNG:4-34-9 DESC: LOTS 8, 9 & 12, 93.14 Ac	US Government (BLM)	No address assigned

B	566903300005	SECT,TWN,RNG:3-34-9 DESC: S/2 NW/4, SW/4, LOTS 3 & 4? 306.78 Ac	US Government (BLM)	No address assigned
C	566903400018	SECT,TWN,RNG:3-34-9 S/2 N/2 SE/4 40.97 Ac	Moreno, Thomas L & Elizabeth 3016 E 7 th Ave Durango, CO 81301	191 HIGH LLAMA LN DURANGO 81301
D	566903400034	SECT,TWN,RNG:3-34-9 DESC: TR IN SW/4SE/4, SE/4SE/4 WITH L&E 41.188 Ac	Crader Properties LLC 28481 Hwy 160 Durango CO 81301	No address assigned
E	566909100066	SECT,TWN,RNG:9-34-9 DESC: E/2 NE/4 & NW4 NE/4 (AKA LOTS 1, 2 & 4) SECT,TWN,RNG:4-34-9 DESC: LOTS 10 & 11 147.87 Ac	US Government (BLM)	No address assigned
F	566910200019	SECT,TWN,RNG:10-34-9 DESC: NW/4 NW/4 40.91 Ac	US Government (BLM)	No address assigned
G	566910200016	SUB:MONTOYA S/D LOT:B 17 Ac formerly owned by: Community of Christ, Jones, Stephen M Trustee, 1001 W Walnut St., Independence, MO 64050, previously Estelle Montoya	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301	27651 E US-160 Durango, CO 81301
H	566910200007	SECT,TWN,RNG:10-34-9 DESC: E/2 NE/4 NW/4 10.9 Ac	Gilleland Family Ltd Partnership, 514 CR 509 Ignacio CO 81137	27653 E Hwy 160 Durango, CO 81301
I	566910200024	10-34-9 NE/4 NW/4 5.01 Ac	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301	No address assigned
J	566910100025	SECT,TWN,RNG:10-34-9 DESC: NW/4 NE/4 17.28 Ac	Colorado Department of Transportation 3803 N Main Ave Durango CO 81301	27993 E US HWY 160 DURANGO 81301
K	566910200015	SUB: MONTOYA S/D BLK: 0 LOT: A 3.0 Ac, formerly owned by Community of Christ, 1001 W Walnut St., Independence, MO 64050	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301	27649 E Hwy 160 Durnago, CO 81301
L	566910200020	SECT,TWN,RNG:10-34-9 TR IN E/2 NE/4 NW/4? 1.33 Ac, formerly owned by Montoya, James Richard, Steevson, Joyce Trustees, 27659 Hwy 160 E Durango, CO 80301	Gilleland Enterprises LLC 17661 Hwy 160 Durango, CO 81301	No address assigned
M	566910200010	SECT,TWN,RNG:10-34-9 DESC: NE/4 NW/4 0.79 Ac	Colorado Department of Transportation 3803 N Main Ave Durango CO 81301	27732 E US HWY 160 DURANGO 81301
N	566910100008	SECT,TWN,RNG:10-34-9 ALL TH PT NW/4 NE/4 SEC 10 LYG S R/W HWY 14.53 Ac	Joy F Knaggs PO Box 1241 Durango, CO 81302	28052 E US HWY 160 DURANGO 81303
O	566910200021	SECT,TWN,RNG:10-34-9 SW/4 NW/4 42.5 Ac	La Plata County 1060 2 nd Ave Durango, CO 81301	No address assigned
P	566911200039	SECT,TWN,RNG:10-34-9 DESC: SE/4NE/4, SW/4NE/4, SE/4NW/4, W/2SE/4, E/2SW/4, SW/4SW/4 WITH L&E SECT,TWN,RNG:11-34-9 DESC: NW/4SW/4, S/2NW/4, NE/4SW/4 WITH L&E 585 Ac	Webb, Marie J Ranch LLC & M J Mesa LLC 25146 Lyncastle Lane Farmington Hills, MI 48336	89 CR 220 Durango CO 81303

Information from La Plata County Assessors Office, Website: accessed/updated 30APR18. No change since 2009.
Please note that the Durango municipal limits have changed in the area and are correctly shown in Map B-2.

EXHIBIT P – Municipalities Within Two Miles

City of Durango

Grandview is incorporated within the municipality of Durango. Refer to Map B-2, where the 2018 municipal limits of Durango are shown nearby.

No portion of the Montoya Pit is currently within the municipal limits of the City of Durango, but the permit boundary does touch those limits at one point (NE corner).

EXHIBIT Q – Proof of Mailing Notices to BOCC and Conservation District

Received
MAY 07 2018
La Plata County
Commissioners

EXHIBIT Q – Proof of Mailing Notices to Board of County Commissioners and Conservation District

Section Q-1. La Plata County Commissioners

A copy of the "Notice to the Board of County Commissioners", including an attached copy of the application to the Colorado Division of Reclamation, Mining, and Safety (DRMS) for the amendment to the Montoya Pit, M1980-146, to be located in La Plata County, Colorado, has been ☐mailed to ☒hand-delivered by (check one)

John Gilleland (insert name)

on the 7 day of MAY 2018, to Jan Mayer-Gawlik (insert name) of the La Plata County Commissioners Office, County Courthouse, Durango, CO 81301, for presentation to the Board of County Commissioners at their next convenience.

SIGNATURE: Jan Mayer-Gawlik
TITLE: Asst. to Commissioners
(SEAL IF USED)

NOTICE TO THE BOARD OF COUNTY COMMISSIONERS LA PLATA COUNTY

C&J Gravel Products, Inc. (the "Applicant/Operator") has applied for a Regular (112) reclamation permit amendment from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of construction materials operations in La Plata County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk and recorder.

The applicant/operator proposes to reclaim the affected land to INDUSTRIAL/COMMERCIAL, RECREATION, AND WILDLIFE use in compliance with current zoning. Pursuant to Section 34-32.5-116(4)(m), C.R.S., the Board may confer with the local Board of County Commissioners before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within twenty (20) days of the date of last publication of notice pursuant to Section 34-32.5-112(10), C.R.S.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567.

Section Q-2. La Plata Conservation District

A copy of the "Notice to the Board of Supervisors of the Local Soil Conservation District", including an attached copy of the application to the Colorado Division of Reclamation, Mining and Safety (DRMS) for the amendment of the Montoya Pit, M1980-146, located in La Plata County, Colorado, ☐ mailed to ☒ hand-delivered by (check one)

John Gilleland

(insert name)

on the 8 day of MAY 2018, to Tom Hershfield (insert name)
at La Plata Conservation District, 31 Suttle Street, Durango, CO 81302; for
presentation to the Board of Supervisors of the Conservation District, at their next
convenience.

Signed for by employee or representative of the District:

SIGNATURE: [Signature]

TITLE: Pres.

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR REGULAR (112) CONSTRUCTION MATERIALS EXTRACTION
OPERATION

NOTICE TO THE BOARD OF SUPERVISORS
OF THE LOCAL CONSERVATION DISTRICT
LA PLATA CONSERVATION DISTRICT

C&J Gravel Products, Inc. (the "Applicant/Operator") has applied for a Regular (112) reclamation permit amendment from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of construction materials operations in La Plata County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk and recorder.

The applicant/operator proposes to reclaim the affected land to INDUSTRIAL/COMMERCIAL, RECREATION, AND WILDLIFE use. Pursuant to Section 34-32.5-116(4)(m), C.R.S., the Board may confer with the local Conservation Districts before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within twenty (20) days of the date of last publication of notice pursuant to Section 34-32.5-112(10), C.R.S.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567.

EXHIBIT R – Proof of Filing with County Clerk and Recorder

A copy of the "CONSTRUCTION MATERIALS REGULAR (112) OPERATION RECLAMATION PERMIT APPLICATION FORM, and All Exhibits thereto, for the amendment of the Montoya Pit, M1980-146, located in La Plata County, Colorado, ☐ mailed to ☒ hand-delivered by (check one)

John Gilleland (insert name)

on the 15 day of MAY 2018, to Phillip M. Stuckman (insert name) of the La Plata County Clerk's Office, Durango, CO.

SIGNED: [Signature] Printed Name: John Gilleland
For C&J Gravel Products, Inc.


This copy will be available for public review during normal business hours to all interested persons, until requested to be returned by the applicant, C&J Gravel Products, Inc., expected to be 60 days after a decision by the Colorado Division of Minerals and Geology. Please do not record this document.

Accepted by official or employee of La Plata County Clerk:

SIGNATURE: [Signature]

TITLE: _____

DATE-TIME STAMP/SEAL



RECEIVED
2018 MAY 15 P 2:26
LA PLATA COUNTY
CLERK & RECORDER
OFFICE

EXHIBIT S – Permanent Manmade Structures

C&J MONTOYA PIT – M1980-146 – PERMIT AMENDMENT (2018)

None of the existing buildings, including houses, office, shop, storage, or other structures on the Private lands are considered “significant, permanent, man made structures.” This includes roads, gates, fencing, utilities, signage, and all other structures.

Access roads and trails on and off the permit area and inside/outside the affected lands, both current and proposed (the 18.3-acre 2018 Expansion Area), are expected to be rebuilt as needed to handle the heavy traffic and meet changing standards. Many structures (such as the houses near the current entry road) will be demolished or removed over the next two years.

All structures on the private fee land belongs to the owner/operator and associated companies and firms and are not considered permanent nor significant. Structures will be demolished or relocated prior to reclamation release and termination of the reclamation permit.

There are no permanent manmade structures on the Public Lands administered by BLM to be affected or which are located within 200 feet of the current affected lands or the additional areas proposed to be added to the affected lands.

To our knowledge, there are no permanent manmade structures located on the Crader Pit or other privately-owned property within 200 feet of Montoya Pit affected lands.

The Colorado Department of Transportation owns highways and related features to the south and southeast of the Montoya Pit, but none appear to be within 200 feet of affected lands.

The US Bureau of Land Management owes (or manages) various items, including oil and gas infrastructure, which might be considered significant but are not permanent.

The following is a listing of permanent and significant manmade structures, all of which belong to a company owned by the owners of C&J Gravel Products:

NONE

Also refer to BLM Environmental Assessment, previous amendments, and original application for information, and Exhibit L of 111 permit application for M-2008-048.

RULE 1.6.2.(1)(b) ADDENDUM 1 (NOTICE REQUIREMENTS)

Section Q-3. Posting of Public Notice at Montoya Pit

NOTICE – MONTOYA PIT

This site is the location of a proposed construction materials operation. Applicant/Operator, C&J Gravel Products, Inc., 27661 Highway 160E, Durango, CO 81301, (970) 385-4112, has applied for an amendment to their Reclamation Permit with the Colorado Mined Land Reclamation Board.

Anyone wishing to comment on the application may view the application at the La Plata County Clerk and Recorder's office, 98 Everett Street Suite C, Durango, Colorado, 81301 La Plata County Clerk and Recorder's office, Courthouse, Durango, Colorado, and should send comments prior to the end of the public comment period to the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203.

CERTIFICATION:

I, John G. Gilkerson (Printed name) of C&J Gravel Products Inc. hereby certify that I posted a sign containing the above notice for the proposed permit area at the entrance of the MONTOYA PIT on (Date Posted) 5.4, 2018.

John G. Gilkerson (Signature) 5.4.18 (Date)

ATTACHMENT 1. BLM Environmental Assessment and Associated Documents

US Bureau of Land Management NEPA Environmental Assessment and Related Documents

Pages are separately numbered. PDF copy provided by electronic means.

DOI-BLM-CO-S010-2017-0019-EA

The attachment consists of three documents:

FONSI (Finding of No Significant Impact),

3 pages, 144 kB.

DECISION RECORD (RECORD OF DECISION, ROD)

10 pages, 464 kB.

which incorporates conditions which are made part of the contract and therefore directly related to the mining and reclamation to be done on the BLM portions of the permit and affected lands.

FINAL ENVIRONMENTAL ASSESSMENT

84 pages, 11,449 kB.

which provides additional supporting data for the exhibits in the application.

These documents are available in electronic form at the following US Government website:

<https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=85573&dctmId=0b0003e880f66380>

Also may be reached by using this shortcut: <https://tinyurl.com/Montoya-Pit-Expansion-2018> (tested on 13 MAY 2018)

A hard copy of these documents was filed by BLM at the LaPlata County Clerk and Recorder and remains on file at this time at the same location as the copy of the application (with exhibits) is placed by C&J Gravel Products.

Although referred to as the 2018 EA in this application/exhibits, the actual final version was signed and published by the uS BLM on 23 February 2018. The Preliminary EA was made available for public and agency comment in 2017.

ATTACHMENT 2. Sales Contract

US Bureau of Land Management

Pages are separately numbered. Copy will be provided to DRMS when signed and released by us BLM to Montoya Pit, either by hard copy or electronic means.

Some portions of the contract may not be public information and may be considered confidential business information and redacted from the copy furnished to DRMS.

This document is proof of right to enter and mine on BLM land.

ATTACHMENT 3. Affidavit of Publication














Durango Herald
1275 Main Ave
Durango, CO 81301

05/23/18

Mailing Address: P.O. Drawer A, Durango, CO 81302

Phone:(970) 247-3504 Fax:(970) 259-5011 Email:classifieds@durangoherald.com

YOUR AD COPY READS:

Private Legals

Account:	106459	Date:	05/23/18
Client:		Ad Date:	05/25/18
		Ad ID:	285518
		Class:	1010
Company:	C & J Gravel Products, Inc.	Ad Taker:	OZENIZO
Address:	27661 Highway 160 East	Sales Person:	UN
	Durango, CO 81301	Words:	254
		Lines:	64
Telephone:	(970) 385-4112	Agate Lines:	94
Description:	285518 PUBLIC NOTICE C & J Gravel Pr	Depth:	6.75
		Inserts:	8
		Blind Box:	

Other Charges:	\$0.00	Net:	\$496.64
Discount:	\$0.00		
Surcharge:	\$0.00	Paid Amount:	- \$0.00
Credits:	\$0.00		
Bill Depth:	6.75	Amount Due:	\$496.64

Payments

Ad Note:

Customer Note:

285518
PUBLIC NOTICE
 C & J Gravel Products Inc., 27661 Hwy 160-E, Durango, CO 81301, (970) 385-4112, has filed an application to amend Regular (112) Construction Materials Operation Reclamation Permit M-1980-146 with the Colorado Mined Reclamation Board under provisions of the Colorado Land Reclamation Act for the Extraction of Construction Materials. The existing mine, the Montoya Pit, is located at or near Sections 3 and 10, Township 34 North, Range 09 West, 10th P.M. The proposed date of completion is December 31st, 2026. The proposed future use of the land is recreation and wildlife habitat (government land) and mixed commercial/industrial (private land). Additional information and tentative decision date may be obtained from the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567, or at the La Plata County Clerk and Recorder's office, 98 Everett Street Suite C, Durango, CO 81303, or the above-named applicant. Comments must be in writing and must be received by the Division of Reclamation, Mining, and Safety by 4:00 p.m. on the 5th of July, 2018. Please note that under provisions of C.R.S. 34-32.5-101 et seq, comments related to noise, truck traffic, hours of operation, visual impacts, effects on property values and other social or economic concerns are issues not subject to this Office's jurisdiction. These subjects, and similar ones, are typically addressed by your local governments, rather than the Division of Reclamation, Mining, and Safety or the Mined Land Reclamation Board.
 Published in Durango Herald May 25, June 1, 8, 15, 2018.

ATTACHMENT 4. Map Portfolio

The 9 maps attached are separately numbered and without standard headers and footers to avoid changes in scale, and are portions of Exhibits C and F.

Blue/Red lines are highwalls as of July 2018.

Red areas are at various stages of reclamation. Permit Boundary

Exterior black line is permit boundary.

Magenta lines are the boundary of expansion areas.

A - at or near final reclamation

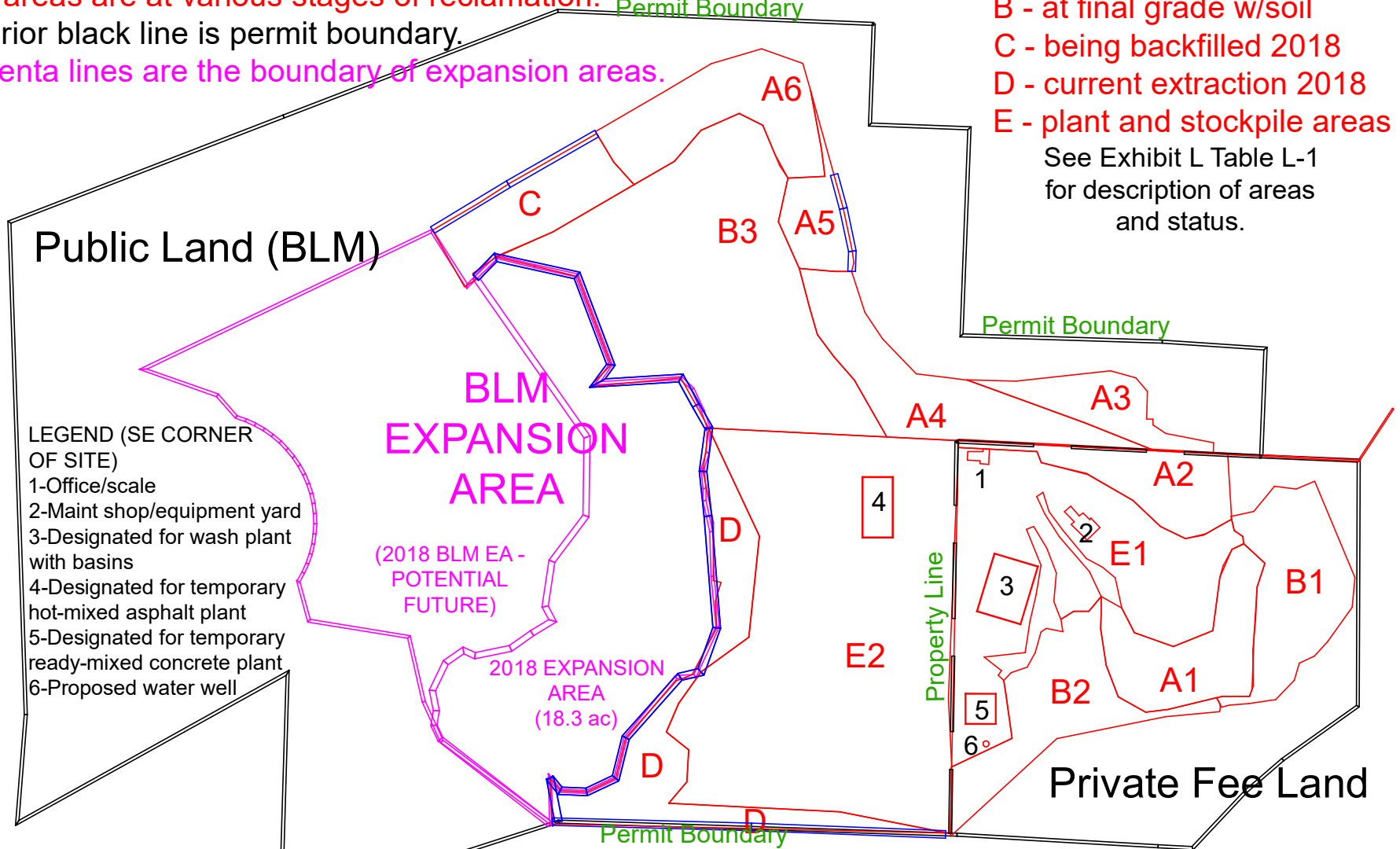
B - at final grade w/soil

C - being backfilled 2018

D - current extraction 2018

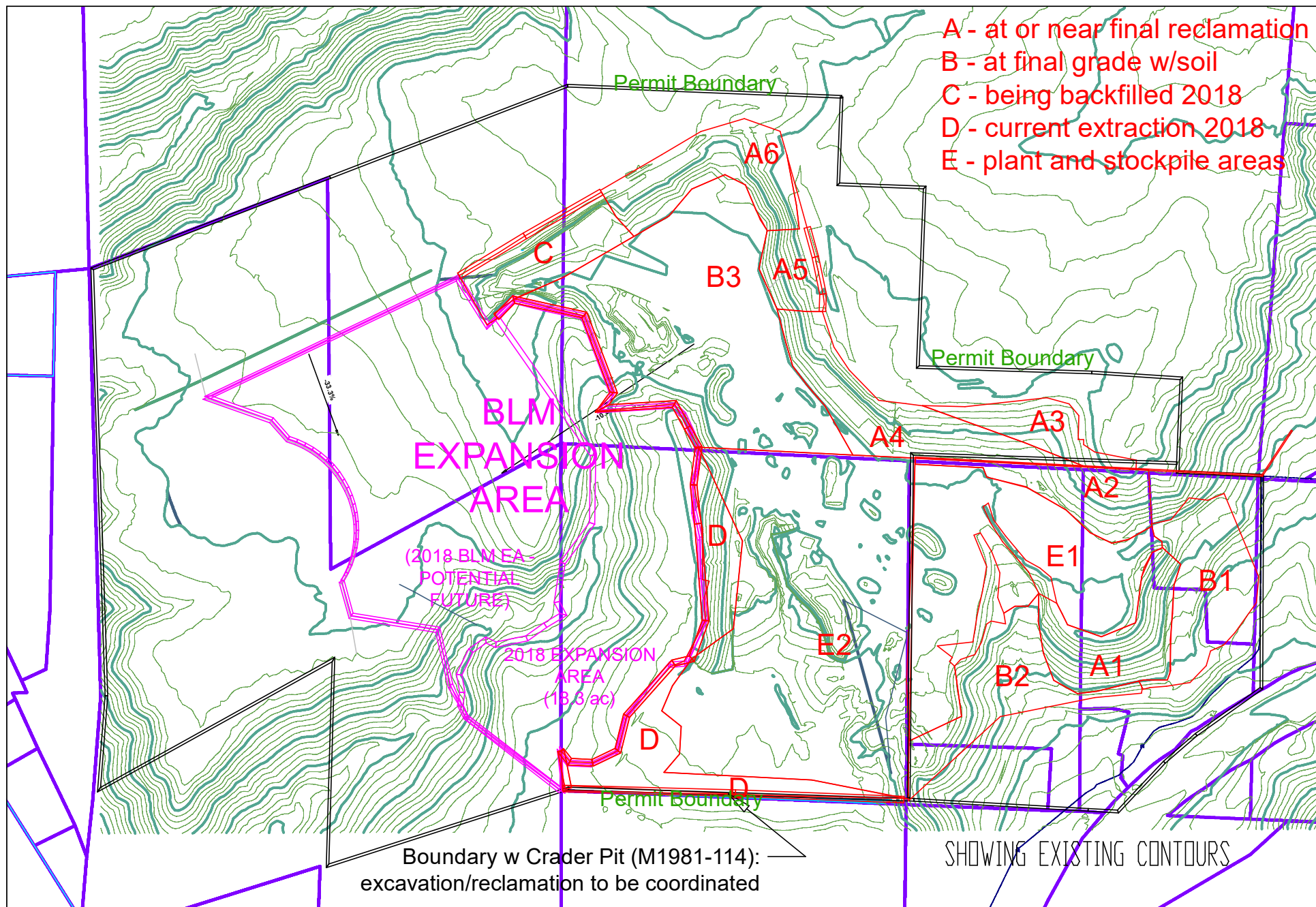
E - plant and stockpile areas

See Exhibit L Table L-1
for description of areas
and status.



There has been no release of reclaimed areas
REVISED FROM ANNUAL REPORT 2016-18, SHOWING LAND OWNERSHIP

<p>Prepared by WASTELINE, INC. POB 88 Cortez, CO 81321 <i>Nathan A. Barton</i> Nathan A. Barton, PE CO-27342</p>	<p>C&J Gravel Products, Inc. 27611 Hwy 160 Durango, CO 81301 (970) 385-4112 www.c&jgravel.com Drawn by NAB Check by NAB R07AUG2018 Check by HB/JG</p>	<p>Rough Estimated Areas by Year. Reclaimed area is NOT released.</p> <p>MAP SOURCES</p> <p>2007 Site Survey USGS Mapping City of Durango C&J Kespry flights</p>	<p>SHEET C-1. EXISTING MAP TITLE</p> <p>Areas to be mined in accordance with current BLM leases, and on private land.</p> <p>AM-05</p>	<p>Scale: 1"=500' GRAPHIC SCALE North Legend: As shown M-1980-146 Montoya Pit</p>
--	---	--	--	---

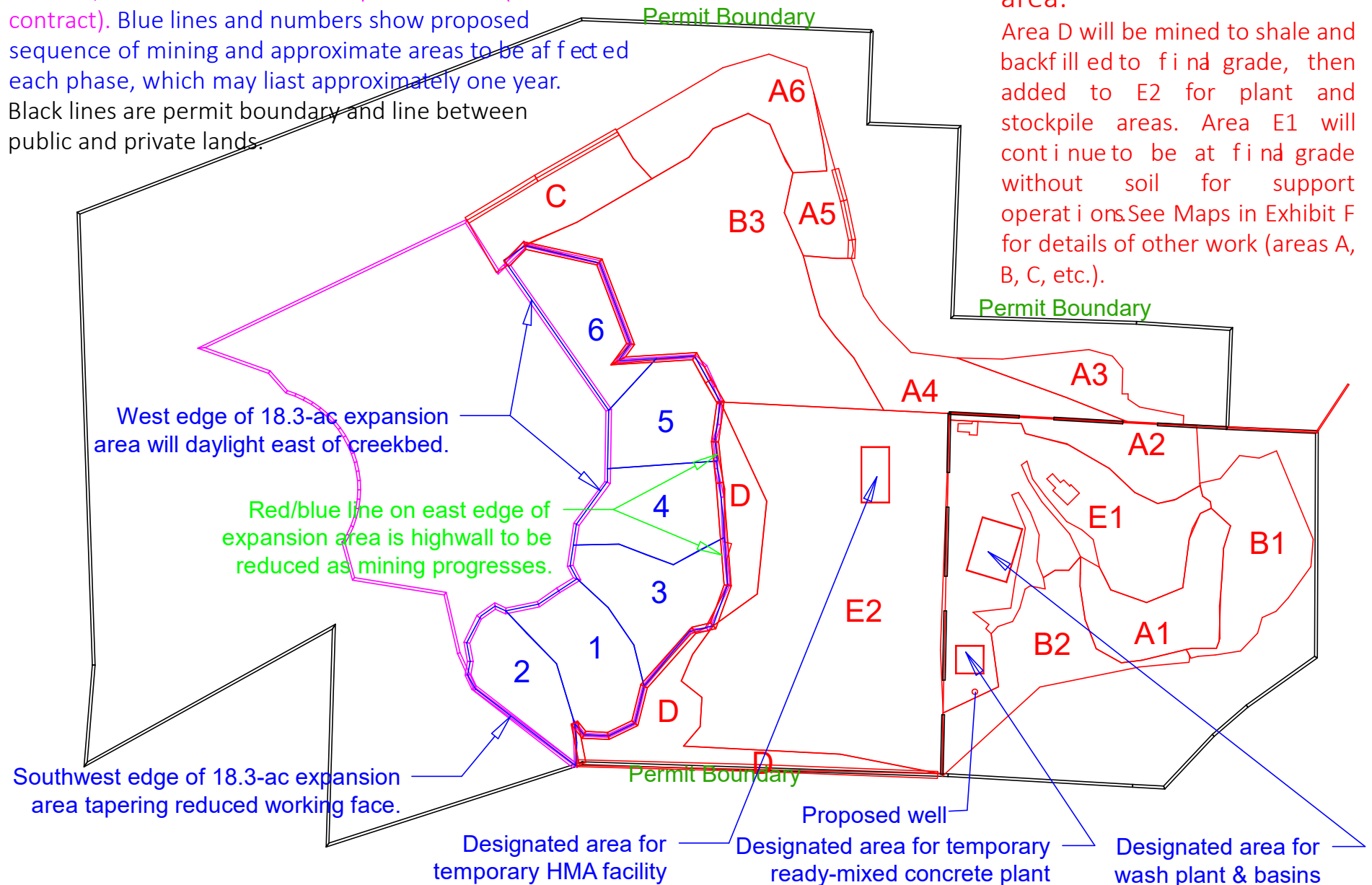


Prepared by WASTELINE, INC. PDB 88 Cortez, CO 81321 <i>Nathan A. Barton</i>	C&J Gravel Products, Inc. 27611 Hwy 160 Durango, CO 81301 (970) 385-4112 www.c&jgravel.com	Rough Estimated Areas by Year. Reclaimed area is NOT released. MAP SOURCES 2007 Site Survey USGS Mapping City of Durango	SHEET C-2 EXISTING. MAP TITLE Contours 10-ft, including stockpiles in current operating areas. AM-05	Scale: 1"=500' GRAPHIC SCALE Legend: As shown M-1980-146 Montoya Pit Mining Years
Nathan A. Barton, PE CO-27342	Drawn by NAB Check by NAB R07AUG2018 Check by PN/JG			

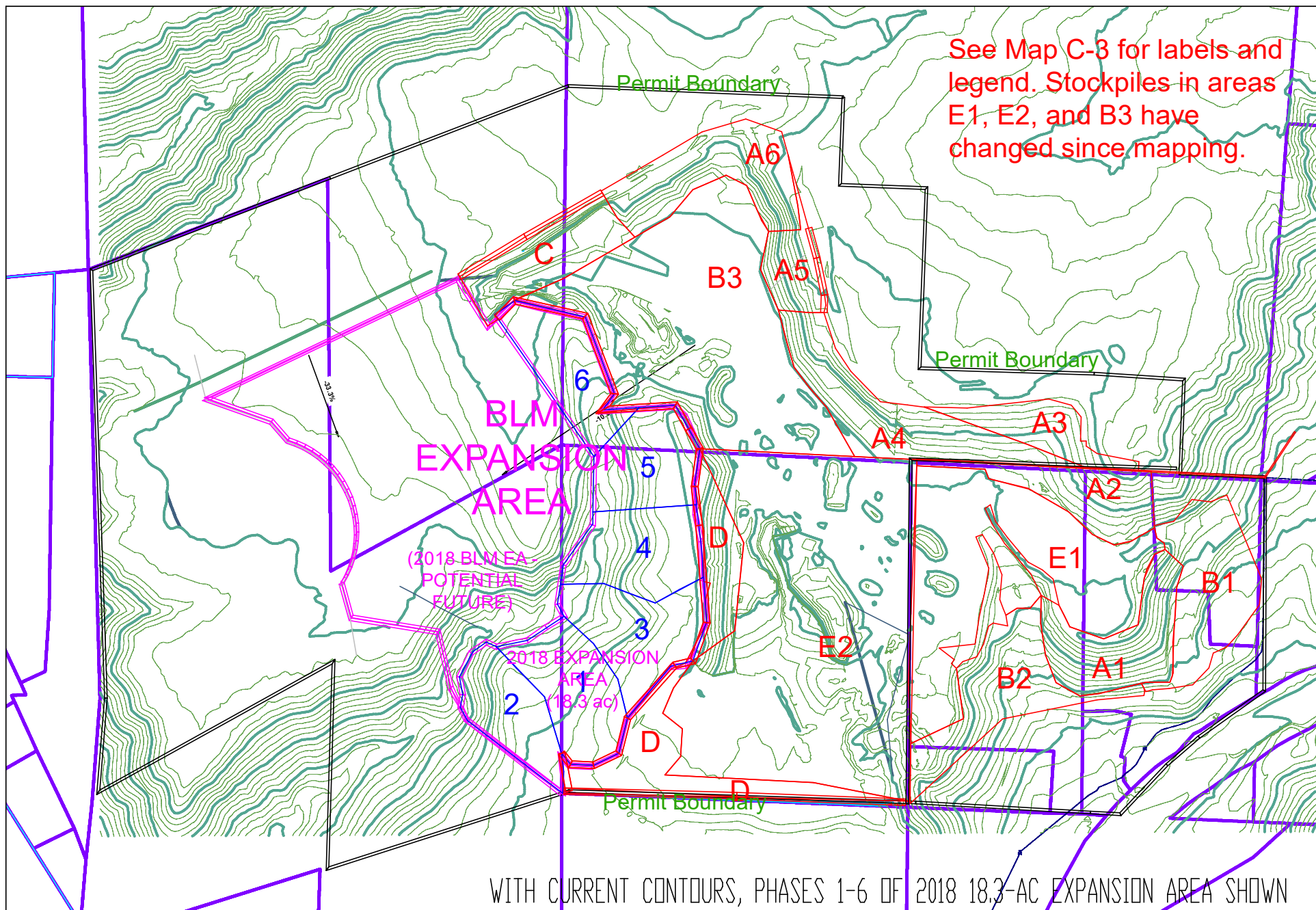
Magenta boundaries show the 44.7-ac BLM area for the 2018 EA, and the 18.3-ac 2018 Expansion Area (sales contract). Blue lines and numbers show proposed sequence of mining and approximate areas to be affected each phase, which may last approximately one year. Black lines are permit boundary and line between public and private lands.

Areas outside expansion area:

Area D will be mined to shale and backfilled to final grade, then added to E2 for plant and stockpile areas. Area E1 will continue to be at final grade without soil for support operations. See Maps in Exhibit F for details of other work (areas A, B, C, etc.).



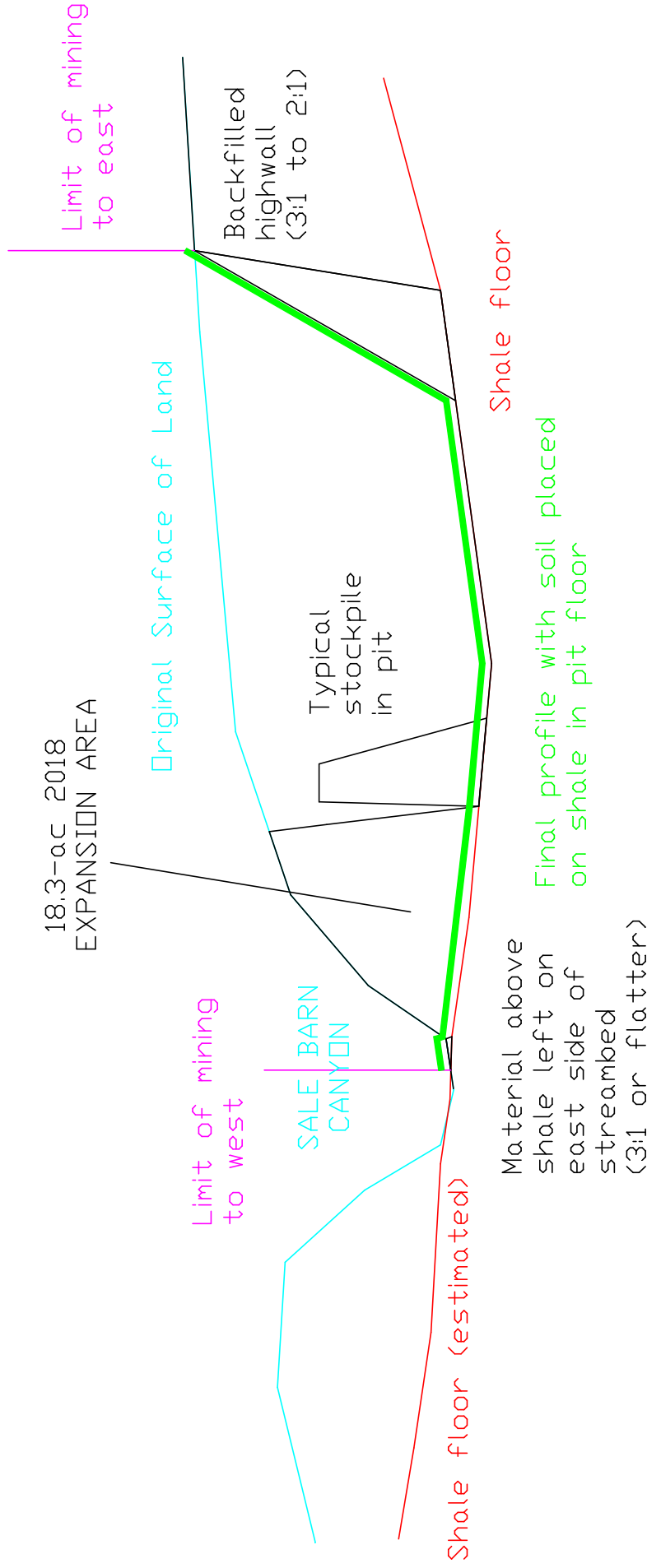
<p>Prepared by WASTELINE, INC. POB 88 Cortez, CO 81321 <i>Nathan A. Barton</i> Nathan A. Barton, PE CD-27342</p>	<p>C&J Gravel Products, Inc. 27611 Hwy 160 Durango, CO 81301 (970) 385-4112 www.c&jgravel.com Drawn by NAB Check by NAB R07AUG2018 Check by PN/JG</p>	<p>Rough Estimated Areas by Year. Reclaimed area is NOT released.</p> <p>MAP SOURCES</p> <p>2007 Site Survey USGS Mapping City of Durango</p>	<p>SHEET C-3 CONCEPT MAP TITLE</p> <p>Note: areas shown are assuming BLM approval of request to purchase additional materials.</p> <p>AM-05</p>	<p>Scale: 1"=500' GRAPHIC SCALE North</p> <p>Legend: As shown</p> <p>M-1980-146 Montoya Pit Mining Area</p>
--	---	---	---	---



WITH CURRENT CONTOURS, PHASES 1-6 OF 2018 18.3-AC EXPANSION AREA SHOWN

<p>Prepared by WASTELINE, INC. POB 88 Cortez, CO 81321 <i>Nathan A. Barton</i></p>	<p>C&J Gravel Products, Inc. 27611 Hwy 160 Durango, CO 81301 (970) 385-4112 www.c&jgravel.com</p>	<p>Rough Estimated Areas by Year. Reclaimed area is NOT released.</p>	<p>SHEET C-4 CONCEPT MAP TITLE Contours 10-ft, including stockpiles in current operating areas. AM-05</p>	<p>Scale: 1"=500' GRAPHIC SCALE North Legend: As shown M-1980-146 Montoya Pit Mining Area</p>
<p>Nathan A. Barton, PE CD-27342</p>	<p>Drawn by NAB Check by NAB R06AUG2018 Check by PN/JG</p>	<p>MAP SOURCES 2007 Site Survey USGS Mapping City of Durango</p>		

TYPICAL CROSS-SECTION Looking North Across Pit Floor and 18.3-acre 2018 Expansion Area

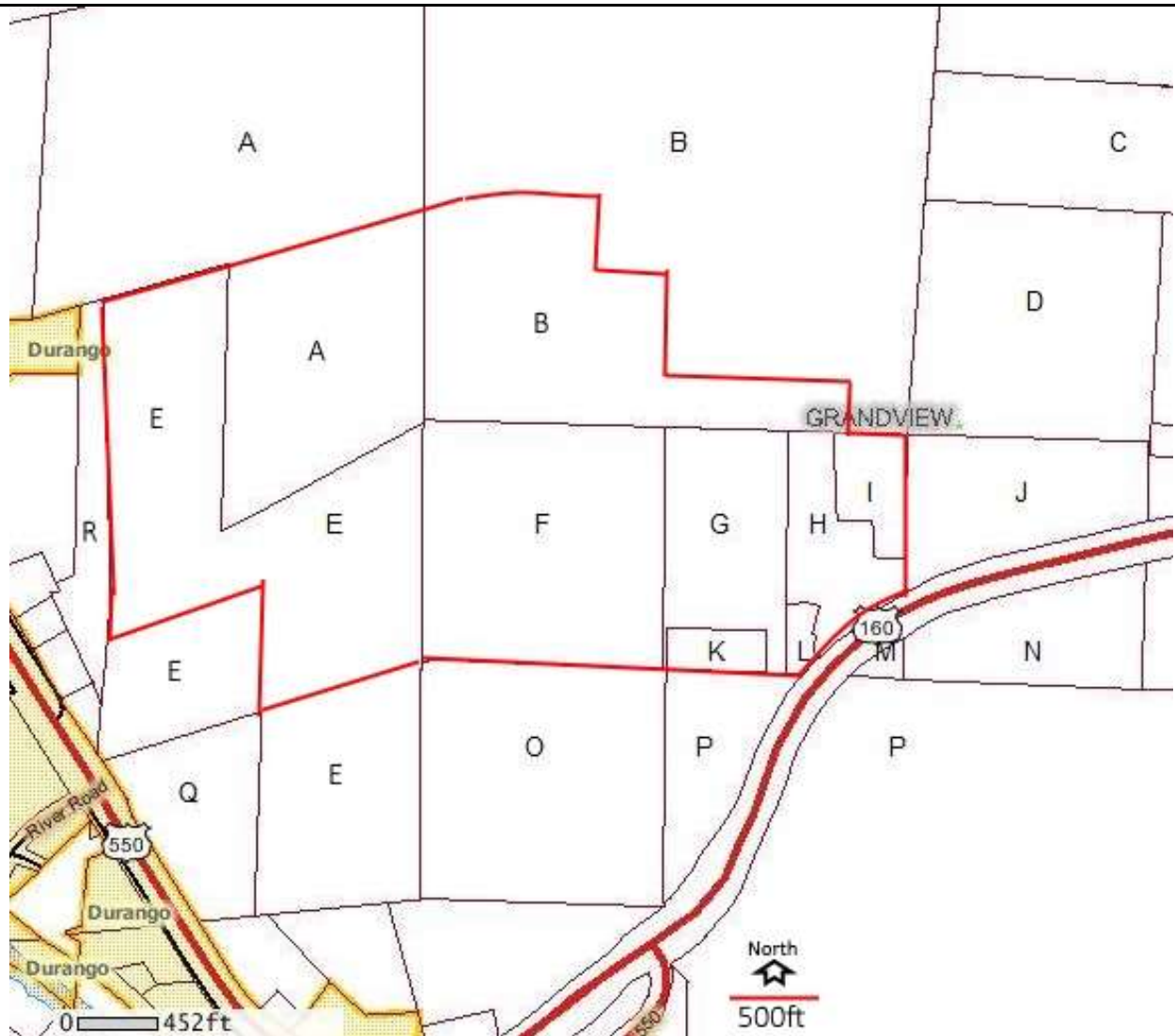


Not to scale, profile is simplified and vertical elevations exaggerated for clarity. Shale floor grade varies from level to 6%.

M1980-146 MONTVOYA PIT
PROFILE CONCEPT
(CROSS-SECTION)

Prepared by N. A. Barton 31 JULY 2018
REFER TO BLM DISCUSSION
NOT TO SCALE

SHEET C-6. MONTOYA PIT AREA LANDOWNERS MAP

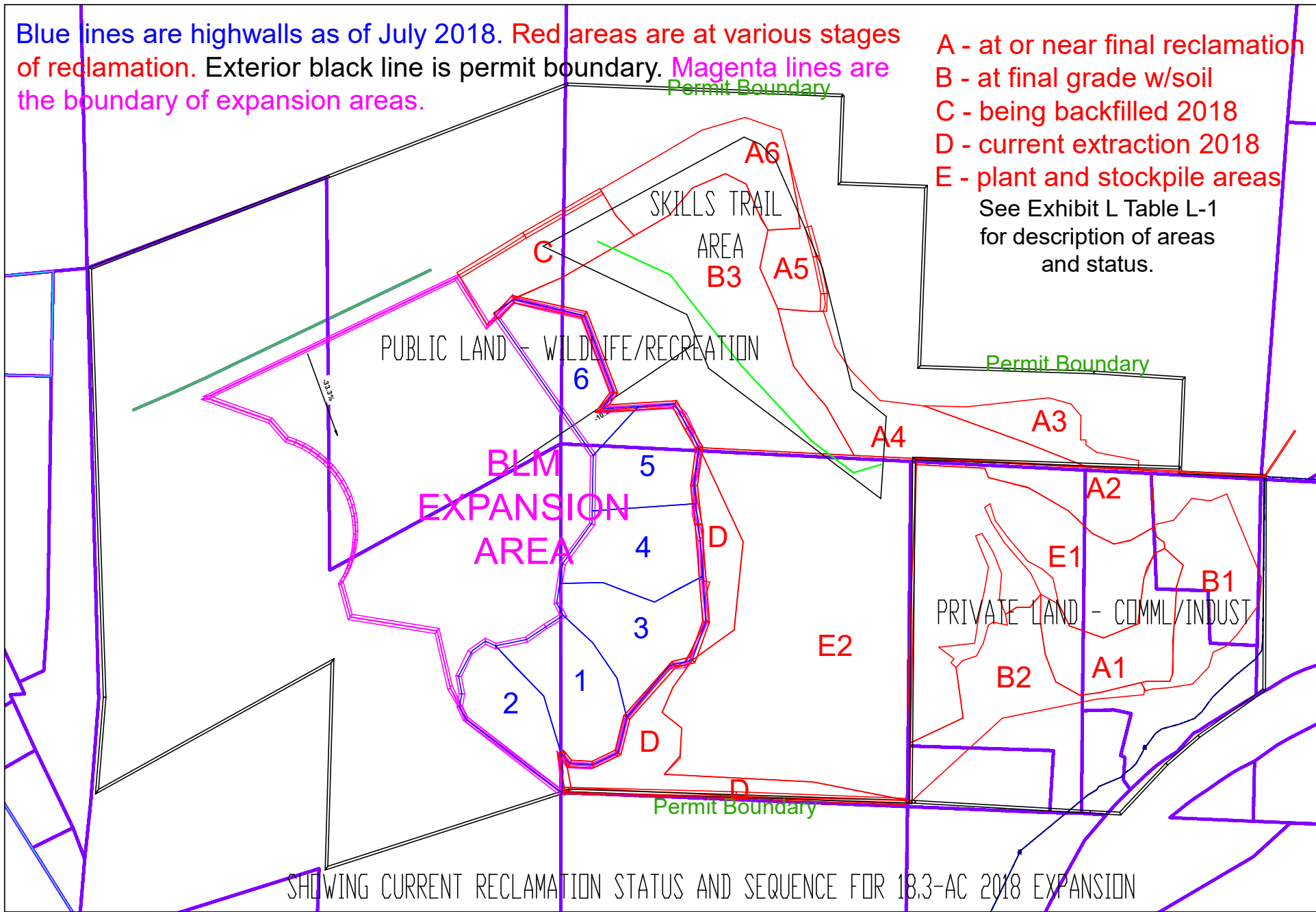


C&J Gravel Products, Inc. Durango CO 81301 Annotations only: <i>Apita DeBouta</i>	Map Title	Montoya Pit Ownership Map	Scale	1"=1000' (1:12,000)	North↑ Date: 02MAY08
	Source of Map	La Plata County GIS	Permit No. &	M-1980-146 Montoya Pit	Drawn by NAB Checked by NAB
	Legend	Key Letters match Table C-1 and Table in Section O-1. Permit boundary red.	Ref	See Section O-1 for Owner Information	File No. C-6

Blue lines are highwalls as of July 2018. Red areas are at various stages of reclamation. Exterior black line is permit boundary. Magenta lines are the boundary of expansion areas.

- A - at or near final reclamation
- B - at final grade w/soil
- C - being backfilled 2018
- D - current extraction 2018
- E - plant and stockpile areas

See Exhibit L Table L-1 for description of areas and status.



<p>Prepared by WASTELINE, INC. POB 88 Cortez, CO 81321 <i>Nathan A. Barton</i> Nathan A. Barton, PE CO-27342</p>	<p>C&J Gravel Products, Inc. 27611 Hwy 160 Durango, CO 81301 (970) 385-4112 www.c&jgravel.com</p>	<p>Rough Estimated Areas by Year. Reclaimed area is NOT released.</p> <p>MAP SOURCES</p> <p>2007 Site Survey USGS Mapping City of Durango</p>	<p>SHEET F-1 CONCEPT MAP TITLE</p> <p>Areas to be mined in accordance with current BLM leases, and on private land.</p> <p>AM-05</p>	<p>Scale: 1"=500' GRAPHIC SCALE Legend: As shown M-1980-146 Montoya Pit Mining Area</p>
	<p>Drawn by NAB Check by NAB</p> <p>R20JUN16 Check by PN/JG</p>			

